ELECTRONIC DOCUMENT MANAGEMENT

A major transformation
towards e-government
in the City of Buenos Aires
2009-2014

ELECTRONIC DOCUMENT MANAGEMENT

Pablo Clusellas, Eduardo Martelli and María José Martelo

A major transformation towards e-government in the City of Buenos Aires 2009-2014

CREDITS

Legal and Technical Secretary of the
Government of the Autonomous City of Buenos Aires
www.buenosaires.gob.ar

Authors
Pablo Clusellas
Eduardo Martelli
María José Martelo

Editorial Production
María Laura Lecuona (editorial coordination)
Mariano Nuñez Freire (graphic design)
Florencia Verlatsky (editing)

Paragraph Producción de Contenidos – www.paragraph.com.ar

Acknowledgments
María Fernanda Inza, Rita Domínguez, María Guadalupe Triviño Valdez, Sandra Negre, Pedro Hadida, Luz Di Gregorio, María Florencia Martínez, Yésica García, Luis De Giulio, Santiago Perciavalle, Ingrid Violini, Iván Buffone

Buenos Aires Ciudad

Martelli, Eduardo Nicolas
Electronic document management : a major transformation towards e-government in the City of Buenos Aires 2009-2014 / Eduardo Nicolas Martelli ; Pablo Clusellas ; María Jose Martelo. - 1a ed . - Ciudad Autónoma de Buenos Aires : Gobierno de la Ciudad Autónoma de Buenos Aires, 2015.
190 p. ; 24 x 17 cm.
Traducción de: Moira Parga.
ISBN 978-987-673-035-8
1. Gestión de Documentos. I. Parga, Moira, trad.
CDD 005.1

Cataloguing Date: October 15, 2014

Buenos Aires, October 2014

CONTENTS

Preliminary words of the authors

From tons of paper to fully digital procedures in the Government of the City of Buenos Aires

Pablo Clusellas

Eduardo Martelli

María Jose Martelo

The purpose of this book is to describe the way in which the Government of the Autonomous City of Buenos Aires achieved what no other past administration was able to fully achieve: to completely eliminate paper **as a recording medium and, therefore, as the basis of legality of all government actions.**

By means of the efforts that started back in 2009 and which are still ongoing, we managed to fully enter into the 21st century, moving from the practice to the **actual** implementation of e-Government and Smart City concepts. We are convinced that without a **full** Electronic Document Management system in place these concepts are only, at best, partial and that the transformation of document management —from paper to electronic— is a necessary, although not sufficient, condition to modernize the state.

According to our research, several governments around the world have attempted "going paperless", but all have been either partial or incomplete. In the Government of the Autonomous City of Buenos Aires **we have implemented something that has never been attempted in any other administration.** In five years we have successfully migrated from a paper-based bureaucracy to fully digitalize all of our administrative procedures, and we have started to make them accessible to citizens who can currently operate more than 50 online procedures (*trámites*) from their households and offices.

We believe that the following elements have allowed **making a difference**, namely:

- the innovation of basing the whole system's rationale and structure on **documents**— and not on procedures, as is usually the case;
- he consolidation of the political, legal and technical will into one single **inter-disciplinary team;**
- the fact that the change process was addressed in a comprehensive manner completely doing away with paper as an information container.

Moreover, what was not only amazing but also decisive was the fact that the impulse and the implementation originated from the legal area of the government.

The final effects of this change –which, unquestionably, **has a large impact on the organizational culture** ("this is how things are done here")– are, in many cases, not yet fully perceived. However, some can already be clearly noticed such as money savings of many kinds, the incorporation of citizens to all types of administrative procedures as well as improvements resulting in the speeding-up of processing, the control of operations and transparency.

Moreover, we are working –although there is still much to be done– in order to attain the full use of the capacities of the system. This will involve, for instance, a much larger data capture, process-reengineering, the generation of processing automated rules and a better flow of information feedback for decision making purposes.

We hope that this is just the start of a long road to travel and that future administrations will not only follow these footsteps but also develop and elaborate upon what has been accomplished, since currently **the limit for e-government innovation rests solely on imagination, creativity and determination.**

Preliminary words of Mauricio Macri, Chief of Government of the Autonomous City of Buenos Aires

The electronic document management system implemented in the Government of the City of Buenos Aires involves returning to the roots and essence of what should be understood as public service

Mauricio Macri

Chief of Government of the Autonomous City of Buenos Aires

Upon taking office as Chief of Government of the City of Buenos Aires in 2008 I set the goal of embarking on a deep modernization of public management in the City of Buenos Aires, resorting to the technological innovations which have exponentially developed since the beginning of this new millennium, opening the gateways to a new form of government-to-citizen (G2C) relationship.

The core objectives of our modernization strategy are: participation, transparency of government actions, streamlining and improving procedures so as to make everyday life easier for citizens in the City of Buenos Aires.

One of the keys to the success achieved so far, and to our ongoing efforts to keep up with such achievements, is to have focused our activities around the citizens' actual needs. Governments embarking on modernization or on the incorporation of technology for endogenous purposes fail or attain limited results, without an actual impact on the population they represent.

However, our citizen-centric approach did not relieve us from a myriad of internal government-to-government (G2G) operational tasks. Consequently, within these seven years in office we have managed to incorporate new information and communication technologies (ICTs), to design more efficient procedures, to change our decision-making process, to change the way we register, store and archive information. The effort has been as great as large is our Public Administration, in line with its complexity and volume, and it involved large training and communication efforts at each implementation stage. New technologies are essential allies of modernization; however they cannot disembark without the aid of adequate regulatory frameworks, procedural guidelines and users trained in the use of such technologies.

Moving forward in this bureaucratic universe to change government calls for a team of highly-committed people, open to learn and exercising

their authority in order to deliver –at the end of their term in office– an administration in better conditions than the one received, based on new change driving parameters that will foster ongoing evolution throughout subsequent administrations.

The electronic document management– the first stage in e-government that we are implementing to develop our modernization strategy– encompasses all the elements mentioned so far, focused on citizens, procedures, technology and information, but above all, on the desire, commitment and capability of all those who implemented and coordinated them in furtherance of achieving government transformation for the benefit of the citizens.

The electronic document management implemented in the Government of the City of Buenos Aires involves returning to the roots and essence of what should be understood and rendered as public service. I am very pleased to have arrived at this stage and proud to introduce this huge transformation, the first one of the kind ever to be implemented in Argentina.

Preliminary words of Horacio Rodríguez Larreta, Chief of the Cabinet of Ministers of the Government of the Autonomous City of Buenos Aires

Technology is essential to be closer to the people and to make their lives easier

Horacio Rodríguez Larreta

Chief of Cabinet of Ministers of the Government of the Autonomous City of Buenos Aires

Public Administration is a service rendering –not good-producing- organization; its two main assets being the development of human resources and the management of information and knowledge. Any modernization or improvement process must take both assets into account.

As Chief of the Cabinet of Ministers of the City of Buenos Aires and embracing a strong vision which I share with Mauricio Macri of a more agile administration, I focused on working coordinately with all the ministries to implement projects addressed at improving the services rendered to citizens, and, from this perspective, to incorporate and increase the use of the new technology across the whole administration.

Technology is essential to be closer to the people and to make their lives easier, both within and outside the government. We are strongly committed to government modernization, in this case applied to the internal administrative procedures of the city, so as to bring government closer to the people, with more modern, state-of-the art, efficient and friendly tools.

However, "modernization" also means evolving towards the sustained use of new technologies over time, to achieve more activity and transparency in governmental actions.

Throughout our years in office we have taken a huge step forward in the modernization of information technology systems and today people no longer need to file their claims in paper; we have consolidated our call center and citizens no longer need to come into our offices to conduct their procedures.

In order to achieve this, first we had to focus on changing the organization cultural change, we had to work on attitudes and behavior and train people; then we moved onto improving procedures, streamlining them and making them more efficient; to finally go on to incorporate technology.

I also underline that the political space that I represent has embraced the vision of achieving a cultural change and today we are taking a huge step to continue improving and providing order and efficiency to administrative procedures in the City of Buenos Aires.

There is still much to be done. But all these processes are long and I feel proud to have started this stage and to have been able to transform the internal operation of administrative procedures, which are now all digitalized, increasing government transparency and improving services to citizens. Together with the citizens we innovate our experiences and our vision towards the future in furtherance of the evolution of the urban spaces we all share.

Preliminary words of Andrés Ibarra,
Minister of Modernization of the Government
of the Autonomous City of Buenos Aires

Innovation is possible when creativity is coupled with new ICTs tools

Andrés Ibarra

Modernization Minister of the Government of the Autonomous City of Buenos Aires

The idea of a modern city is a "process analysis category". It does not describe something static, but refers instead to a process in permanent development. Using this concept allows us to make changes in the present but, at the same time, to think forward, into the future, as something essential and inherent in politics.

The same happens with the transformation and improvement of document management, because it is a typical process of a modern city. Change is directly related to the digitalization of government management process. For a city seeking to transform itself into a "modern" city, its document and administrative procedure management system is essential. It could be said that, in its beginnings, the essence of modern Government rested upon the rationalization of its procedures (*trámites*). And it continues to be so.

How does an electronic document management system insert in the development of a modern city?

First, by means of the institutionalization of innovation spaces. Somehow, the electronic document management arises from the quest for change and this will always involve innovation; it arises from the work teams' will to create spaces of exchange and conversation for systematic purposes.

However, this innovation is possible when the creativity of individuals is coupled with the possibilities afforded by new ICTs, and this produces stunning changes. Investments and the systematic and programmed incorporation of ICT enable such reformulation of management.

But, what are the effects of electronic document management on a modern city? Principally, there are three consequences: more sustainability, more efficiency and more time saving.

A modern city is a city that is projected as a space with more sustainable procedures. And going "paperless", a consequence of the implementation and development of an electronic document management system, will

have a direct and positive impact on the sustainability of procedures and results.

On the other hand, the concept of efficiency in the frame of a modern city is not exactly the same as the one that has been applied so far. Efficiency (doing the right thing in the right manner) now involves also, other means and manners: to take charge of, and be more responsible for, the employees who work at the administration, the citizens and their needs, and the transparency of the government's actions.

Finally, the electronic document management system will have a significant impact in terms of time reduction, saving citizens' time. The time citizens used to spend at government offices, waiting time and interaction with public officials handling the procedures will now be spent in the personal activities and tasks, leisure or work of citizens.

Consequently, the electronic document management system will foster the development of a modern city, with innovation and institutionalized creativity processes, with a work team focused in maximizing efficiency and in obtaining results with sustainable practices in time and space, always in the benefit of citizens.

INTRODUCTION

1. THE CITY VIS-Á-VIS THE CHALLENGE OF E-GOVERNMENT

When the new administration of the Autonomous City of Buenos Aires took on the challenge of embarking on a modernization that would involve moving the government towards an e-government model, the starting point was daunting: tons of paper, precarious systems, control problems, holographic signatures and registrations, disorderly procedures, scarce use and training in new technologies, lack of information management.

The chances of a major transformation appeared very remote, however, in 2009 such transformation was undertaken with strong determination first from the Legal and Technical Secretariat (*Secretaría Legal y Técnica*), and later with the contribution of the Ministry of Modernization (*Ministerio de Modernización*), created to foster the change process.

Thus, in only a few years, the Government of the Autonomous City of Buenos Aires managed to move forward towards an electronic document management system so that, in 2014, more than 850 procedures (*trámites*) of the Government of the City of Buenos Aires were operated on a fully digital basis. This major transformation in dealing with administrative processing is a key milestone for the City to consolidate as an e-government flagship both in Argentina and on a worldwide scale.

From the Past into the 21st Century in Five Years in Office

In this 21st century, **smart cities** –based on digital technologies, connectivity, collaborative tools and open government– are no longer a futuristic fantasy but a possible reality. However, regardless of the technological advances that are revolutionizing the world on an individual scale, the transformation of a city is not feasible without an integrating vision and a management that will lead it towards new horizons.

The innovation proposed by the new city models start from the **application of the numerous information and communication technology (ICTs) tools** –mobile phones, Internet, tablets, management software, among others–, which undoubtedly can speed-up and improve both the transparency and the efficiency of public administration. However, technology is currently just the **basis for the productive use of information and interconnectivity,** and for new administrative models that will allow **increasing the participation of citizens in city management.**

The new **e-management** and **e-government** paradigm reflects a management conception oriented at satisfying the citizens' needs with ICTs support and on the basis of excellence in public services rendering. Its engine is efficiency, with the resulting processing and management time reduction that avoids mobilization and unnecessary costs and increases citizens' chances to access the information.

When, back in 2008, the **new administration of the City of Buenos Aires** took on the challenge of a modernization that would involve **moving the administration towards an e-government model**, the **road to travel was large:** most of the procedures were conducted by obsolete or unconnected systems, a large number of records and controls were manually handled, disorder reigned and the challenge of moving forward towards a new way of handling public administration was even larger than in other cities.

> The road to travel was large: most of the procedures (*trámites*) were conducted by obsolete or unconnected systems, a large number of records and controls were manually handled and disorder reigned.

On the one hand the starting point was many decades backward in time. On the other, **the dimension, complexity and structure of the City of Buenos Aires actually make it a "City-State"**: 3 million residents and another 3.5 million people commuting daily into the city coming both from the Province of Buenos Aires and from other municipalities, 600 buildings dedicated to public administration, approximately 1,200 schools, 125,000 public officials, 55,000 system users, nearly 850 different types of procedures (*trámites*), 25 million annual transactions, 15 million annual documents.

Public administrations are, worldwide, the organizations generating and processing the largest number of documents; due to their nature, procedures basically consist of record files (*expedientes*) as well as other document containers which support governmental

[1] The Spanish term "trámite" has been translated as "procedure" and "tramitar" as processing, referring to the conduct or handling of a procedure.

[2] The Spanish term "expediente" has been translated as "record file" meaning a collection of documents related to a procedure.

actions and store information. At that time, **all the agencies and divisions of the Government of the City of Buenos Aires operated in paper format,** i.e. the referred millions of annual documents, also involved **millions of papers, dossiers and folios.** Even systems that were allegedly digitalized, involved paper documents which, in many cases, were produced in computer word processors, printed to comply with certain regulations –or merely out of habit– and then scanned for consultation or further use.

The paper-based model –even the paper-digital mixed model– involves not only a **larger volume of archives, physical transportation and material consumption,** but only allows **the information to be processed by human reading.** A technology that was several centuries behind.

Conversely, an actual **digital document management,** an essential step towards e-government, involves, apart from going "paperless", the establishment of **updated information systems** that will allow using digital tools so as to **speed-up procedures, drive down costs, improve services, increase efficiency and show greater transparency.**

As from the initial assessment made by the Government of the Autonomous City of Buenos Aires (GCABA) and the research of international cases made in 2009, the heads of the Legal and Technical Secretariat took on the **challenge of eliminating paper as the basis of the administration and starting on the path to e-government through an internal transformation process based on electronic document management.** The point was made that this process had to be integral: paper had to be eliminated altogether as a container of information, so as to prevent the use of paper from obliterating the survival of the digital container. Following the so-called Gresham Law–"when two types of legal currency simultaneously circulate in one given country, and one of them is deemed "good" by the public and the other one "bad", the bad money always drives out the good money from the market"–, the risk of paper-digital coexistence was avoided.

> In 2009, the heads of the Legal and Technical Secretariat took on the challenge of doing away with paper as the basis of the City's management and starting on the path to e-government through an internal transformation process based on document management.

The strategy was to aim at a **deeply rooted transformation, starting from the very core of processing,** instead of starting from the government to citizen (G2C) relationship –as was the case of many other e-government initiatives worldwide which although having a rapid impact on the public may end up being superficial and underperforming.

With a long-term outlook, GCABA realized that **it was impossible to effectively interact with its citizens electronically without first resolving GCBA's internal management problems,** implementing an effective electronic document management that would allow **moving technology several centuries forward in just a few years**. In order to do so, in 2009 the GCABA started implementing an electronic document management process with systems, equipment and funding of its own. The process started from **simple tools such as the Official Bulletin (Boletín Oficial) and Official Communications,** which were accessible to most public officials. These were the starting points for the introduction of mayor changes and the development of capacities and projects for new implementations.

The first systems, which progressed hand in hand with a necessary adaptation of the regulatory framework, paved the way for the currently wide-ranging "EDMS ecosystem" ("ecosistema SADE"), that encompasses a network of modules integrated around the **Electronic Document Management System (EDMS)** (*Sistema de Administración de Documentos Electrónicos) (SADE)* –among them the **e-Record File** (*Expediente Electrónico) (EE)* and the **Official Documentation Digital Generator** (*Generador Electrónico de Documentos Oficiales) (GEDO)*– available to all public officials through a **Single Desktop** (*Escritorio Único) (EU)* and with an **e-signature** system that allows for the digital completion of all the administrative procedures.

Challenging paper not only involved changing the media of information, but also **rethinking the working method and mind-set of thousands of public officials**, resulting in the streamlining and automation of many procedures. Support and training are still the vital aspects of a management that is oriented **at making this structural transformation an endurable contribution that will lay the grounds for a far-reaching, efficient, open and participating e-government.**

The recent UN Survey "E-Government for the People" (2012) emphasized the significance of internal management, recommending governments to improve the backend or engine of operations before generating offer to the public, in order to achieve a true transformation in the relationship. This is the path that GCABA has been travelling for the last several years, a path of internal transformation with achievements that are worth disclosing now, since a new stage begins in which citizens will have a more active participation, with the certainty that **an internal soundness in the administration will provide him with an answer.**

By the end of 2013, in a relatively short period from the difficult assessment made at the beginning of this Administration, **all GCABA's administrative procedures *(tramitación)* were being conducted electronically, a milestone not only on the local level but also on a nationwide and international scale.**

By the end of 2013, all the administrative procedures were being conducted electronically, a milestone not only on the local level but also on a nationwide and international scale.

Whilst the administrations of the most advanced cities in the world have only a few dozen procedures, **the more than 850 procedures managed by the GCABA operating in a fully digital manner involve a unique e-government dimension.**

This book sheds light on the **experiences and results obtained during the implementation of the electronic document management model** in the Autonomous City of Buenos Aires, addressing its impact in the operation of government not only from a technological or operative perspective, but also from the perspective of the GCABA's team work culture, that has been the key to the success of the process.

The purpose is to inform citizens of the significant transformation involved in **moving from paper based document management to electronic document management**, not only for this administration in particular, but for the **future administration of the City.** This is a profound change that affects the efficiency and effectiveness of the public administration and that lays the ground for the gradual opening of management towards citizens, as

already evidenced by the **recent implementation of the On-line Procedures** (*Trámite a Distancia*) **(TAD)** within the EDM ecosystem (*ecosistema SADE*). This module that became operational in November 2013 allows citizens the possibility of operating and consulting online a variety of procedures directly related with the Government of the City of Buenos Aires.

Leaving paper behind as the basis of management allows also **re-imagining the government function and moving forward towards an increasing innovational e-government.**

We hope this book will also provide **encouragement and orientation to other public administrations** that decide to take on similar challenges **to move their organizations and citizens forward into a management abreast with this 21st century.**

2. SOME CONSIDERATIONS ON THE TASK

Planning and implementing the new electronic document management model in a complex and multidimensional organization such as the Government of the City –with more than 125,000 public officials, 55,000 system users and millions of records–, was not an easy task.

Surmounting a document tsunami, confronting bureaucracy, elucidating Kafkaesque procedures, addressing the resistance to change, are some of the challenges that the transformation leaders had to overcome.

In this chapter, the authors, each from their own unique perspective in the transformation process- the regulatory framework, the systems, the implementation- narrate their experiences and ponder on the difficulties encountered and the achievements obtained.

The Chimera of Going Paperless

Pablo Clusellas

Lawyer — Universidad de Buenos Aires

GCABA Legal and Technical Secretary

I was first offered the position as Legal and Technical Secretary (SECLYT) during the night of June 2007 upon announcement of the results of the runoff that resulted in the election of Mauricio Macri as Chief of Government of the City of Buenos Aires.

I hesitated. I began to investigate on the subject and discovered that the information for conducting SECLYT was scarce: little documentation, a few photocopies containing regulations or organization charts, no e-file whatsoever.

When, despite my doubts, I decided to join the team and the transition commenced, the meetings we held with the outgoing public officials ended up with the delivery of some loose paper. They told us about the problems they were facing and the heroism of their actions addressed at complying with the requirements of Government. I was struck by the significance that document management had for the Official Bulletin (*Boletín Oficial*), which, due to its urgencies, seemed to generate daily premiere chapters of a series or TV soap opera. The activity of the archive, that struggled to **overcome a constant state of emergency** and to stop being a paper graveyard, was also heroic. We were also worried about the pile of record files that would await us upon arrival, and the document tsunami that would be generated with our taking of office. **Mountains of paperwork, Kafkaesque procedures, lack of information.** Finally, I was handed the "lost ark": the record books, which we had to custody as Indiana Jones. Seldom have I had a pressure spike, such occasion was one of them.

Soon after, we took office at the Secretary, with the fearful enthusiasm of the newly initiated. We passed the first exams without drowning in paperwork tsunamis, as we had first feared, however the whole model did not make sense. **During our first days in office we were just running behind the facts.**

> During the first days in office we were just running behind the facts and trying to dodge the paperwork tsunami. In the document management field, the whole administration was being carried away by the turbulent current.

The problem did not lie in the areas of responsibility of the legal department, where we had a good skilled team who knew how to cope with the situation; there were no overflows there and the legal flow allowed us to swim along. In all the other areas, we managed to keep afloat, but unfortunately it was not noticeable enough because **in the document management field the whole administration was being carried away by the turbulent current.**

Thus, we concluded that keeping afloat or clinging on so as to avoid being swept along by strong currents, being only survivors, was not a good story. Escaping from the river and leaving the rest to drown was not good either. We wanted to take part and participate in a different story, one with a different ending. We had to bet all our chips to a profound change,

embark on serious reform work. In this case the challenge involved **finding a different document management model, attuned to the 21st century.**

In 2008 we launched a relatively simple project but with a huge symbolic value, since it opened the door to a change in the work culture. **We decided to move the Official Bulletin to a fully electronic format.** To castle the documental support: instead of digitalizing paper (as was done until then), we had to paperlize the digital support. In other words, we tried to checkmate the paper publication process. The first answers to this initiative was "it cannot be done", but finally in a few months the Official Bulletin became a web, with the huge change that this has brought about in all respects, not only for citizens and their access to information, but also for the administration's internal management.

Fortunately, the administration did not suspect that so little could do so much. They no longer called me begging for the publication of a regulation; the river of publication was channeled and is now sailing towards new horizons. A good start and a good hint of what the electronic document management would later mean in providing a more agile and transparent government solution.

What happened with the rest of the processes? We had channeled only a portion of the documental river, but the plans that Eduardo Martelli, technical head of the project, had already drawn up were bigger. The Official Bulletin's success encouraged us to go after the **chimera of going paperless.** The model to follow was that of Spain, which in 2008 had mandated its public administration to do away with paper, and had granted its citizens the right to demand digital format; the reform was possible.

The Official Bulletin's success encouraged us to go after the chimera of going paperless. The model to follow was that of Spain, which in 2008 had mandated its public administration to do away with paper, and had granted its citizens the right to demand digital format; the reform was possible.

Thus, in 2009, after investigating several e-government cases, it was clear to us that we should avoid a partial reform in order to make a very profound change with tailor–made tools: **a document transformation had to be launched.** The old record file tracking system (SUME) had to be literally blown up and replaced. I remember the comparison that was drawn to me at that time between the SUME and the tracking systems implemented by leading courier companies: if those companies would have put in place the SUME for tracking their deliveries they would have disappeared in a few days.

Thus, we started then holding the **first meetings of the modernization group** presided over by the Chief Cabinet of Ministers, very enthusiastic about the concept of going paperless. Initially we could not grasp the manner in which such a project could be implemented through the Legal and Technical Secretariat (SECLYT). We had to take an exam. We could not lead the project whilst paper-based documents reigned on all fronts.

The first attempts to convince the organization to go completely paperless within a short period of time were not good. After holding a meeting in a large theatre, where hundreds of

public officers became angry just at the perspective of change, we decided to move forward by other road: the Trojan horse tale or the lesson of how to conquer in inferior conditions. **How to change with very little resources a whole administration that is unwilling to change? Well... it must be unaware of what we are doing.**

This is when the **Electronic Document Management System (EDMS) (SADE)** saw the light of day, initially a "tunnel digger" who had to open spaces in the administration's information management avoiding any blockade from those who opposed change. Additionally, we managed to pass the **Public Administration Modernization Law (*Ley de Modernización de la Administración Pública*)** that provided us with a very significant legal and regulatory support vis-a-vis detractors.

> Thus, before long the document transformation project started becoming a reality and digital bombs became more potent. We managed to curb the paper tsunami into an orderly flow of digital documents.

Thus, before long the document transformation project started becoming a reality and digital bombs became more potent. As the predicament gained ground, the phrase **"it cannot be done" was less heard.** EDMS (SADE) progressed by increasing its modules. More and more public officials joined the ranks as they realized that the tangible results allowed them to perform their duties better. The time had come to write a first book, narrating the battles fought, and those that will continue to be fought. I hope that all that has been done so far can be appreciated and understood in this book.

The reason why public administrations usually **abandon document management to the fate of the current is still a mystery** that should be the subject of another book. In this book we want to narrate how we managed to curb the paper tsunami and convert it into an **orderly flow of digital documents that opens the doors to e-government in the City of Buenos Aires.**

A Journey from Utter Chaos to e-Documents

Eduardo Martelli

Bachelor of Business Administration - UBA

GCABA
Undersecretary of Modernization
Project Management

The journey that involved the transformation that we narrate in this book is full of unusual shades, anecdotes, joys, heartaches, fulfillments, annoyances, successes, disappointments, huge doses of work, effort, political will, some boldness, a dose of innocence and pretty much sane insanity. I would like to tell you briefly **how we arrived at electronic document management**, how difficult it was to implement it, how we built the work teams, its significance in terms of administrative reform, what is happening as a consequence of its implementation, how was EDMS (SADE) –this great "Meccano"– built, and some anecdotes of the journey.

Shortly after winning the 2007 mayoral election, Mauricio Macri invited Pablo Clusellas and myself to join in the team of officials of the administration that was about to take office. Neither of us had ever worked in the public sector, and the proposal was to conduct the **Legal and Technical Secretariat** (for readers not familiar with governmental terminology, "technical" refers to **administrative and operating issues**). Pablo would handle the legal issues and I would be in charge of handling the technical issues, such being my field of expertise.

Soon after I took office I began analyzing the administrative circuits and was **"dazzled" by the way in which record files were handled:** pages could be easily altered, it was even possible to number separator sheets containing unnumbered loose pages inside; no signature register existed, the record file tracking system (SUME) allowed anyone to "move" anything, that is to say, whilst the record file was in somebody's possession another area of Government could move such record file forward to any other department without the need of any consent; I detected these and many other failures in the control system. In fact, Pablo told Mauricio Macri that through the existing systems it was impossible to guarantee him that the record files supporting his executive decrees would contain reports or other elements signed by those who alleged to have signed them. **Really, an utter chaos.**

The truth is that looking at the way things were done we did not know whether to laugh or cry. Most of the documents were produced by some kind of IT medium –a word processor or some other system– that is to say, 20th century technology, however **since they could not be "made official" in an electronic manner, they were printed, signed and stored in paper in some kind of container** – either a record file or dossier (*expediente o legajo*) with a technology that went back to the 18th century. Then, in order to be published in the Official Bulletin, the same documents were re-digitalized!

In this scenario and in view that the **Legal and Technical Secretariat is the agency in charge of the administrative processing in the Government of the City of Buenos Aires**, it was clear that we had to do something about this. I believed that there were only two feasible ways: the easy and regular alternative of trying to "fix" what actually existed, an alternative that would anyway take much time and efforts, or a disruptive and revolutionary one: moving to e-record files and documents and doing away with paper.

We did not hesitate; if we were going to commit time and effort to fix something, this should be done to produce a **final improvement, moving administrative processing into the 21st century**. We were not going to work for the past, we were going to modernize the

administrative processing of the Government of the City of Buenos Aires. We had not been elected only to "pass through" our official positions; we had come to the public sector to make a difference; to change obsolete structures so that when we left office, what had been managed by us would be definitely different forever. **We wanted to do something transcendental and we did so; this book sheds light on such transformation.**

> If we were going to commit time and effort to fix something, this should be done to produce a final improvement moving government processing into the 21st century. We were not going to work for the past, we were going to modernize the administrative processing of the Government of the City of Buenos Aires.

Since I was well familiar with the **logics of governmental record files** for having worked in the insurance company industry for many years –insurance companies being fully regulated by the government (Insurance Superintendence) must document all their decisions as is the case of government actions– and since I had became acquainted with e-files there, **we prepared a radical change proposal**. We presented this proposal to Mauricio Macri, who approved it without hesitation. We commented on the legal, political and administrative difficulties that we were facing with a project of such type, but we told him that if we succeeded, the new back-office or internal workings would allow us to open government processing to citizens (not as governments usually do, i.e preparing a guide of procedures with forms, but where citizens do not actually operate the procedure). His answer was "Do not worry, you have my full support".

Over time we realized that **the support and involvement of the organization's highest hierarchies resulted vital to move on** in the proposed direction, to overcome hurdles and to sidestep change detractors.

Looking back on how the stages of this procedure unfolded, I am increasingly convinced that the incredulity with which our ambitious idea was received by the rest of the administration turned out to be our best ally; they did not see us coming, and when they finally realized that the change was actually going to happen, it was actually unstoppable. **Today the project is accomplished and there is no way back.**

An example will suffice to illustrate the cultural change that arouse from the change, **let us focus on record book (*libros de registro*)**. Until a few years ago they were handwritten. Yes. Books were handwritten at each front reception desk, for both input and output purposes (*mesa de entradas y salidas*). This mechanism allowed for an extended –though incorrect– practice of "reserving" numbers for administrative acts. The purpose of such practice was that if a certain task was not performed within a certain deadline, such task could be performed later and recorded on the desired date. The administration could not conceive its existence without this "drug". The implementation of the **electronic document management system** resulted in the shortening of processing times, since **under the electronic document management system dates must be met; there is no margin; dates cannot be changed and, thus, tasks cannot be "procrastinated".**

There is a revealing anecdote which illustrates the degree up to which this practice was entrenched. Whilst I was monitoring and assessing the actual operation of public administration I spent some time at a large input and output front reception desk, a center

for the follow-up and control of procedures to check what they actually did. The first thing that called my attention was that the referred record books were handwritten; therefore I began posing questions to the head of the front desk regarding the use of the book. After explaining me very politely the way in which such books operated, it occurred to me to challenge her by stating that within one year record books would disappear. She answered to me very emphatically: **"This will never, never occur, it is impossible. How would they be able to reserve numbers?."** I then asked her to define "never": would it mean that in 2050 we would continue using handwritten books in spite of the IT revolution into which the world was embarking? She conceded that in 2050 books would no longer exist, so I told her that then we should change "never" for "when". I must admit that it took us a little more than one year, **but currently there are no more handwritten record books** in the Government of the Autonomous City of Buenos Aires.

With Mauricio Macri's endorsement, we began to investigate which were the IT solutions available in the Argentine market and to contact other areas of the Government that were also thinking about implementing e-government solutions so as to reach a consensus on what had to be done and how to do it. However this proved to be time-consuming and prevented us from progressing at the rate we believed was necessary. **It was then when we realized that the project was huge and that there was no time to loose.** So, in 2009, we travelled to Spain to find out what was actually happening there, since we were aware that Law No. 11 of 2008 was mandating the Spanish administration to move on to e-procedures by January 2010. Thus, Spain seemed the ideal place to carry out our research, the latest should be developing there and the language was a great aid for any IT solution that we could find.

> From the outset of the project, the first thing we assessed was that a temporary conviviality with paper would be necessary and that we would need to set up a framework of departments that would later serve for the e-world.

We visited the governments of Madrid, Barcelona and Málaga, where we found that the most varied solutions were being implemented. Most of them very good, but very expensive for our budget. Additionally, the **Information Systems Agency *(Agencia de Sistemas de Información) (ASI)*** of the City of Buenos Aires had established an open code **framework as the technical condition of the solution to be implemented**, which restricted and made it very difficult to find a solution that would cover all those needs. Finally, as in every good story and partly by chance, we found a flexible solution that met all of ASI's requirements as well as our budget.

From the outset of the project, the first thing we assessed was that **a temporary conviviality with paper would be necessary** as well as that we would need to set up a framework of departments that would later serve for the e-document management system. Thus, the former SUME system was replaced by a new module that would track paper record files (expedientes) and would serve as a platform of the incoming system. The **TRACK module** became operational on August 18, 2009. When I look back and recall the huge effort involved in transferring millions of records from one system to the other and that "only" five million "routes" were "broken", the fact that we **suspended the Government's administrative procedures for nearly one week, worked for 15 days at a very slow pace and that it took two**

months to restore full normality, I realize the courage and determination that this step had required.

Whilst one team worked on this indispensable change, but that did not actually consist in the new solution, I conducted an in-depth study of the Government's organization, its rules and its culture, and was able to see very clearly the **technical and implementation problem** that we were facing.

Finally, I realized that **making a direct move from digital documents to e-record files** was impossible because we would generate a huge crisis in the organization and that neither the administration nor we would be able to cope with such a huge change without some kind of intermediate step. Analyzing the different types of administrative acts I noticed that **the Note (*la "Nota"*) and the Memo (*el "Memo"*) —the lowest administrative acts in the scale which were extensively used— could be used as a "Guinea pig".** So, it occurred to me that we could do something intermediate that would allow us both to **introduce the organization in the use of e-documents and digital signatures** and to make the officers understand that the workflow resulting from the creation of a document is different from the workflow arising from the procedure itself.

This concept of decoupling the document flow from the procedure flow was, in my view, **the most significant conceptual change** compared to all the other solutions that we had encountered in our case research. Thus, **we untied the generation of each and every document, from its container** —Record File (*Expediente*), Folder (*Carpeta*), Dossier (*Legajo*), Registry (*Registro*)—. This distinctive feature makes the SADE eco-system very different from other Document Management solutions and this was the reason why it was necessary to **build the system completely from scratch.**

> This intermediate stage was implemented through the Official Communications module, which on April 19, 2010 allowed me to sign the first official e-document of the Government of the City of Buenos Aires.

With this view, we obtained a "protoGEDO" in Official Communications, that is to say a first approach to the Official Documents E-Generator *(Generador Electrónico de Documentos Oficiales)*, currently the crux of the whole SADE Ecosystem. We also got the team to learn to send proceedings (actuaciones) to other members of the organization without having to go through the Reception Desk (Mesa de Entradas). Consequently, we also obtained a "protoEE" (Electronic Record File) *(Expediente Electrónico)*, that is the second most important component of the ecosystem. Thus, in a relatively short time, we managed to cause the administration to take its first steps in e-processing (*tramitación electrónica*) without causing the collapse of the whole system, since **we only replaced the paper Notes and Memos by the electronic ones, which involves taking a lower risk.**

This intermediate stage was implemented through the **Official Communications Module *(Módulo de Comunicaciones Oficiales)* (CCOO), which on April 19, 2010 allowed me to sign the first official e-document of the Government of the Autonomous City of Buenos Aires.** This module is something that I have not seen in other governmental initiatives, I really do not know whether there is any of the kind currently in operation. Anyhow, I strongly recommend anyone who intends to undertake this "journey" to implement this module as

the kickoff of the cultural change, since it ended up being extremely useful and a perfect bridge to arrive at "destination". Furthermore, it is fully effective for any kind of notices or applications, for filing any kind of procedure or allowing access to the record file without the need of forwarding it, thus, streamlining the procedure and avoiding time waste which adds no value to the procedure.

At such time, the Chief of the Cabinet of Ministers (*Jefatura de Gabinete de Ministros*) provided us with a **work team exclusively dedicated to the implementation**, which went around department by department training employees and eliminating the paper alternative for operations, that is **much more than the usual group dissertations and group training** that are usually provided in these cases. This was a hand to hand work, with many facets, as María José Martelo, in charge of the training phase, explained in the section "Hamlet in the jungle: the challenge of implementing digital document management".

With the incorporation of this new team we managed to set up the four necessary teams to carry out the project. Such are: **the operational team**, that surveys operations, designs solutions and works closely with the EDM solution provider; **the legal team**, composed of a special team of lawyers dedicated to analyze existing regulations and to propose the necessary regulatory changes so as to implement the new solution; **the implementing team**, that reaches to all the corners of the administration; and the technical, in this case the Information System Agency ***(Agencia de Sistema de Información)*** **(ASI)**, setting up the necessary environment for the implementation of the system.

> As EDM (SADE) developed it turned out into a large "meccano", where its pieces progressively began to connect. Each module is supplementary of another one, or a combination of several ones at a time, due to the reuse of the different software pieces.

Of the aforementioned four teams, **the operational team** has several facets, among them I especially highlight **the activities** conducted by Rita Domínguez, in charge of the Document Management General Division *(Dirección General de Gestión Documental)*, since thanks to her efficiency in the handling of citizens' demands, in the constant improvement of functionalities and in the management of applications and training, we succeeded in attaining constant innovation over a the community of 55,000 City employees and across the large heterogeneity of the more than 850 identified procedures, and in more than 600 departments.

The next step involved the implementation of the **Official Documentation Digital Generator (*Generador Electrónico de Documentos Oficiales*) (GEDO)**, that underlies the Official Communications (Official Communications) (CCOO), but with a **large number of rules to correctly manage all types of documents.** In this case, again, we took an unconventional decision: **to make its use mandatory for the generation of documents** although we had not implemented yet the e-Record File (*Expediente Electrónico*) (EE). As results of this, users began getting used to using the same flow of CCOO, for the rest of the documents; then they had to print them and incorporate them into paper record files. In this way not only did we train them in the use of the module, but also managed to **control the signature and issue date**, bringing about an enormous change into the organizational culture, as I earlier explained.

Next came the turn of e-Record Files **(EE)**, which actually allowed change to become final. At this stage, **the approach to implementation was procedure-driven (por trámite), not on a department basis**. The TRACK module progressively barred the possibility of creating record file covers in paper, allowing only the creation of e-record files. This process called for **new implementation strategies**: as to public officers, we needed to know what they were actually doing, what documents they used, what rules they applied to each procedure. Our first approach was to start talking to senior levels, but in time we realized that such strategy was adequate only in very few cases; such level was precisely the origin of much of the resistance, therefore we took the decision of sending analysts to every reception desk (mesas de entradas), who would de-file procedures and analyze them on a case-by-base basis so that when we attended meetings with the senior authorities we were –in many cases– more acquainted and familiar with the way operations were conducted in their own departments than the senior authorities themselves.

The following anecdote illustrates precisely how sometimes the middle and higher management levels are the ranks that resist change out of fear that they may loose some degree of power or comfort. Once I had to go to the HHRR offices of a Department for an issue unrelated to Document Management and whilst I was there waiting for the head of the division, an employee from her desk asked me if I was "Martelli". My first thought was "now she is going to complain about EE" since we had recently implemented them for HHRR. But, to my enormous surprise, she told me –in a very low voice, nearly whispering "... **EE is really great, not only because it is fast, but also because I have no papers on my desk so I loose nothing; and most of all because now I can be aware of who actually has the record file** at Central HHRR and therefore I can know what is that employee actually doing with the file. I can phone Martita and tell her, please process my dossier because I can notice that it is delayed at your office...". At that precise moment her boss came in and having overheard the conversation she confessed: "I haven't learnt how to use it, but they tell me EE is very good". **We had managed to change the administration and the organizational pyramid is sometimes inverted.**

> Technology will keep surprising us and providing us with new and wonderful tools to enhance Government, enabling it to provide more services and being closer to citizens.

As the EDMS (SADE) developed it turned out into a large "meccano", where progressively all its pieces began to connect. Each module is supplementary of another one, or a combination of several ones at a time, due to the reuse of the different software pieces. Thus, the following modules came next: Single Desktop (*Escritorio Único*) (EU), Signature Holder (*Porta Firma*) (PF), Chief of Government Signature Management (*Administración de Firma del Jefe de Gobierno*) (AFJG), Archive (ARCH), Works & Services Contracts (*Locación de Obras y Servicios*) (LOyS), the integration of e-Procurement Buenos Aires (*Buenos Aires Compras*) (BAC), Multipurpose Dossier e-Management (*Registro Legajo Multipropósito*) (RLM), Health Personnel Designations (*Designaciones del Personal de Salud*) (DPS), Regulatory Information System (*Sistema de Información Normativa*) (SDIN), e-Roll Registration Single Credential No. (*Legajo Único Empleados*) (LUE), Suppliers Single Administrator (*Gestor Único de*

Proveedores) (GUP), On-line Procedures (*Trámite a Distancia*) (TAD), services to other systems, each of them with their own anecdotes and challenges of all kinds. But I would like to refer, particularly, to the e-Civil Registry (*Registro Civil Electrónico*) (RCE) and to the Subsidies Single e-Processing Platform (*Tramitador Único de Subsidios*) (TUS) with its RIB and PSOC modules, for the impact they are generating and because they are an innovation in themselves, apart from the document management in particular.

Until the introduction of the e-Civil Registry (RCE), the Civil Registry had basically operated as it did back in 1886, year of its creation, where **vital records were recorded in handwritten books** and searches were conducted on the basis of indexes and books stacked in shelves. Bearing in mind that approximately 2,000 birth certificate copies are requested each month, we can realize the absurdity of such operation in 2014. With the new system, and in spite of the fact that it will take some time for all the links to be loaded, we will have at any time a "photo" of the civil status of each person and his/her family relations, that is to say, we will have a life line of each person.

But what I would like to emphasize is that not only did we improve information and certainty, but also that we will be able to provide citizens with efficient **services and time savings -otherwise devoted to pointless procedures.** If additionally, this could be combined with the rest of the civil registries in the provinces and with the Federal Civil Registry (*Registro Nacional de las Personas*) we could revolutionize the identification of persons in Argentina, providing an invaluable assistance to the possibility of online procedures, without requiring attendance to governmental offices, standing in long lines or coming and going upon the whim of the officer on duty.

The Subsidies Single e-Processing Plan (TUS) will allow consolidating in a single registry all the information regarding the granting of subsidies in the City of Buenos Aires, with individual programs for each social plan. This will exponentially improve the subsidy granting criteria, making social aid more fair, effective and transparent. This system should be a model to be followed by many other districts in Argentina.

Finally, I would just like to say that I hope that future Administrations will continue this trend and progress further on, never changing the direction of the path that has started and will never stop, since technology will keep surprising us and providing us with new and wonderful **tools to enhance Government, enabling it to provide more services and being closer to citizens.**

With this in mind, as technology progressively allows us access to all the data provided by people, objects and nature –and this is not too far way from being accomplished– we will be interacting with the world in a very different manner. It will be a new age of knowledge and governments will have to **re-think institutions, cities and nations.**

Hamlet in the Jungle: the Challenge of Implementing Electronic Document Management

María José Martelo

Bachelor of Social Communication - UBA

Administrative Modernization General Director

Government of the Autonomous City of Buenos Aires

It is said that **perspective conditions everything**, more still than the determination of the context, and that, for example, when an actor is asked about the plot of the play he is acting in, he will always narrate the story centered in the role he is actually playing: "it is the story of a messenger who always brings the worst news to King Lear".

I had to face the challenge of **carrying out the actual transformation towards an electronic document management government in the "territory".** The strategy was to start from an easy application in operational terms, Official Communications (*Comunicaciones Oficiales*), but which contained two features that would allow escalating and quickly moving on to record files, documents and signature control. The application, which is similar to an e-mail, had to be very well assimilated by users, but, would also introduce new concepts, the tip of the iceberg for the administration: e-signature, tasks mailbox, Allocator, Producer, Reviewer and Signor roles, basic duties in the production of Government documents. On the other hand, the implementation of this module would call for reviewing and straightening up the processing containers and documents that were being chaotically used by agencies and divisions (record files (*expedientes*), dossiers, (*carpetas*), memos, notes, etc.).

The territorial **scale of implementation** was somewhat scary: 600 administrative agencies and divisions under the General Directorate (*Dirección General*), 33 hospitals, approximately 1,200 schools, and more than 55,000 users of the system. The idea was to personally conduct **field surveys of the operation** since the central Government was practically unaware of the mechanics of operations; to draft an EDM proposal, to validate it with management, to train and start up operations and to provide first line support.

> The territorial scale of implementation was somewhat scary: 600 administrative agencies and divisions under the General Directorate (Dirección General), 33 hospitals, approximately 1,200 schools, and more than 55,000 system users.

Although the challenge was impressive, we were highly motivated with critical but practical thinking and a large dose of histrionics —"funny and necessary" combination for the Government jungle— of Pablo Clusellas and Eduardo Martelli, who led the transformation process. In the first kickoff conversations of the project, they provided an acid and accurate diagnosis of the City of Buenos Aires administration that I summarize in the following statements:

- **"The pyramid is inverted.** Power and information rests in the reception desk (mesa de entradas) and in the lower rank administrative employees. Processing must be initiated electronically and information must be forwarded to higher ranks for the adoption of decisions".

- "Stopping the administration for one or two days... poses no risk because **we cannot do it worst and slower** than what they are doing now; we have no data, we do not even know what they are doing".
- "**Time** is our scarcest asset".
- "They will tell you that they are lacking equipment, and they are probably right, but **it is a very complex organization** and one in which if you wants things to happen you will always need to put the cart before the horse".
- "They are going put up resistance, they are going to accuse us of going against the rules of the stratosphere.. Our proposal is audacious and daring, but **we are not going to do anything that is non-compliant with the law of administrative procedure, procurement or budget.**"
- "**We are clearly aware of where we want to go**. Be emphatic because they are in the trenches and surely they are good people... but never allow such field to intoxicate you so that you loose the course of what must be done".
- "This is an administration that **needs many years to achieve changes**. The things we do and define now will be here for many years to come".
- "This is a **class of beliefs** between our vision of change and theirs, for resistance".
- "There is no change without pain ... and we are willing and ready to provide it for the sake of a better government".
- "If you are in this change "business" and you want to be loved... buy a dog".

Since I had been working in public administration for many years, I shared the view of Eduardo and Pablo's diagnosis and this greatly motivated me to **dream of something different**. I thought that the project was very ambitious and, therefore, more inspiring still.

> Our proposal is audacious and daring, but we are not going to do anything that is non-compliant with the law of administrative procedure, procurement or budget.

It was the scale what actually scared me most. We began working with very young graduates in Business Management and Social Sciences, who took the challenge they were facing as a sort of university workshop involving ethnographic field research on public administration. I really realized how young they were when I discovered that they had never seen comedian Antonio Gasalla's TV sketch female impersonation of a petty public servant. The good thing was that they didn't even have such a stereotype operating in their minds -they were fully "detoxified" and were highly motivated to discover the administration.

In light of the disciplines from which all of us the implementers came from, the most appropriate allegory would probably be to say that we were going to conduct **participant observation, narrating Hamlet in the jungle to a tribe that was totally unaware of our occidental beliefs and that, more than a change, this would amount to a revolution.**

I recall, with tenderness, that we had internally developed a working mystic within the implementation team, mystic which I believe necessary and essential to face any challenge

involving change. A pseudo-pretentious mystic of "Social bugs", seduced by tensions, entities, the analysis of enabling conditions, cultural clashes, the transcendent, the Hegel moments of rational thinking. Rather far-fetched? Yes, of course. The mystic made sense only if it was fed back by **rapid changes and specific achievements in the field**. Thus, after each landing in government departments so heterogeneous as the Vehicle Fleet (*Flota Automotriz*), Cementries (*Cementerios*), Urban Health and Waste (*Higiene Urbana*), Environmental Protection (*Protección Ambiental*), Consumer Defense (*Defensa del Consumidor*), etc. we conducted joint work with the "tracker moles" (*topos rastreadores*), experience feedback, reluctance to change, linguistic operation perception. We encouraged each other and saw ourselves as a part of history in the making of **change and counterchange.**

As we moved forward in the implementation and conquest of government departments, we progressively experienced how reluctance to change was getting more violent. **As change was progressively being implemented, intransigence arouse in non-impacted areas.** It was a balloon effect, something like "first they came for them.. now they are knocking at my door and coming for me".

> We surveyed 790 specific procedures however these may be broadly categorized into three groups: audit, recordation and decision making. The diversity, chaos and heterogeneity existing in government departments had now achieved practical simplicity and an overall view.

In this way we managed to learn more about our role as implementers, about the **difficulties involved in keeping up a transformation in an organization where power is so atomized**. We were specifically noticing that our mission was actually to **narrow the gap between the map and the territory**, handing over to the cartographer (Pablo) and the guardian of the model (Eduardo), our journey and field accounts to adjust the regulations and tactics so as to close deviations from the operation. Specifically, Eduardo made a practical and quick translation of the paper transactions into the e-platform and Pablo illustrated us on the administration duties in terms of **simple auditing, recordation and decision making instructions.** We surveyed 890 specific procedures however these may be sorted out into groups according to the referred three actions. The diversity, chaos and heterogeneity existing in government divisions had now achieved **practical simplicity and an overall view.**

As part of our visits and surveys around the Government offices, we found employees hidden behind piles of paper, **proud of showing desks packed with records/files** as if this would positively mean that one was "overloaded with work". At the Ministry of Culture we were compared to crimes against humanity; at the Ministry of Health we were accused of "interrupting the transplant of a little boy"; at the Ministry of Public Spaces we were charged with having a "disrespectful paving" attitude, and thousands of other stories.

Over time, we managed to decipher the **encrypted meaning underlying employees' intransigence.** First, the population at stake had never reached the first wave of computer literacy. Second, they felt competent and proud of having performed the same tasks for the last ten or twenty years, and we were coming to tell them that such which they made would be no longer done and, moreover, and if this was not enough, that their tasks were

improperly performed and that they added no value. Third, we perceived that directors generals had a certain degree of despise for management duties.

Inherently, resistance to change was a symptom that showed **deep fear** of loosing their job based on the individual belief of not feeling courageous to face the change and learn the applications. To achieve results we had to work largely on **strengthening the employee's skills.** Accordingly, we decided that training was to be afforded at the employee's will and on a permanent basis and never restrictively. Thus, we have realized that some people took the same course six or seven times on the most simple ecosystem application.

To achieve results we had to work largely on strengthening the employee's skills. Accordingly, we decided that training was to be afforded at the employee's will and on a permanent basis and never restrictively.

It is also true that we have **met many employees with a true vocation towards public service**, a great deal of dedication at the trenches, a condition that is equally or largely more inspiring than the message sent from the top management.

Finally, I want to mention that we have had a strong political support, a network of inter-institutional links between the Legal and Technical Secretariat (*Secretaría Legal y Técnica*), the Chief of the Cabinet of Ministers (*Jefatura de Gabinete de Ministros*) and the Ministry of Economy (*Ministerio de Hacienda*). Moreover, subsequently, the **Ministry of Modernization was set up to foster and to implement the cross-cutting transformation of electronic document management**. We also got the support of strategic management personalities in other ministries who opened us the door and curbed their internal resistance. These strategic personalities needed field information and the data of operations that the IT applications would provide to embark in their own local management transformation.

As to the results, they always generate addiction: 17 developed and implemented applications, 55,000 active users, 1.5 million official communications generated, 15 million e-record files, an excess of 1 million covers of e-files and records, 745,000 registered beneficiaries, 25 subsidy plans operating electronically, **inter alia.**

In this path travelled in only five years, I had the chance of accompanying, participating, contributing and empirically determining the motto that the guardians of the model had repeated to me from the outset: "time is the scarcest asset". Therefore, for a transformation of this size to be accomplished and maintained, **one must only concentrate on the transversal generality and never waste energy on particular cases.**

Finally, I warmly thank all those young graduates and enthusiastic people who participated in this project since 2010, because the above figures and the results narrated in this book are the product of the **insistence, persistence and clarity in the field work**. And it is precisely to them that I dedicate the phrase that I recently overheard in awe and with pride at a government division, so that you may notice how time materialized into results, consummating a true e-management revolution: "I send you the e-Official Communication so that we can pay next month by means of the PSOC system, OK?".

We did it!

3. NEW TECHNOLOGIES TO REFORM PUBLIC ADMINISTRATION

E-government involves a change of paradigm: the use of new technologies not only speeds up and makes public administration more efficient but also generates opportunities for citizens to become more involved in management and for the development of sustainable models.

This new conception is possible thanks to the convergence of public administration reform and modernization concerns with the information and communication technologies (ICTs) that have greatly impacted the world during the late 20th and the early 21st century.

Clear and updated information allows for the implementation of better public policies. Electronic document management, a necessary condition for an e-government model, involves the adoption of new technologies for transforming public administration procedures and working methods, keeping them up with the times.

From Bureaucracy to e-Government

The **professional function of government** arouse approximately in the 13th century, with the inception of the **first public organizations with qualified and paid staff** in Germany and France. They involved administrative personnel bodies created within the monarchies to stress the differences and draw the line between the political and religious sphere in organizational and institutional terms. In many cases, their officers where anyhow priests or aristocrats qualified to handle the technology of the time: writing, to record the acts of government.

Approximately some centuries later, as professionalized governments grew and their territories expanded, **bureaucracies** appeared, becoming one of the distinctive features of **modern societies.** A group of specialized government officials performed from their desks and offices ("bureaux") the recordation, registration and filing functions of government acts, fundamentally on the basis of paper: files, certificates, records, books, forms, booklets, sheets, etc. The ever more complex and inflexible management of these papers –a nearly dehumanizing practice devoid of final purpose– became in many cases the core of public administration, the concept of "bureaucracy" –i.e. the power of the bureaux– developing the **negative connotation it currently has today.**

Thus, during the 20th century several **administrative reform attempts** arose seeking to transform the operation of the large and heavy government organizations inherited from previous centuries. Although the attempts were sporadic and had different results –overall, generally, below expectations– they established the concept of organizational change in government and laid the **grounds for management models aimed at efficiency and effectiveness.**

> To achieve results we had to work largely on strengthening the employee's skills. Accordingly, we decided that training was to be afforded at the employee's will and on a permanent basis and never restrictively.

As the **information revolution** –also referred to by some authors as knowledge or communications revolution– began to emerge in the late 20th century, government organization models based on the new technologies emerged. First, in the 1980s and 1990s administrations **incorporated PCs as management tools**, later followed by the incorporation of networks. Although the incorporation of technology was a step forward, it also involved document duplication and paper increase (by enabling photocopies and printed copies), hindered synchronization and team work, resulted in limited and complicated access to public information, *inter alia*. Consequently **electronic document management models** arose as a response to such problems, in order to organize, coordinate, speed-up and facilitate public administration with the support of information and communication cutting-edge technologies (ICT).

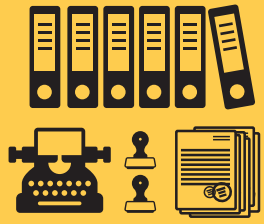
The ever expanding and relative low cost opportunities afforded by the new technologies to society at large, even in developing countries, triggered a new approach to rethinking government activities. Over time the term **e-government** was coined to refer to a new

Stages of Documentation

Historical evolution of government records and management

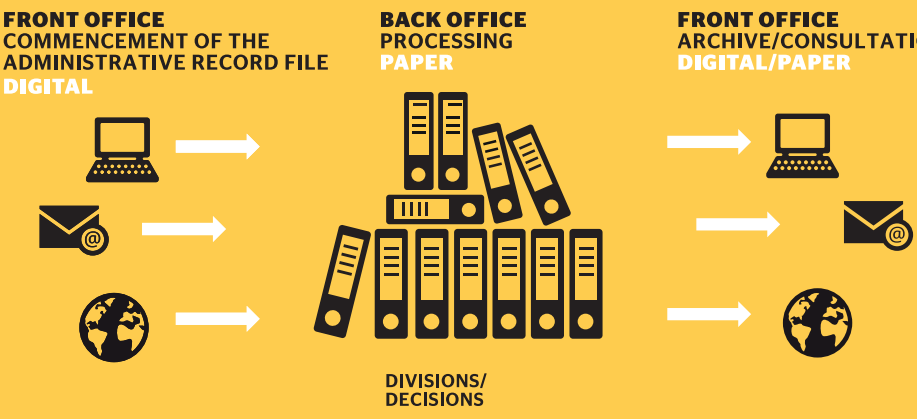
First governmental records
Antiquity

First professional governments
Middle Ages

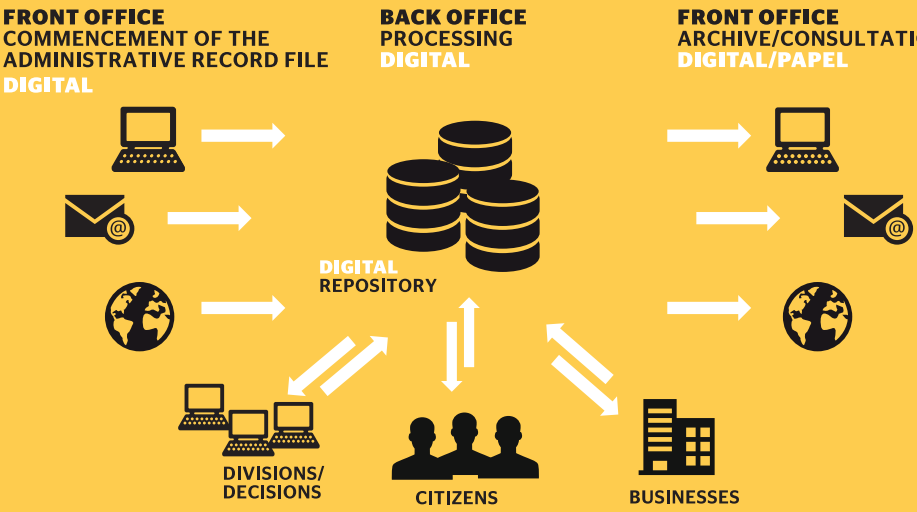


Bureaucracy
19th century

First ICTs. Late 20th century



e-Government. 21st century



proposal that involves state management by the use of intensive technology so as to improve efficiency and effectiveness and an **in-depth transformation that will modernize government and bring it closer to the citizens.**

E-government is defined today as a means to approach public administration with the support of ICTs to **enhance services and information offered to citizens and organizations improve and streamline institutional support procedures and facilitate the creation of channels that will allow increasing transparency and citizen participation.** Thus, e-government aims at optimizing the use of resources available in the 21st century to attain governmental goals, while also promoting a **more direct, open and transparent relationship with citizens**, who are increasingly using such ICT tools in their everyday life.

Europe, with England and France at the forefront, has been on the cutting edge of this new **government approach, more agile and interactive and with far less paper**. E-government projects were implemented there on the basis of relatively primitive technologies, whereas countries such as the U.S., Spain or Estonia have recently implemented more integrated models based on ICTs technological leapfrogging occurring early in this 21st century.

> Technology in itself does not bring about reform, but makes changes easier, cheaper and more effective.

Following the cutting-edge countries, the e-government model beacons **the path for public administrations worldwide**, since it appears as a **tool for fostering transparency, inclusion, sustainable growth, and economic, political and social development**. Growing infrastructure, greater access to information and education, massive computer literacy are some of the factors that accelerate the transition towards e-governments even in developing countries. In the words of an e-government report published by *The Economist* in 2008: "Technology on its own will not bring reform, but it can make changes easier, cheaper and more effective".

ICTs and the New "Smart Environment"

Today it is unquestionable that the Internet, cell phones, PCs, tablets, smart phones and other "new technologies" that have incorporated into our lives during the last decades amount to an **unprecedented social revolution due to their massiveness and speed of expansion.**

ICTs have **globalized and quickly permeate society**, affecting not only the internal management of public and private organizations but also the way in which people relate with each other in different socio-economic contexts. According to the figures released by the International Telecommunications Union, the UN specialized agency responsible for issues concerning ICTs, by the end of 2014, 44% of households worldwide will have access to the Internet; there will be almost **3 billion Internet users**, two-thirds of them coming from the developing world, whilst the mobile-cellular subscriptions will reach **8 billion lines** —early one per person worldwide— of which one-third will have broadband Internet access.

As results of the exponential growth rate of the projected global infrastructure, the accumulated experience and the incorporation of "digital native" generations we may **foresee even more revolutionary changes in the not too distant future**, as technologies integrate and potentiate.

As regards this new stage that opens to the application of the new technologies, the expert Kevin Maney explains:

> *When data from people, things and nature can be tapped, mixed, matched and analyzed, the world will speak to us in new ways. The challenge then for leaders will be to rethink conventional wisdom and existing institutions, corporations, cities and nations.*
>
> *Technology is liberating data from the world around us. The data has always been there –in the growth of crops, movement of people, billions of daily transactions, changing levels of a stream– but now we're beginning to capture, decipher and understand it. This new tide of intelligence is changing what we know and what we want to know. As the trend picks up speed over the coming decade, technology will once again change the way the world works.*

And so the **"smart environment"** approach arouse in the last decades. This involves taking a step further in the application of information and communication technologies, to improve the daily lives of people, with **smart cities** as the cornerstones of this technological revolution.

What are the features of a "smart environment"?

- Information available anywhere and anytime.
- Use of available information to generate solutions.
- Elements linked through networks or the "Internet of Things", i.e.: vehicles, cell phones, TV sets, sensors and other interactive devices with access to information and interconnected between themselves.
- Added value for making connectivity smart.

Buenos Aires, smart city

For the Government of the City of Buenos Aires, a smart city is one whose policies are generally and fully addressed in furtherance of efficiency and transparency of the governmental processes, access to public information, sustainable development, economic and social integration by the implementation of new technologies and the provision of a broad scope of services to its citizens.

Its key features are:

1. A high level of development of ICTs.
2. An urban infrastructure oriented to environmental protection and the efficient use of resources.
3. The innovation of services to citizens provided by the public and private sector, promoting social integration.

- First stage, focused in the efficiency of existing models. Second, focused in rethinking activities and creating new models from the possibilities of technology.
- Reusing information processing the ever growing big data.

Experts believe that **the public sector is one of the engines of the smart environment** since it promotes development and the maturity of technologies in a large scale, for instance, by the "smart" measurement of public services.

E-government initiatives are currently in line with this **vision of development supported on technology to improve the daily lives of people.**

The e-Government Model

As results of the convergence of state reform processes and the development and popularization of ICTs, **e-government established itself as a necessity to bring all public administrations, worldwide, into the twenty-first century. Such new state model calls for a different government.**

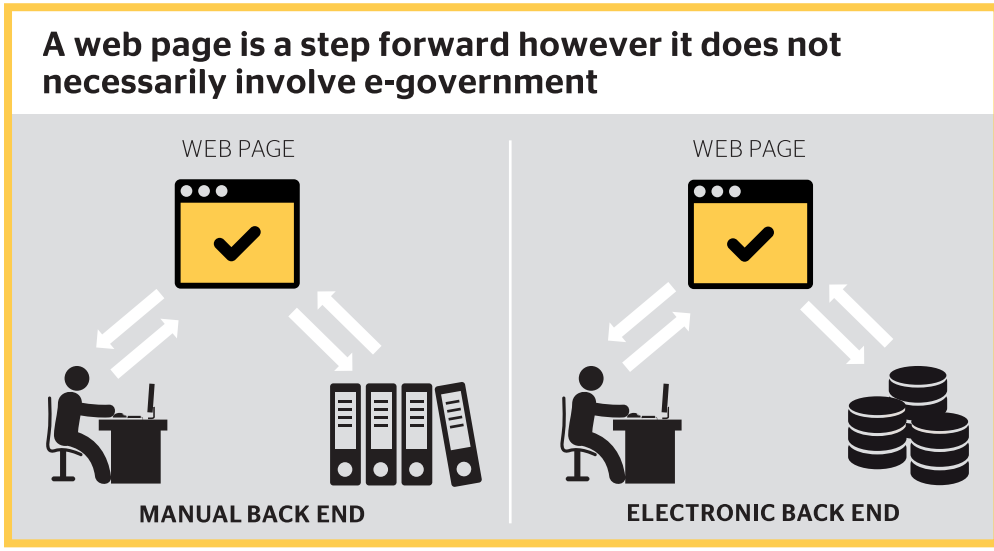
The UN "E-government for the people" report (2012) states that:

> *The underlying principle of e-government, supported by an effective e-governance institutional framework, is to improve the internal workings of the public sector by reducing financial costs and transaction times so as to better integrate work flows and processes and enable effective resource utilization across the various public sector agencies aiming for sustainable solutions (...). It seeks to establish better processes and systems' aimed at more efficiency, effectiveness, inclusion and sustainability.*

The UN prepares an **e-government ranking on a country by country basis** measuring "the willingness and capacity of national administrations to use information and communication technologies to deliver public services", on the basis of its development status of telecommunications infrastructure, its scope and quality of online services and its inherent human capital. **The first rank position worldwide is earned by the Government of the Republic of Korea, followed by the Netherlands, the United Kingdom and Denmark, followed closely by the United States, Canada, France, Norway, Singapore and Sweden**. The group of emerging leaders is headed by Austria, Island and Spain, with Chile ranking 39 and Colombia 43 as the first Latin-American countries in the list, followed closely by **Uruguay (50), México (55), Argentina (56) and Brazil (59).**

> There is no single model of e-government. Each initiative is the result of a combination of local needs, technological advances, availability of resources and other issues that vary in time and place.

The analysis is dynamic, highlights the UN, since **there is no single model of e-government.** Each initiative is the result of a combination of local needs, technological advances, availability of resources and other issues that vary in time and place. However, **some common elements to all implementation experiences** can be identified:



- **Goals.** In general, all e-government initiatives share goals such as transparency, efficiency and getting close to citizens.
- **Guiding principles.** There is a general guiding framework for the implementation of any e-government model.
- **Implementation phases.** Moving from a traditional model to a fully digital one involves several stages that progressively increase in the complexity and variety of tools used.

E-Government Goals

In general, **all e-government initiatives pursue the following goals, both as regards G2C and G2G:**

- **Proximity, closeness.** The government is aware of the citizens' needs and adapts its services to such needs; in turn citizens can have a larger participation in the management of their cities or countries.
- **Modernization, innovation.** New technologies are incorporated to management so that the government not only keeps abreast of the times but also becomes the driver of advanced changes, such as the promotion of information society among its citizens.
- **Agility, velocity.** The new organization and rationalization mechanisms implemented to streamline procedures bring about swift operations and avoids downtime. Citizens need less steps to complete their procedures, which may be conducted from any place, at any time, without queues and waiting time.
- **Effectiveness.** The government conducts its activities and achieves its set goals.
- **Efficiency.** The administration attains its objectives at the lower possible cost, since duplications are eliminated, resources are shared and paper transportation, storage and management are reduced.

- **Service-oriented.** The government is no longer a vast bureaucracy imposed on citizens, to become a results-focused organization.
- **Transparency.** Process automation, statistics and reliable data, traceability of operations among other e-government features facilitate government accountability and the provision of information to citizens.
- **Inclusion.** The new technologies simplify access to public services to those who had great difficulties to get to public offices, either due to geographical location, physical conditions or other problems. E-government is an essential step forward to facilitate, in equal conditions, full integration of these citizens into public, social, labor and cultural life.

E-Government Guiding Principles

The Latin American E-Government Chart (Carta Iberoamericana de Gobierno Electrónico), a proposal made by Centro Latinoamericano de Administración para el Desarrollo and adopted in 2007, promotes the importance of abiding by the following principles when implementing e-government initiatives:

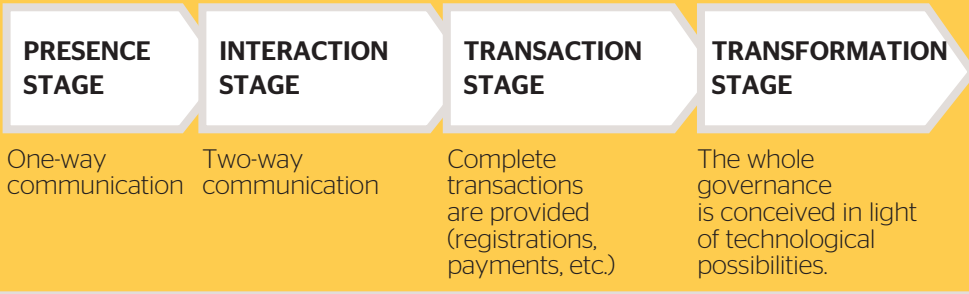
- **Principle of equality.** It is essential for electronic means to avoid "restrictions or discriminations against those citizens that relate with Public Administrations by non-digital means".
- **Principle of legality.** Guarantees afforded should be identical both for G2C relations conducted by e-means as well as for those conducted by traditional ones and, particularly, personal data protection regulations must be abided by.
- **Principle of conservation.** These principles guarantee "that e-communications and documents are to be kept in the same conditions as traditional means".
- **Principle of transparency and accessibility.** "Guarantees that Public Administration and public services e-information must be afforded in a clear and comprehensible language according to the addressee's profile".
- **Principle of proportionality.** Seeks that "the security requirements be adequate to the nature of the relationship established with the Administration".
- **Principle of responsibility.** This principle proposes that "the Administration and the Government answer for their actions conducted by e-means in the same manner as they answer for actions conducted by traditional means".
- **Principle of technological adaptation.** "Administrations shall choose the most adequate technologies to satisfy their needs. Open and free software standards are recommenced due to their security, long term sustainability and to prevent public knowledge from being privatized".

Phases for the Implementation of e-Government

The path towards e-government involves compliance with certain phases or stages that gradually increase in the complexity of the means involved, however they are not necessarily implemented in a one-by-one successive order.

Phases for the implementation of e-government

Phases increase gradually in line with the complexity of the means involved however they are not necessarily implemented on a one-by-one basis.



- **Presence stage.** In this stage public administrations develop a unidirectional communication, furnishing citizens with information through relatively simple digital means, for instance, portals with links to different information sites on the requirements to conduct procedures. The support format may be 24x7x365 (permanent), for example, through Internet presence or a telephone help-line.
- **Interaction stage**. Once the presence phase consolidates, public administrations develop a bidirectional communication that provides information consultation services, information requests and form downloading. The information may be supplemented with videos, tutorials and other resources.
- **Transaction stage**. This phase involves the provision of full transactional services to citizens by e-systems, such as tax payment, registrations, certifications, license applications, etc. This stage usually requires some kind of authentication and may include the management of funds.

> The transformation stage involves having achieved full digitalization of internal and external procedures so as to allow catering for the needs of an integrated citizen- oriented model.

These first stages involve an effort by public administrations to adopt the necessary infrastructures for the implementation of security mechanisms for transactions, such as e-signature, and in internal organization programs that will allow catering for citizens' demands, putting in place citizen services that are supplementary to the paper-based traditional ones.

- **Transformation stage.** In this last stage, the whole government management is reconsidered in light of technology capabilities, to focus on the needs of citizens. The administration works in an integrated manner and is oriented to events in the life of a citizen, such as the purchase of a dwelling, the request for education loans or the opening of business. It requires a model based on the single-desktop concept (ventanilla única), with multichannel, integrated and personalized citizen's attention: either by presence, telephone help-line and the Internet with multidispositive access and service 24x7x365.

Thus, citizens can commence a procedure by one channel and then follow it up by another channel, always having access to the information. At this stage G2C communication is essential, since citizens will participate through 2.0 web and other interactive tools.

- Reaching **the transformation stage involves having achieved full digitalization of internal and external procedures** so as to allow catering for the needs of an integrated citizen-oriented model. Thus, among other benefits, at this phase governmental agencies no longer need to request citizens for information which is already held by other agencies, from which the required information will be sought, or which may be consulted from centralized databases.

Goal: the Modernization of Latinamerica

Although some prior experiences existed from the mid-20th century, **Latin American governments' concern for public management modernization increased as from the return of democracy**, coinciding with the development of ICTs which rapidly entered into citizens' daily lives.

However, public administration reforms have attained expected results in very few instances, partly due to failure to use such tools. As Moriconi Bezerra states in his book "Rhetoric, politics and public administration. Why do administrative reforms fail? (Retórica, política y administración pública. Por qué fallan las reformas administrativas):

> *At least for the last two decades, most Latin American countries have incorporated public administration reform programs in their government's agendas, which have been, in many cases, ambitious and far-fetched (...). We may say that in Latin America concerns for administrative reforms went, from the outset, hand in hand with the transition processes towards democracy, since democratic leaders were aware of the need of improving governmental results and developing effective public policies to promote development, reduce poverty, improve security levels, among other goals.*
>
> *In most of the referred countries, democratic transition has been unable to establish a public administration system that is open and participative as this new times call for, and which, at the same time, achieves sustainable positive results.*

Analysts consider that the differential factor in Latin America is the maintenance of deep-seated social inequalities that demands focusing on **e-government as an instrument of change and inclusion.**

The 2007 Latin American E-Government Chart (*Carta Iberoamericana de Gobierno Electrónico*), highlights so by stating:

> *Thus, information and knowledge constitute the essential factors of human productivity and development, consequently efforts must be concentrated so as to prevent inequalities from deepening and to facilitate inclusion and strengthen social cohesion.*
>
> *[...]The adoption of e-government by Latin-American governments seeks to satisfy needs and to contribute to the development of society, thus it cannot consist simply of an answer to technological offers supplied by the market.*

Activities towards e-government and cooperation to attain e-government in the region have increased lately on the basis of the Chart and the White Book of E-Government Interoperability for Latin America and the Caribbean (*Libro Blanco de Interoperabilidad de*

Gobierno Electrónico para América Latina y el Caribe) (published by CEPAL). Several Latin American countries have attained significant advances on a national level, the leading ones being Chile, Colombia, Uruguay, México, Brazil, Argentina and Trinidad and Tobago.

E-Government as a Right of Citizens

The *Latin American Chart* also highlights the perspective of e-government as a right to which citizens are entitled to in the 21st century:

Therefore, on the one hand, this Latin American Chart acknowledges citizens with a right that opens multiple possibilities to an easier access to Public Administrations and thus:

- *Become aware, with the ease that e-means allow, of the actions conducted by such Administrations.*
- *Make them more transparent, and thus, more subject to controls that allow for fighting corruption and generating trust in citizens.*
- *Eliminate space and time barriers erected between citizens and their Administrations and which move citizens away from interest in public affairs.*
- *Promote inclusion and equality of opportunities so that all citizens may access to be benefits provided by the information and knowledge society.*
- *Actively participate by issuing opinions, suggestions and in general following up decision making activities, as well as any kind of service provided by governments and any kind of means of provision thereof.*

This involves not only facilitating citizen to public administration relations and consequently equalizing opportunities, but also grasping the potential of public administration relations to foster the development of the information and knowledge society.

Digital Document Management: the Core of e-Government

As earlier mentioned, **governments operate on the base of documents** which, gathered in different containers, are the **support of public administration's actions and the register and storage of information.**

Historically, administrative documents have been distinguished into 1) **proceedings (*actuaciones*)** and 2) **record files (*expedientes*).**

1) **Proceedings (*Actuaciones*) or Administrative Proceedings (*actuaciones administrativas*)**: are notes, memoranda, dossiers, courts' written communications (oficios judiciales) and other kinds of documents used by the public administration in the management procedures.

2)**Record Files (Expedientes)**: an **organic set of documents** that provide information on a same matter and are the basis and support for the administrative handling or decision thereof.

For centuries the model was paper-based: forms, notes, record books, data indexes, etc. that were kept in dossiers, archives or libraries and that were **exclusively processed by human reading.**

The arrival of ICTs marked the incorporation of computer and systems into public administrations to improve some of the **document management processes.** However, given the large equipment initial costs, piecemeal approaches and resistance to change within the organizations, public administration rarely moved into ICTs at the speed rate of private organizations in the last decades.

In many cases, **the disorderly incorporation of technology added complexity and disorder to the processes**: multiple copies, documents created in PCs and later printed to be incorporated to the paper record file (expedientes de papel), documents that are scanned many times to keep digital and paper records, etc.

> In order to move forward towards e-government document management must be reconsidered as a whole on the new logic provided by computer systems, not only to convert paper documents into digital format but also to introduce some order into the creation, amendment, circulation and storage of information.

Therefore, in order to move forward in the direction of e-government **document management needs to be conceptually reconsidered**, taking advantage of the new logic provided by computer systems, not only to convert paper-documents into digital form but also to put information creation, modification, circulation, recordation and storage in order.

This approach or set of IT tools are known as **electronic document management system,** and it is on such bases that e-government initiatives must work in order to achieve its goals of transparency, efficiency, inclusion and getting closer to citizens.

Generally, the issues on which an **electronic document management system** operates are, namely:

- The creation of e-documents (either by a single author or jointly with others).
- The classification and organization of information.
- The validation or authentication of e-documents (e.g. through digital signature).
- The storage, recordation and keeping or archive of documents (terms, formats, etc.)
- The safekeeping of the information.
- The recovery or consultation of information contained in e-documents.
- The flow or circulation of documents among the different users or departments.

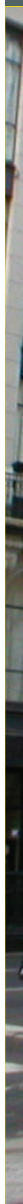
Thus, an actual **digital document management**, essential to lay the basis of e-government, involves also going "paperless", establishing **updated information systems** that will allow using IT tools to accelerate procedures, lower costs, enhance services, improve efficiency and show grater transparency.

It involves, as stated in the *ISO Standard 15489—Information and Documentation Records Management,* ensuring that the e-document is:

- **Authentic,** guaranteeing that it is original and created by the purported person.
- **Reliable,** it is the representation of the operation or transaction that it supports and it has a certain date.
- **Has Integrity,** i.e. it is complete and unaltered.
- **Usable,** easy to locate and access for those who need to consult it or use it.

Additionally, it should be noted that technologies not only generate by themselves the modernization of procedures and tools but they are also a strong **driving agent of cultural change** that usually accompanies successful implementation. Once technology has been successfully implemented, and through it new work procedures and practices have been formalized, it is difficult to go back, since organizations incorporate them in their behavior and operating practices.

Although **technology cannot by itself transform government, government cannot be transformed without the help of technology.** Thus, electronic document management is actually a necessary condition, however insufficient, to make a major transformation in the public administration. Organizational changes and a strong political will are necessary to implement the transformation.



4. KEYS TO THE TRANSFORMATION IN THE GOVERNMENT OF THE CITY OF BUENOS AIRES

The magnitude of the challenge involved in transforming the Government of CABA – moving from a bureaucratic organization based on paper to a government operating under a fully electronic document management system in barely five years- had to be addressed with a variety of electronic, organizational and socio-cultural tools.

Among the keys to the success of the process we may mention a strong vision of change coupled with the political will to implement it, an integral and multilevel diagnosis, a flexible approach strategy and a set of modular systems specifically tailored to meet local needs

Integral Diagnosis of the Organization

Upon taking office in 2007 the new Administration of the City of Buenos Aires decided to face the challenge of modernizing public administration. The Legal and Technical Secretariat (SECLYT) team, responsible for management and operational issues, resolved to make an **integral diagnosis to identify the different layers of problems and to assess the elements needed for the transformation process to be successful.**

Although the initial approach was technical in principle– to switch from a paper-based to an electronic document management– much more profound issues were actually considered given that **technological changes and administrative reforms often fail** for apparently irrelevant issues which are usually put aside when the plan is drawn up.

Thus, during the diagnosis stage not only was the **emerging conflict identified but also its root causes were explored**, so as to launch an integral and comprehensive approach that would ease the way to attain the goal.

> During the diagnosis stage not only was the emerging conflict identified but also its root causes were explored, so as to launch an integral and comprehensive approach of the subject matter that would ease the way to attain the goal.

In his book *Why do Administrative Reforms fail?* (Por qué fallan las Reformas Administrativas) (2011), Marcelo Moriconi Bezerra details some of the principles that transformation leaders took into account to decide to carry out an **in depth diagnosis in different levels** that would allow them to understand the reality into which the public administration of the City was immersed into.

> *Whilst formal rules can be changed rapidly, informal ones change at a very slow pace because they are impregnated by cultural patterns proper to each institution.*
>
> *It should be noted that rules need to be construed, and it is in this meaning play where dislocations will allow for the implementation of the ideas. Formal institutions will become operative only once their rules have been construed and are deemed operational. And it is in this sense that interpretation actually becomes a political tug-of-war where all the different players compete to attach specific meanings to the rules, for the purpose of controlling their performance and thus, favor their interests [...]*
>
> *Therefore, it is essential for a general reformation plan to take into account the whole institutional network, both formal and informal, upon which the plan wishes to operate. This task cannot be feasibly carried out starting from purely technical variables. Accordingly, the analysis of official speeches allows determining which were the parameters used to diagnose the status of the administration to be reformed. Thus, it is essential to specify whether the reform plans started from the construction of the legal institutional reality, where only formal institutions and the public text emerge, or if an in-depth analysis was conducted until a general global situation was revealed, of which the dislocations and the continuous meaning shifts of the established rules are an integral part.*

Keys to the transformation

- Integral diagnosis of the organization
- Case and reference model analysis
- A clear mission and a vision of deep change
- Simple, tailor-made and scalable system
- Flexible-approach strategy
- An adequate regulatory framework and plan
- Interdisciplinary team and continuous ongoing training

The Starting Point

The size of the Government of the Autonomous City of Buenos Aires's **exceeds that of most cities worldwide.** Not only is the city a large urban center with a population of approximately 3 million residents –plus 3.5 million people commuting daily into the city- but it is also autonomous and the headquarter of the national government, which adds **levels of administrative complexity**. With more than 125,000 public officials and 1,600 sites, operating both at a municipal and provincial level, it is actually a "City-State", and therefore has an immense volume and variety of procedures and operations, that is progressively increasing due to the expanding demand of public services.

The **main conflicts** that were identified emerging from the administrative condition of the Government of the City were:

- **Time consuming procedures.** The physical flow of documents, the operation of entry points (mesas de entradas), the linearity of procedures, among other issues, brought about delays and idle time that resulted in long and burdensome processing.
- **Impossibility of tracking the operation.** It was difficult to track the flow of transactions given that procedures were different depending on the agency or official conducting them.
- **Scarce management information.** Information for decision making purposes was difficult to find since it was not classified and grouped together and required manual processing.

In an in-depth analysis of the causes and problems underlying the referred conflicts, the following were identified:

- **Misuse of proceedings (*actuaciones*).** Due to difficulties and gaps in the procedures, incorrect practices such as post-dating, reserving record files numbers, number inserting or deleting, among other, were common.
- **Operations dispersed across several proceedings.**
- **Duplication of tasks.** For example numbering by books and their subsequent loading into the system.
- **Manual work in a high volume operation.** Most of the tasks were conducted manually: the numbering of record files, the stamping of the folio number, the stamping of the date seal, seals evidencing entry and exit.
- **Impossibility of identifying batches of pending vs. completed procedures.** The information system did not allow distinguishing pending from completed procedures.
- **Guarantee of reception of proceedings in paper receipts.** The physical movement of record files was recorded in paper forms, which were difficult to access and to keep in order.
- **The labeling of record files is far away from the operation.**
- **Lack of information on procedures.** The procedures management system was neither involved in labeling or recording processing issues, nor in identifying the status of procedures; forwarding of the record file did not involve reception of the documentation (acknowledgment of receipt was recorded on a slip of paper).
- **The forwarding of the record file was not subject to any control**. The system allowed a user to forward proceedings and record files that were neither in his control or agency.

The Autonomous City of Buenos in 2008, at the outset of the new administration

SURFACE: 22,000 hectares

POPULATION: 3,000,000

DAILY COMMUTERS: 3.500.000

TOTAL CITIZENS TO CATER ON A DAILY BASIS: 6,500,000

GOVERNMENT EMPLOYEES: 125,000

ICT business environment

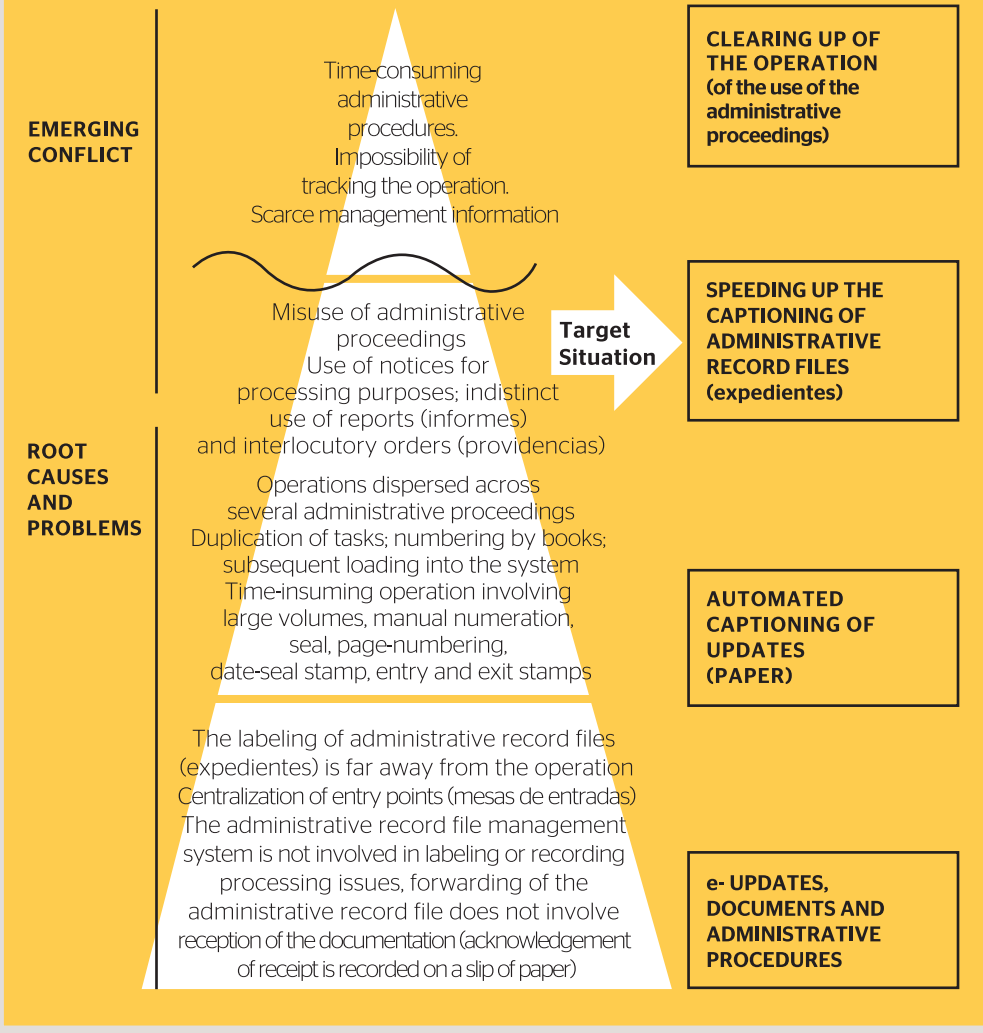
ICT Budget (GCABA): Low in relative terms with respect to the size of the organization (1%).

Low propensity to change, 100% of internal procedures based on "paper technology", except for Budgets and Salaries

Processing steps are the same than those conducted in the 1980's, with the support of an obsolete and deficient tracking system.

GCABA Organizational Management Diagnosis (2009)

The emerging conflict was identified, but its deep rooted causes were also explored so as to make an integral approach.



Limitations of the Paper-Based System

Although some e-documents or procedures existed, **in 2008 all the public administration was conducted on paper.** The record files (expedientes) –the containers of the documentation supporting government acts and the basis of all procedures– were folders and physical paper.

Although for centuries the **Paper Record File (*Expediente en Papel*) (EP)** was the useful means, it has disadvantages vis-a-vis the new options:

- It may be easily altered, both in its contents and in the number of pages, dates, signatures, etc., thus its reliability is very low.
- It is difficult to track its "course", thus, tracking information was nearly non-existent.
- Its mobility is very low.
- It only allows working on a stage-by-stage and linear basis but not simultaneously.
- Since information is lacking, the administrative "power" rests more on the line than on the GCABA Direction.

Although some systems had been incorporated and e-documents were being used for some stages of the process, a mixed system **maintained the paper-based system disadvantages**, where some elements were digital but the whole **back office** was paper based.

Facilitators in the Path towards e-Government

As to the context in which the change process was to be developed, we highlight some of the factors that were identified as facilitators in the path to e-government, namely:

- **Progressive digital culture.** With a "digital native" generation and the progressive use of ICTs in every day life people are more skilled in the use of technological tools, both within GCABA as well as in their role as citizens.
- **Simple interfaces.** The advance of technological tools currently provides relatively simple and intuitive interactions that do not require a special training.
- **Infrastructure.** The installed equipment and the development in management systems allow for a broader scope and interoperatibility.
- **Lower storage costs.** Currently, large data volumes can be stored and rapidly accessed at relatively low cost.
- **Collapse of prior systems.** As result of the chaos, overburden of capabilities and lack of citizen orientation that reigned in the administration, the proposed changes involved very low risks since it was difficult for its condition to worsen.

Case Studies and Reference Models

By learning from **past experiences conducted in other cities and by comparing reference cases** the new administration was able to design an adequate transformation plan to suit the particular needs of the City of Buenos Aires without committing the most usual mistakes committed in similar processes.

In 2009 an investigation stage was launched **by conducting research and visits to other cities that had already implemented similar projects.** Successes and failures were identified and **specialized consulting bodies** were contacted to get a general picture of what was happening in other administrations and which were **the most accepted digital solutions.**

In Argentina the **development was scarce and focused in procedures in particular**, not on an electronic document management as a whole. Advances only occurred in G2C tools: web pages providing information and allowing only for certain specific procedures (reservations, denounces or access to a specific form).

As to the **international models** some of the most advanced cases were analyzed in the U.S., Canada and several European countries.

Exploratory visits were focused in Spain, particularly Madrid, Barcelona and Malaga, not only because Spain's **idiosyncrasy, language and legislation are similar to those of Argentina**, but also because of the **cooperation agreements.**

Moreover, Spain **is a benchmark case in e-Government implementation.**Spanish **Law No. 11 passed in 2008** mandated all administrations –at a national, provincial or local level– to give transparency to their processes and implement e-processing for record files as from 2010.

> In 2009 an investigation stage was launched by conducting research and visits to other cities that had already implemented similar projects. Successes and failures were identified and specialized consulting bodies were contacted.

The visits allowed us noticing that the Municipality of Madrid *(Ayuntamiento de Madrid)*, jointly with the Community of Madrid *(Comunidad de Madrid)*, covers services nearly identical to those of the GCABA, however with a considerably larger budget. The Municipality of Málaga *(Ayuntamiento de Málaga)* was taken as a smaller size alternative, oriented to solutions based on free software and a budget more similar to the one operated by GCABA.

Some of the **lessons learnt from the analyzed experiences** and used as a starting point for local change planning were, namely:

- As to the adoption of technology, governments are more conservative than the private sector, thus governments are usually a step behind.
- What are the things that e-government implementation participants would never repeat? Doing too many things at the same time.
- Change arrives not only as results of the actions of consultants but when the political will is achieved, that is to say, when the authorities take a commitment and become involved.
- A transformation of this type involves a change of mentality and, thus, a change of habits. Working on the cultural change is as important as working on the technology.
- E-government projects and electronic document management involve an intensive use of technology, but they are not technological projects in themselves.
- The Government generates much information that is not processed, e-government implementation simplifies access to statistics, management measurements and other data.
- The approach of systems in the e-Record File *(Expediente Electrónico)* tackles the problem from the standpoint of the procedure, which is complex because one has to analyze, for each procedure, all of its specific features and documents included.

A Clear Mission and a Vision of Deep Change

In order to launch and implement such a large-scale transformation it was essential for the administration head officials to draw a clear and agreed upon course of action. Since the new administration took office, the **Legal and Technical Secretariat (SECLYT)** was one of the main departments in charge of **diagnosing the obsolete and outdated condition of the administrative processing systems and the collapse of the existing work patterns, and of proposing a modernization that would implement a more efficient, effective and citizen-oriented model in order to make the organization take a leap forward** that would put the City in the path of an e-government model.

From an initial view, restricted to seeking a new order for the paperwork that dominated the administration of the City, we managed to attain –with the support of the highest levels of the organization– **the development and the implementation of an exhaustive and ambitious electronic document management project.**

As from the diagnosis of the existing situation, the condition of management in GCABA and the reference cases analyzed, the work team **spelled out the goal of the electronic document management project** that was going to be tackled on the road toward e-government: "Create a new model, move all documents in the City to a digital format and place them in a **large repository,** so as to process them from there and hand back control of the procedures to the administration".

> The Legal and Technical Secretariat (SECLYT) spelled out its goal to "Create a new model, move all documents in the City to a digital form and place them in a large repository, so as to process them from there and hand back control of the procedures to the administration".

Thus, its main goal was to **abandon paper, or to go "paperless"**. But from the outset it was clearly realized that although document management was the starting and arrival point, that is to say a project based on new systems and technologies, **the transition towards an e-government within the 21st century standards involved much more in-depth changes.** First it was necessary to create a framework that would provide legal, registration and storage value to the digital document. Then, it was essential to work in the implementation and fostering of the cultural change that had to accompany the incorporation of technology and changes in the way of working.

As part of this strategic analysis, it was decided that the project would be conducted **on the basis of GCABA's own human resources, systems and financing,** different from many other projects worldwide. Thus, the project would move forward adapting to GCABA's particular needs and with a flexible approach that would ensure the success of the challenge.

In line with the transformation under way, a Reform Board was set up in 2011 with the purpose of being: *"The Governing Board that would lead GCABA's Administration into the 21st century. It would be based on three pillars, the integral use of human resources, the modernity of procedures allowing for decentralization with control, providing more and better services,*

internal and external; and generating the necessary information for the organization's decision taking and control".

Later, the Modernization Undersecretariat was created within the Ministry of Modernization, to provide a new frame to the progress attained in the organizational transformation. Its mission laid down the main goals of the e-government project, namely:

- to rethink the Government's management in light of the new information and communication technologies (ICT) making it closer, inclusive, innovative, transparent, agile, effective and efficient;
- to achieve administrative decentralization with centralized control;
- to provide relevant, accurate and timely information to the rest of the organization;
- to foster transparency in all of its forms;
- to transform employment relations;
- to improve G2C relations by creating new and better interrelations.

A Simple, Tailor-Made and Scalable System

When the transformation process began and on the basis of the research conducted, the results sought and the available budgets, the administration resolved to work with **an electronic document management solution of its own**, developed on the basis of existing systems in the market but specifically tailored to meet GCABA's management needs and goals. Thus, the system complied with the condition of operating within an open code frame, as was required by the **Information Agency Systems (IAS)** of the Government of the Autonomous City of Buenos Aires (GCABA).

Thus, GCABA worked on the basis of a solution provided by an international company with the addition of tailor made developments planned by the GCABA team and with the programming conducted by external consultants, to create a system that would allow **tackling the detected problems on a rapid, simple** manner that would allow gradual growth in the road to e-government.

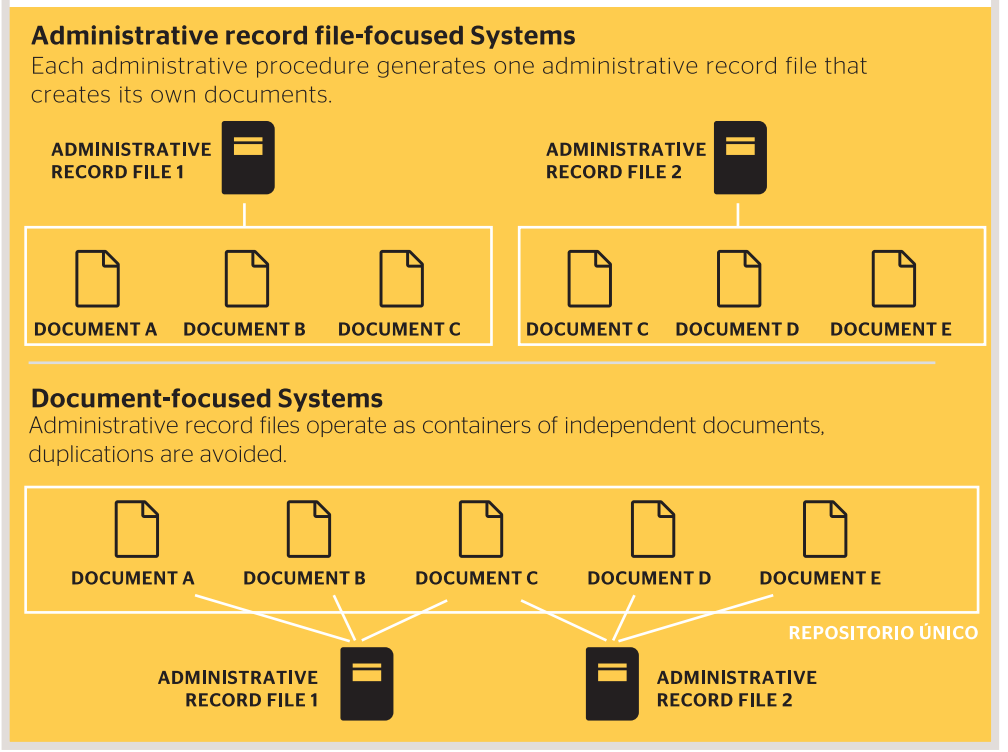
> The Electronic Document Management System (EDMS), core of this set of modules, has been the engine of transformation, since it is involved in all the government actions.

This **specifically developed integral solution for document management** in GCABA is currently called "EDMS Ecosystem" **(*Ecosistema SADE*)**, a set of interrelated modules for specific needs that operate jointly.

The **Electronic Document Management System (EDMS),** core of this set of modules, has been the engine of transformation, since it is involved in all government actions. It is a set of software tools with simple interfaces that allows for the creation, processing and storage of digital documents with legal and formal validity, that feeds all the other modules of the ecosystem.

Documents vs. Administrative Record Files

One of the main innovations in GCABA was to focus the approach of the systems on the document and not on the administrative record file (expediente).



All the documents are stored in an **Official Documents Single Repository (*Repositorio Único de Documentos Oficiales*) (RUDO)**, so as to streamline their storage and consultation.

The innovative document-centered approach –instead of record file-centered approach– and the **modular structure** allowed for a **relatively swift start up of the systems** and for the gradual incorporation of the different procedures through the implementation of the e-record file and modules for specific solutions such as Works & Services Contracts (*Locación de Obras y Servicios*) (LOYS), e-Roll Registration Single Credential No. (*Legajo Único de Empleados*) (LUE) or Subsidies Single e-Processing Platform (*Tramitación Única de Subsidios*) (TUS).

The gradual progress and the scalability of the system allowed for a progressive **fine-tuning of the design as new solutions were being implemented**, so that field experiences drawn upon in the field turned into **learning and readjustments** for the implementation of the subsequent modules.

These **differential features in the development of the EDM ecosystem** (tailor made development, flexibility, scalability, gradual implementation, document-centered) **have been essential for its successful implementation** and for moving from paper to e-document in the Government of the Autonomous City of Buenos Aires.

Additionally, the flexible e-document management structure that has been achieved allows **moving towards new challenges without starting from scratch,** as in the case of most recent implementations, namely e-Civil Registry *(Registro Civil Electrónico)* (RCE) or Multipurpose Dossier e-Management *(Registro/Legajo Multipropósito)* (RLM), modules that supported on solutions that were already developed. In the next chapter we will describe the functions, contributions to government management and changes attained with each of the ecosystem modules.

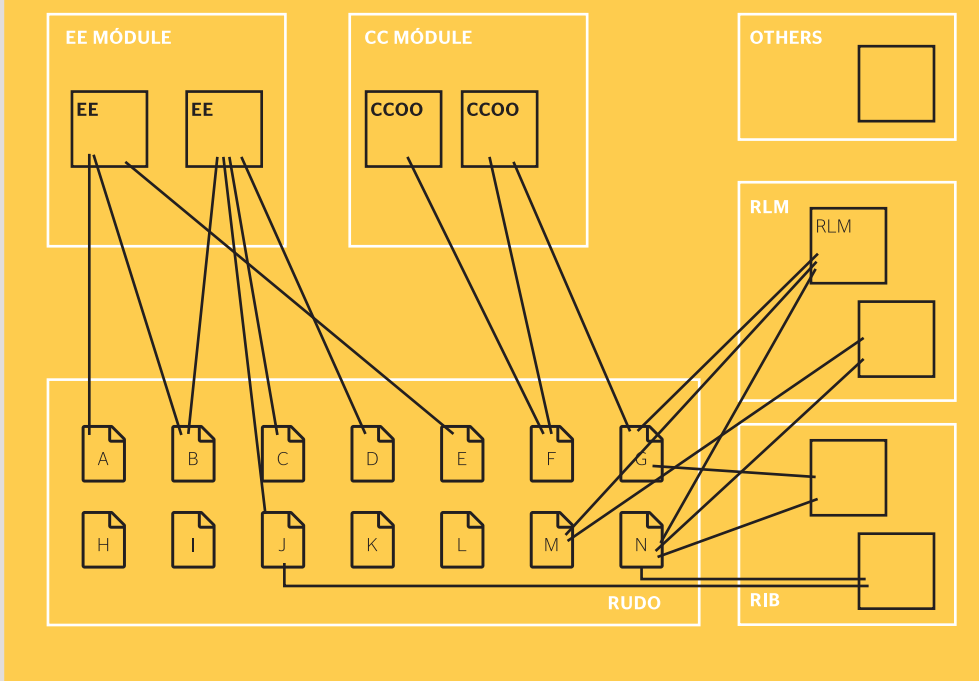
Document-Centered

One of the features that make GCABA e-document management development unique is the **novel approach of focusing in the generation and management of documents independently from the e-record file** that contains them.

Different from the approach adopted for e-document management systems usually found in the market or implemented in other cities, including most of the Spanish experience, the Autonomous City of Buenos Aires **focused the development its development on e-records/files centered on documents**. This involved focusing the system in the creation of e-documents, which are stored in an **Official Documents Single Repository** (*Repositorio Único de Documentos Oficiales*), and from there, subsequently grouped into a record file for processing.

Official Documents Single Repository

The documents are stored in a single repository from which they are used by the different EDM (SADE) modules.



When the approach to the e-Record File (*Expediente Electrónico*) is **procedure-centered, that is to say, one software solution for each procedure**, each type of document is only a portion of this type of record file or procedure. Consequently, for each procedure one must analyze its specific work or implementation flow, an excessively complex and extensive path in this case, given the enormous number of procedures existing in the GCABA.

Contrary to the procedure-centered model, the document-centered e-record file approach gives **existence to each document by itself** (identification/numeration), and therefore enables linking such document with a set of other documents and forming a record file. Thus, two workflows were built ("*tramitadores*"), one for the creation of documents and another one to link them and process them with a record file, based on **an open model that allows for great flexibility.**

The model only required **analyzing the general features of the documents generated by the public administration** to find the common denominators, and thus approach **in a relatively quick manner a large variety of procedures**. Thus, the redesign of administrative circuits was tackled on a second stage, but achieving a large number of advantages in a short term.

Flexible-Approach Strategy

What was the logic to be followed to approach **such a radical change as the one proposed** in an organization so large, formal, complex and extensive as the GCABA?

Given the size of the organization a "Big Bang" was impossible therefore we decided to **conduct a stage-piecemeal transformation with peer-learning**. On the other hand, although e-government initiatives are addressed to the citizen, we decided to **start from a G2G transformation** process that would ensure that, at the time of communicating and opening the G2C path, the answer and service culture would be adequate to the new management approach.

> The internal transformation called for a flexible and multi-dimensional approach, that took into account not only technical issues but also the legal and functional framework, as well as the technical assistance and training necessary for the cultural transformation.

This internal transformation called for a **flexible and multi-dimensional approach**, that took into account not only technical issues but also the legal and functional framework, as well as the technical assistance and training necessary for the cultural transformation.

The outstanding features of this approach strategy have been:

- Starting from the inside (G2G): from the backend to the citizen (G2C).
- Using systems and processes to increase efficiency.
- Starting from simple applications: the implementation of official communications.
- Adopting a gradual implementation.

Starting from the Inside (G2G): from the Backend to the Citizen (G2C)

Most e-government approaches start by adding a technology "layer" in the G2C relationship, **without making deep changes**. This is partly due to the fact that it is easier to transform the public administration's exterior than its interior, and partly due to the fact that they have a short term impact.

In this case, the approach was to seek **an in-depth transformation** that would outlive any given administration and would lay the path towards sustainable e-government in the City of Buenos Aires.

Thus, the initial task **focused in the procedures within the administration (G2G)** and then, upon completion of the bulk of such transformation, to move on to the direct relation with the citizen (G2C) through the Online Processing *(Tramitación a Distancia)* (TAD).

Systems and Processes to Increase Efficiency

Efficiency in an e-government model is attained by two roads. On the one side, the **implementation of new ICTs** allows generating e-documents and processing the records/files that contain them, thus avoiding paperwork. On the other, the logic of e-processes allow implementing **processes reengineering**, since many of its steps, that made sense in the logic of a paper-based model, will become senseless in the new work model based on e-documents.

When GCABA approached the problem, it was impossible– due to time constraints and long-standing procedures– to take both roads simultaneously in full depth. Explain with maximum degree of detail the thousand and thousand administrative circuits (procedures/proceedings) conducted in GCABA and re-defining the respective workflows was an impossible task within a reasonable time frame, therefore the problem had to be tackled in two different ways.

We decided to **identify the most relevant procedures** in terms of transaction volume and monetary cost, and in terms of service impact to citizens; and to seek the process reengineering in them and **their definition as an independent module** (e.g. LOyS), whilst a **free workflow** was designed for other procedures, that allowed for the use of the Official Documentation Digital Generator *(Generador Electrónico de Documentos Oficiales)* (GEDO) and the creation election of the "road" to follow, in each of the steps.

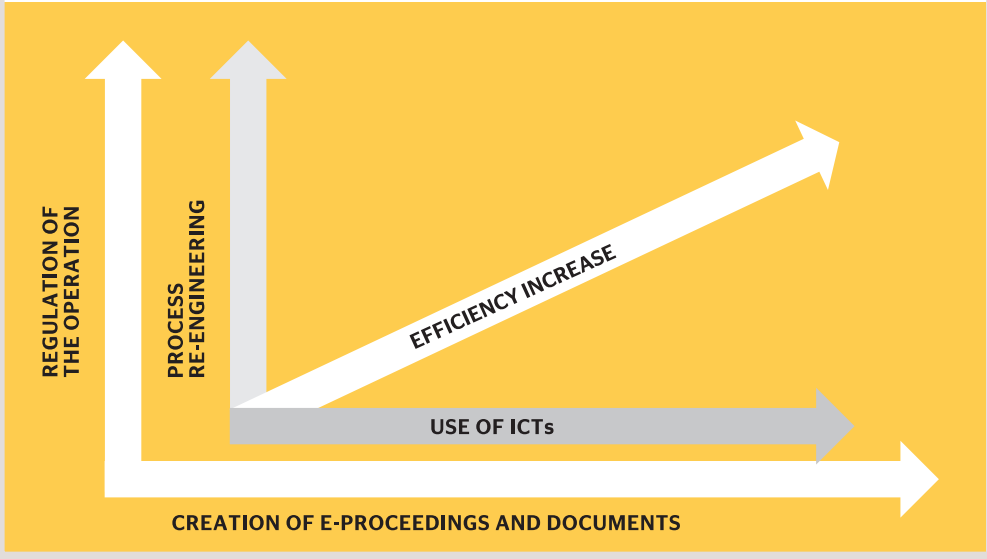
> We managed to review and improve the efficiency of key procedures, without significantly altering the work of officers involved in other procedures, who began handling them digitally but kept control over the circulation of the information and records/files they handled.

In this way, we managed to **review and improve the efficiency of key procedures,** without significantly altering the work of officers involved in other procedures, who began handling them digitally but kept control over the circulation of the information and records/files they handled.

The implementation of e-management of the several hundred procedures handled by GCABA allows **moving on to an in-depth overhauling of procedures** to improve the regulation of the operation.

Approach of the Change

Efficiency in an e-government model is attained by two roads: the implementation of new ICTs and process reengineering.



Starting from Simple Applications

Where to start from in such a vast change process? **A first, simple but effective, step** that would lay the grounds of what would follow had to be taken. Therefore, we analyzed the eco-system that was being proposed in search for a module that would allow the organization to learn how to use the Official Documentation Digital Generator (*Generador Electrónico de Documentos Oficiales*) (GEDO) and that would, in turn, implement the need of choosing "digital addressees", as a means to get to the e-Record File (*Expediente Electrónico*) (EE). Additionally, it had to be a module of general use that would allow **getting the largest number of officers acquainted** with the new ways of operating and the new available tools.

> Official Communications is essentially a simple module which initiated users in electronic document management and paved the way for the implementation of the rest of the modules.

The chosen module was the Official Documentation Digital Generator ***(Comunicaciones Electrónicas Oficiales)*** **(CCOO),** because it combines the "need" of an addressee (a "route"), with a simple format document such as Notes or Memos, with all the legal and formal components of any other type of official document. This is a module that allows generating and sending notes and memoranda, and which up to such date had been prepared in word processors and printed for signature and circulation purposes between the entry points (*mesas de entrada*), in a digital format similar to an e-mail, but with official validity.

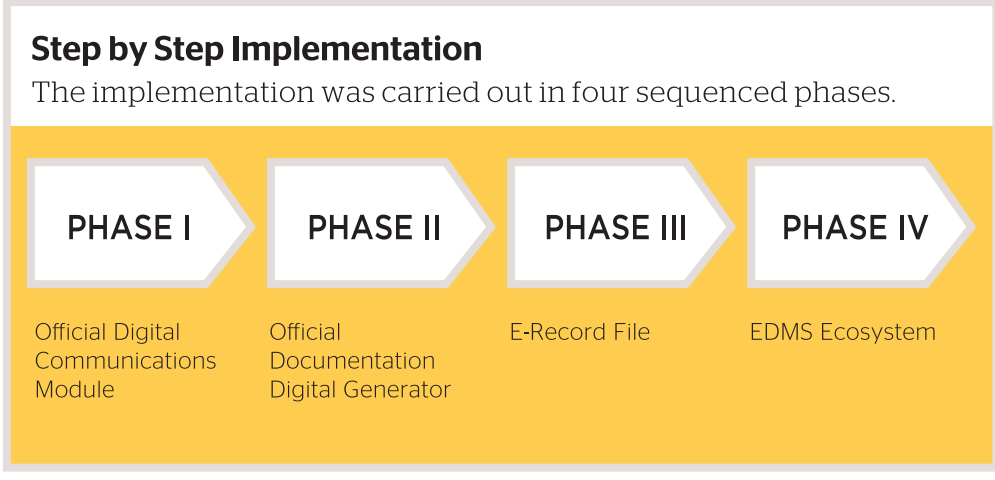
Official Communications is essentially a **simple module** which initiated users in electronic document management and paved the way for the implementation of the rest of the modules. The task was approached on an area by area basis so that a team covered more than 500 GCABA agencies and divisions within a 7 month period explaining the operation of the module and issues involving the changes in government management that were being implemented. Keeping in direct contact with the users not only ensured a successful implementation and provided support to officials in the transition, but also nurtured the strategy as from the answers and difficulties that arouse in the field.

Gradual Implementation

In view of the hurdles and risks involved in addressing changes at a fast pace in an organization of the size of the GCABA, a gradual implementation plan was designed in the path towards **electronic document management.**

The implementation may be divided **into four sequenced phases**: a first implementation that lay the grounds for moving from paper to digital, followed by the start up of the e-documents generator, and then the implementation of the e-record file as main document container and finally the implementation of a series of interrelated modules that compose the aggregate ecosystem and that allow taking new steps towards transparency and efficiency in the government of the City of Buenos Aires.

The following summary describes in a nutshell each of the phases, its focus and the transformations achieved.



Phase I. Implementation of official communications (CCOO)

- Transformation of the entry points *(mesas de entradas).*
- Approach on a division-by-division basis.
- The captioning of the record files no longer involved a formal step to become a simple click close to the transaction and to the user handling the procedure.
- EDMS's implementation was achieved and GCABA employees' IT skills were strengthened.
- Officials began to implement digital signatures.
- Document are signed and validated simply with one click.
- Documents are no longer manually handled.

Phase II. Implementation of the Official Documentation Digital Generator (GEDO)

- Start up of the module that digitalizes 100% GCABA's document management.
- Administrative acts are token-signed.
- Joint signatures were generated.

Phase III. E-Record File (EE)

- Approach on a procedure-by-procedure or subject-matter (*trata*) basis.
- Digital documents were integrated giving them meaning within a container.
- Procedures were integrally completed in digital form.
- Procedures, on a procedure-by-procedure basis, were moved from paper to digital format.
- Certain procedures were made more specific thanks to the larger technical possibilities.
- Each procedure can be simultaneously accessed and tracked on a permanent basis.

Phase IV. EDMS Ecosystem

- Specified interrelated modules were kicked off, on the basis of GEDO and EE.
- Steps were taken to move on to the interaction with other systems.
- New document formats and standardized forms were generated.
- Steps were taken to move on to the intelligence of procedures, improving their efficiency.
- Accumulated data exploitation began.

An Adequate Regulatory Framework and Plan

The **GCABA Public Administration Modernization Plan** approved by Law No. 33,404 of 2010 ("*Ley de Modernización de la Administración Pública de la Ciudad de Buenos Aires*") resulted an essential framework to guide the transformation process already embarked upon and to encourage additional regulatory changes.

The overall objective of the Plan is: *"To achieve a high quality public management so as to deliver goods and services to the citizens of the City of Buenos Aires in a fair, transparent and effective manner".*

> This plan reflected many of the changes that were already being implemented in the administration, but lacking an adequate regulatory framework they were difficult to consolidate.

The following specific objectives were laid down in the Plan, which were essential for moving from a paper based management to a digital management:

> *"To improve governmental management articulating day-to-day decision making, strategic planning, budget programming process, process reengineering, management monitoring and accountability by results.*
>
> *To orient the Administration to citizens, through a transparent performance and effective citizen participation and control channels.*
>
> *To promote and introduce the use of new Information and Communication Technologies to provide swifter and more effective answers to society requests."*

Particularly, chapter 3 of the "E-Government and new ICTs" Plan, proposes improving information systems and implementing e-management specific tools, namely:

- The **online site,** "To enable citizens to access information and administrative services beyond the chronological limitations of traditional offices, extending the links between them and generating a virtual extension of the Public Administration's traditional offices".
- The **electronic and digital signature,** for the purpose of "Speeding-up the management of public administration and to enhance citizen's access to administrative services and procedures, securing the authorship and integrity of e-documents, created either by the administration or by the citizens".
- The **digitalization of administrative procedures,** "for the purpose of simplifying the performance, access and perdurability of information and the reduction of processing time".

This plan reflected many of the changes that were already being implemented within the administration, but without the adequate regulatory framework they were difficult to consolidate.

Adapting regulations to document management has been of utmost significant for the process. Chapter 5 of this book provides a detailed description of the regulatory framework and the manner in which such framework accompanied the transformation.

Interdisciplinary Team and Continuous Ongoing Training

A change of paradigm such as the one involved in switching from a paper-based to a digital based management requires technical knowledge encompassing **legal, operational, technological and implementation issues**. Consequently, the transformation in GCABA was addressed by four teams that interacted and worked jointly:

The legal team that was in charge of drafting the legal framework and all ancillary regulations necessary to provide e-documents with the same legal effectiveness as paper documents. We highlight the problems that surrounded the implementation of electronic and digital signatures in all its types (see Chapter 5).

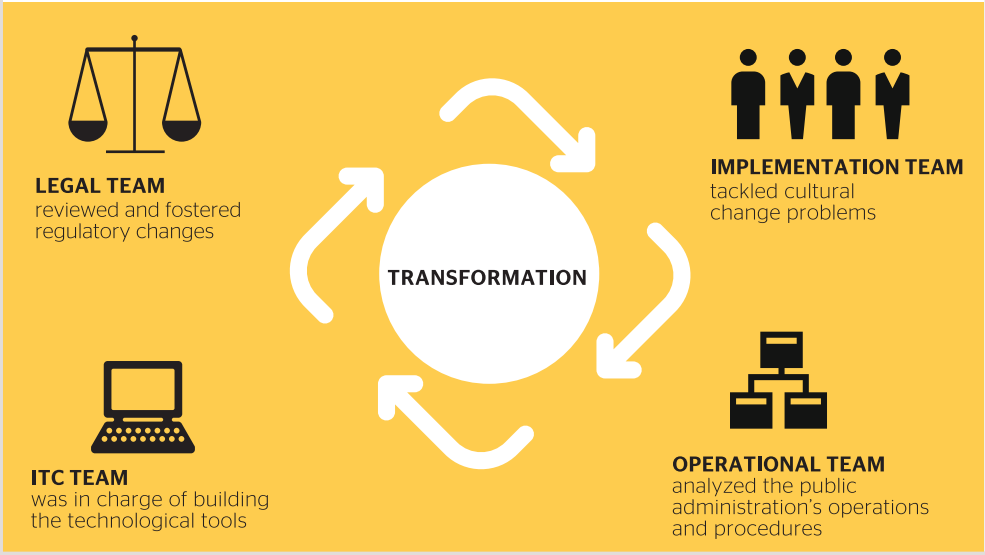
The operational team that was in charge of analyzing government management procedures, the functional equivalence of documents, the impact and results of the changes introduced, in order to define the IT tools to be devised and used. It was also in charge of identifying the improvements sought and attained in information management and control.

The ITC team that was in charge of creating the technological tools in order to implement the operational and legal requirements, including, without limitation, the process equipment and certification, and the communication (networks) necessary for the correct operation.

The implementation team that was in charge of addressing the problems arising from the cultural change brought about by these new government management tools, of defining the procedures, users training and assistance, of answering general queries and of handling all the issues related to the implementation of the transformation.

Profile of the teams

The process could be handled in the GCABA thanks to the interaction and joint work of four teams.



From the outset and during the whole process training, support and follow-up was essential, it started directly by the line of direct users, with the implementation of the Official Communications module in more than 500 governmental divisions. In the e-Record File implementation phase the approach was made on a subject matter basis, drawing each team to the specific reality of each procedure.

This was the only possible way to implement the **flexible and multidimensional approach** designed for the process.

> The change of paradigm called for technical knowledge encompassing legal, operational, and technological and implementation issues.

As the Latin American e-Government Chart states it is vital for governments to prepare the implementation of the electronic management system: "*The preparation must include, on a permanent basis, the training component so as to support the change initiatives from learning spaces in order to guarantee the necessary transformation of organizational cultures and the correct reformulation of the practices*".

The training experience was integral and rewarding for all its participants, as it may be noticed from the **testimonies of some of the internal consultants** involved in the process:

In general, after the first days of implementation and training support to users, the answer is positive. They frequently stress the fact that the proceedings neat up the administrative procedures and make them more transparent. One could say that complains start from an individual outlook ("that this will not affect my work") and ends up with an integral collective one ("this really helps to achieve the goals in a more agile manner

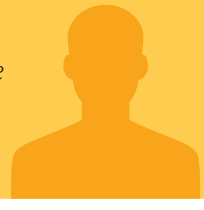
As to the new functionalities, the role of the administrative areas and users is significant because they are not simply passive players that turn on the application that we developed. There have been cases of improvements fostered by the divisions themselves which after closer analysis were developed and included in the application. The role of users is significant not only for the purpose of rating the module but also to try to improve it on a day to day basis

Upon the impact that such a change of paradigm involves, moving on from paper-based to digital based management, we have the duty of "providing emotional support" to the division staff by explaining that we "gain nothing" delivering the project and leaving them adrift, but that we are actually the ones that will provide them support, will accompany them, train them and answer their queries. We tell them that we have implemented the module in other ministries, we tell them about the queries that arose there and show them that they are not alone in this implementation and that the same queries have surfaced in other divisions. In this manner we not only get them to collaborate in the implementation but we also remove their concerns, we encourage them to open to this new paradigm and finally we show them that they can be part of this change that means bringing in modernization into public administration.

Processing improves year by year and new functionalities are added that streamline prior tasks or involve a new development within the circuit

In our area, the impact of the module can be noticed in the increase of demand in the request for queries and training. Our team answers consultations formally through CCOO, and also through the GCABA e-mail, by telephone from the office, and also from our personal cell phones (even though we do not have fleet telephones even during week-ends in some cases, thus showing our commitment with the Project). Due to the social interactions with other divisions across the GCABA, some contacts have included us in "whatsapp", speeding up answers if we are actually moving around the divisions of GACBA or holding training sessions.

As to training sessions, they are organized in relation to the implementation of each new program, and they are usually held on-site at a participant's working desk. It is important to establish a good bonding with the direct/end user of the platform. In general, the procedure goes from what we could call "from resistance to gratitude", since the first approach to the user's platform is riddled with uncertainty and, in case of doubt, grumbling quickly follows. From this standpoint, as change drivers, we must be aware that it will be difficult for them to accept change straightforwardly, since they have been working manually, on a paper-based format, for many years and they are impregnated with practices that arouse more out of habit than out of what ought to be done. The answers frequently are "and the data that I used to fill in the form, where do they go now", "I never used a computer", "I do not understand" etc.



From our perspective, the implementer's task consists in being extremely patient towards the user, and to be willing to explain from the platform itself or through the Internet.

Some areas require more support than others, and we understand that not all the ministries are open to the new technologies. Although the progress of the other EDMSs modules such as CCOO, GEDO, EE, have paved the way and contributed to easing the cultural change, the task is far from being easy and represents the largest challenge and motivation of our project.

The organizational culture of GCBA, perceived all across the divisions that we visited, tends to the statu quo ("continue doing things how they are done here"), more than innovation friendly, particularly if such innovations are technological.

5. THE ELECTRONIC DOCUMENT MANAGEMENT REGULATORY FRAMEWORK

Moving from paper-based document management to electronic document management called for a detailed analysis of the regulations of the Government of the Autonomous City of Buenos Aires and a significant adaptation to fit concepts such as “electronic record file” and “digital signature”, among others.

The legal team was vital to foster the changes from the Legislature of the City and from the Executive Branch so as to create a new frame that would provide legal effectiveness to the new electronic documents proposed under the public administration transformation project. Other ancillary rules enabled progress in the City’s modernization.

A Modern Legal Framework for an Effective Management

Modernization processes generate changes and should not be intended to increase the scope of discretionality, but to increase efficiency and thus broadening the scope of legality, instead. Legality is a necessary value that has been included in order to **provide legal certainty and support to the implementation of the electronic document management.**

The regulatory framework had to **solve different issues or problematic matters** including the legal and functional equivalences of the different formats, the new identification or authorship modalities, publicity and privacy, access, the different types of documents, their features. It is always convenient for **legal regulations to keep a degree of technological neutrality** that will allow the necessary flexibility to use the largest possible number of tools.

So as to avoid discussions on issues that were not yet ripe back in 2008 and which would have only delayed implementation, an overall amendment of regulations governing administrative procedures or management was not attempted at. The strategy was, instead, **to provide public administration with the tools and the legal support so as to implement each of the problematic issues.**

Once the legislative architecture was obtained, the **implementation strategy** consisted basically in the enactment of several executive decrees that were subsequently approving the different modules, vesting a lower agency –the Legal and Technical Secretariat (sometimes severally and others jointly with the Chief of Cabinet, Ministry of Modernization or even the GCABA Audit Agency)– with authority to define issues such as the time schedules providing for the deadlines for the gradual mandatory implementation of the modules by the GCABA agencies and divisions.

The status of document management was so far behind that regulations had to be passed even for paper-format document management so as to organize it and make it more effective, given that applicable regulations dated back to 30 years ago.

Next, we provide a description of the **main regulations passed** to accompany the shift towards electronic document management.

Modernization Laws

Law No. 2689 creating the **Information Systems Agency (*Agencia de Sistemas de Información*)** was passed in 2008 for the purpose of organizing and coordinating the telecommunications and information technologies infrastructure and systems with all the Executive Branch divisions and agencies, providing the City with a self-sufficient, reasonable and coordinated electronic government plan, that would allow citizen e- and telephone access to government information services, providing transparency to the government (*Article 2°*). The aim was to create **an autarchic body devoted to develop the information technology infrastructure necessary** to achieve the aforementioned goal and to collaborate in the definition of the relevant architecture.

Law No. 2739 was passed in 2008 declaring the authenticity and official nature of the publication of the Official Bulletin of the City of Buenos Aires (*Boletín Oficial de la Ciudad de Buenos Aires*) in the website of the Government of the Autonomous City of Buenos Aires, in the manner and subject to the conditions and guarantees to be established by the regulatory provisions, and carrying the same legal effects as the printed version.

Thus, the Official Bulletin became digital. That is to say, the digital version was valid; not only its access but also its creation was being modified.

Law No. 3304, "Modernization of the Public Administration" ***(De Modernización de la Administración Pública)***, passed in early 2010, reinforced the administrative modernization goals set at the time when the administration took office and provided a frame of legal equivalence between paper and digital documents. As earlier mentioned, the aim was to afford institutional tools that would provide legal certainty in their usage. The so-called Gresham Law is applicable to this case, which adapted to paper, would say as follows—"The bad money (paper) always drives out the good money (digital)". In order to prevent this from happening, the "bad money" had to be eliminated from the process.

E-government will be instrumented (Law No. 3304, Annex I, Title II, Chapter III) by means of:

- The online site
- The electronic and digital signature
- The e-record file (expediente electrónico)
- The e-document
- The digitalization of administrative procedures
- IT security
- Interoperability
- E-purchases

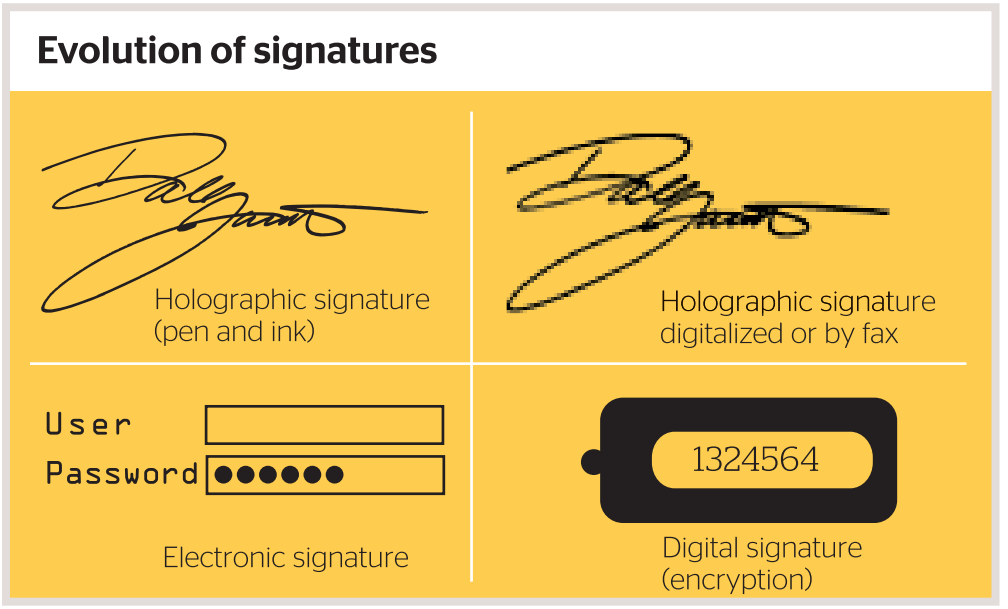
> The fact that the Autonomous City of Buenos Aires has its own Digital Signature infrastructure involves that this type of signature legally amounts to a holographic signature, that is to say, it enjoys the same presumption of authorship and integrity

In this context it was necessary to **travel the evolutionary road towards e-processing (tramitación electrónica).**

Subsequently and reinforcing the aim of strengthening a solid e-government, **Law No. 4013 "Ministries Law"** ***("De Ministerios")*** was passed in 2011 providing that: *"All the members of the Executive Branch and decentralized bodies may use the electronic or digital documents that the Executive Branch may determine for the creation and execution of acts or documents as well as electronic or digital signatures that (the Executive Branch) may determine to countersign or sign, all of them carrying the same legal effects and evidentiary value as their conventional equivalents" (Law No. 4013, Title IX "Supplementary Provisions").*

In late 2013, and once e-processing had attained a high degree of progress within the public administration (Executive Branch), the need of involving the rest of the GCABA branches, i.e. the Legislative and the Judiciary, in this trend became necessary.

It became evident that in the short term it would be necessary for administrative processing digitalization to move from the back-office to the front-office, that is to say, that public administration could connect online with citizens and suppliers.



In order to achieve such goal, **Law No. 4836 "Digital Signature Infrastructure Implementation in the Autonomous City of Buenos Aires" *(Implementación de Infraestructura de Firma Digital de la Ciudad Autónoma de Buenos Aires)*** was passed in December 2013 which not only broadened the legal equivalence between paper support and digital support across the whole CABA Public Sector, but also established that CABA would have its own Licensor Entity, the Executive Branch, that shall implement the digital signature infrastructure to be used by all of the agencies and divisions that compose CABA's Public Sector.

The fact that the Autonomous City of Buenos Aires has its own Digital Signature infrastructure involves that this type of signature legally amounts to an holographic signature. In fact, pursuant to **Federal "Digital Signature" Law No. 25,506** *"Whenever the law requires an holographic signature, such requirement shall also be met by a digital signature.."* and *"it shall be presumed, unless evidence to the contrary, that any digital signature belongs to the holder of the digital certificate ..."* (that is to say, it enjoys the same authorship and integrity presumption than an holographic signature).

The contents of two other laws, promulgated late in 2013, will be strategic when moving forward towards G2C relationships.

The first one is **Law No. 4764, that amended Law No. 2095, "Public Sector Procurement in the Autonomous City of Buenos Aires" *(Compras y Contrataciones del Sector Público de la Ciudad Autónoma de Buenos Aires),*** which in Article 7º item 10, provides as follows *"Electronic Means Standard: procurement procedures must be executed by electronic means in compliance with the requirements and through the instruments provided under Chapter III, of Title II of Annex I of Law No. 3304, the processing thereof being exceptionally and admissible by means of documents in paper format exclusively due to the occurrence of any of the reasons provided in the regulatory provisions hereof"*.

The second one is Law No. 4735, that amended the Necessity and Urgency Executive Decree No. 1510/97, "Administrative Procedure in the Autonomous City of Buenos Aires"

("Procedimiento Administrativo de la Ciudad Autónoma de Buenos Aires"), which incorporates to Electronic Records/Files -the support of administrative processing (tramitación)- the possibility of affording access (vista) to e-records/files and of giving e-notice in an administrative procedure. **All these are novel concepts, considering that the Law is a Law of Procedure and probably one of the first laws in Argentina to incorporate the "electronic" concept.**

Executive Decrees, Resolutions and Administrative Notices

Following the guidelines provided by Law No. 3304, "Modernization of Public Administration", passed in 2009, **Executive Decree No. 589/09** approved the implementation of the **Electronic Document Management System (EDMS)**, as an integrated system for the captioning, numbering, follow-up and registration of movements of all the proceedings (*actuaciones*) of the Government of the City of Buenos Aires. It also established the Technical and Legal Secretariat (SECLYT) as the manager of the system.

The EDMS is the **e-processing platform of GCABA**, upon which specific modules would be progressively added in the next five years, conforming what is currently called the "EDM ecosystem" (*ecosistema SADE*).

The record file always existed as a type of proceeding in the public administration. Most of the procedures in GCABA that required an administrative resolution were conducted through a record file whilst all other procedures —notices, registration, etc- were conducted through other proceedings such as: folder (*carpeta*), dossier (*legajo*), notes (*notas*), memos, etc.

> The record file as a type of proceeding always existed in public administration, but in order to move on towards electronic processing in the back office, that is to say, inside the administration, a new proceeding had to be incorporated: the document.

Record files, both in paper and electronic format, are document containers -in any case what changes is the format of such documents. There are also records/files created for the purpose of storing documents or which are created for personal or information purposes, the classic example being staff dossiers or medical records, and others which contain a procedure that ends up with an administrative resolution. This applies to records/files both in paper and digital format. Documents are also containers, but of information or data. What radically changes is the use of such information or data if the document is in paper or in e-format.

But in order to be able to move on to back-office e-processing, that is to say into the realm of the administration, **a new proceeding had to be introduced: the document.**

Resolution No. 138-SELCYT/10, currently repealed, amended the Rules approved by Resolution 96-SECLYT/09, approving the new Rules for the Management of Records/Files and Administrative Documents. This rule introduced for the first time the concept of document as

an identified entity in GCABA's public administration, that is to say, with an official numbering.

Such Rules described the term Record File (Expediente) as *"...an ordered set of documents that provide information on a same matter and which serve as the background and support for its processing or administrative resolution"*.

And the term Document as *"an identified and structured entity that comprises text, graphics, sound, images or any kind of information inherent in administrative procedures"*.

A "Trojan Horse" to Implement Electronic Documents Open to All Citizens

Although record files (*expedientes*) and documents (*documentos*) are the two core proceedings of processing, they were not the first step of the implementation. The "Trojan Horse" used to pave the way for e-government was a simple but powerful module.

Actually, the strategy was to use an application that was easy in operational terms so that, once incorporated by users, implementation could move forward on to record files (expedientes) and documents (*documentos*). The Trojan Horse was Official Communications (CCOO), the first EDM module.

As mentioned earlier, **Resolution No. 138-SELCYT/10** included notes and memoranda within official proceedings (*actuaciones oficiales*), which served to communicate different matters within the Administration.

Executive Decree 288/10 mandated all Executive Branch agencies within GCABA to prepare Notes and Memoranda in the "Official Communications" Module, as the sole and exclusive means for the creation, communication and storage thereof, and to sign such Notes and Memoranda by digital signature technology.

> Currently, electronic official communications are the only official means of internal communication within the Government of the City.

At this point the conquest of the administrative jungle had began, raising Executive Decree No. 287/10 as a flag in the multiple trainings and workshops held in GCBA, since everything within public administration needs to be supported on a legal rule, without which it would have been nearly impossible to make the users take heed to, and internalize, the message of change.

Currently, **electronic official communications are the only official means of internal communication** of the Government of the City.

It seemed a small step because notes and memoranda lacked the "entity" of the record file (*expediente*) given that they were not used for processing but only for communication purposes. However, it was giant step for this project, since it was a quantum leap towards the conquest of the use of e-documents and e-record files.

Thus, **Executive Decree No. 865/10**, of September 2010, mandated all Executive Branch agencies within GCABA to use the Official Documentation Digital Generator (*Módulo Generador de Documentos Electrónicos Oficiales*) (GEDO) to create, register and store Reports (*Informes*) and Orders (*Providencias*).

The GEDO module is, as we usually call it, the "heart" of the EDM ecosystem, since it is the module in charge of conducting the tasks of signing and numbering within the platform.

Any administrative document, regardless of its support, requires **a fundamental element in order to be legally valid: the signature.** This crucial element is the expression of the will of the person who accepts responsibility for the contents of the document.

In addition to the signature, and as results of the volume of documents daily produced in the administration, **another element is required —the official number—** for the document to be easily identified.

The aim was then that each administrative document should be signed and numbered in GEDO. The referred Executive Decree No. 765 was the kickoff. Implementation started by Reports (*Informes*) and Orders (*Providencias*), since these were the two most frequently used documents up to such date in administrative processing.

> Acts that required an administrative resolution issued by the Administration were our next goal. Signing provisions and resolutions digitally implied involving officials directly in this process and, moreover, finally amounted to the definite acceptance of change.

A large number of documents were progressively created during the following years on the basis of GEDO pursuant to different administrative resolutions, namely:

1) Resolution No. 245-SECLYT/11. Prescribed that: as from November 1, 2011 all decentralized bodies and entities of the Government of the Autonomous City of Buenos Aires must use the Official Documents Digital Generator (GEDO) to create, register and store the following documents:

- **Opinion *(Dictamen)***. It communicates a given situation and contains an opinion or technical advice as regards a decision to be adopted. It requires one single signature.
- **Jointly Signed Opinion *(Dictamen de firma conjunta)***. It communicates a given situation and contains an opinion or technical advice on a given matter. It requires two or more signatures.
- **Minutes *(Acta)***. Certifies what has happened, discussed or agreed upon as regards an event. It requires one single signature.
- **Jointly signed Minutes *(Acta de firma conjunta)***. They certify what has happened, discussed or agreed upon as regards an event. It requires two or more signatures.
- **Draft Covenant *(Proyecto de convenio)***. Contains the draft agreement between a body or decentralized entity of the Government of the City of Buenos Aires with a third party
- **Convenant *(Convenio)***. Document that contains the agreement between a body or decentralized entity of the Government of the City of Buenos Aires with a third party.

2) Resolution No. 129-SELCYT/12, whereby the following e-documents were incorporated into the GEDO module of the EDM System:

- Draft (Proyecto). Document containing a work schedule or work plan prior to its approval.

- **Annex *(Anexo)***. Document attaching information that is an inherent part or that is related to the main issue.
- **Payment order *(Orden de pago).*** Document whereby the relevant authority orders the delivery of funds.
- **Law No. 104 Information Request *(Solicitud de Información Ley 104)***. Document requesting the Public Administration of the Government of the City of Buenos Aires to furnish information on its administrative activity.

Generating reports and orders using GEDO was the second great accomplishment of the work team. Users were already using the CCOO module for internal communication purposes and the GEDO module for the creation of these documents.

Users became familiar with the creation of notes, memoranda, reports and orders using SADE and the gradual acceptance of this new work modality allowed moving forward and addressing new challenges.

Acts that required an administrative resolution (*actos resolutorios*) issued by the Administration were our next goal. Signing provisions and resolutions digitally implied involving officials directly in this process and, moreover, finally amounted to the definite acceptance of change.

Users became familiar with the creation of notes, memoranda, reports and orders using SADE and the gradual acceptance of this new work modality allowed moving forward and addressing new challenges.

In order to do so a book closing logistic was necessary, a process of delivery of tokens (*cryptographic devices*) which would be mandatory to sign such decisions. Given that such devices provide more security than signatures, it was made mandatory for resolutions to be signed with tokens.

Thus, **Executive Decree No. 6/11** passed in 2011 instructed all the bodies under the Executive Branch of the Autonomous City of Buenos Aires to use the Official Documentation Digital Generator (GEDO) to create, register and store resolutions and orders. The rule also established that paper and digital support had the same legal effects: *"orders* (providencias*) created through the GEDO module are signed with digital technology and have the same legal value and effectiveness as provisions in paper format"*.

During 2011 all the areas that were signing decisions gradually incorporated by means of Resolutions specifically establishing that *"the bodies may only create, register and store their resolutions by the referred system"*. That is to say, the Book of Resolutions (*Libro de Disposiciones*) was discontinued and the body no longer issued paper-based acts: thereafter GEDO had to be used for their creation, signature and register.

The organization was at that time in the following condition: all G2G communications were digital, the most used documents (Reports and Orders) were also created electronically, and now resolutions started also to be created in the GEDO module.

But the mere fact that the Administration created such digital documents would not result in the Administration processing digitally, it was necessary to link them to a "container"

that would arrange all the documents related to a same issue for processing purposes. Thus, the e-Record File module was created in SADE and **Decree No. 196/11** implemented such module under the terms of the Modernization Law (*Ley de Modernización) (Annex I, Title II, Chapter III*).

During the next three years, several Joint Resolutions of the Technical and Legal Secretariat and the Chief Cabinet of Ministers **instructed the areas of government on the use of e-records/files for the handling of various procedures, precluding paper-support for such processing.**

For example, **Joint Resolution No. 99-SECLYT-SGCBA/11**, prescribing that the Management Closing procedure (*procedimiento de Cierre de Gestión*) must be processed through e-Records/Files, pursuant to Decree No. 196/11, using the e-Record File Module of SADE.

> Progressive steps were taken until all the government procedures set forth in the *Nomenclador de Tratas* (Subject Matter Nomenclature), had their final closing, as results thereof by late 2013 all the government procedures were being processed digitally, a milestone not only locally but also on a national and international level.

And pursuant to **Joint Resolution 14-MMGC-MJGGC-SECLYT/12**, as from August 20, 2012 the following procedures must be processed by e-Records/Files (EE), in accordance with the provisions of Decree No. 196/11:

- Burial Vault and/or Grave Ownership Certificate (Cementries).
- Updating Burial Vault and/or Grave Ownership Certificate (Cementries).
- Renewal of Burial Vault and/or Grave (Cementries).
- Transfer of Burial Vault and/or Grave deed (Cementries).
- Supply of coffins (Cementries).
- Condominium Administration (Consumer Defense).
- Citizen Request to the Executive Branch.
- Change of tax rate acknowledgement (Treasury).
- Facade Recovery (Historical District).
- Households (Schools).
- Curriculum of Studies (Schools).
- Institutional Project (Schools).
- Name Selection (Schools).
- Course Approval (Schools).
- School Security and/or Surveillance (Schools).
- Direct Experience (Schools).
- Trips (Schools).
- Room reservation and others (Culture).
- Appointment of Subsecretary.

To date, not only these but practically **all the subject matters (850) must be processed by electronic record files.**

Progressive steps were taken until all the government procedures set forth in the *Nomenclador de Tratas* (Subject Matter Nomenclature) approved by Resolution 13/SECLYT/2012, repealed by Resolution 335/SECLYT/14, had their final closing, as results thereof **by late 2013 all the government procedures were being processed digitally, a milestone not only locally but also on a national and international level.**

The use of e-Record Files hastened the time schedule of the project, since once processing became mandatorily digital, the creation of e-documents in GEDO that would accompany the processing became necessary and, on the other hand, that all resolutions (*actos resolutorios*), not only provisions, would become digital since otherwise the areas should scan documents on paper-support in order to link them to the e-record file, which amounted to a double work burden.

Thus, and pursuant to Decree No. 6/11, **Joint Resolution 13-MJGGC-PG-SECLYT/11** instructed the Attorney General of the City of Buenos Aires to use SADE and the GEDO module as the sole and single means for the creation, registration and storage of the "Legal Opinion" document.

And **Decree No. 424/12** prescribed that all the bodies of the Executive Branch of the City of Buenos Aires must use the Official Documentation Digital Generator for the creation, registration and storage of Resolutions, following the same logistics as in the case of provisions, that is to say, closing of books and delivery of tokens to the officials in charge of the area.

> With a long term strategic vision it was decided that it was impossible to reach the citizen without solving first the internal problems within the administration. If the backend did not work with the necessary dynamism, starting G2C processing would be useless.

Finally and as a golden brooch, on October 1, 2013 all Executive Decrees of the City of Buenos Aires began to be signed digitally as results of the issue of **Decree No. 398/13. Thereafter, all government officials generate and sign their decisions digitally, an unprecedented event in the public administration.**

Once the majority of the administration procedures (included in the Subject Matter Nomenclature) had moved from paper to digital support, the only pending issues to be solved included, *inter alia*, subsidy management, contracting and payment of works and services contracts, management of government staff dossiers and management of registries, such as the registry of Government suppliers.

Thus, in addition to the first modules of SADE —i.e., CCOO (Official Communications), EE (e-Record File) and GEDO (Official Documentation Digital Generator) the following ones were added:

- **Executive Decree 568/12** implemented the following modules "Beneficiary Identification registry" (RIB) and "Social Plans and Subsidies" (PSOCS) as the sole means of processing

the social benefits granted by the Government of the City of Buenos Aires to individuals or legal entities in order to provide them with assistance or subsidies.

- **Executive Decree 224/13** prescribed that "the execution, amendment, performance and termination of contracts under a Works and Services Agreement must be processed using the LOyS module of the SADE system".
- **Executive Decree Nº 282/13** implemented the module "E-Roll Registration Single Credential No." ("*Legajo Único Electrónico*") (LUE), of the EDMS (SADE), as the "single means for the creation, storage and recordation of all e-documents pertaining to the agents working within the area of the Executive Branch of the City of Buenos Aires".
- and **Executive Decree No. 116/14** implemented the EDMS "Suppliers Single Administrator" ("*Gestor Único de Proveedores del SADE*") (GUP) as a "means for the receipt and dispatch of filings, requests, writings, documents, notices and communications, inter alia, filed through the Suppliers e-Management Platform (*Plataforma de Gestión Electrónica de Proveedores*).
- and **Executive Decree No. 350/14** implemented the Multipurpose Dossier Registry (*Registro legajo Multipropósito*) (RLM) a tool used to replace paper-records used across all the public administration.

The goal of changes in the structure, proceedings and procedures of the public sector is to improve their operation **so as to provide citizens with better services**. However, citizens were not the initial addressees of the shift towards e-document management. Why? Because with a long term strategic vision the project leaders noticed that it was impossible to reach citizens without first solving the internal problems existing within the administration. If the backend did not work with the necessary dynamism, starting G2C processing would be useless.

> No longer was online G2C interaction a mere expression of desire, or another modernization goal prescribed in the words of a law or a presentation, it had actually become a reality.

It was only in October 2013, after five years of intensive work conducted as from the creation of EDMS, that **Executive Decree No. 429/13** could be passed creating the Online Procedures Platform (plataforma de Trámite a Distancia) (TAD) "*as a G2C interative means*" and the EDMS TAD module, "*as a means for the receipt and dispatch of filings, requests, writings, documents, notices and communications, inter alia, filed through the Online Procedures Platform*".

No longer was online G2C interaction a mere expression of desire, or another modernization goal prescribed in the words of a law or a presentation, it had actually become a reality.

Finally, the "one-shop stop" module (*ventanilla única*) will shortly be enacted. Such module will change the receipt and commencement of all citizen filed applications and requests.

Regulatory Framework of GCBA's Electronic Document Management

Module	Regulations	Implementation Commencement Date
WEB Official Bulletin	Law No. 2739	June 2008
Public Administration Modernization Law *(Ley de Modernización de la Administración Pública)*	Law No. 3304	November 2009
Electronic Document Management System *(Sistema de Administración de Documentos Electrónicos)* (SADE)	Decree No. 589/09	June 2009
Official Communications *(Comunicaciones Oficiales)* (CCOO)	Decree No. 287/10	April 2010
	Decree No.696/10	September 2010
Official Documents Digital Generator *(Generador Electrónico de Documentos Oficiales)* (GEDO)	Decree No. 765/10	September 2010
	Decree No. 6/11	January 2011
	Decree No. 424/12	August 2012
	Joint Resolution No. 14/ MMGC-MJGGC SECLYT/12	August 2012
	Joint Resolution No. 13 MJGGC-PG-SECLYT/11	October 2011
	Resolution No. 334/ SECLYT/12	September 2012
e-Administrative Record File *(Expediente Electrónico)* (EE)	Decree No. 196/11	April 2011
	Decree No. 105/13	March 2013
	Law No. 4735	November 2013
	Law No. 4764	November 2013
	Resolution No. 21/ MJGGC-SECLYT/12	December 2013
	Resolution No. 17/ MJGGC-SECLYT/13	September 2013
	Resolution No. 19/SECLYT/14	April 2014
Services & Works Contracts *(Contratos de Locación de Obras y Servicios)* (LOYS)	Decree No. 224/13	June 2013
	Law No. 2751	June 2008
Digital Signature	Decree No. 398/13	October 2013
	Decree No. 446/13	November 2013
Remotely conducted Administrative Procedures *(Tramitaciones a Distancia)* (TAD)	Decree No. 429/13	October 2013
Social Plans and Subsidies Beneficiaries Identification Registry *(Registro de Identificación de Beneficiarios (RIB))* and Social Security and Subsidies Plans *(Planes Sociales y Subsidios)* (PSOCS)	Decree No. 567/12	December 2013
	Resolution No. 317/SECLYT/13	November 2013
e-Roll Registration Single Credential No. *(Legajo Unico Electrónico)* (LUE)	Decree No. 282/13	July 2013
	Resolution No. 3/MMGC-SECLYT/14	March 2014
e-Civil Registry (RCE)	Decree No. 104/13	March 2013
Suppliers e- Management *(Gestión Electrónica de Proveedores)* (GEP) and Suppliers Single Administrator *(Gestor Unico de Proveedores)* (GUP)	Decree No. 116/14	March 2014
Registries e-Management *(Registro Legajo Multipropósito)* (RLM)	Decree No. 350/14	August 2014

Consequently, municipal business hours may be extended and existing premises can be used for other purposes since filings will no longer be made at specific sites and locations.

Supplementary Rules

Electronic Archives and Digitalization

Several rules supplemented or accompanied the digitalization of administrative processing given that the different areas had **to be trained as to matters such as: what had to be done** with paper once it was scanned, setting paper document scanning parameters, which was the digitalization procedure to be applied, the manner in which e-records/files would be archived and the digitalization of paper-format e-records/files whenever necessary.

At the commencement of the Administration's term **Executive Decree No. 2008/03**, established that "*the divisions, upon completion of the procedure, shall forward the record files* (expedientes*) to the General Archive either by means of an administrative act or order, specifying that no issues are pending resolution ...".*

On the other hand, **Law No. 80** (*art. 115, item i*), vested the Accounting General Directorate (Dirección General de Contaduría), with the following authority, among others "*to keep the financial documentation general archive of the Government of the City of Buenos Aires*".

Consequently, article 4 of **Executive Decree No. 2008/03** had to be partially amended as regards the financial documents archives. Thus, **Executive Decree No. 696/10** established that: "*The Records/Files containing financial documents shall be archived and prospectively purged at the Reception Desk and Archive Department (Departamento Mesa de Entradas, Salidas y Archivo de la Dirección General de Contaduría), thus Article 4 of Executive Decree No. 2008/03 is hereby accordingly amended*".

Subsequently, **Executive Decree No. 823/10** regulated item 5 "Electronic Archive", of item 6.3 "Administrative Procedures Digitalization", of the Modernization Law (Ley de Modernización). It prescribed that "*the original administrative documentation in paper format shall be archived and kept on electronic format, abiding by the procedure jointly determined by the Chief of the Cabinet of Ministers and the Legal and Technical Department ...*" and that *"the documents stored and kept in electronic format shall have the same legal and evidentiary value as those stored and kept in paper format ...*".

In line with this Executive Decree, **Joint Resolution No. 18/MJGGC-SECLYT/11** approved a digitalization of paper format records/files for the purpose of their electronic storage.

The Administration reviewed the use that the areas had to give to paper format documents as well as the scanning parameters, paper digitalization procedure and e-record file archive, in order to issue new regulations. Accordingly, **Resolution No. 130/SECLYT/2014** was passed to repeal Resolution No. 138/SECLYT/2010, that had become obsolete after three years of profound changes in government processing.

The referred Resolution **formally introduces the digital world as part of government processing** and separates it from "paper" world. Thus, allowing government areas to **clearly visualize the differences and similarities between both worlds**. Moreover, it consolidates into one single regulatory body matters that were scattered across different regulations,

creating to some extent **a consolidated body of principles and basic guidelines for government processing.**

Digital Signature for the Rest of the Branches of Government

Law No. 4836 for the implementation of the Digital Signature Infrastructure, established that CABA has its own Licensor Entity. **Executive Decree No. 518/13**, that implemented the referred law, designated the Legal and Technical Secretariat (*Secretaría Legal y Técnica*) (SECLYT) of the Autonomous City of Buenos Aires as the Licensor, vesting such Licensor with the authority of granting licenses to licensee certifiers. **Resolution No. 283-SECLYT/14** approved the Certification Policy to be complied by the Information Systems Agency, thus becoming CABA's Certifying Authority.

> Across different regulations, creating to some extent a consolidated body of principles and basic guidelines for government processing.

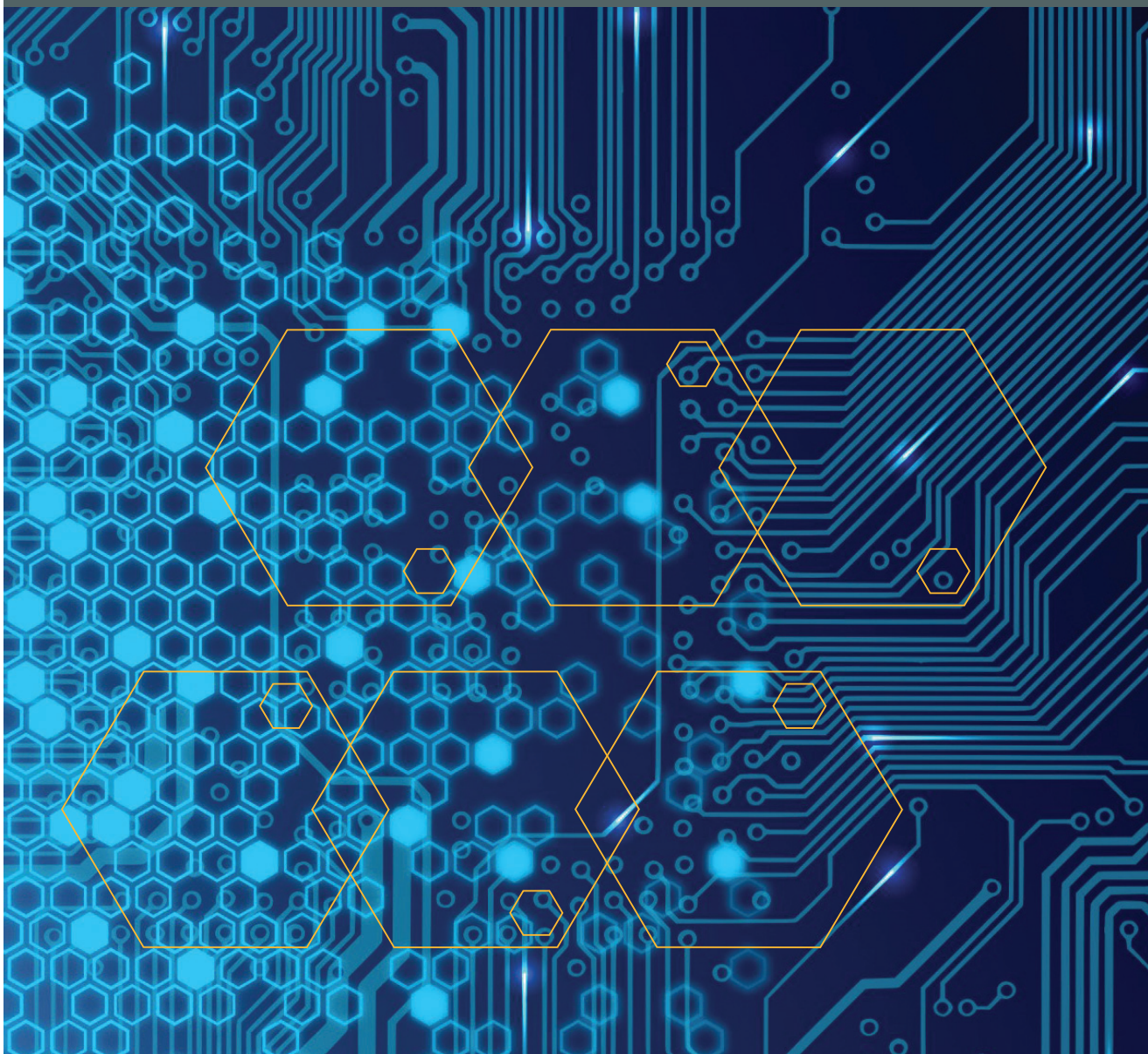
E-Procurement

Law No. 2095 regulates the Procurement Regime (Régimen de Compras y Contrataciones) within CABA, as amended by the referred Law No. 4764. Article 83 of the new rule establishes as follows: "*Procurement Digitalization. All purchases, sales and contracts made by the contracting bodies encompassed by this law, must be made using the electronic or digital system established by the Governing Body, across all the stages and administrative acts of the process. Digital documents shall carry the same legal effects and value as paper-based documents and shall be deemed evidence of the information contained therein ...*".

Executive Decree No. 1145/09 approved the regulation of article 83 of Law No. 2095 and implemented the e-Procurement System of the Government of the City of Buenos Aires *(Sistema Electrónico de Adquisiciones y Contrataciones del Gobierno de la Ciudad Autónoma de Buenos Aires) thereafter called Buenos Aires Compras (BAC)....*".

Although the BAC platform is not part of the EDMS ecosystem (SADE), it was necessary for it to interact with the e-Record File module of the EDMS Ecosystem to allow for the e-processing of procurement in the City of Buenos Aires. Therefore, **Joint Resolutions Nos. 8-MHGC-MJGGC-SECLyT/11, 9-MHGC-MJGGC-SECLyT/11, 12-MHGC-MJGGC-SECLyT/11** and **14-MHGC-MJGGC-SECLyT/11,** were passed to approve the e-proceedings of Procurements to be processed by such module.

6. E-GOVERNMENT IN ACTION: THE EDMS ECOSYSTEM



The switch from paper management to e-management was achieved through the development of a modular ecosystem that allowed for the gradual implementation of new components. The core of the referred ecosystem is composed of the Official Documents Digital Generator (*Generador Electrónico de Documentos*) (GEDO) and the e-Record File (*Expediente Electrónico*) (EE).

The Official Communications (*Comunicaciones Oficiales*) (CCOO) module opened the door to electronic document management, thereby allowing officials to start getting acquainted with digital tools and avoiding the disadvantages arising from paper-based models.

The EDMS Ecosystem: Modular Strategy as a Starting Point

The **Electronic Document Management System (EDMS) (Sistema de Administración de Documentos Electrónicos** (SADE)) is the core software of the electronic document management system devised for the Government of the Autonomous City of Buenos Aires (GCABA). It was structured on the basis of a solution existing in the market, making developments especially tailored in line with GCABA's specific requirements.

It is designed as a set of components that do not operate on an isolated basis but which are part of a modular structure. Each "component" is a module that fits with others and, in turn, each "component" is reusable by other modules within the same system and also by external systems.

Thus, the EDMS constitutes an ecosystem, or group of interrelated elements, that has progressively grown on a module-by-module basis and that allows for new incorporations and interactions in the future.

The central and fundamental component within this ecosystem is the Official Documents Digital Generator (GEDO). This module contains and manages all the rules to digitally generate e- official documents that legally replace traditional paper-based and holographically signed documents. These new e-documents are stored in the Official Documents Single Repository (RUDO), from which the rest of the modules take them in order to manage them according to each module's rules, whether they are "containers" (e.g. e-record files) or specific "businesses" or operations which in turn use some "container" (e.g. subsidies or works or services contracts that are processed through an e-record file).

The central and fundamental component within this ecosystem is the Official Documents Digital Generator (GEDO). This module contains and manages all the rules to digitally generate e- official documents.

The principal modules are the e-Record File (*Expediente Electrónico*) (EE), Official Communications (*Comunicaciones Oficiales*) (CCOO), Web Official Bulletin (*Boletín Oficial Web*) (BOW), Regulatory Information System (*Sistema de Información Normativa*) (SDIN), Chief of Government Signature Management (*Administración Firma Jefe de Gobierno*) (AFJG), Archive (ARCH), Subsidies Single Processing e-Platform (*Plataforma Electrónica para la Tramitación Única de Subsidios*) (TUS), Works & Services Contracts (*Locación de Obras y Servicios*) (LOyS), Buenos Aires Procurement (*Integración Buenos Aires Compras*) (BAC), Personnel Single e-Dossier (*Legajo Único Empleados*) (LUE), Suppliers e-Manager (*Gestor Único de Proveedores*) (GUP), Health Personnel Designations (*Designaciones del Personal de Salud*) (DPS), e-Civil Registry (*Registro Civil Electrónico*) (RCE), Multipurpose Dossier Registry (*Registro Legajo Multipropósito*) (RLM) and Online Procedures (*Trámite a Distancia*) (TAD).

Additionally, the general services modules such as the Single Desktop (*Escritorio Único*) (EU) and Signature Holder (Portafirma) (PF), ease tasks or their display.

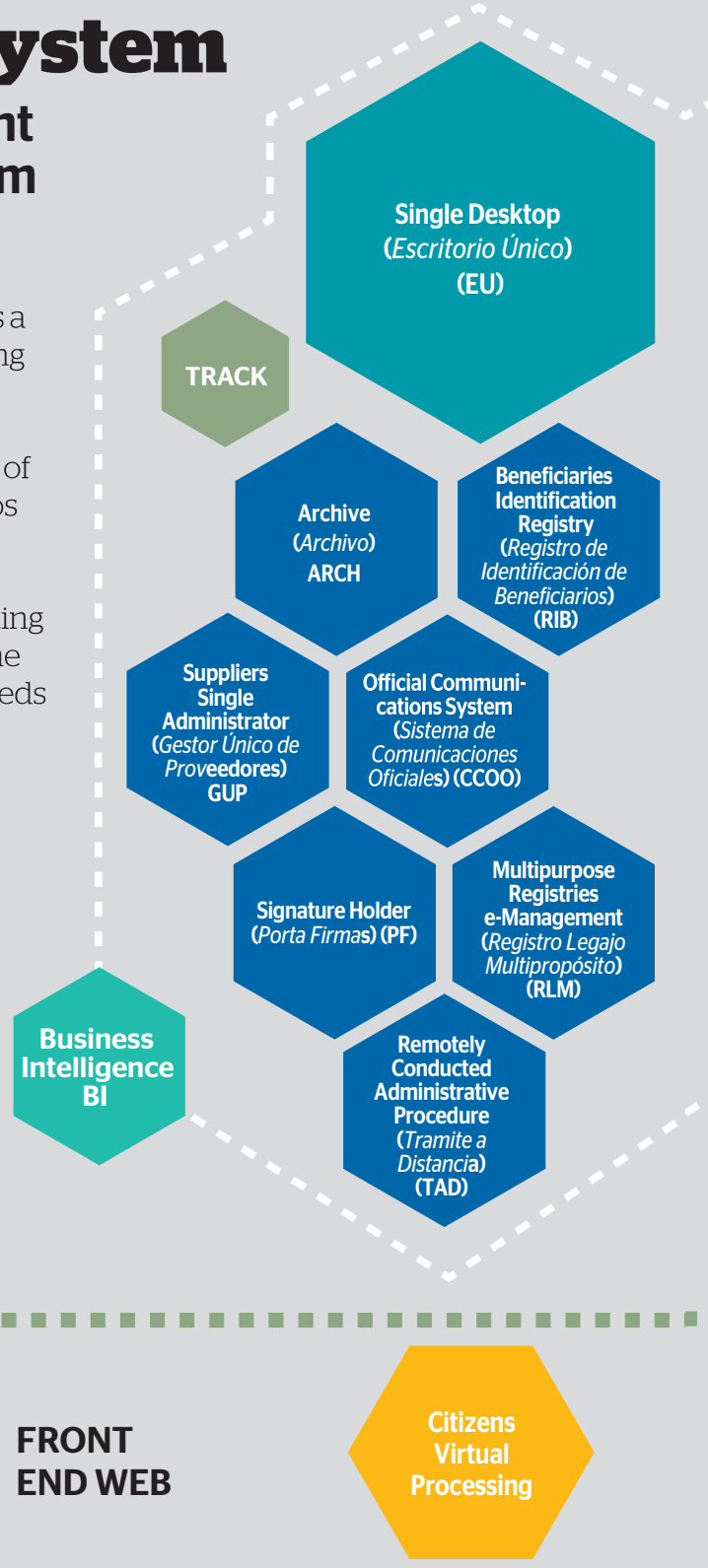
The so-called Business Intelligence (BI) module is the ecosystem's layer that provides management reports or data bases for datamining. Consequently the BI differs from the rest of the modules in that it is not a transactional module and encompasses all of them since all the modules generate reports.

EDMS Ecosystem

Electronic Document Management System

The Electronic Document Management System (EDMS) is a broad ecosystem encompassing the variety and aggregate administrative procedures processed by the Government of the Autonomous City of Buenos Aires.

Each module operates interacting with all the other modules of the system, catering for specific needs and contributing to a work-structure aligned with the e-governance model.




BACK END
Official Documentation Digital Generator (Generador Electrónico Documentos Oficiales) (GEDO)
E-Administrative Record File (Expediente Electrónico) (EE)
OFFICIAL DOCUMENTATION SINGLE REPOSITORY (Repositorio Único de Documentos Oficiales) (RUDO)
Regulatory Information System (Sistema de Información Normativa) (SDIN)
Web Official Bulletin (Boletín Oficial Web) (BOW)
Services & Works Contracts (Contratos de Locación de Obras y Servicios) (LOYS)
E-Civil Registry (Registro Civil Electrónico) (RCE)
Social Plans and Subsidies (Planes Sociales y Subsidios) (PSOC)
Chief of Cabinet Signature Management (Administración de Firma del Jefe de Gabinete) (AFJG)
Health Personnel Designation (Designación de Personal de Salud) (DPS)
e-Roll Registration Single Credential No. (Legajo Unico Electrónico) (LUE)
Numerator
GCABA Employees Virtual Processing

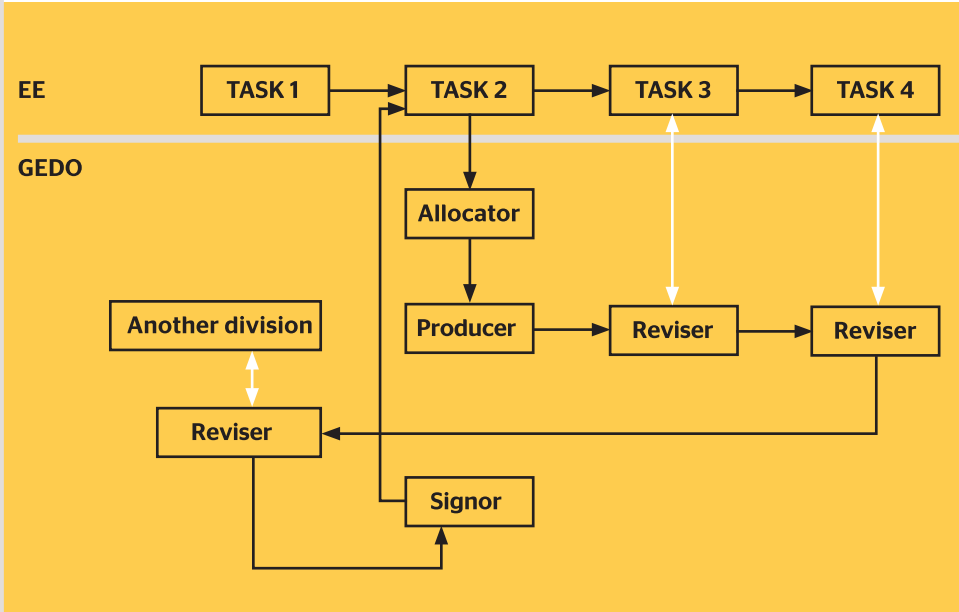
An example that illustrates the **interaction between the parts of the ecosystem** is the operation of the Official Communications module (CCOO) with GEDO and EE. Basically, CCOO is the GEDO module with a portion of the EE rules, in addition to some rules of its own. That is to say, it was not necessary to develop something totally new, instead, it was enough to combine two concepts, **reusing components that are nothing else than software parts or subroutines of principal programs.**

Another case that illustrates the interaction between modules, however different and more conceptual, is the inter-operation of GEDO and EE. A particular effect is generated in public administration **due to the complexity of the acts of government and the legal need of recording the legal reasoning thereof**: whenever a process is described, such process seems to be affected in each stage by the production of documents, when, **they are actually separate processes with a very different logic, even when one is dependent on the other.**

In general, in traditional systems, workflows include the processes involving the production of documents as if they were specific for each case, when they all actually have the same logic. This is the reason why when approaching a procedure under this scheme, the procedure flow must be analyzed in terms of the tasks involved and take into account if it calls for the creation of a document. The following graphic illustrates this double parallel workflow.

Double Parallel Workflow Scheme (EE-GEDO)

The record file and the generation of documents operate independently.

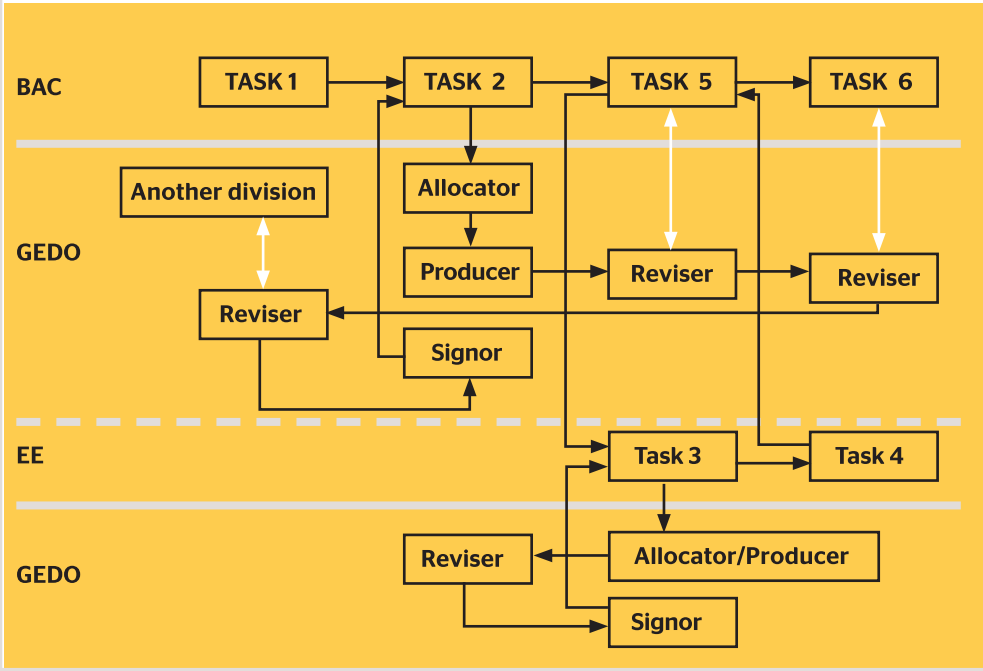


Another example that illustrates the independence between documents and processes is an even more complex case: when a specific "business" (e.g. BAC) requires, in addition to a parallel workflow for the generation of documents, to "exit" to another flow in an exceptional manner. In this case it not only "calls for" the GEDO flow, but also for the EE module to use its

open flow, regardless of the fact that in each task it is using the EE services as a container. The following graphic clearly reflects this fourfold parallel workflow, where the four flows may be being simultaneously conducted.

Fourfold Parallel Workflow Scheme

Processes are independent of the documents and record files.

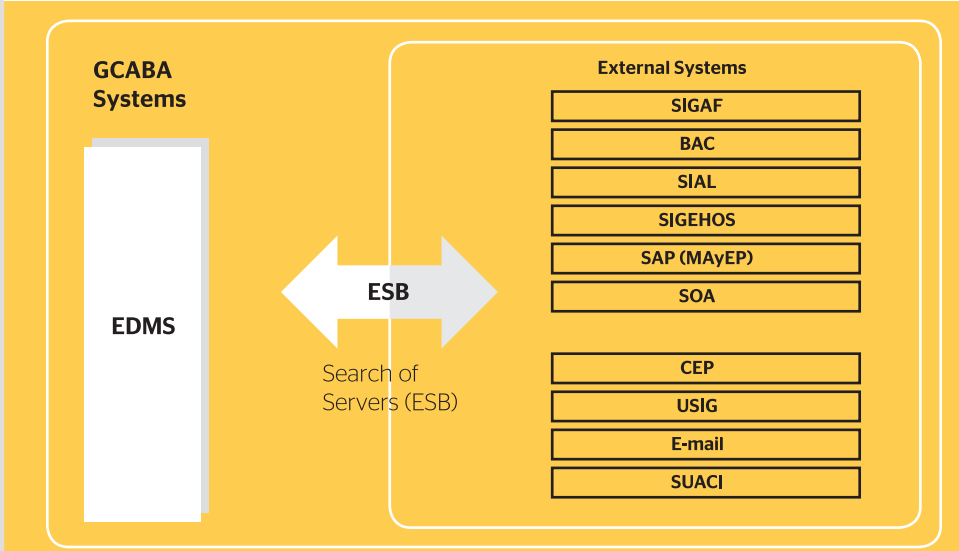


Any combination is possible because, as mentioned earlier, EDMS's general architecture is modular. But also because each "component" of each module is designed with subroutines, this allows each module to, apart from transacting per se, turn into services usable for other systems.

This subroutine structure also allows building platforms for specific uses on the basis of Electronic Record Files (EE) and on the basis of Registries-Dossiers (RL), which are the two basic types of existing "containers", however they also share many subroutines in common. The record files are aimed at processing, that is to say, there is a process or workflow for a specific result. Conversely, registries-dossiers are aimed at the storage of information for the control and validation of future situations. This has allowed for the easy adaptation of the basic models to any specific needs which called for a specific solution due to their significance or complexity. Thus, for example, the Works & Services Contracts (*Locación de Obras y Servicios*) (LOyS) or Social Security and Subsidies Plans (*Planes Sociales y Subsidios*) (PSOC) modules were developed on the basis of the EE, whilst modules such as Social Plans and Subsidies Beneficiaries Identification Registry (*Registro de Identificación de Beneficiarios)* (RIB), Suppliers e-Manager (*Gestor Unico de Proveedores*) (GUP) or the Personnel Single e-Dossier (*Legajo Unico Electrónico*) (LUE) were developed on the basis of the R-L.

EDMS Services Model

Each module may transact either by itself or act as a service for other systems.



Official Documents Digital Generator (Generador Electrónico de Documentos Oficiales) (GEDO)

The Official Documents Digital Generator (GEDO) is the module of the Electronic Documents Management System (EDMS) that resolves the creation, numbering, processing (generation workflow), signature and archive of all GCABA's official documents in a secure, controlled, automatic, digitally supported and recorded manner, thus, eliminating the need of their paper-based production, registration and storage. Therefore, GEDO is the only source of creation of official e-documents to be included in any GCABA's containers.

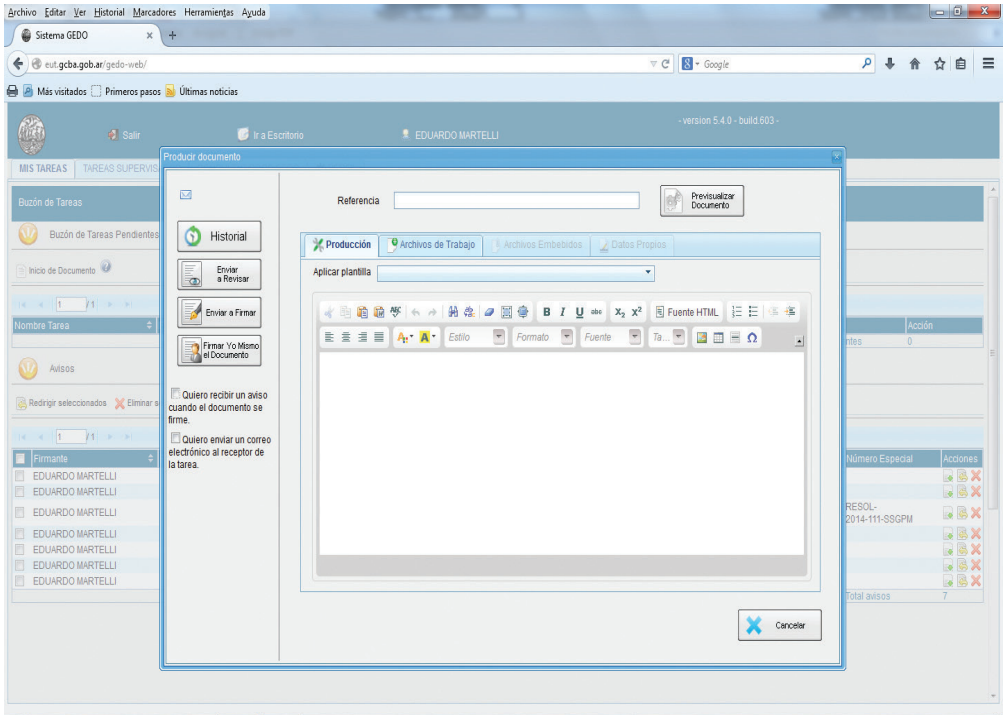
This is the central module of the whole EDMS ecosystem, since it generates the documents that are the "raw material" of the rest of the modules and of all the other government systems that need to document their acts by means of this service. GEDO is the tool that allows e-processing; without GEDO, the rest of the modules would be senseless.

GEDO is the system that allows for the generation, numbering and storage of e-documents of the Government of the Autonomous City of Buenos Aires. All documents generated by GEDO are contained in one single repository called Official Documents Single Repository (*Repositorio Único de Documentos Oficiales*) (RUDO) and from there any document can be linked to any of the different containers (record file, registries dossiers, CCOO, etc) whereby processing is conducted in GCABA.

All documents generated by this module may use a workflow that reflects the steps invariably followed in public administrations. The stages of the generation workflow are: Allocator, Producer, Reviser and Signor.

- The Allocator is the person that requests another user (Producer) to generate a document. This profile is very clear in Online Procedures (Trámite a Distancia) (TAD), where an official requests a citizen or a company to prepare a specific type of document, thus becoming a Producer.
- The Producer is the user that generates a document, that is to say drafts it, fills out a form, "imports" it from an image or "embeds" it in the case of documents externally generated (e.g. a word document, a video, a drawing, etc.).
- The Reviser/s is/are officials, lawyers or advisors who generally revise the documents before they are signed by one ore more official/s. The module allows circulating the document as many times as necessary between different revisers or signors and revisers.
- The Signor/s is/are are officials who give legal validity to the document by his/her signature. It may be one, but sometimes, in the case of documents that require joint signatures, there are several signors. A typical example is the signature of Draft Covenants, Covenants, Executive Decrees and Minutes that are countersigned.

The route across the different workflow players is recorded and displayed at all times so as to be able to audit who created, revised and signed each and every document. This is the e-representation of what is known as the "step ladder" ("la escalerita") in administrative jargon. The step ladder consists of a seal with signature boxes, very common in government practice, to progressively add in the signatures of the users involved. The system accommodates this practice and displays a chart reflecting all those who revised the document, but also allows for the insertion of comments.



Display. GEDO's graphic interphase

Important: any user may perform all the roles in one single step.

GEDO also provides a convenient alternative whenever a user wants to **save metadata or data of any GEDO document, the module has a generator of additional data or metadata.** By means of tables any user can display, very easily, screens that will allow capturing and saving such data.

GEDO uses **four basic types of documents:**

- **Editables.** Documents that are drafted and exclusively consist of text, e.g. administrative acts. They generate a document in PDF freely legible format.
- **Images.** The image of a document generated in paper is captured (scanned), e.g. when a citizen hands a document to the administration in paper format or judicial paper. Images generate a document in PDF freely legible format.
- **Templates (forms).** These are preset documents containing a combination of texts and boxes or only boxes, to be filled out or not (mandatory or non-mandatory) controlling their values. They generate a document in PDF freely legible format and an file with the captured data.

  Note: Templates manages documents "imported" from an image, to which a form may be linked in order to capture data.
- **Embedded (other non-PDF formats).** These documents allow storing other proprietary formats (eg. doc, .xl, .tif, .dwp, .dwf, etc). This allows saving and signing a document (drawings, videos, etc.) without losing its original format, but only readable with the application that represents them (Word, CAD, etc.). They do not generate PDF format documents.

> GEDO is the system that allows generating, numbering and storing the e-documents of the Government of the Autonomous City of Buenos Aires.

In addition to these four basic types there are other features, all defined through simple and practically defined tables:

- **Reserved.** Reserved documents may only be seen by the users who are staff within the agency-division that generated such documents and who additionally have the access profile (permit) to see this type of documents. The signor, the reviser-user and the user holding an access permit are authorized to see these documents.
- **External Signature.** The system acknowledges a document that has been digitally signed outside the EDMS, and, if accepted, saves it honoring the external signature.
- **Special Number.** Documents which once signed are allocated a special number either to enhance their identification or for legal purposes.
- **Division.** Controls the division that may create such documents, e.g. birth certificates can only be generated by the Civil Registry, etc.
- **Signature with Token.** Controls that this document has been signed with the relevant digital certificate.
- **Notice of Signature:** Informs if automatic notices with his/her signature must be generated.

To get a picture of the complexity that feature combination has actually attained, **more than 550 documents (300 documents and 250 forms)** have already been created.

It was necessary to create families of document types in order to facilitate selection by users: they are groups of documents that share common features.

Additional comments on Controlled Forms (Formulario Controlado) and Joint Signatures (Firma Conjunta):

- **Controlled Forms** allow, easily through tables, replacing many "loading screens" of the traditional systems and are essential to 1) control and guide the creation of documents both for On Line Procedures (*Trámite a Distancia*) (TAD) —i.e. when the form is loaded by a handicapped citizen— as well as in the case of a Multipurpose Dossier Registry (*Registro Legajo Multipropósito*) (RLM) and in the cover page of the Record Files, and 2) capture data from documents incorporated from an image.
- **Joint Signatures**, of a digital document that must be numbered and dated with the last signature without losing the validity of the prior signatures, involve a sophisticated technical resolution that allows GEDO to actually represent the documents as they are presented in paper. Many other systems resolve this by generating several individual documents, each one carrying its signature, however, this complicates and burdens the creation, display and validity of such documents.

> To get a picture of the complexity that feature combination has actually attained, more than 550 documents (300 documents and 250 forms) have already been created.

These components have provided a new dimension to GEDO, they make it more flexible and allow for compliance **with all the long-standing legal requirements applicable to paper format documents.**

Another facility provided by the GEDO module is its capacity to **save work documents** that were part of the final document preparation process. This facility is usually used in large and complex documents, as is the case of covenants. The Producer and the Revisers may, for example, use the Word processor with all the edict and change tracking facilities that this application provides and forward the final version to the GEDO's editor, and then use it in future procedures.

The main benefits arising from the implementation of the **Official Documents Digital Generator (GEDO)** in the management of GCABA arise from the fact that it can:

- Create any type of document in a fully controlled manner.
- Decouple document production from the workflow process (procedure) where it is used through its own workflow.
- Allow for the creation of an Official Documents Single Repository (RUDO).
- Significantly speed-up document production, particularly those that require for joint signatures.
- Gain an instantaneous comprehensive picture of all the participants in the creation of a document.
- Prevent the reservation of document numbers. Apart from the obvious control issues involved, this fosters timely work since the government can no longer "speculate" with procrastinating tasks to a date later than the one established by the rules and prevents backdating.
- Prevent signature manipulation.

What happened before GEDO? Prior to the implementation of this module, documents were first drafted in a PC, then revised by Word with tracked changes, printed, numbered and recorded in books before being included in folders and dossiers. A combination of 20th and 18th century technology.

Electronic Record File (Expediente electrónico) (EE)

The **e-Record File (EE)** module is one of the **main "containers"** in the EDMS ecosystem to manage the rules that govern the use of an e-record file in the Government of the Autonomous City of Buenos Aires. It allows linking documents generated by GEDO and stored in the single repository, with all the document management features.

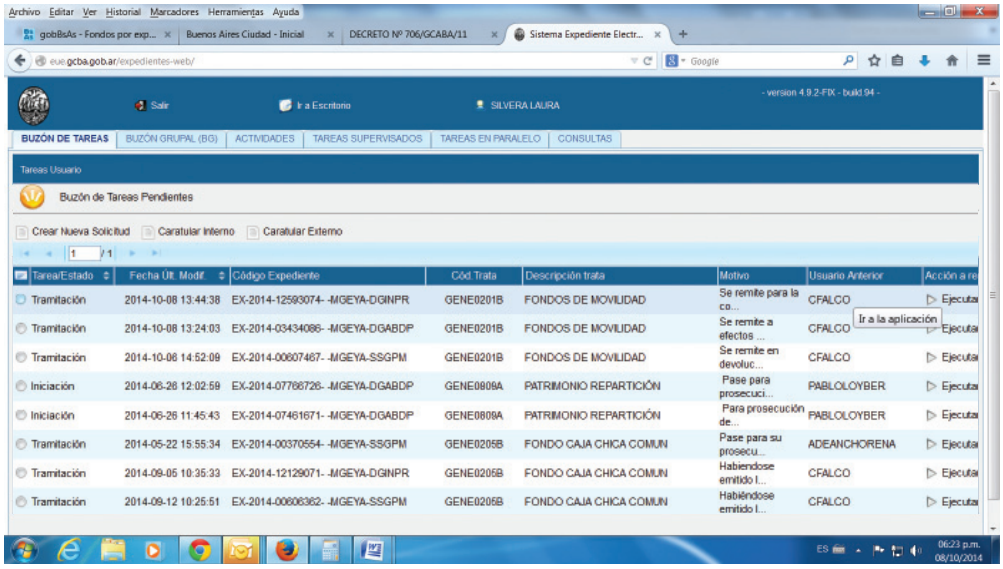
Until the creation of the EE, Paper Record Files (EP) were the medium used which, although compliant with the rules then in effect, **had several disadvantages in comparison with their digital counterpart**, namely: their processing, view and access was slow and they were subject to individual consultation, the forwarding and signature of such files were recorded in writing, documents were duplicated and physically transported (bearing in mind that the City has 1,400 buildings this is a crucial issue), archives were difficult to access, among other disadvantages.

> The shift to e-record files quickly speeded-up processing times, allowed for decision taking processes to become paperless, provided certainty and allowed for the use of documents in parallel.

The **shift to e-record files** quickly speeded-up processing times (document forwarding is instantaneous), allowed for decision taking processes to become paperless, provided certainty to the integrity of documents that compose the record file, eliminated paper records, slashed physical transportation costs and provided certainty as to dates of processing, allowed for record files and prior documents to be reused, and above all, for the display and use of documents in parallel. It has also **generated a significant increase in transparency**, since it enables citizen to access record files both for consultation purposes or for conducting procedures which are be currently available online.

Some of the **advantages resulting from the implementation of the e-Record File (EE) module** in GCABA are:

- Access to the e-record file (information) on a permanent basis.
- Greater interlinking.
- Allowed for decision taking processes to become paperless (however, this does not involve paper costs slashes since it is likely that several versions will be printed).
- Online and ex post control information.
- Full certainty as to the contents of record files.
- Reduction of bad practices.
- High technology security environment.



DISPLAY. Electronic Record File Interphase

- Interoperability with vertical and transversal systems.
- Task follow-up on a procedure by procedure basis.
- Agent performance control on an agent by agent basis.
- Better G2C relationship (consultation, online procedure).
- Implementation of one-stop shop.
- Savings in:

  Staff (registry/messengers).
  Transportation (errand boys/ vehicles/ chauffeurs).
  Space (temporary and permanent archives).
  Time (travelling/simultaneous consideration).
  Money (discretionary handling of the record file).

Operation of e-Record Files

The flexibility afforded by the e-record file module results in a series of **services or facilities that allow for an agile processing of record files with multiple work options**, namely:

Cover Page Labeling (*Caratulación*)

The module allows for the creation of a "Cover Page Label" ("*Carátula*"), that is a **record containing the main features of the procedure to be conducted**. All procedures are codified, thus one must select the one to be conducted and fill in the general data, both mandatory and non-mandatory. Specific metadata may also be defined for each specific procedure in the EE Management module by means of tables.

The steps to change a cover page are restricted to certain fields. Records of all changes are saved and informed to the audit department for a closer and more effective control.

Request for Cover Page Labeling

Given that cover page labeling decentralization is not appropriate for certain procedures, the user may request the EE central manager for the creation of a cover page label in order to commence the procedure. The user loads the data in a format similar to a cover page and awaits for the central manager's confirmation.

Linkage

A record file is the collection of documents that provides the basis for a decision and the relevant administrative act. The main service of EEs is to allow linking any of the documents generated by GEDO and stored in the Official Data Single Repository (RUDO) to a container (EE), that is nothing more than a "pointer" that allows to orderly gather the documents that will compose the record file.

Such linkage can only be undone whilst the EE is held by the user who is actually operating the EE. Once the EE is forwarded to another user, such documents cannot be unlinked for any reason, and this is one of the principal basis on which the system rests. If for any reason a change were to be introduced, it can only be done through the Clerical Error Correction (*Subsanación de Errores Materiales*) (SEM) service.

The flexibility afforded by the e-Record File (EE) module results in a series of services or facilities that allow for an agile processing of e-record files with multiple work options.

Clerical Error Correction (SEM)

Whenever documents are erroneously linked to an EE container, such error can be remedied by means of an "e-disaggregation" or by means of the correction of clerical errors (SEM).

In a "paper" container the pages (documents) would be removed and such removal would be acknowledged by means of an administrative act specifying the reason for such removal. It is a very weak practice for control purposes given that one never knows for certain which were the documents actually removed.

Electronic containers enhance certainty by barring removal of linked documents, thus the SEM service allows for the correction of such errors without the need of disaggregating the documents. On the other hand, given that e-documents allow for an infinite amount of originals, thus, the argument that such documents are needed in order to attach them to another container is baseless in an e-environment.

Forwarding (*Pase*)

Forwarding is the service that identifies the person or sector to who one wishes to confer control over the EE to continue with the procedure. The act of forwarding allows the forwarder to 1) explain the motive and request for this act; the system shall turn it into a document (Administrative Notice) (Providencia) and link it to the EE; 2) change the status of the record file, and 3) notify another user that the procedure moved on to another stage, by means of the Official Communications (CCOO) module.

Group Mailbox (*Buzón Grupal*)

Given the size of the City of Buenos Aires Government it is not always possible to identify the user to whom one wants to address an EE. The Group Mailbox allows "forwarding" a record file to a division or sector rather than to an individual.

In this case until the EE is allocated by a senior authority to a specific user or until an

authorized user "takes" such EE from the Group Mailbox of its division or sector, no one can operate on such record file since any user handling the record file must be always identified.

Status

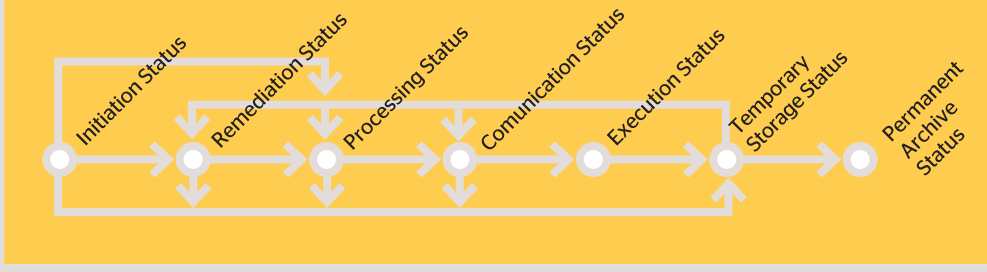
There can be up to seven statuses (*estados*) involved in the processing of any EE in the City of Buenos Aires. The term "status" is not synonymous of stage (*etapa*). Statuses are the general conditions or the common steps of any procedure, with different legal effects and which definition helps the management of the EE; stages, instead, are inherent to each procedure, they indicate what must be done in each case for that specific procedure.

The transition from one status to another is not related to the location of the EE or to a workflow, but will depend instead of the user's criterion, except for the "Initiation" status.

The statuses are: Initiation Status (*Iniciación*), Remediation Status (*Subsanación*), Processing Status (*Tramitación*), Comunication Status (*Comunicación*), Execution Status (*Ejecución*), Temporary Storage Status (*Guarda Temporal*), and Permanent Archive Status (*Archivo Definitivo*). However, nothing prevents defining any other further status in the future, if necessary. The service controls the logical sequence of the transition from one status to another. Each time an EE is forwarded, the status of the EE can be changed complying with the defined rules, specifying in each case the reason for such forwarding in a text field available for such purpose.

EE Statuses and transition from one status to another

The statuses are the general conditions or the common steps of any procedure



- **Initiation Status.** Is the status upon which the record file is generated by means of the cover page labeling. When the user wishes to change this status, the user may move on to the "Remediation Status", "Processing Status", or "Temporary Storage Status". Once the Initiation Status has been abandoned, the user cannot go back to such status. If the user chooses to move on to the "Remediation Status", he/she must specifically indicate which is/are the document/s to be amended. The user must also indicate the motive why he is sending the record file to the "Remediation Status".
- **Remediation Status.** This is the time when the administration requests a third party to remedy some error or clarify his/her presentation. In this status the features and documents of the record file specifically identified for remediation can be amended. The user can then move on to the "Processing Status" or to the "Temporary Storage Status". The remediation status is an optional status within any record file's life cycle.
- **Processing Status.** This status reflects the moment during which the procedure goes through the different stages to finally reach its resolution (administrative act). In order to move from this status to the "Remediation Status" or to the "Communication Status" or

"Temporary Storage Status" the user must specifically indicate so. If the EE is moved on to the "Remediation Status", the user must specifically indicate the document/ that is/are to be amended.

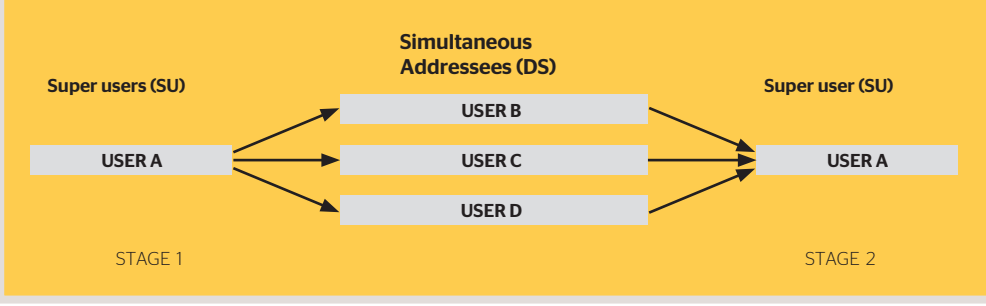
- **Communication Status.** At this status, the EE is already communicating and publishing the administrative act, it cannot allow for the linkage of documents. The record file cannot be amended. There are two possible following statuses: the "Temporary Storage Status" or the "Execution Status".
- **Execution Status.** This is the time when the procedure must execute the administrative act. This is an optional status within any record file's life cycle. The next possible status is the "Temporary Storage Status".
- **Temporary Storage Status.** When the procedure is completed, the user handling the EE defines its archive. This status allows going back to some prior statuses upon an express request from a relevant authority by means of the Rehabilitation (*Rehabilitación*), a task that is exclusively controlled by the system manager.
- **Permanent Archive Status.** This is the time when the EE moves on from the Temporary Storage Status to the Permanent Archive Status. At this point the EE cannot return to any other status.

Multiple Forwarding (Parallel Processing)

Multiple forwarding allows **processing a record file simultaneously** in different areas, in order to speed up processing times. Any user may initiate parallel processing thus becoming a "super user": make simultaneously forwarding to several addressees, indicating the motive thereof: these addressees may only return the record file to the same user.

EE Parallel Processing Diagram

Allows processing a record file on a parallel basis across different divisions so as to speed-up processing times.



Record File Reservation (*Reserva de Trata*)

Some record files are classified as reserved due to the sensitiveness of the information they contain (for example Child Care Board). The Record File Reservation service was designed **to keep the contents of a record file strictly reserved.** The reserved condition of an EE is a feature of the subject matter of the record file. During the cover page labeling process the user may elect whether to keep the contents reserved. If the user elects to use the "reserved" condition, the administrative act that declares reservation is linked.

Record File Reservation allows the EE to be only seen by the users who participated in such record file's processing or by those users who hold the "authorized" role within the Division,

but subject to a restriction: as the record file's processing moves on, its view is partial and is progressively restricted to the documents included up to the time (of the Forwarding) when such Division had control over the EE.

Additionally, a reserved record file (*EE reservado*) can only be viewed by the users who hold the role of "authorized" users of the Divisions (one, several or all) loaded in the specific table of Divisions authorized to see reserved record files of each subject matter. For example, if a specific subject matter contains issues subject to tax secrecy it will be marked as reserved. If the user decides to process the record file on a reserved basis, the "authorized" users of a specific Division of the Tax Authority (*AGIP*) will always be entitled to see the record files for such subject matter, in addition to the users handling the procedure.

Linkage (*Asociación*)

This facility allows managing the **existing link among EEs bearing some connection between them** —because they are processed as regards the same issue, or they are, for example, purchases additional to a prior record file— without losing their individuality.

Any EE user man invoke the Linkage service and inform the number of EEs that he/she may be willing to link, specifying the motive supporting such linkage in the relevant order. The Record File that is being operated will be the "Head" (*"Cabecera"*) of this linkage. The EEs to be linked need not be under the control of the user at the time of the linkage.

Thereafter, linked EEs can be globally viewed, thus streamlining the operation.

A new system for 28,000 procedures in three days

One of the first major challenges of the electronic document management system arouse as a consequence of the floods occurred in the City of Buenos Aires in April 2013. Thanks to the Electronic Record File module a new process was successfully implemented in three days that allowed processing 27,700 flood subsidy applications.

Joint Processing (*Tramitación Conjunta*) (TC)

This facility allows **managing the processing of a group of record files on a joint basis for a certain time period** without loosing their individuality; thus, they may be unpaired at any time.

Any user may invoke the service and report the EEs' numbers that such user is willing to link for TC purposes, specifying the reason for such linkage through the relevant order. The record file that is being operated will be the "head" of such linkage; until such record files are not unpaired from the head EE they will not be operational. A user may only link an EE that is under such users control at the time of the linkage.

Thereafter, operations will be conducted on the head record file and each and every action made in the head record file must be made in all the linked EEs. That is to say, whenever a document is linked to a head EE, all other linked EEs must be linked to such document; whenever a Forwarding (*Pase)* is made to the head record file, the same Forwarding must be made to all the linked EEs.

If the Head EE is moved to Temporary Storage Status (changing its status), the linked record files must be unpaired since storage is always made on an individual basis.

Access to a TC EE will provide gaining sight of each and every linked Record File, with the head EE being displayed first. Access to display can be made from any of the linked record files, indistinctly.

Merged Record Files (*Expedientes Fusionados*) (FU)

This is the facility whereby the EDMS EE module allows **combining a group of EEs on a permanent basis.** This operation, unlike joint processing (TC), has no turning back; "merged" record files loose their individuality. Any EE user may invoke the service and report the EEs' numbers such user is willing to link for FU purposes, specifying the reason for such merger in the relevant order.

The EE that is being operated will be the "head" and shall bear the number of the EE resulting from the merger, the rest of the linked EE's shall loose their individuality and shall move on to Temporary Storage Status earmarked as record files that cannot be returned to processing. A user may only link an EE that is under such users control at the time of the linkage.

The FU EE shall operate as any other EE, only its display shall vary since it will show each of the record files separately, with an additional window to see the documents linked since the date of the merger until the date of consultation.

Tasks of Monitored Users (*Tareas de supervisados*)

This service allows those who have monitored staff, in addition to obtaining access from the Single Desktop (EU), to see, reallocate, undertake and send any of the EE held by its monitored staff to Temporary Storage Status.

Work Documents (*Documentos de trabajo*)

The EE allows for the **progressive storage, in a work repository, of archives that are not part of the EE** but that the users may deem appropriate to store for the purpose of simplifying and enabling processing in any subsequent stage. For example, archives containing drawings in dwg format (editable AutoCad) in order to be able to edit them and make any necessary corrections –different from storage in an EE that in a dwf (non editable AutoCad) format–, or in an Excel in a price redetermination EE so as to understand its calculation or to change it.

Consultation (*Consultas*)

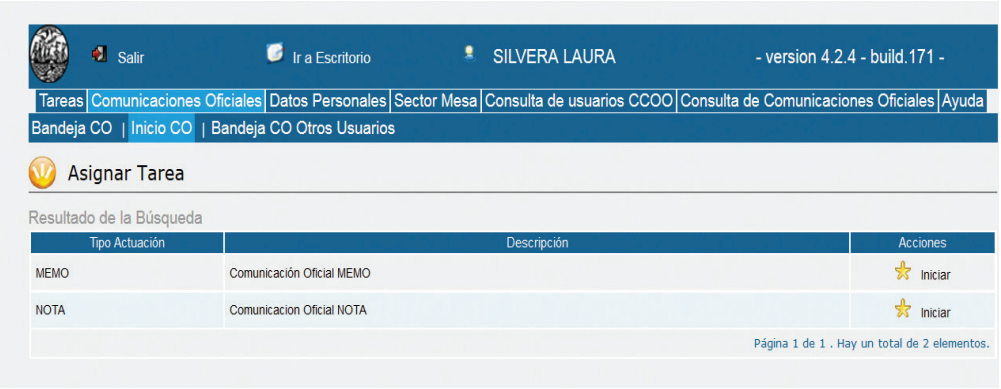
The EE module provides for **different types of consultation engines** the most significant ones being: all EEs can be located by their exact code name; by their user, all EEs generated by the user's Division, all EEs in which the user participated in such EE's processing. Once the record file to be consulted has been located, there are several significant displays that will allow gaining a quick view of the EE, including, the cover page label, the possibility of seeing the EE displayed with or without any forwarding thereof, and any details of the metadata of the documents –for example, who allocated it, who created it, who revised it and who signed it.

Official Communications System (CCOO)

Used by all agents and officers within the EDMS system, the Official Communications (CCOO) module resolves the **creation, numbering, signature, communication and archive of Notes and Memoranda** of the Government of the Autonomous City of Buenos Aires (GCABA), in a secure, controlled, automatic manner with digital support and recordation, thus, eliminating the need for paper-based recordation, notification and storage.

Its principal functionalities are:

- Generation and forwarding of an e-communication.
- Generation of an answer to an e-communication.
- Re-forwarding an e-communication.



DISPLAY. Interphase of the initiation of the CCO module.

DISPLAY. Official Communications Inbox.

The CCOO includes a **Task Mailbox (*Buzón de Tareas*)** that allows each user to identify the Allocation and Production tasks and roles that such user has initiated or its pending Revision and Signature tasks, using the GEDO module; an **Official Communications Mailbox (Buzón de Comunicaciones Oficiales)** to see all the notes or memoranda sent and received; the forwarding to **several addressees;** the **undertaking, reallocation or referral** of tasks, the **consultation** of CCOOs and of users by division.

The module allows identifying the **different roles** of users: Producer (the user that creates the note), Reviser (the person who conducts some kind of control over the official communication), Signor (the officer who signs the communication). The revision task over a specific official communication may be conducted by several users sequentially.

Before the implementation of this system, notes were created by some kind of word

processor, next they were forwarded to the Front Reception Desk, where they were numbered. **Work on paper was really artisanal:** the note's number was handwritten, pages were seal-numbered; the date of issuance and of exit from the Division was recorded on paper bearing another seals. The document was signed and sealed by the official involved and signed or revised by the relevant advisors or heads of department with subject matter jurisdiction over the note. Each note was accompanied by an acknowledgement of receipt for follow-up purposes.

> The Official Communications module (CCOO) was the first module to be globally implemented across the administration, due to its simplicity and as a means to open the door to electronic document management.

This module was the **first module to be globally implemented across the administration,** due to its simplicity and as a means to open the door to electronic document management. Its introduction brought about **a major change for the organization:**

- CCOO was the kickoff of e-documents in GCABA.
- Front reception desks were transformed.
- The numbering and recordation of record files no longer involved a formal step to become a simple digital function close to the transaction and to the user working on the procedure.
- GCABA employees' IT skills were strengthened.
- Document signature was incorporated simply with one click.
- Work on documents is no longer manual.

Some of the **specific benefits arising from the implementation the Official Communications (CCOO) module are, namely:**

- **The eradication of a significant bad practice in the organization: processing through notes.** By 2008, thousands of record files of the Government of the City were labeled by one single front entry and exit desk: the General Front Reception and Archive Desk (*Mesa General de Entradas, Salidas y Archivo*). This strict centralization complied with the regulations in force but had a negative impact on operations: processing delays occurred and, additionally, the areas used to substitute the record file by other type of proceedings, such as the note. The disadvantage of this substitution was that all record files are labeled and thus identified by a procedure code number (*código de trámite*) whilst proceedings lack such identification code numbers; therefore, processing by means of notes and other proceedings resulted in a significant loss of information for the organization. Upon the implementation of EDMS cover page labeling was decentralized, as results thereof all administrative areas were forced to use notes properly, i.e. as communication instruments and record files for processing purposes.
- **The officialization** of notes "in just one click", fast and simple. With the implementation of CCOO, when an officer signs a Note or a Memorandum, the proceeding is numbered by the system and automatically forwarded to the user's mailbox. The forwarding times

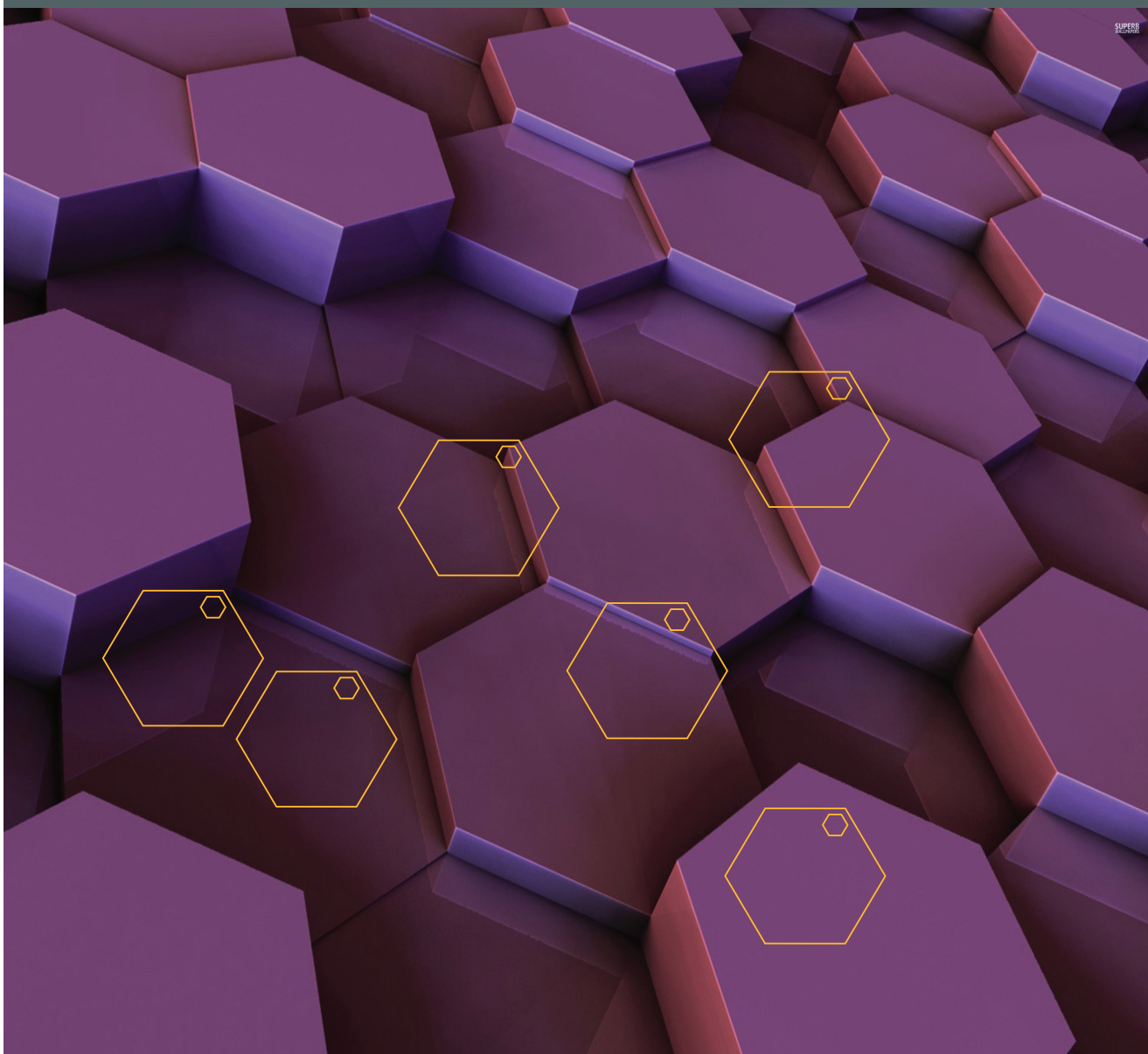
of these proceedings have been substantially reduced. Notes or memorandums are archived from the very outset, thus avoiding not only the artisanal paper work but also saving time involved in transporting the note.

- **The use of CCOO for internal notification purposes within GCABA.** To such an extent did the organization adopt this means of communication that it became the internal means of notifying any proceeding, thus, avoiding the need of forwarding record files for the sole purpose of officials taking notice of such files. The CCOO module only informs public officers that they must read the proceedings, avoiding idle time in record file processing.

KEYS TO THE EDMS ECOSYSTEM

- ✓ Keys to the EDMS ecosystem
- ✓ Scalable modular structure
- ✓ Specific inter-integrated modules
- ✓ Web environment
- ✓ Window interphases, easy to view and to operate for 55,000 users
- ✓ Document single repository

7. SOLUTIONS ON A MODULE BY MODULE BASIS



Currently the Electronic Document Management System (EDMS) is a broad ecosystem that comprises the variety and aggregate procedures conducted by the Government of the Autonomous City of Buenos Aires.

The EDMS is composed of the following modules: Single Desktop (*Escritorio Único*) (EU), Signature Holder (*Porta Firma*) (PF), Chief of Government Signature Management (*Administración de Firma del Jefe de Gobierno*) (AFJG), Archive (*Archivo*) (ARCH), Works & Services Contracts (*Locación de Obras y Servicios*) (LOyS), e-Procurement Buenos Aires (*Integración Buenos Aires Compras*) (BAC), Multipurpose Dossier Registry (*Registro Legajo Multipropósito*) (RLM), Health Personnel Designations (*Designaciones del Personal de Salud*) (DPS), Web Official Bulletin (*Boletín Oficial Web*) (BOW), Regulatory Information System (*Sistema de Información Normativa*) (SDIN), Personnel Single e-Dossier (*Legajo Único Empleados*) (LUE), Suppliers e-Manager (*Gestor Único de Proveedores*) (GUP), e-Civil Registry (*Registro Civil Electrónico*) (RCE) and Online Procedures (*Trámite a Distancia*) (TAD).

Each module operates in interaction with the rest, catering for specific needs and contributing towards working in line with an e-government model.

Archive (ARCH)

ARCH is the EDMS module in charge of **managing the storage, consultation and depuration of record files,** both in paper and digital format, of the Government of the Autonomous City of Buenos Aires.

But, above all, it allows eliminating the "unarchive", for several motives, of record files which were already archived due to procedure completion. As from the implementation of this module, if any information contained in the procedure of a completed paper-format (not digitized) record file, **such contents is then digitized and allows the e-Record File module to create a new record file and to link it to the digitized one so as to be able to display it during the whole new processing.** The same operation is applied to an archived electronic record file, without the need of digitizing it.

From the standpoint of the handling of the archive of paper-format record files, the module **replaces 9 applications** that were used in GCABA to manage the archive and perform the aforementioned tasks. For practical purposes, the execution of each archive process previously **involved using each of the applications separately.** With the new module, the number of applications that employees must operate was **reduced from 9 to 1,** thus time reduction in the procedures and error reduction in the execution of such procedures are unquestionable.

The unification in one single EDMS integrated data module allowed attaining **more efficiency in the recordation of information,** since it prevents the existence of multiple records pertaining to a same record file within different bases. Due to the application of different archive storage and implementation criteria, archives not only failed to gather the same data for all record files thus lacking a uniform criteria, but also in cases in which the same data was gathered it resulted openly inconsistent. The foregoing also resulted from the fact that it is too expensive and inefficient in terms of the procedure and use to keep multiple data bases for a same archive management.

With the new Archive (ARCH) module, the number of applications that employees must operate was reduced from 9 to 1, thus time reduction in the procedures and error reduction in the execution of such procedures are unquestionable.

The development of ARCH, the unification of archive data and the enhancement of processes (with the definition of workflows reflected in task mailboxes managed by supervisors) brought about benefits, such as, time reduction in response to citizens' consultations and requests for copies. Formerly, such responses involved a **72-hour turn-around time, whilst currently the response is immediately provided or within a maximum 24-hour term in the case of paper-format record files that have not been yet digitized.**

This new tool allows speeding-up task performance, doing away with the need of constantly consulting different applications in order to recover paper-format information and locating record files, or applying deductive methods according to the existence or non-existence of records to be searched.

The incorporation of **tasks mailboxes allows gaining on screen a comprehensive picture of all pending tasks, their status and the details of each application** without having to exclusively resort to e-mails, and ultimately doing away with paper-format applications which, once circulated among the work team members, prevent any kind of accurate workflow volume calculation.

It is unquestionable that the level of usage and enhancement of information management **create better and more efficient working conditions for employees.**

The development of the system that allowed integrating the archive process with the EDMS's electronic management was also a first step towards **defining archive policies** in terms of time of storage, digital protection processes, types of information storage and access.

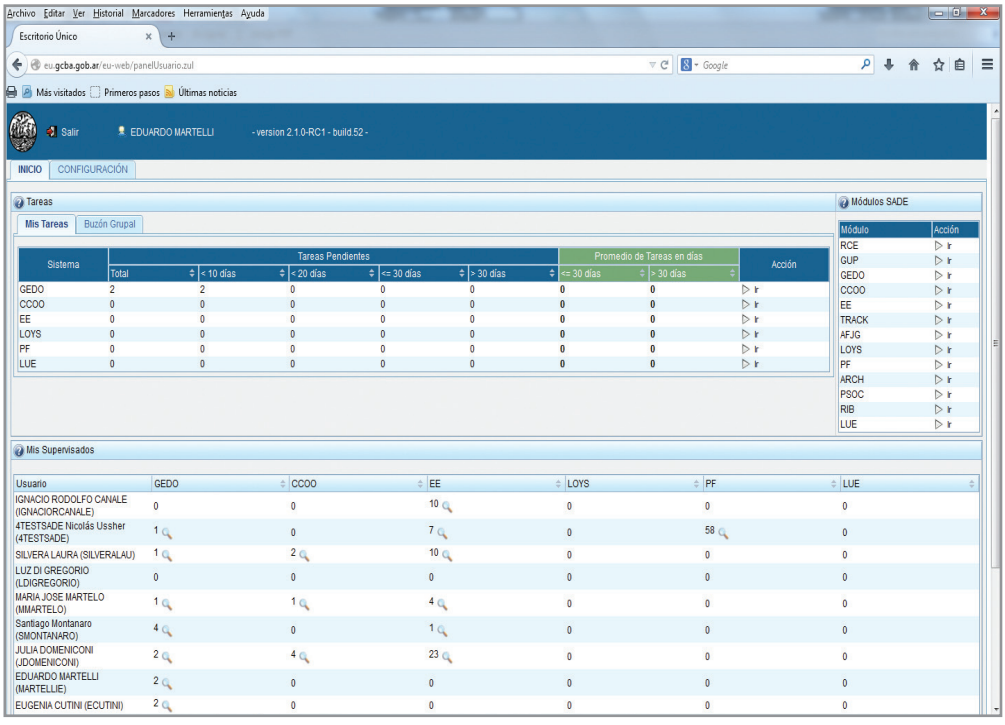
Single Desktop (EU)

The **Single Desktop (EU)** is an access gate or an "inbox" to the whole ecosystem. Operation of any of the EDMS modules can only be accessed through this desktop that **facilitates access and monitors the permits of each and every user.**

The desktop provides a **general comprehensive on line and real time picture of the tasks and time delay of the workflows of the user and his/her subordinates.** The desktop also provides access to the modules, allows to operate on subordinates' tasks and to receive notices of tasks that are performed in subsequent stages of the workflow.

The **EU module has the following basic functions:**

- To control the users' authorization to operate the different modules of the ecosystem.



DISPLAY. Single Desktop interphase.

- To provide the user with an overview of **his/her** stock of pending tasks for each of the modules, and the time during which the user has been holding such tasks, since it displays them by time intervals defined by each user as better suits him according to his type of activity and with average calculations.
- To provide the user with an overview of the pending tasks for each of the modules of his/her subordinates with the same overview than the user's own tasks and allows going into detail as to the possibilities of operating the following functions: reallocate them, undertake them, delete them or send them to Temporary Storage Status.
- To receive different notices from the modules; for example if a task was performed in a subsequent stage of the workflow (as in the case of the signature task).

> The Single Desktop (EU) provides the user with a general, comprehensive on line and real time picture of the tasks and time delay of the workflows either of the user or his/her subordinates, as well as access to the modules.

In terms of the paper-based classical public administration for a user to enter a general mailbox and get a single view of the stock and time frames of his/her tasks and that of his/her subordinates, and furthermore to be able to execute the tasks of his/her subordinates, clearly sounds as a "science fiction" story. It is so revolutionary, that the administration has not yet fully internalized this tool's full potential, particularly **to control and to act upon the tasks of subordinates,** an issue where it can have most impact.

If in the future the EU module is used to its full potential, it will bring about a radical change in task supervision activities across the administration, and therefore, the way in which employees interact with their principals.

Signature Holder (PF)

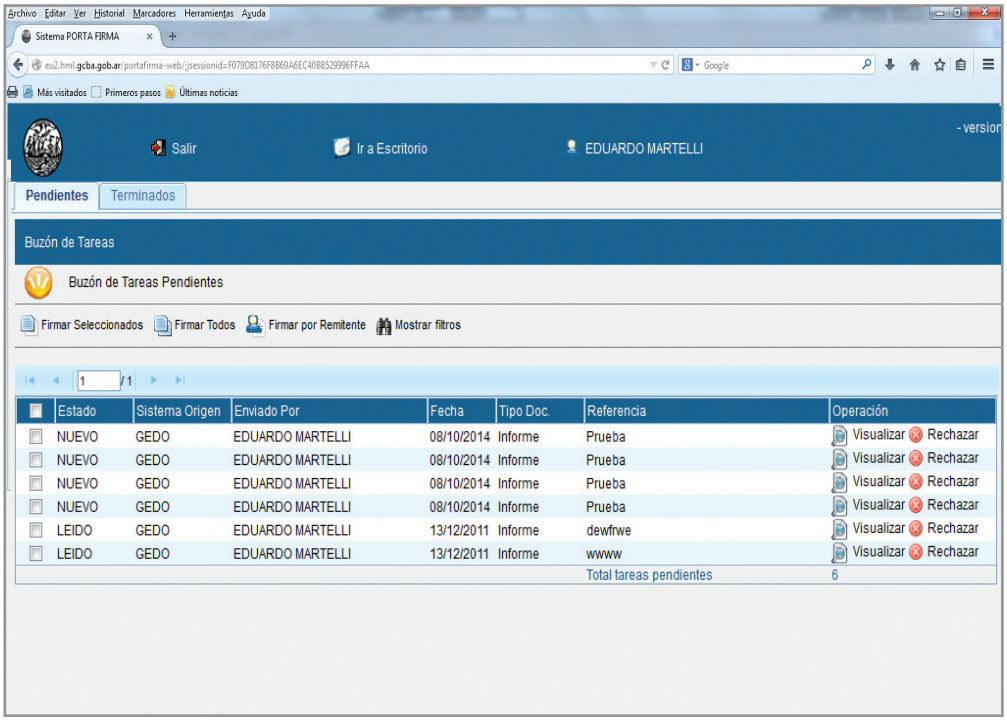
The Signature Holder (PF) module allows a user who has to stamp a large volume of signatures to **manage such signatures jointly in an easier and faster manner.** This functionality is advisable only for a **user profile with a large volume of signatures,** since upon opting for this signature module the user will no longer be able to sign individually on the module he/she is operating.

Its functions are, namely to:

- Select the universe to be signed, bookmark and unbookmark operations in such aggregates.
- Sign the selected lots.
- Track all signed operations.

The principal benefits of this tool are, namely, to:

- Improve the control of the origin of signatures.
- Provide a general vision of the signature requirements.



DISPLAY. Access to the Official Bulletin

- Provide celerity to the task. For example, a user who must stamp more than 250 daily signatures (budget adjustments, authorizations, etc) will probably take 4 or 5 seconds per signature, such tasks will insume approximately 20 minutes, with this functionality such signatures will take her/him approximately from 30 seconds to 2 minutes depending on the filters used. It must be noticed that during certain times of the year this type of user may end up signing more than 1,000 documents in one single day.

Chief of Government Signature Management (AFJG)

The **Chief of Government Signature Management (AFJG)** is an EDMS module that operates as an "inbox" of the administrative proceedings that are processed at the Legal and Technical Secretary to show the route followed by each proceeding all along from entry at SECLYT's Reception Desk in the EDMS, up to exit.

The AFJG module allows for **control in real time of the status of tasks in the management process of proceedings forwarded to the signature of the Chief of Government.**

Some of its functions are, namely, to:

- Control the production of tasks across the different stages of the Chief of Government signature ecosystem to be operated by each of the users involved in the management of the proceeding.
- Allocate "producer" and "reviser" users prior to the signature of the general director (DG) and the intervention of the Legal and Technical Secretary.
- Allow the user to gain a view of his/her stock of tasks and flag up warnings of tasks which deadline is about to expire.

- Learn through the consultation module who is the user who holds the proceedings and the stage of the proceedings managed in the frame of SECLYT.
- Learn details of the report or order and the draft of the Chief of Government Decree to be issued in the Record File.
- Reflect the internal track and the users involved in each of the stage from entry to exit.

Thus, AFGJ allows **tidying-up internal tasks** carried out across all the proceedings that enter SECLYT, identifying tasks and those responsible for conducting them.

The AFJG module contemplates the load of the "Producer" of the task, the *production days*, the identification of the user that will be performing the "Reviser" role and the time period to comply with such task.

In turn, at the loading point a "Signor" must be elected, who will be in charge of signing the order or report, as the case may be, and will forward the communication for the intervention of the Legal and Technical Secretary for the purpose of managing the signature of the Chief of Government.

The **warning system** of AFJG flags when the deadline of a task is about to expire. This allows **following up the tasks across all stages,** so as to control and be aware of all the process and, prospectively, adopt preventive measures to reorder the process and check that all time periods and formalities are duly complied with.

The module provides for the possibility of specifying the subject matter of the proceeding upon receipt by the Reception Desk of SECLYT. Consequently, the module broadens the scope of the information beyond the identification of the subject matter of the proceeding in compliance with regulations in force.

Accordingly, the module allows identifying the sender division, the subject matter and its clarification, and taking data from EDMS, specifies the number of pages existing at the time the proceeding enters SECLYT.

After execution of the task "Receive the Proceeding", such proceeding may be entered either into the individual "Task Mailbox" of EDMS users or into the "Group Mailbox" of the stage involved.

The flaps of the AFJG module allow to "Attach Work Documents —any documents that the "Producer" user may deem necessary to conduct his/her work (drafts, consultation documents, etc.)—, or to add presentations to the head proceeding, by clicking "Presentations to be Attached".

The module also provides for the possibility of attaching the report prepared in the proceeding and the draft decree to be forwarded to the signature of the chief of Government, and allows for the display or deletion of documents.

The "Producer" user executes the "PRODUCTION" task in order to load the following in the different flaps: any work documents, whenever deemed necessary; the report or order signed in GEDO and the draft decree. Next, the user moves the proceeding to the "REVISION" status.

The "Reviser" user controls the tasks of the "Producer" and moves the proceeding to the "SEND TO DG" (Send to the general director) status.

The general director controls the uploaded documents and, if the Signature of the Chief of Government applies, opts for the action "Send to Secretary".

Once the chief of Government signs the decree in GEDO, the Legal and Technical Secretary removes the proceeding from his inbox opting for the action "SIGNATURE". The module also provides for the possibility that the Legal and Technical Secretary opts for the action "FOWARD TO RECEPTION DESK".

Next, once the Date of Registration and Date of Publication (of the administrative act) fields have been filled out, the "EXIT" status is executed and the proceeding is received again by SECLYT's RECEPTION DESK so that it exits the AFJG module and moves on to the EDMS, which in turn forwards the proceedings to the relevant instances, in compliance with the formalities prescribed for such administrative act.

If the signature of the Chief of Government is not necessary, the module will allow executing the action "FORWARD TO THE RECEPTION DESK", an instance that forwards the proceeding to EDMS, which in turn forwards it to the relevant instance to move on with the procedure.

In sum, the AFJG module provides **a general overview of the tasks developed by the SECLYT's work team upon operating in the proceedings that are being forwarded,** thus providing a general outlook of the whole work ecosystem, and the subordinate instances that participate in the proceedings' analysis process.

> The implementation of the Chief of Government Signature Management (AFJG) allowed reorganizing tasks and roles, as well as fixing clear deadlines for the performance of each of such tasks and roles.

Previously, GCABA operated with a system called SIGA, not integrated to EDMS, with only a few of the described functionalities and with some manual load processes.

The implementation of the Chief of Government Signature Management (AFJG) module generated the following benefits, namely, to:

- Control and follow-up the tasks allocated to the users.
- Identify those who are liable for the tasks.
- Gain a comprehensive picture –in real time– of the whole ecosystem of users involved in the management of the proceedings subject to the signature of JG.
- Allocate production times.
- Become aware and identify the stage at which delays occur in the workflow of both the user and his/her subordinates.
- Access documents loaded by the Producer (of a report or Administrative Notice) and the draft Decree to be signed by the Chief of Government (JG).
- Receive warnings of tasks which deadlines are about to expire, allowing for the adoption of preventive measures so that the user Producer executes such tasks within the appropriate time period.

The impact in the staff of the area has been very positive because it enabled **reorganizing tasks and roles, as well as fixing clear deadlines for the performance of each of such tasks and roles.**

Since the module provides a revising function, "Producer" users have reordered the function involving the control of their work with a specific user who is in charge of verifying the

Producer user's work, also with the allocation of an express deadline to perform such duty.

AFJG has rendered very positive results especially for supervisors, apart from the warning systems they have, they are notified of any tasks' deadlines that are about to expire. Through the "Consultation of Proceedings" (*"Consulta de Actuaciones"*) they can identify the user that is responsible for a pending task, whatever the status such task may be at, thus enabling task follow-up in real time.

Subsidies Single Processing e-Platform (TUS)

In the frame of the City's Integral Social Protection Network ("En todo estás vos" Network), the **Subsidies Single Processing e-Platform (TUS)** was created to **consolidate the subsystem of direct and indirect monetary transfers** by means of the citizenship booklet (*libreta de ciudadanía*) (Law No. 4036) through an integral registration, processing and payment platform.

Through the Ministry of Social Development, the government of the City of Buenos Aires grants **subsidies and benefits to individuals or legal entities,** implemented through 67 monetary direct and indirect transfers. Such programs coverage reaches out to more than 150,000 families that are undergoing a vulnerable situation, with a population of approximately 500,000 individuals.

Additionally, benefits are granted from the Chief of Cabinet of Ministers (JGM) (subsidies to Malvinas War Veterans, Survivors and Relatives of Victims of Cromañón, Parents of Individuals Subjected to Forced Disappearance); the Ministry of Education (Scholarships for Middle School, Grierson Scholarship and Graduate Studies Grants); Economic Development (subsidies and grants to sports athletes, grants to COPIDIS); Culture (*Prodanza, Proteatro, Régimen de Reconocimiento para la Actividad Literaria, BAMUSICA* grants); Health (health program called *programa Cobertura Porteña de Salud*), Environment and Public Spaces (program called *programa de Recuperadores Ambientales*), *inter alia*.

The **TUS platform was built during 2012 and became operative in November 2012** for the implementation of two JGM subsidies: Malvinas War Veterans subsidy and Relatives of Individuals Subjected to Forced Disappearance subsidy. The following subsidies were implemented as from February 2013: FIT (Work Inclusion and Training Program) (*Programa Formación e Inclusión para el Trabajo*) and the Living at Home Program (Subsidies Alternative to Institutionalization) of the Ministry of Social Development (MDS). **The first e-payments of subsidies under all of the referred programs were processed in March 2013 by means of the Social Plans and Subsidies (PSOCS) system.**

> The Subsidies Single Processing e-Platform (TUS) became operative by the end of 2012 and the first e-payments of subsidies under the City of Buenos Aires programs were paid in March 2013.

At the outset of the TUS project, in January 2012, the diagnosis was as follows: all procedures involving the registration, grant and payment of subsidies were made on the basis of paper-format record files and not by means of an integral management system that would include document management. Accordingly, all the relevant agencies involved in the selection, eligibility and administration of benefits recorded potential beneficiaries on an isolated basis, with the resulting inconsistencies, duplication of paper-format records, etc.

Subsidies, Scholarships and Grants operated in the TUS platform

In early 2014, the following subsidies are operating by means of the TUS platform, namely:

Chief of the Cabinet of Ministers (JGM)

- Subsidies to parents of individuals subjected to forced disappearance during the Military Dictatorship 1976-1983 (Law No. 2089). Number of beneficiaries: 45.
- Subsidies to Malvinas War Veterans (Law No. 1075). Number of beneficiaries: 1200.

Social Development Ministry (MDS)

- Program "Living at home"- Subsidies Alternative to Institutionalization (*Programa Vivir en Casa - Subsidios Alternativos a la Institucionalización*). Number of Beneficiaries: 2000.
- FIT Scholarships– Work Inclusion and Training Program. Number of Beneficiaries: 5000.
- Our Families Program. Number of Beneficiaries: 4000.
- Social Reinsertion PREASIS Subsidy. Number of Beneficiaries: 45.
- Famility Ties PREASIS program. Number of Beneficiaries: 45.
- Economic Assistance Programa LAE. Number of Beneficiaries: 500.
- AEP Program (*Actividad Especial de Asistencia a Personas Integrantes de Emprendimientos Productivos de Contención Social*). Number of Beneficiaries: 2700.

Buenos Aires Citizenship (*Programa Ciudadanía Porteña "Con todo derecho"*). Number of Beneficiaries: 150,000 registered households, covering an excess of 450,000 beneficiaries.

Economic Development Ministry (MDE)

- Sports Scholarship – Law No. 1624. Number of Beneficiaries: 50.
- Sports Subsidy – Law No. 1624. Number of Beneficiaries: 200.
- COPIDIS Scholarships. Number of Beneficiaries: 450.

Public Space and Environment Ministry (MAYEP)

- Program: Programa Recuperadores Ambientales. Number of Beneficiaries: 5,000.

Health Ministry (MS)

- City of Buenos Aires Health Coverage. Number of beneficiaries: 300,000

Similarly, payment processing in paper-format record files brought about turnaround delays, a special problem in this case given that the population of beneficiaries is highly vulnerable, therefore it was necessary **to optimize payment times by means of an e-payment system.**

Initial surveys reflected the need of modernizing the registries of beneficiaries, moving towards the construction of a **single registry of beneficiaries** common to all subsidies and grants of the different ministries, as well as system of applications, processing and payment that would streamline the subscription and request for the benefits, that would provide the necessary information for the eligibility procedures and would optimize payment times by means of the processing of e-payments.

Thus, during 2012 the Ministry of Modernization of GCABA designed an integral platform for the single processing of subsidies, based on two work modules within the **EDMS** ecosystem: **RIB (Beneficiaries Identification Registry) and PSOCS (Social Plans and Subsidies).**

The **RIB** module allows identifying a registered person who is, will qualifies as, a candidate beneficiary of social programs of GCABA. The system allows specifying the particulars of all those living with the beneficiary at a given time (households), as well as their relationship

(relatives and non-relatives) with other registered beneficiaries. Currently, more than 745,000 beneficiaries are identified in the system.

The PSOCS module enables the full digital processing of benefit awards, from application to payment in the beneficiary's account. PSOCS labels record files' cover pages by person and by program, and informs RIB of all procedures commenced by such person. Additionally, PSOCS operates in an integrated manner with the Financial Management and Administration Integrated System (SIGAF), eliminating work duplication.

In general lines, **the three main work processes in PSOCS** are:

1. **Application/Commencement of the procedure for the request of a benefit.** At this stage the e-record file cover page is labeled on a person and plan basis. In order to create the cover page label of a record file it is mandatory for the person to be previously registered with RIB, since PSOCS requires the RIB number at the time of commencing a benefit application procedure. The RIB number is loaded and the plan for which the person is eligible is selected. Next, the mandatory data and documents of each plan are loaded and the beneficiary is listed as a candidate applicant of the benefit.
2. **Lots/Eligibility.** The PSOCS provides those in charge of deciding whether to grant each program, with a lot of record files by program with all of candidate beneficiaries. Thus, lots of candidates by plan are generated in order to assess them by external decision systems. According to the answer provided by the external system, the PSOCS record files: a) move in the flow towards the Payment Mailbox (if they were accepted for payment, granted benefit), b) are moved on to Temporary Storage Status (if they were denied and must be deleted) or c) return to the initiating agency (if they fail to comply with any requirement or are kept under evaluation for future decisions).
3. **Payment Mailbox and Accounting Mailbox.** These mailboxes are integrated with the SIGAF system (Financial Management and Administration Integrated System) for the conduct of the payment stages (temporary earmarking (*afectación preventiva*), final earmarking (*afectación definitiva*), Administrative Act and Accrued). The SADE-SIGAF integration for subsidy payment has the advantage of eliminating work duplication in both systems, thus ensuring a swift execution of payments from a single platform.

> Currently more than 745,000 beneficiaries are identified in the RIB module of the system.

As to the operation of PSOCS, it is very important to highlight that given that the beneficiary has one record file for each requested benefit, and given that it is the same record file the one that moves again across each of PSOCS's stages again and again on a monthly basis, **each record file contains a record of each payment received by such beneficiary** for such plan through the different processing and execution cycles through which the record file moves until removal from the plan. This information is forwarded to RIB on a daily basis, from where the status of each procedure conducted by each registered beneficiary may be consulted.

Thus, the TUS platform by centralizing the information of vulnerable households in one single registry of beneficiaries and in one single e-manager of benefits operates as the **social information system necessary for the social protection network.** The goal of the Network is to achieve full coverage of vulnerable households working on an integrated basis for health, education, social development, cultural and any other purposes.

The **main contributions made by the Subsidy Single Processing (TUS)** module include, namely:

- Single registry of beneficiaries with document management.
- Comprehensive approach of the person and his/her family group.
- Comprehensive management of the procedure.
- E-payment integrated to SIGAF. Task duplications are eliminated.
- Mapping of social investment in subsidies per household.
- Traceability.
- Historical information of beneficiaries.
- Historical information of households: follow up household composition changes.
- Provision of consolidated information for assessment by external decision systems (eligibility).
- One-shop stop and de-centralization of citizen service (zones, districts).
- Information shared among different areas of GCABA.
- Digitize beneficiaries' documentation, so as to avoid repeated requests for documentation to candidates and beneficiaries of social grants.

The Inter-American Development Bank (IDB) defines single information systems of beneficiaries as a priority in the frame of social protection networks to eradicate poverty: *"In order to focus social interventions and direct them to the poorest, it is first necessary to identify the poor, their location, features and unsatisfied needs; therefore, this information can only be managed by an information system, thus, a Single Information System of Beneficiaries is applied. Such information must be available to all programs aimed at the vulnerable population and must ensure compliance with the basic imperative of the strategy. (...) The creation of a Single Information System of Beneficiaries (Sistema Único de Información de Beneficiarios) (SUIB), is a necessary and consistent tool with a Social Protection strategy. Moreover, it would be difficult to conceive a strategy of this nature without a tool that would allow identifying, priorizing and diagnosing the core beneficiaries of such policy"* (IDB, "Single Information Systems of Beneficiaries in Latin America" (*"Sistemas Únicos de Información sobre Beneficiarios en América Latina"*, October 2004).

Works & Services Contracts (LOyS)

The **Works & Services Contracts (LOyS)** module has two main functions: on the one hand, the application **generates and processes the contracts of people who render services under Contracts for Works or Contracts of Services** in GCABA; and on the other, the application also **settles their respective invoices.** This module is used by those in charge of the procurement and payment of services hired by the Divisions of GCABA.

Currently, GCABA generates approximately 17,000 contracts per year through this ecosystem module.

The module operates on an integrated basis with the e-Record File (EE), the Official Documents Digital Generator (GEDO), the Financial Integral Management and Administration System (SIGAF), to conduct all tasks of budget related issues of such procurement.

The fact that LOyS operates on an integrated basis with the other three systems is very practical for any **user who, by entering one single application, may conduct any operation related to the procurement and payment of services**. Additionally, it allows generating contracts on a swift manner: **service and works procurement contracts that used to take**

months in their closing can now be generated within a few days. And with the incorporation of the invoice settlement phase, the payment process has also been accelerated.

The EDMS user must hold specific permits in order to be able to operate in LOyS. Such permits are as follows:

- **Initiating Users (*Usuarios propiciantes*).** Initiating Users are those users of the divisions that commence the service and works procurement procedure: they label the e-record file cover page, they fill out the first particulars of the candidate, and upon receiving the candidate's documentation they conduct the first documentary control. At the Execution phase they are also in charge of loading the invoices to the system, of filling out the respective information and they send it to the signature of the relevant public officer.
- **DGTAL Users (*Usuarios DGTAL*).** GDTAL Users are the users of the Legal and Technical Administrative General Division (*Dirección General Técnica Administrativa y Legal*) (DGTAL) of the initiating area. The DGTAL departments are the legal departments of the different jurisdictions. Their tasks include: conducting supplier incompatibility controls, making the temporary and final appropriation of the expense, drafting the resolution approving the service procurement, drafting the contract and forwarding it for signing and generating the Supplier Definitive Registration (*Alta Definitiva*).
- **Treasury Users (*Usuarios Hacienda*).** The approval of the Treasury Department (*Ministerio de Hacienda*) is necessary to generate certain contracts. Treasury users hold a special permit/role authorizing them to work on those contracts. They can either approve or reject such contracts.
- **Signor User (*Usuarios Firmantes*).** Signor Users are the users who are the signors of the contracts. At the Execution phase they are also in charge of signing the invoices and their authorizations. These officers have the rank of General Directors, Undersecretaries or Ministers.
- **Accounting Dpt. Users (*Usuarios Contaduría*).** Accounting Dpt. Users are the users of the Accounting Department. They control the Definitive Registration of the service and works procurement which may be either approved or denied. At the Execution phase they control invoices before actually confirming any Payment Order. They can return any procurement to the respective area for correction purposes.
- **Invoice Settlement Users (*Usuarios Liquidadores*).** Invoice Settlement Users are those in charge of working on the settlement of the invoices of service suppliers. They control the invoices sent by the initiating areas and may either accept or reject such invoices, they also load any data necessary for settlement purposes, generate the invoice authorization and forward it to the relevant officer.

Service procurement contracts that used to take months in their closing can now be generated within a few days. And, with the incorporation of the invoice settlement phase, the payment process has also been accelerated.

The LOyS functionalities can be summarized as follows:

- **E-Record File (EE) automatic generation.** When the initiating user commences any

contract in LOyS, an EE is automatically generated and numbered. This results from the integration of the different systems.

- **Registration of each and every person hired by the system.** If the candidate was hired at some other time through LOyS, his/her data will be automatically retrieved by the system.
- **Affords secure access to an external user.** The candidate enters the system through a DMZ (demili tarized zone, i.e. a perimeter security network) by means of a user name and password in order to furnish information and load the required documentation.
- **Links documents to the record file.** Each document loaded by the candidate is allocated an official number and automatically linked to EE LOyS.
- **Integration with the Financial Management and Administration Integral System (SIGAF).** The LOyS module takes the budget data of the service procurement generated in SIGAF. Other tasks can also be conducted within LOyS, which formerly could only be generated in SIGAF.
- **Automatic generation of documentation.** As tasks progress, the system automatically generates documents, that formerly were exclusively produced in an external system. Once a document is generated, it is linked to EE LOyS (as is the case of the Definitive Earmarking, Supplier Definitive Registration and Invoice Authorization).
- **Generation of the contract.** The system takes all the data loaded throughout the different stages of the process and completes the procurement draft contract. No drafting is necessary: there is a boilerplate to which all the particulars are added.
- **Contract simultaneous routing.** Once the contract has been generated, the system automatically and simultaneously routes the contract for signature to the officer and the contracted party. The contracted party logs on to sign through the DMZ.
- **Invoice settling operations.** LOyS has a phase that has been specially developed to settle the invoice of contracted parties. Invoices are loaded to the system and from there worked on LOyS.
- **Invoice e-signing.** Once the invoices are loaded into the system, they are digitally signed by the relevant division officer. The system routes the loaded invoices to the GEDO of each officer so that such officer signs them and identifies them with an official number. Once signed the invoices are linked to EE LOyS.
- **Introduction of amending clauses to contracts.** The system allows generating amending clauses to contracts whenever necessary. Such amendments are introduced by the record file number and are linked to the original record file. This allows processing the amending clause without the need of re-loading the whole documentation, because the system takes any previously loaded data.
- **EE LOyS's temporary storage.** The system allows storing the record file upon process discontinuation.
- **Consultations.** The application allows consulting generated contracts and contracts that are being processed. They can be consulted by file record number, by date of commencement and termination, by current task, by type of contract and by ID type and number.

Prior to the implementation of LOyS **all procurement was paper based,** moreover, **services and works procurement lacked a unified criteria** which could vary from ministry to ministry.

The period of duration of the procurement process either under Service Contracts (*Locación de Servicios*) or Contracts for Works (*Locación de Obra*) varied depending on the jurisdiction and, generally **many months elapsed before the execution of the contract.**

The service procurement process was initiated by each DGTAL (or equivalent division), that is to say each division had to initiate the contract of the candidate-employee of such division thus the task and work volume was very large. **Each jurisdiction had its own contract duration and execution standards.** Additionally, since only officers ranking as Ministers and Under-Secretaries were authorized to hire and execute service procurement contracts, the process was **long and time insuming and resulted in people working for long time periods without a supporting contract.**

Since record files were paper-based there was always the risk of misplacement or misfiling, of ignoring at what stage such service procurement was, or who actually held possession of the record file, finally physical transportation of the record files resulted in additional time wastes.

As results of the existing service procurement time delays, the need of revising the administrative phases involved in this process was acknowledged. The first step was to regulate a new procedure that would be uniform to all jurisdictions. Then such procedure was systematized within the EDMS where a specific module was designed for works & services contracts: the LOyS module.

> Today contracts can be executed within a few days whilst formerly such process could take several months; contracts can currently be consulted and viewed regardless of the area where they are whilst formerly it was impossible to ascertain who was actually in possession of the contract.

As from the implementation of the LOyS module several **benefits were reaped in the processing of service procurement contracts.** We can say that in many areas, radical changes were made in relation to service procurement mechanisms: today contracts can be executed within a few days whilst formerly such process could take several months; contracts can currently be consulted and viewed regardless of the area where they are whilst formerly it was impossible to ascertain who was actually in possession of the contract or at what stage the procurement mechanism was. Moreover, the contracted party loads and signs the document online, he no longer needs to go from division to division handing in papers and signing, the contract is routed from one area to another by just one click.

The implementation of LOyS reaped the following benefits:

- **Process standardization.** All areas must use the same module and the data they need to generate the procurement has been uniformed. Time frames and tasks will no longer vary on an area by area basis. All areas must conduct the same steps, which have been pre-established by the system.
- **Decentralization.** The module eased the decentralization process since each division may initiate the procurement procedure, the only requirement being for the user to hold the relevant role to do so. Then, the record file is routed to the DGTAL with the necessary

documentation. The decentralization process reduces the work load of all DGTALs and, in turn, provides division with a larger control over the first stages of procurement.

- **Responsibilities defined on a step-by-step basis.** As results of LOyS's implementation and the standardization of the service procurement process the circuit was divided into different tasks/stages. A closed workflow was generated (with pre-defined steps). In order to conduct a specific task within the module the user must hold the relevant permits/roles. This allows the record files to be taken by the users in charge of conducting such tasks and it also allows anyone consulting the process to identify the user working on the record-file.
- **Time reduction and optimization.** E-procurement contract generation involves that the record file no longer needs to be physically transported from one division office to another: as any e-record file, routing is made with just one click. This brings about significant time processing savings. The fact that that system is integrated also speeds up processing since it is no longer necessary to enter and exit from one application to another. An additional benefit comes from the fact that the contracted party may sign the contract and file the document remotely by logging in the system through his/her name and password. Finally, as results of the procurement circuit modification the signature of contracts is no longer restricted to under-secretaries and ministers, but it can now be delegated to the general directors of the relevant divisions, who may now sign the contract with just one click. This contributed to a more equitable distribution of tasks among officers.

The **first LOyS version was implemented in 2011** and, thereafter, adaptations were developed in order to speed up and make the procurement process more efficient.

Personnel Single e-Dossier (LUE)

The **Personnel Single e-Dossier** ***(Legajo Único de Electrónico de Personal o Legajo Único de Empleados) (LUE)*** of the EDMS ecosystem is the module that digitizes and manages the e-dossiers of all the GCABA employees, within the Executive Branch, of all hierarchies except for teachers.

The Government of the City of Buenos Aires has a staff of approximately **125,000 active employees distributed in approximately 1,200 office buildings and spaces.** The handling and management of information of such a large roster scattered across the City **required paper-format documents to be carried back and forth** from the agent to the head of Human Resources of the relevant division and from there on to the HHRR Central Office (*RRHH Central*); the resulting inconsistencies and delays in the communication of events had an impact in payroll liquidation. Moreover, many documents contained in personnel dossiers were damaged and improperly stored.

Additionally, **many dossiers co-existed for one single employee.** An updated dossier was kept at the division where the employee was working at that time, but his/her employment record within the Government was archived with the HHRR Central Office. On the other hand, upon termination of services some divisions kept the terminated employee's dossier whilst others forwarded it to HHRR Central Office. In other words, the **scattering, inconsistencies and duplication** of dossiers was of such a scale that the centralized management of such a volume of paper-based documents was very difficult.

The **LUE** module of the EDMS ecosystem was created to generate and **manage personnel dossiers on a single, electronic and decentralized basis across all divisions but under the control of the HHRR Central Office.** The module covers the hiring of personnel in the different hierarchies within the GCABA, namely: cabinet staff (*planta gabinete*), permanent staff, temporary staff, managerial staff and officers across all the government jurisdictions. In turn, the system has an application called "Temporary Storage" where dossiers can be electronically and immediately routed in case of resignation, death or termination of an employee. All the documents linked to the module must have been previously generated in GEDO and electronically signed, in order to guarantee the documentation official authenticity.

As to the forwarding of dossiers, with this new system, dossiers are **electronically routed in real time.** The forwarding of dossiers to another division as well as to Temporary Storage must be approved by the HHRR Central Office.

As to information storage, given that all documents are digital and that their paper-based support has been eliminated **information will be better preserved for much longer time periods,** not being subject to wear and tear

> Many documents contained in personnel dossiers were damaged and improperly stored. Whenever the record had to be forwarded, the record file was physically transported, with the risk of loss, damage and destruction of the information.

Currently the municipal card (*ficha municipal*) (census card) is allocated by the system, during the "registration of employees without a card" (*"alta de agentes sin ficha"*). This contributes to transparency in public administration given that all staff recruitment within GCABA is recorded in LUE together with all its documentary support.

The implementation of the **Personnel Single e-Dossier (LUE)** reaped the following benefits, which arise from the advantages resulting from e-systems vis-a-vis paper-based systems:

- Centralization of information.
- Reduction of office physical space.
- Avoiding information duplication.
- Keeping information centralized, updated and online.
- Eliminating the need of transporting physical documentation.
- Immediate access of dossiers.

Restricted access, granted on the basis of profile policies.

As to **the specific benefits of LUE**, the following are highlighted: any original documentation filed by agents in paper-format (ID, certificates, education degree, etc.) is scanned and loaded in the system and then returned to the agent. **The digital version remains unaltered and is routed to the Official Documents Single Repository (RUDO)**, a module that is integrated with the rest of the EDMS modules. This integration allows **retrieving any documents that have once entered into EDMS through any of its modules,** by means of their EDMS number.

An illustrative example is the use of the personal documents of LUE in an Electronic Record File initiated by an agent. Merely by "linking" this document to the relevant record file, such document is "retrieved" from RUDO and incorporated into the record file.

Another significant benefit: **the agents registration reengineering process** allowed determining which documents are mandatory at the time of their registration and updating the dossiers formerly created, in order to have the whole information fully updated, centralized and on line. In practice, this involved both a huge cultural change –since all the areas were aware of the "outdated" condition of many dossiers- and an enormous digitizing effort of effective dossiers.

Suppliers e-Manager (GUP)

The **Suppliers e-Manager (*Gestor Único de Proveedores*) (GUP)** module is 1) the **means of registration of individuals and businesses willing to be suppliers of the GCABA,** and 2) the e-management center of information, documentation and antecedents of procurement procedures conducted by all GCABA's agencies.

The Procurement Division (*Dirección de Compras y Contrataciones*), under the Ministry of the Treasury, is the body vested with authority to control this module and centralizes the information related to the registration and management of suppliers.

In the past the process was initiated similarly, but once the supplier submitted the documentation for assessment purposes, **the procedure took 10 days to register the prospective supplier** or to request for additional documentation. Currently the module allows for **registration of the prospective supplier in one single day.**

For information consultation purposes the administration used different separate systems, now the module centralizes the information of all the systems in one single location.

> The Suppliers e-Manager (GUP) speeded up processing since an activity that would formerly take months is currently conducted in just five minutes and provides a comprehensive picture of the documentation contained in all the record files involving a same supplier.

Formerly, whenever a division of Government needed to access documentation of a supplier in order to conduct any procedure, the procedure could take months until completion.

With the aid of e-Record Files and official documents, the module **allows retrieving and accessing, either for utilization or consultation purposes, all documents related to a specific supplier** across all its stages, from procurement, execution, sanctions up to price redeterminations.

This module provides the following specific benefits:

- Ongoing and updated picture of a supplier's condition. All procurement, price redetermination and non-performance record files can be viewed.

- Achieve a view of all the documents contained in all those record files, for example the history of all bidding terms and conditions of a specific supplier.
- G2G information requirements time frames enhancement.
- History of all the procedures involving a supplier of GCABA.
- Supplier can handle its procedures online.
- General registration process (1 day vs. 10 days).
- Creation of a Public Works Suppliers Special dossier (*legajo especial para proveedores de Obra Pública*).

The Suppliers e-Manager (GUP) speeded up processing since **an activity that would formerly take months is currently conducted in just five minutes** and affords access to any documentation contained in all the record files involving a same supplier.

Health Personnel Designations (DPS)

The **Health Personnel Designations (Designaciones del Personal de Salud) (DPS)** module is a closed workflow that manages the designation process conducted for the **incorporation or replacement of** health personnel.

The Health Ministry has a staff of approximately 36,000 employees who work across the central unit, 35 hospitals and several local health centers. Every year approximately **4,000 posts must be filled by public contest and designation** to cover positions such as nurses, technical service staff, medical doctors, both permanent and on call, heads of services and stretcher bearers.

Historically, the public contest for the selection of an agent in a hospital and his/her designation by the HHRR Central Office **lasted for a period ranging from one to two years,** given that the change of the calendar year would involve losing the relevant budget appropriation.

A surveys into the reasons for such delay reflected that **the process was not standardized and uniform across all hospitals.** Furthermore, there was no general rule logic but the **rule was the exception** for all cases, even the simplest ones.

> The Health Personnel Designations module encompasses stages going from the filing of documentation by a candidate to cover a post in the Health area until its formal designation by means of the relevant resolution.

The Health Ministry and the HHRR Central Office –controlled by the Ministry of Modernization– jointly **decided to develop a single e-platform to process designations in the health area and that would include health staff in the future designations of teachers, a larger area covering approximately 55,000 teachers.**

In relation to this initiative, in 2013 starting from the experience and information gathered in prior implementations, research was conducted and improvement proposals were

made that allowed **for a larger implementation and incorporation of Information and Communication Technologies (ICT) to the process.** This resulted in the reformulation of electronic management tools that led to structuring procedures on the basis of the use of the e-Record File and GEDO modules of EDMS.

Finally, the Health Personnel Designations (DPS) module was created with a **workflow** that **supplements the selection phase,** initial instance for filling in any position in the Health area. Upon confirmation and notification of the awardees of the Antecedents Contest, **the module covers all the instances** from the **filing of documentation by the awardees to the formalization of his/her designation** through the relevant resolution.

This module provides the following functionalities, namely:

- **Cover page automatic labeling with the incorporation of metadata.** The linked e-record-file (EE) is automatically initiated from the data loaded in the screen at the initiation of the procedure, the predefined data is incorporated in the cover page label.
- **GEDO documents automatic generation.** From the loading of this type of predefined documents, the GEDO e-documents are automatically generated as they are loaded in the module (curriculum, ID, etc).
- **Predefined workflow.** Prior configuration of the addressees of each of the steps of the procedure for automatic routing purposes.
- **Deadline check configuration.** This is a function that can be configurated for the allocation of the deadlines of each step, which in turn allows checking the procedure in terms of management within real time deadlines.
- **Automatic interphases with systems related to the procedure's workflow, for consultation or updating purposes.**

In addition to the agent to be designated as user, this module is used by: the Requesting Health Unit – RRHH; the Health Resources General Administration and Direction Division (*Dirección General de Administración y Desarrollo de Recursos Humanos de Salud*) (DGAYDRH); the Labor Health General Administration and the Direction Division (*Dirección General de Administración Medicina del Trabajo*) (DGAMT); the Payroll General Division (*Dirección General de Administración y Liquidación de Haberes*) (DGALH); the Control and Planning General Division (*Dirección General de Planeamiento y Control de Gestión*) (DGPCG); and the Legal and Social Security General Division (*Dirección General de Asuntos Legales y Previsonales*) (DGALP).

The implementation of the **Health Personnel Designations (DPS)** module reaped the following **benefits for the administration:**

- Interaction with the procedure of the staff to be designated, through the TAD (Online Procedure) module for loading personal documents and other related requirements.
- Automatic cover page labeling with direct linkage to the e-Record File of Origin (Contest) with metadata retrieval.
- Data loading for the Automatic Generation of Official Documents, reducing the GEDO document generation manual scheme.
- Closed workflow that provides for automatic routing, enhancing the routing scheme since it eliminates misrouting risks.
- Deadline monitoring for each step of the procedure.

- Implementation of e-record forwarding for management control and follow up purposes (on the basis of type of record file, management deadlines, division, etc.) broadening the scope of the follow-up of operations.
- Interphases with other applications for automatic updating or consultation (SIAL, Personnel e-Dossier, access to DGMAT, e-Notices), speeding up management time periods.
- Linkage e-Record Files to link them with related prior procedures and a significant speeding up of time periods for the designation of agents, that was the main goal sought.

E-Civil Registry (RCE)

Thanks to the experience gathered and the effective development of the infrastructure of electronic document management, the challenge of modernizing the **Civil Registry of the City of Buenos Aires by means of the e-Civil Registry (RCE)** arouse in 2012.

The paper-based archive was composed of 32,000 volumes, since up to such date vital records (births, marriages and deaths) were recorded in handwritten format, as it had been recorded since 1886 when the Civil Registry office became operational.

The Civil Registry of the City of Buenos Aires has **three functions: first, it is the local civil registry of all vital records in the City; second, it operates as a National Registry as required by the Judiciary and, finally, presides the Federal Board of Civil Registries in the Republic of Argentina.** The referred Federal Board is the body created to solve issues and lay down the rules for problems arising from the different recordation formalities involving local civil registry records, given that in Argentina such registries are under local jurisdiction, that is to say, each municipality has its own civil registry, in compliance with National Law No. 26,413, which provides a global legal framework.

> The electronic document management of the Civil Registry of the City of Buenos Aires went beyond the local sphere, since given the large volume of records in the City and its benchmark role within the Board, the definition of any recordation administrative procedure is usually followed by the rest of the local civil registries throughout Argentina.

The design of the electronic document management for operating the Civil Registry had to take into account the National law framework and thus, **went beyond the local sphere,** since given the large volume of records in the City and its benchmark role within the Board, the definition of any recordation administrative procedure is usually followed by the rest of the local civil registries throughout Argentina. It also took into account a series of **regional documents governing public policies** on civil matters, and meeting the goal of universal birth registration by 2015 for Latin America and the Caribbean. *"The right to an identity and universal registration should be a priority. In most countries of Latin America and the Caribbean, a boy or girl without a birth certificate cannot exercise his or her human rights and is therefore unlikely to develop to full potential,"* stresses the main article of ECLAC-UNICEF bulletin.

Document Diagnosis in the Civil Registry of the City of Buenos Aires

Local civil registries have historically been dedicated to the preservation of paper-format documents both for recordation and archive purposes. National Law No. 26,413 has been amended many times in order to update its contents, however the opportunity had never been seized in order to introduce new state of the art technology for generation or storage purposes, reform **always restricted itself to paper-format management.**

The Civil Registry of the City **is vested with authority to create its own administrative local procedures, with restrictions on a national basis.** Anyhow, the different administrations conducted isolated acts lacking an integral and long term outlook seeking the overall modernization of the registries of vital statistics and digitization of the flow and historical archives.

Thus, **the registry was first carried on a handwritten format** then such data was recorded in a database for national statistics which afforded no transaction application whatsoever and which failed to link personal records. First the certificates were written then they were recorded in the books, and subsequently fed into **different data bases i**n order to deliver and search for information of national bodies, districts and local delegations.

The Civil Registry of CABA **lacked any centralized or integrated information system for managing the information it generated;** the Civil Registry managed approximately 40 data bases with micro-systematizations which lacked any integration between themselves, and which were vulnerable on an IT basis in many ways.

One of the most important features was the **loss of information,** since the loading of data was scattered throughout the data bases existing in each of the Civil Registry offices thus giving way to information loss due to errors such as omissions, late closing of monthly statistics, information loading duplications.

Another problem was that **processes were isolated, since each data base focused in loading its specific information in response to the specific nature of its division or office;** the public officer had to meticulously load a same information dossier in different databases.

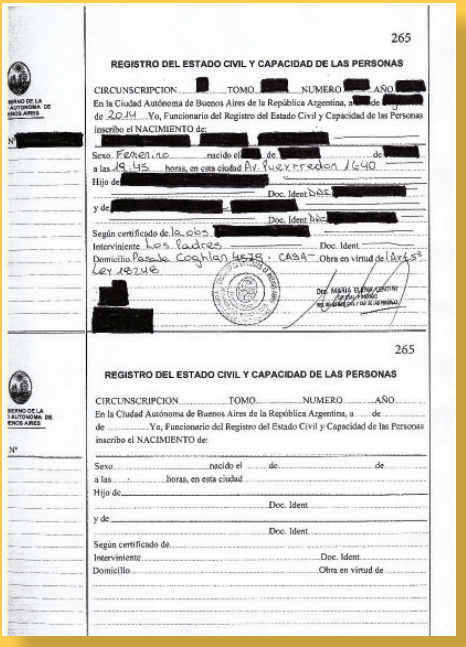
> The Civil Registry of CABA lacked any centralized or integrated information system for managing the information it generated; the Civil Registry managed approximately forty data bases which lacked integration, all of them were essential for management purposes, and, in turn, all of them were absolutely vulnerable in IT terms.

The **preservation and safeguard of information was based on a Physical Book (*Libro Físico)* as mandated by Law No. 26,413, however it did not provide for the protection of the information contained therein.** As regards the Physical Book's preservation and safeguard the Civil Registry of CABA conducted digitization tasks on the book that contains the certificates (*actas)*. Such task surfaced the need of managing the updating of the book. Thus, the stored information was used more for reference purpose than as a system of reliable information.

In spite of all these operational issues surrounding the paper-format, the Civil Registry of

Paper and Digital Birth Certificates

Recordations had been made in handwritten format since 1886; today they are fully digital.



265

REGISTRO DEL ESTADO CIVIL Y CAPACIDAD DE LAS PERSONAS

CIRCUNSCRIPCION [redacted] TOMO [redacted] NUMERO [redacted] AÑO [redacted]

En la Ciudad Autónoma de Buenos Aires de la República Argentina, a [redacted] de [redacted] de 2014 Yo, Funcionario del Registro del Estado Civil y Capacidad de las Personas inscribo el NACIMIENTO de: [redacted]

Sexo Femenino nacido el [redacted] de [redacted] de [redacted]

a las 19.45 horas, en esta ciudad Av. Guerrero 1640

Hijo de [redacted] Doc. Ident. [redacted]

y de [redacted] Doc. Ident. [redacted]

Según certificado de la ley

Interviniente los padres Doc. Ident. [redacted]

Domicilio Pasaje Coghlan 1678 - CABA - Obra en virtud de Art. 8° Ley 18.248

[redacted]

265

REGISTRO DEL ESTADO CIVIL Y CAPACIDAD DE LAS PERSONAS

CIRCUNSCRIPCION TOMO NUMERO AÑO

En la Ciudad Autónoma de Buenos Aires de la República Argentina, a de de

Yo, Funcionario del Registro del Estado Civil y Capacidad de las Personas inscribo el NACIMIENTO de:

Sexo nacido el de de

a las horas, en esta ciudad

Hijo de Doc. Ident.

y de Doc. Ident.

Según certificado de

Interviniente Doc. Ident.

Domicilio Obra en virtud de

HANDWRITTEN CERTIFICATE

GOBIERNO DE LA CIUDAD DE BUENOS AIRES

REGISTRO DEL ESTADO CIVIL Y CAPACIDAD DE LAS PERSONAS

DNI: [redacted]

Circunscripción [redacted] TOMO: [redacted] NÚMERO: [redacted] AÑO: 2014

En la Ciudad Autónoma de Buenos Aires de la República Argentina, a 1 de agosto de 2014,

Yo, Funcionario del Registro del Estado Civil y Capacidad de las personas inscribo

el NACIMIENTO de:

[redacted]

Sexo: [redacted]

[redacted] - Ciudad de Buenos Aires - Argentina.

Hijo de: [redacted] DNI: [redacted]

Y de: [redacted] DNI: [redacted]

Según certificado de: [redacted]

Interviniente: [redacted] Doc. Ident: ---------

Domicilio: [redacted]

Obra en virtud de: ---------

Firma de intervinientes

Oficial público

INUTILIZADO

DIGITAL CERTIFICATE

CABA **provided in paper-format faithful copies of the original document for the large volume of vital events** recorded in the City on an annual basis:

- Births: 84,000 annual recordations.
- Marriages: 13,160 annual recordations.
- Deaths: 42,200 annual recordations.

In spite of the precariousness of the administrative procedure, the Civil Registry of CABA **managed the information of vital records and delivered the relevant certificates to citizens with a certain degree of formality, order and celerity.**

Vital records, Now in Electronic Format

The **generation of electronic documents from the initiation of the recordation procedure** involved a challenge in several ways: from the political standpoint, the decision to introduce such change and implement it by means of concrete actions; from the administrative standpoint, the profound change introduced in the way certificates were created.

This first standpoint was strengthened by legal instruments: 1) Executive Decree 104-GCABA/13, regulating the creation of the e-Civil Registry module (RCE) integrated

into the EDMS ecosystem, that safeguards the information in the City of Buenos Aires; 2) Resolution No. 40-GCABA/14, that created the coordinating unit for the implementation of the RCE module and 3) several administrative resolutions that fostered actions and reflected, mainly, the **enormous and consistent political will** of the administration's head authorities of commencing the transformation.

> The generation of electronic documents from the initiation of the recordation procedure involved a challenge in several ways: from the political standpoint, the decision to introduce a change and implement it by means of concrete actions; from the administrative standpoint, the profound change introduced in the way certificates were created.

The modernization of the Civil Registry was **tackled in three areas:** first, **the analysis of administrative procedures for vital statistics (births, marriages and deaths) and their conversion into e-documentation abiding by** National Law No. 26,413; second, **technological renovation,** acquisition of new hardware to speed-up the use of the RCE module; and third, **training public officials** involved in the use of RCE, because they had never used a PC in their daily tasks, given that all their tasks were made by handwriting in paper books.

The mail goal of modernization was to produce **electronic documents** maintaining the rules of the administrative procedure and its legal effects. Accordingly, a RCE module containing all the rules for the production of the certificate document (*documento acta)* was devised, for such module to electronically generate the certificate and digitally sign it, but with a consequent safeguard in paper, as prescribed by applicable national regulations, since the law mandates that the original of family documents (births, marriages and deaths) be kept in books with holographic signatures.

Until the introduction of this module, a certificate was written in a book and then such data was transcribed to another support format, with the risk of transcription errors. As from the implementation of this module, this logic is inverted: now **the data is first loaded in the system and thereafter the certificate is produced, signed and stored in paper-format**. This not only makes it impossible for data to differ from the paper certificate, moreover, given that there is an-e-copy of the digitally signed document, **there is an infinite number of "copies", speeding-up daily operations involving citizens' certificate applications in an agile and secure manner.**

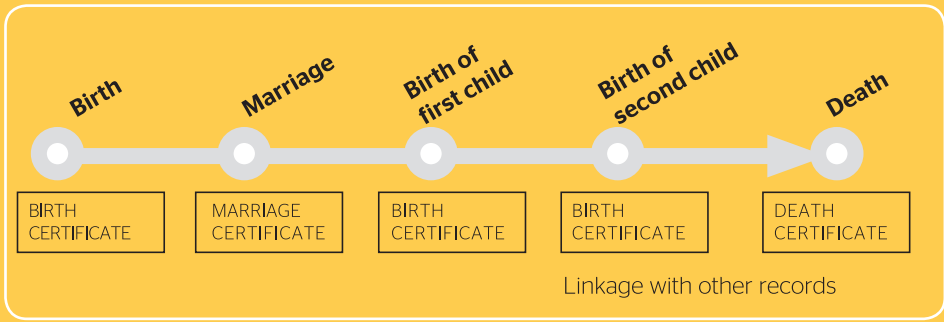
In turn, it was established —and this is an absolute novelty— that vital record events of an individual be linked among them so as to create a *Life Line* (*Línea de Vida)*, and that they should be linked with the vital record events of other related individuals so as to create a *Relationship Tree* (*Árbol Vincular)*.

The **advantages arising from the application of the e-Civil registry module (RCE)** include:

- E-certificates ensuring the inalterability and preservation of the information.
- Speeding-up citizens' access to information (e.g. there are 240,000 annual applications for birth certificates authenticated copies).

Personal Dossier- Time Line

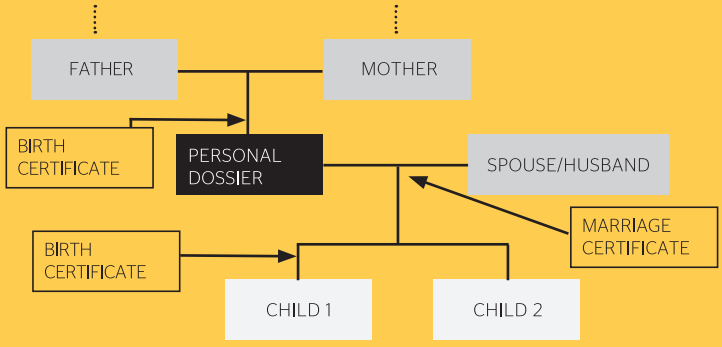
The succession of life events, supported by their respective documents, gives way to the Personal Time Line



Personal Dossier

Family Relationships- Hierarchical Tree

The dossiers interrelated by means of "pointers" among records, supported by Documents (Relationship Life Events) give way to the Relationship Tree.



Each of the rectangles represents a PERSONAL DOSSIER, that is linked to other Personal Dossiers by means of "pointers" that allow gaining a picture of the "Hierarchical Tree" representing the relationships with relatives.

Family Relationships

- Consistent online single base for all the districts and civil registry offices facilitating decentralization.
- Inter-operation with other local agencies that need to consult the information (e.g. Education or Health local, provincial or federal ministries that may request for Birth Certificates).
- Possibility of incorporating historic records by means of digitization.

At the time of publication of this book, the implementation of the RCE module covered the recordation of births and deaths on a decentralized basis in all Civil Registry municipal offices, hospitals and branches. In turn, the functionality for marriage recordations has been

completed. Finally, the status and scope of isolated and asynchronous actions involving digitization of the flow and historical records have partially and incompletely commenced for the different procedures within the Civil Registry.

Consequently, **an integral digitization of the historical archive** has been agreed upon on the basis of three core actions: a) loading the daily flow of applications for copies in the archive into the RCE, b) reconverting the archive images dating back from approximately 1960 (because these five decades include digitization actions and they record births of the population that is more susceptible of generating news and request for copies of certificate) and c) digitizing the 32,000 books accumulated from 1886.

Multipurpose Dossier Registry (RLM)

The **Multipurpose Dossier Registry (RLM)** is the module of the EDMS ecosystem that allows the e-management of the several **public registries** existing within GCABA vested with recordation and control functions.

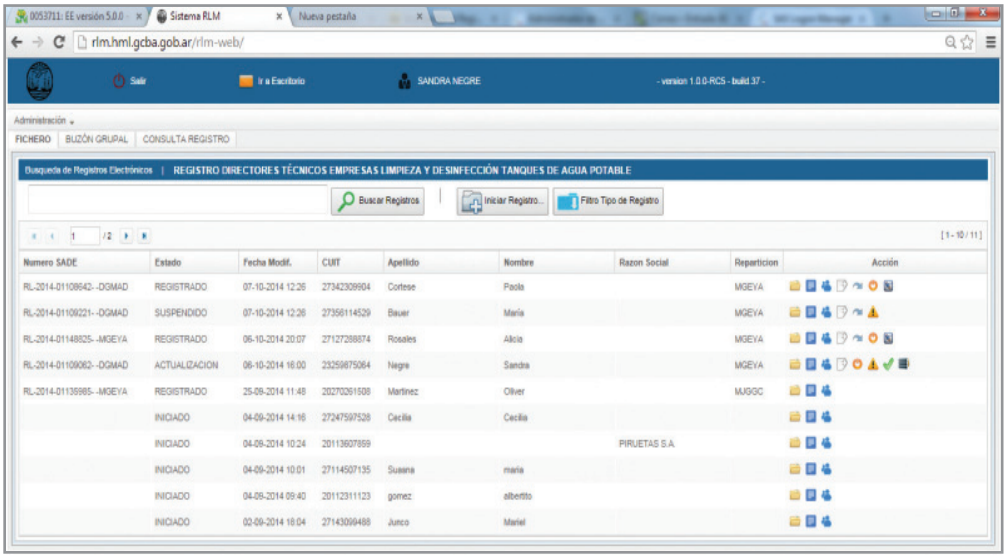
The purpose of these registries is to identify persons (either individuals or legal entities) and license them to perform certain activities. Some of these public registries are, namely: Registry of Pest Control Companies (*Registro de empresas habilitadas para tareas de desinfección y fumigación*), Public Registry of Condominium Association Managers (*Registro público de administradores de consorcios*), Public Registry of Lifeguards (*Registro público de guardavidas*), Registry of Aged Care Workers (*Registro de asistentes gerontológicos*), Public Registry of Natural Gas Installers (*Registro de Gasistas).*

The users of this module are the officers of the division in charge of control over the procedure of the public registry, the individuals and legal entities willing or who must be included in the registry, and any citizen willing to consult if a person is recorded in a public registry.

This module makes intensive use of other modules of the ecosystem, **since all the information for the registries is captured through 1) "Controlled Forms" linked to an e-record file** of a contents associated to this registry and 2) the capacities of the EE to manage the link of the supporting document in the registry. Upon completion of the task of controlling the data and the linked documents, the user executes the incorporation. It must be noticed that a registry is nothing else than a collection of the record files of a specific procedure, regardless that in certain circumstances it will be recorded, if it passes through a formal record file, for the purpose of expediting the procedure.

The implementation of this RLM module allows the **administration to:**

- Resolve the document management of registries and dossiers that lacked a repository.
- Generate a data base for the registry and cross reference information among registries.
- Achieve the flexibility afforded by centralized or decentralized management according to the specific needs of each public registry/dossier.
- Eliminate physical archives.
- Obtain an e-archive that is legally valid.
- Keep updated and online information.
- Eliminate paper document transportation.
- Afford immediate access to the dossier (optimize search and management times).
- Clear identification of the roles, functions and duties.



DISPLAY— Interphase Multipurpose Dossier Registry

- Automatic identification of individuals or legal entities that need to renew their recordation with the registry.
- Retrieve documents, so as to avoid having to request citizens for documents that have been already submitted for recordation or other procedures (one-stop shop).
- Find antecedents of the candidate individual or legal entity seeking registration or renewal of registration, since it may be easily identified if there are any pending fiscalization record files, reports or other documents of such candidate.

The benefits gained **by citizens** who need to register themselves in a public registry are, namely:

- Chance of conducting the procedure online, through the online platform (TAD).
- Flagging up the need of renewal.
- Access to his/her registry/dossier history.

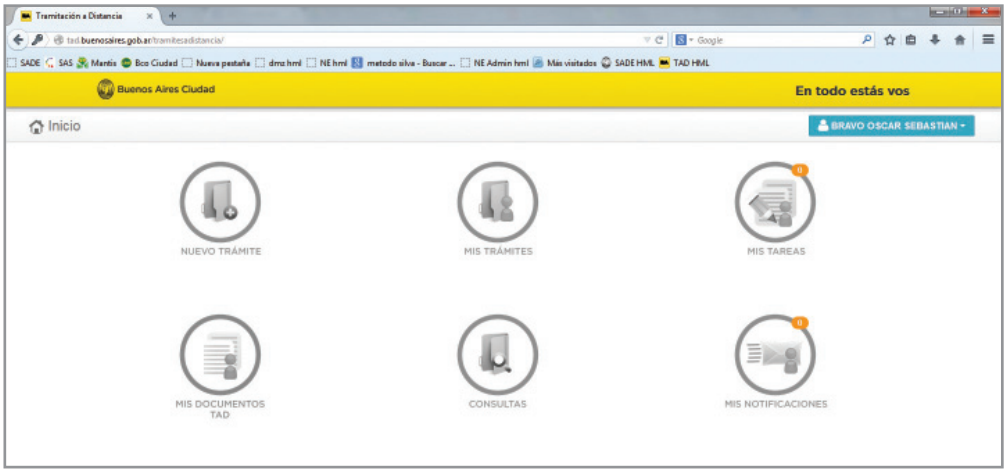
The benefits **for citizens at large are:**

- Consulting from GCABA's web the list of names recorded in a registry, either of a specific individual or legal entity in particular.
- More transparency in public registry recordation processes.

Online Procedures (TAD)

The Online Procedures (TAD) module operates as a **virtual point of entry** available in each home, office and Smartphone. G2C interaction becomes more friendly and relaxed, since the module is available at any time and any place.

The consolidation of the City of Buenos Aires processing on the e-record files platform favored the **generation of information and data on the behavior of processes and resolution of administrative decisions** as had never been achieved before. Thus, we discovered that



DISPLAY— Interphase Online Procedures (TAD)

from an aggregate of the approximately 790 specifically labeled procedures, at least **300 were very frequently requested by citizens at entry points.** For such purpose, citizens personally attended a government office, or municipal branch, or hired a representative whenever he/she was unable to follow-up the procedure in person.

> With the Online Procedures (TAD) module it is the citizen the one who initiates a procedure; the processing of certain administrative procedures is now open to be operated by citizens.

From this perspective, the aim was to offer citizens the chance of initiating procedures remotely and interacting online with the administration until completion of the procedure. For such purpose the Online Procedures (TAD) module was created. Located at the portal of *www.buenosaires.gob.ar*, through TAD, **citizens may choose a procedure from a list and label the record file, load documents, rectify and amend documentation upon an agency's request, track the route of the procedure and be notified by e-reliable notice.**

The premise underlying the creation of this module was that public officers' performance would improve in line with the speeding up resolution times that would result from G2C direct interaction. The approach was to establish a **"one-stop shop"**, that is to say to have one single channel to receive procedures. TAD's design **has a distinctive value when compared to other procedure portals, namely: each and every procedure conducted before a governmental agency is conducted by means of a record file and TAD mirrors this practice.** With the TAD module it is the citizen the one who initiates a procedure; the processing of certain administrative procedures is now official and open to citizens.

> TAD's implementation that was launched in November 2013 currently allows citizens to conduct more than 50 procedures online progress will continue incorporating new procedures.

As to its architectural features, TAD shares **document generation and linkage services with GEDO and e-Record Files.** Moreover, TAD affords safety and effectiveness to citizens since it is **integrated with the City Password *(Clave Ciudad)*** of AGIP.

Upon accessing the TAD module, a citizen finds a digital desktop with different action mailboxes: New Procedure (*Nuevo Trámite*), My Tasks (*Mis Tareas)*, My Procedures (*Mis Trámites*), Consultations (*Consultas*), My Documents (*Mis Documentos*) and Notices (*Notificaciones*).

Currently, the platform contains 50 online procedures and aims to reach a target of 300 procedures. An emblematic case that is currently up and running is the **Access to Public Information Law**. Originally, in order to file an application for public information related to the City of Buenos Aires, the petitioner had to go to the General Reception Front Desk. Subsequently, after the Decentralization Law was passed, the scope broadened to cover also Municipal Management Centers (*Centros de Gestión y Participación*). Currently the procedure is available in TAD for its immediate labeling until final resolution.

Buenos Aires Procurement (BAC)

Buenos Aires Procurement (BAC) is an e-procurement system that stands as an example of full integration with the EDMS ecosystem. All e-procurement operations within CABA's Administration are made through BAC. The system allows for the interaction of buyers, suppliers and citizens within the same portal.

As from the integration of BAC and EDMS, the document management of the procedures conducted through BAC is automated, i.e. all related documents are generated and linked to the e-Record File where the procurement is processed.

On the other hand, the e-Record File (EE) of the EDMS ecosystem operates as a "task mailbox" of BAC, routing the record file from user to user according to the tasks to be performed. From the EE the user may directly access a pending task in BAC.

Additionally, due to the flexibility afforded by the EE module, the record file may exit the predetermined flow in BAC and move on to another users or divisions (and then return to the flow); moreover, any additionally documentation may be linked to the EE, as necessary.

Therefore, as from the integration, EE is a task mailbox of BAC and the procedures conducted in BAC are automatically reflected in the documents of the e-record file.

BAC's main functions are, namely:

- **Automatic creation of the e-Record File's cover page label.** Upon commencement of a procurement process in BAC, the application automatically creates an e-Record File in the user's inbox.
- **E-documents linkage.** The documents generated in GEDO (such a sheet of terms and conditions or administrative acts) are linked in BAC to the procurement process by means of its EDMS number or other special number. When this action is conducted, the procurement is also automatically linked in the relevant e-Record File.
- **Documents synchronization.** The documents generated by BAC are imported and signed in GEDO and then automatically linked to the e-Record File.
- **Tasks Mailbox.** The EE mailbox screen was modified to add a new button that allows direct access to a pending task in BAC. Additionally, the record file is automatically routed from users to user, according to the relevant task (predeterminate flow in BAC).
- **Record File Control.** The record file may exit the predeterminate flow in BAC and carry out the normal operation of the EE module. However, in order to be able to operate in BAC it must be in the mailbox of the predefined users. This ensures continuity and consistency in the management of the process and in the documentation.

Before implementation of the BAC and EDMS integration, tasks were conducted on a parallel basis. The user performed tasks in BAC and then had to reflect them in the record file. Tasks were duplicated. In the administrative acts, BAC provided flows for their creation, authorization and protocolization; GEDO also did so. Therefore, a user had to perform tasks in BAC and then the relevant tasks to generate the document again in GEDO and, finally link it to the e-Record File.

In the case of documents generated by BAC—e.g. budgets or purchase orders— users unloaded the screen, imported it to GEDO and then linked it to EE. In many other cases, on a more rudimentary basis, users printed the screen, scanned it and then imported it in GEDO to subsequently link it to the EE.

Since BAC had no task mailbox, the user had to memorize or write down the procurement procedure number in which the user was involved, to then search it and perform the relevant actions. Using **EE as a BAC's task mailbox, this task was simplified and imposed order in the daily work of the area.**

Unquestionably the main benefit is that it speeded up staff tasks, with the resulting **substantial time saving and mistake reduction arising from the load duplication.**

The streamlining of tasks resulting from non-duplication and BAC's substantial improvements arising from integration, allows a friendlier user-system interaction, a **fundamental impulse towards the cultural change involved in going electronic.**

The integration also **imposed order in procurement processing** since the system automatically links the relevant documents to the EE, averting any errors or omissions of the user. It involves a huge step forward for processing audit purposes.

The use of the EE as a task mailbox of BAC also leads to **a better work organization** and above all, it speeds up processes by allowing access to the pending task in BAC.

Internal response to the change has been very positive since it significantly **streamlined the work benefitting from the advantages afforded by the two systems.** At the Procurement General Division (*Dirección General de Compras y Contrataciones*), where a large number of processes are centralized, tasks were streamlined speeding up processes.

It should also be noted that the order imposed upon administrative processing by this integration, that automatically provides a comprehensive picture of all the relevant stages of the process, is vital for the subsequent audit.

Web Official Bulletin (BOW)

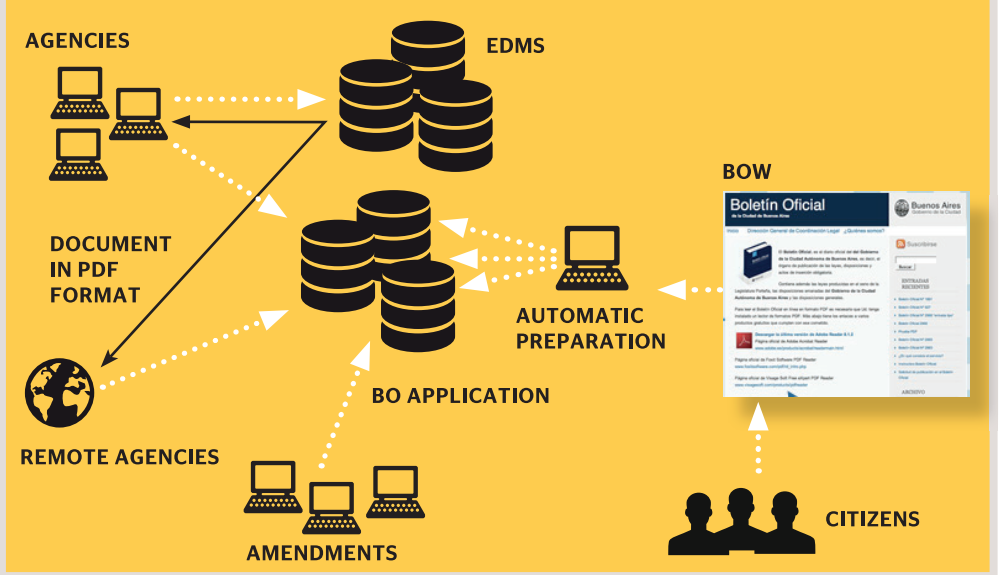
The Official Bulletin's application called **Web Official Bulletin (BOW)** was designed so that all agencies of the Executive Branch of the Government of the City of Buenos Aires **load files containing administrative acts, tender procedures, call for bids, notices, communications and any other kind of rule to be published in the Official Bulletin.** The Web Official Bulletin also publishes laws enacted by the Legislative Branch and rules of the Judiciary within the sphere of the Autonomous City of Buenos Aires.

Although BO could be used when it was paper-based, it was implemented when it became digital. Agencies who have obtained a user password may access this application holding a user permit called "issuing agency" in order to load the file pertaining to the rule to be published. The staff of the Official Bulletin Operations Management Department have another user profile called "designer user" since such employees are the ones who diagram and design the final product of the application, i.e. the Official Bulletin which may be consulted by the general public through the intranet and/or the internet.

Before the implementation of this application, the agency willing to publish something

Web Official Bulletin Elaboration Process

El Boletín oficial dejó de realizarse manualmente y puede consultarse online.



DISPLAY. Access to the Official Bulletin

in the Official Bulletin had to file a paper note with the Reception Front Desk of SECLYT together with two paper-based copies, of the text to be published signed by the public officer together with a digital format copy (floppy disk). The Official Bulletin Operations Management Department worked on the material to be published, made the necessary corrections through proof reading and then forwarded the material to the City of Buenos Aires printing office. The daily circulation, approximately 3000 copies, was distributed for free to the agencies of the Executive and Legislative Branch of the City of Buenos Aires, copies were also sold to the public. The public could subscribe for a fee to receive printed copies of the Bulletin.

This implementation brought about several benefits for the internal organization, the government and citizenship. In terms of the government, it **eliminated the purchase of paper, ink and other printing input.** The print is no longer used and **the Bulletin is no longer distributed in paper format. Publication periods were speeded up** and summarized rules were eliminated: the Official Bulletin is no longer subject to the limitations involved in paper editions, since it can **publish much more contents in much less time.** The agencies and divisions willing to make publications no longer need to go to the Bulletin offices, they file publications online from their own offices. When this Administration took office, the Official Bulletin was delayed by 10-days, there was no printing capacity, and consequently statutory obligations were not complied with. A digital Bulletin existed, but it was the result of the paper edition digitization.

In terms of citizens, the BOW means **more information in real time**. The Official Bulletin is available free of charge for everybody and can be easily accessed through the official page of the City of Buenos Aires. No purchase or subscription is necessary to read the Official Bulletin. No paper edition storage is necessary. It is accessible from anywhere in the world, 365 days a year, through the Internet. Law No. 2739, passed in 2008, prescribed that the Web Official Bulletin carries the same legal effects as its printed version.

The Official Bulletin operates on a 48 advance time frame, thus issuing users are required to specify two publication dates: the suggested date and the deadline, in relation to the compliance with certain legal requirements of the rules. This provides the "designer user" with a working margin, to avoid rush deadlines and uneven Bulletin publications –i.e. one

day 30 regulations and another 300 regulations. The designer enters the application and chooses the work date, monitors that the rule to be published –and attached schedules, if any– complies with editing standards manual (so as to have an aesthetically visual and reader friendly bulletin), and approves the rule. At the end of the working day the designer user combines –that is to say obtains one single pdf format document– all the documents of the day, the document is then linked to the supplement as rules carrying an annex, it is loaded to the web and the Web Official Bulletin is ready for consultation.

> In terms of citizens, the BOW means more information in real time. The Official Bulletin is available free of charge for everybody and can be easily accessed through the official page of the City of Buenos Aires.

The implementation of the BOW module has improved work quality and volumes, a rule can be sought and retrieved within the application. The BOW has imposed order given that rules are received in an orderly manner, thus resulting in better working conditions. On the one hand, this application **averts the error of publishing the same rule twice, and on the other, no rule remains unpublished, mistakes that were frequently committed in the paper-format.**

The implementation of the BOW module brought about several advantages, namely:

- Legal certainty and validity by means of the e-signature (encryption of 128 bits).
- Time frame optimization from the approval of a rule to its publication.
- There are no physical limitations as to rule publication volumes.
- Close follow-up of each of the stages of the process.
- Official Bulletin preparation process is faster and safer.
- Quick search of rule publication dates.
- Permanent publicity of the acts of government.
- Free, unrestricted and permanent access to the contents of the Bulletin for internal users and citizens.
- Transparency.

Initiating change

The Official Bulletin Web was implemented prior to the electronic document management project and the EDMS ecosystem, thus the BOW organization served as a kickoff for moving towards e-document management, breaking resistance to change and generating a learning process for the staff.

Regulatory Information System (SDIN)

The **Regulatory Information System (Sistema de Información Normativa) (SDIN)** allows importing the administrative acts published in the Official Bulletin and carrying an updated data base of all published rules in the web of the Government of the Autonomous City of Buenos Aires (GCABA).

SDIN also allows linking the rules according to their relevant regulatory actions and publishing a summary, among other reasons, to retrieve them by means of key words (or "free text"). In this way **any citizen can conduct searches** by different parameters on all published regulations.

The module also allows monitoring the rules before their publication in the web and generating reports on the volume of published rules, cross referenced with different parameters (type of rule, date of enactment or publication, issuing agency, etc).

> As from the implementation of the Regulatory Information System (SDIN), any citizen can conduct searches by different parameters on all published regulations.

SDIN was launched some time ago, however, **new improvements have been progressively introduced** to streamline its operation.

By early 2011 the staff was still recording on handwritten format on each daily Official Bulletin summary, the rules that had been circulated to work on and those that were circulated for basic data monitoring purposes. As from 2011 an Excell archive was used to distribute the rules to be worked on. The operating manager sent such Excell by e-mail to the agents in his area. However, the operating manager continued to store summaries of the Official Bulleting with the information of the volume of rules worked on.

The main benefits stemming from the implementation of SDIN are, namely:

- Allocation of rules within an application within SDIN (discarding the Excel archive).
- Easy monitoring of the work load of each agent and pending works, each agent can consult the rules allocated to such agent (inbox).
- Generation of work time reports, volume of hours worked broken down per area and per agent on a specific date or within a range of dates.
- Mandatory control mechanism of the rules worked on, BEFORE they are available in the rule search web application form (filtro).
- Paper summaries need not be kept.

8. NEW REALITY, NEW CHALLENGES

In the earlier sections we have described on a module by module basis the major changes achieved by the new electronic document management implemented in the Government of the Autonomous City of Buenos Aires. It is also worth highlighting the general impact reaped throughout the whole administration of the City.

Within a five-year period, the swift transformation process not only left behind piles of paper, but also immediately eliminated malpractices, speeding-up process sing times, slashing staff and transportation costs and saving office space.

These and other results are valuable in themselves, since they add transparency, speed up and update a public administration that was way back in time and lacked order and control. But they are, also, the starting point for a sustained e-government model, increasingly centered on the needs of citizens and progressively evolving as the twenty-first century unfolds.

From Paper-Based to Paperless Government

At the outset of our administration, **all record files were processed on paper-format.** This does not mean, however, that there were no digitized documents or processes and internal systems, it means that procedures relied on paper record files, with all the disadvantages stemming therefrom as identified at the diagnosis stage, namely: alterability, document physical transportation and duplication, impossibility of simultaneously working on a record file, physical archive, manual records, among others. In many cases, a document created in a computer, was processed on paper, and upon completion, scanned for storage in digital format, **a mechanism that is not only inefficient but that side-steps the advantages currently afforded by IT systems.**

As results of the implementation of the electronic document management system, **by late 2013 all the procedures of the Autonomous City of Buenos Aires (GCABA), in excess of 800, were already conducted by means of e-Record Files (EE) within the EDMS ecosystem environment. Currently such procedures well exceed 850.** The incorporation of the digital signature and the e-signature in replacement of the holographic one, has been essential for document authentication purposes, allowing for the generation, management and archive of a large number of documents without paper support format.

> As results of the implementation of the electronic management system, by late 2013 all procedures of the Autonomous City of Buenos Aires (GCABA) were already conducted by means of e-Record Files (EE) within the EDMS ecosystem environment.

Although it is possible that paper consumption has not actually been reduced –many people still prefer to print e-documents to read, analyze or transport them– **the need of processing on a paper format has been eliminated.** The documents are either generated within the system, or scanned and the originals are returned to their owners (as in the case of IDs of the employees for their dossiers), to be finally stored in **one single repository from which they may be consulted or reused.**

Among other advantages, digital documents are not misplaced, do not occupy space, afford easy access, can be consulted on a simultaneous basis, and they are no longer related to the physical place where they are processed. E-processing allows an **ongoing and real time follow-up** as well as the production of **statistics** as regards the record files, such as their volume, location, routing map and division where they were held etc.

Systems abreast of the 21st century demands

The transformation attained in the Government of the Autonomous City of Buenos Aires (GCABA) by means of the implementation of the document management through the EDMS ecosystem is permanent, sustainable and has no way back. For the first time the internal systems of the organization keep up with the current trend of IT society.

Safer, Faster and More Transparent Procedures

As results of the implementation of electronic document management system in the Government of the Autonomous City of Buenos Aires (GCABA) —more than 850 procedures involving the relationship of the City with its citizens, suppliers and other stakeholders— became safer, faster and more transparent.

- **Faster Procedures.** Not only was the document allocating role of the front reception desks changed and the physical transportation of paper eliminated, but the new system also prompted other fundamental changes to speed-up procedures. On the one hand, it is no longer necessary for processing to follow its critical path on the basis of the physical location of the divisions involved (currently, a procedure may, in minutes, move from one division to another division located on the opposite side of the City and come back on the same day without any physical circulation of documents). On the other hand, the agent in charge of processing is forced to comply in due time and manner with specified deadlines and formalities. "In due time" because given that documents' dates cannot be changed, deadlines must be met —it is impossible to speculate with dates or "procrastinate"; "in due manner", because once a document is incorporated into a record file it cannot be suppressed. Formerly, as is the case in any paper-based public administration, it was usual for errors and dates of prior stages be amended in further stages of the procedure, suppressing some documents and inserting new ones with the consequent page renumbering.
- **Safer Processing.** The trackability of a procedure is fully "closed" and the names of those who were involved in the processing, in the generation of documents and their respective roles in the procedure are identified on a permanent basis. On the other hand, the record files and Registry Dossiers can no longer be misplaced in the administrative tangle, therefore the usual practice of "reconstructing the record file" —which caused so many problems— no longer exists.
- **More Transparency.** All documents, record files and registries or dossiers can be accessed; nobody can "shelf" them, except for duly supported confidentiality grounds. This is reinforced by the referred features of trackability, dating and impossibility of suppressing documents from a record file.

> Currently, a procedure can immediately move from one division to another division located on the opposite side of the City and come back on the same day without any physical circulation of documents.

These features of the new way of handling procedures in the government were not clearly noticed at first by citizens at large, since **the process began by increasing efficiency and effectiveness in the G2G sphere** so as to guarantee the provision of adequate, fast and safe answers to the public at large upon being launched at the G2C sphere. In 2013, when all the internal G2G procedures were operating within the EDMS ecosystem, **the implementation of the Online Procedure (TAD) was launched, which has already afforded citizens with the possibility of operating dozens of procedures online,** and which will allow, in the new future, access to approximately 300 procedures.

Some of the procedures that may be initiated online through the TAD module (as of September 2014)

Urban trees
-Irregularities report
-Tree inspection request
Historic town center
-Facade recovery
Rat extermination certificate
Fiscal Control
-Installment plan
Book entry accounts
-Opening and/or closing
Gift coupled with a condition
Unconditional gifts
Real Estate Tax (ABL) Exemption
-Amateur theatre premises Law No. 156
Car Plates Tax Exemption
for travel salesman 50%. Ordinance
Hazardous Waste Prospective Generator for polluted sites
Real Estate Tax (ABL)
Pest extermination and disinfection companies registration
Tank cleaning companies registration
Access to Public Information Law No. 104
Historical heritage
Technical heritage advise
Quarterly and semester filings by companies
Condominium managers registry-licenses
Condominium managers registry- Filing of annual returns
Premises/showrooms booking
Animal health- procedures
Food heath protection-
-Food inspection request
SIRCREB
-Withholdings reimbursement
-Exclusion from registry high fiscal risk
-Exclusion from withholdings registry
Request for hearing with the Chief of Government (Citizens)
Taxpayer's Request
Request for the cleaning and disinfection of drinking water tanks
Request for disinfection and pest extermination stamps
Tourism
-Request for the distribution of brochures in Tourism Information Centers
-Receipt liquidations of tourism bus
-Request for hotel rating
-Request for passenger reception
-Request for event space booking
-Hotel rates in force

EDM System in all procedures

1,180 Total procedures	**55.000** No. of Current Users	
Transactions		
25.000.000 Annual Total	**95.000** Daily Average	
Consultations		
180.000.000 Annual Total	**700.000** Daily Average	
Documents		
15.000.000 Annual Total	**1.250.000** Monthly Average	**56.000** Daily Average

Government Accountability and Access to Information

In the context of administrative disorder, a growing mountain of manually handled and recorded paper based documents and procedures that existed in the City less than one decade ago, **it was impossible for any Administration to guarantee its correct operation, less still render accurate account of its activities and results.**

The systematization, document order and better access to information achieved as from the implementation of electronic document management across the whole organization of the Government of the Autonomous City of Buenos Aires (GCABA) involves also **increasing transparency in all government actions and easing account rendering.** Accountability is one of the pillars of e-government, since it allows citizens to know which is the origin and allocation of their taxes, fostering and strengthening democracy.

> The updating of systems has allowed organizing, gathering and accessing data of the administration that was formerly difficult, if not impossible, to obtain, thus increasing transparency and easing account rendering.

In the information era, the updating of systems has allowed **organizing, gathering and accessing data of the administration that was formerly difficult, if not impossible, to obtain.** As results of the implementation of the EDMS ecosystem in the GCABA, it is currently possible:

- to obtain more and better information, faithful and timely, for taking decisions and controlling the decentralization of procedures;
- to provide access to information at all levels, on a simultaneous basis, and thus handle larger volumes of shared information;
- to decentralize the decision taking process, since there is a flow of information across all the levels of administration, from the point of its generation –in the base– to the higher levels;
- to base governmental decisions on faithful and updated data, since public officers conducting the procedure have the best access to information;
- to exercise more control over the performance of public officers;
- to obtain a better and more adequate accountability from the different levels of the administration;
- to generate administration indicators and statistics;
- as from the online procedure (TAD) module, to improve access to information to citizens at large and to enhance G2C interactions.

Modernization as a Goal Sought by the City of Buenos Aires

The conception of the **City as a realm for innovation is the indirect result of the success of the document management transformation process,** since it allowed generating internal capacities, developing interdisciplinary work teams and driving the whole organization towards more modern and efficient working conditions.

The e-government approach allows foreseeing the implementation of **new innovations in the forthcoming years in the field of public utilities,** relying on the results obtained and on a more G2C oriented organization.

> In line with the implementation of the electronic document management system, the Ministry of Modernization was created in December 2011 incorporating initiatives and actions addressed at modernizing the Government of the Autonomous City of Buenos Aires (GCABA).

In line with this transformation process, **the Ministry of Modernization was created in December 2011** incorporating initiatives and actions addressed at modernizing the Government of the Autonomous City of Buenos Aires (GCABA) in order to:

- speed-up and make management more transparent;
- improve procedures to attain a more efficient organization;
- value the staff culture and promote professional development heeding to their expectations of providing quality services;
- provide better citizen services;
- provide more information, generating new spaces for citizenship collaboration and participation.

Savings for the Public Administration

The starting point of the transformation of the internal organization of the Government of the City of Buenos Aires (GCABA) is the drive for greater efficiency and effectiveness in public administration. Thus, **savings and the efficient use of resources** are some of the main results.

Where are savings identified? Some of the sources of efficiency are, namely:

- **Savings in personnel,** staff costs are slashed given that many tasks are automated or streamlined, whilst others are eliminated all together, such as manual recordation or messenger services. Consequently, human resources are reoriented to higher value added tasks.
- **Savings and transportation and dispatch:** messengers, vehicles, chauffeurs, internal mail, among others.
- **Office space savings**, arising from the elimination of papers and dossiers in temporary and permanent archives.
- **Time savings,** resulting from the fact that travelling and physical transportation of documents is avoided, from the parallel handling of record files, by speeding-up internal communications, etc. Another issue that increases staff efficiency is the integration of the ecosystem between modules and other supplementary systems, which avoids time insuming entering and exiting applications.
- **Control improvements,** involved in shifting from manual audits to ex-post system audits, generating monetary savings by avoiding bad practices and the discretional handling of record files and documentation.

Training Public Officers in the New Technologies

The vast universe of the Government of the Autonomous City of Buenos Aires (GCABA) posed the challenge of managing the change and implementing new ICTs in a population of diverse computer skills: some groups were highly skilled, some were even self-educated; other groups needed word processing, Internet and excell training. That is to say, **the implementation of EDMS led to the strengthening of staff IT skills** and the incorporation of new technologies far from driving staff away allowed for more participation of the staff that lagged behind in the use of these IT tools.

> The incorporation of new technologies far from driving staff away allowed for more participation of the staff that lagged behind in the use of these IT tools.

From the outset of the transformation process more than 55,000 public officers in the City of Buenos Aires were trained in IT systems necessary to operate the electronic document management.

Outcome of the Transformation Process of the Government of the Autonomous City of Buenos Aires in its shift towards e-Government by means of Electronic Document Management

- Paperless office.
- Speeding-up procedures.
- Improvement of G2G internal management and G2C services.
- Follow-up of tasks on a procedure by procedure basis.
- Monitoring performance on an agent by agent basis.
- Reduction of bad practices.
- Single automatic and successive numbering of all proceedings.
- Permanent and instantaneous access to procedures (transparency in the information).
- Savings for the administration and an efficient use of resources.
- Audit on a system by system basis.
- Interoperation with vertical and transversal systems.
- Substitution of government communications with digital documents with e-signature.
- Unification of the classification of communications (Memo, Note, Report).
- Elimination of manually recorded books.
- Technological environment providing high IT security.
- Larger interconnection, incorporation of users of the Government's mail web.
- One-stop shop.

Looking Ahead

As results of the implementation of updated and flexible systems tailor made to serve the management needs of the Autonomous City of Buenos Aires (GCABA), **new challenges lay ahead the path to an increasingly effective, efficient, transparent and citizen-centered e-government.** Some of them are, namely:

- **Standardization of procedures.** Currently, most of the procedures are conducted with a free workflow, and in many cases the same procedures are conducted differently depending on the division or personnel involved. The challenge is to find and implement optimal information circulation routes to standardize similar processes, fix the steps from the system modules involved and ensure that staff members use them. In many cases process reengineering will be necessary in order to establish the steps of each e-procedure, in the quest for greater efficiency and drawing on the advantages of the new logic imposed by electronic management.
- **Readjustment of personnel and roles.** On the one hand, the implementation of systems has transformed many labor positions within the administration, making some operative roles obsolete and requiring training and new skills in higher impact labor positions. On the other hand, the decentralization and trend towards more horizontal structures that facilitate channeling G2C services will continue changing the needs for human resources.

New challenges lay ahead the path to an increasingly effective, efficient, transparent and citizen-centered e-government.

- **Integration of all Government systems with electronic document management.** All the procedures are integrated to electronic management, the only pending step being that all systems that require document generation to support decisions will use the EDMS ecosystem, so as to save a significant volume of useless work and increase the safety of procedures.
- **Extension of the rules' engine to many other procedures.** The goal is to allow for task automatization, that is to say, parametrizable decisions or controls to reduce discretionality and human errors, speed up procedures and slash costs.
- **Use of tools to their full potential.** The implemented systems allow for deepening and expanding results, to the extent their use is incorporated and adopted in the administration and the necessary adjustments are made to fit the needs of each procedure, area or division.
- **Backward digitalization.** A portion of the historical documentation prior to the implementation of the electronic document management is still in paper format and may be digitized to be progressively incorporated to the ecosystem.
- **Interoperability with other e-government systems.** Ensure and foster data exchange with other electronic government systems in other cities, levels of government or countries will allow for an aligned and integrated operation that will lead to better services and information for citizens.

Governments and the Future of Information

In the year 2000 only 25% of the stored information worldwide was in digital format, the other three thirds of information were analogical: stored in paper, floppy disks, magnetic tapes, etc. But due to the rapid growth of digital information, already by 2013 only 2% of the 1,200 stored exabytes were in analogical format. Although there is no image good enough to actually represent what this volume of information represents, we can imagine that if such information were in printed books, they would cover the whole aggregate surface of Argentina in 179 layers.

Another surprising piece of information is that the volume of stored information grows fourfold times faster than the global economy and the processing capacity grows nivefold faster.

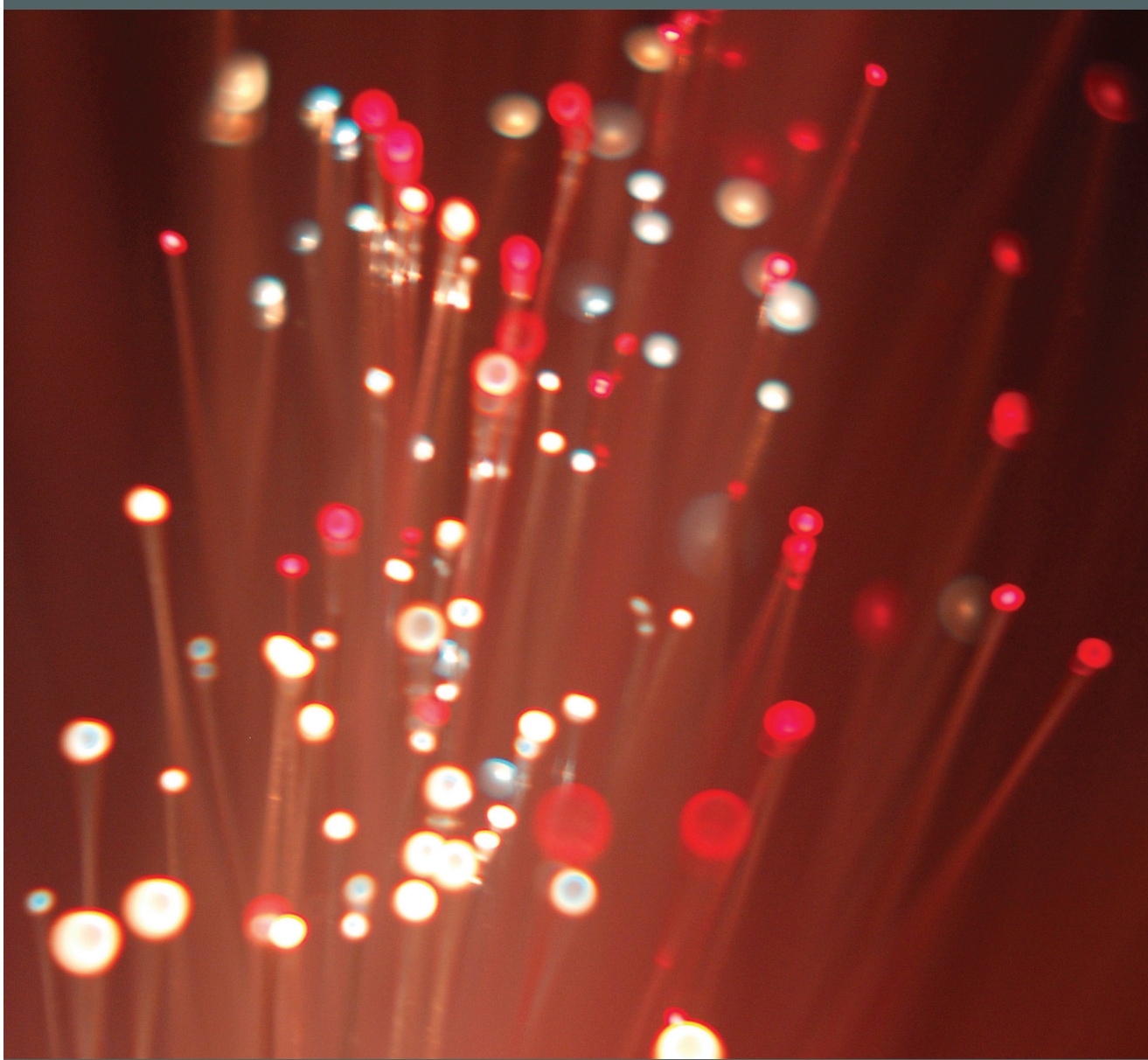
Such enormous data volume and processing capacity is not only changing the world economy, but it is also creating a new economy, based on information, and generating new types of wealth.

Believing that Governments can remain uninvolved in this process is not only absurd but also sheer nonsense. For us it is clear that the Government being one of largest information generators and storers has the unavoidable obligation —at the risk of failing to comply one of its basic duties— of moving such information to digital format, thus eliminating analogical format altogether, particularly the paper "container", placing data at the citizenship disposal so that they may be kept informed and, moreover, so that they may create new forms of value through collaboration processes.

- **Extending the use of "controlled forms" to nearly all administrative procedures.** The facility of documents to become into "controlled forms" allows shifting all existing paper forms to digital format, controlling the documentary operation, capturing key data for decision making processes and the interaction with other systems. Likewise, it eliminates any operation dating problems since controlled forms would bar the chance of altering or changing dates, as paper based documents allow.
- **Increasing the use of data captured throughout the whole GCABA.** As the use of electronic documents extends and consolidates, useful data is gathered that could be processed and used to improve decision making processes and productivity control.
- **Laying down audit guidelines on a system basis and survey user's behavior while conducting administrative procedures.** In order to do so, the aforementioned tools must be used for data mining purposes and programs have to be put in place to analyze such information and turn into audit reports that would flag up the seriousness of the deviation.
- **Improving utilization and services.** On the basis of the current systems it is possible to improve and extend interphases, and to increase Internet processing services with suppliers, firms and citizens**.**

The above list is only intended as a guideline and, therefore, provides only a very small picture of what is yet to come and what governments shall embark upon in the future. A tough-minded capacity of realization, effort and will shall be essential in order to adapt to the new reality that also involves new organization forms. As stated earlier, the data was always there, but ICT has managed to capture such data and release it, thus creating a new stage of knowledge, that will transform reality as we know it and will lead us to new challenges that will call for new ways of thinking and acting.

9. ANNEXES



Bibliography

Casado López, Héctor (2006). *La modernización de la comunidad de Madrid: El plan de Simplificación de la Gestión Administrativa 2005-2008.*

CEPAL (2007). *Libro Blanco de Interoperabilidad de Gobierno Electrónico para América Latina y el Caribe.*

CLAD - Centro Latinoamericano de Administración para el Desarrollo (2008). *Carta Iberoamericana de Gobierno Electrónico.* Adoptada por la XVII Cumbre Iberoamericana de Jefes de Estado y de Gobierno. Chile.

Criado, J. Ignacio (2009). *Gobierno electrónico en Latinoamérica. Aproximación desde una perspectiva intergubernamental.* Revista Chilena de Administración Pública / N° 14. Chile.

Gamero Casado, E. y Valeros Torrijos, J. (2008) *La ley de administración electrónica. Comentario sistemático a la Ley 11/2007, de 22 de junio, de acceso electrónico de los ciudadanos a los servicios públicos*. Thomson Aranzadi.

Gobierno de Chile (2011). *Plan estratégico de gobierno electrónico 2011-2014.* Chile.

Hamm, Steve (2011). *Reinventando la Organización Moderna.* IBM.

Lara Martínez, M.A.; Pina Martínez, V. y Torres Pradas, L. (2013). *El gobierno electrónico y la rendición de cuentas en la administración regional y estatal.* Gestión y política pública. CIDE. México.

Ley 11/2007, España (2007). *Ley de acceso electrónico de los ciudadanos a los Servicios Públicos.*

Ley 3304, Ciudad de Buenos Aires (2010). *Ley de Modernización de la Administración Pública de la Ciudad de Buenos Aires.* Argentina.

Ley 4726, Ciudad de Buenos Aires (2013). *Ley de Implementación de Infraestructura de Firma Digital de la Ciudad Autónoma de Buenos Aires.* Argentina.

Maney, K., Hamm, S. y O'Brien, J. (2011). *Trabajando por un mundo mejor.* Pearson Educación.

Moriconi Bezerra, Marcelo (2011). *Retórica, política y administración pública. Por qué fallan las reformas administrativas.* Universidad Autónoma Metropolitana. México.

Naciones Unidas (2012). *Informe sobre gobierno electrónico 2012: Gobierno electrónico para la gente.*

Naser, Alejandra y Concha, Gastón (2011). *El Gobierno Electrónico en la gestión pública.* CEPAL.

Naser, A.y Concha, G. (2012), *Datos abiertos: un nuevo desafío para los gobiernos de la región.* CEPAL.

Oszlak, Oscar (1999). *De menor a mejor: el desafío de la "segunda" reforma del Estado*. Revista Nueva Sociedad. Venezuela.

Rivera Ortega, R. (2008) *El expediente administrativo. De los legajos a los soportes electrónicos*. Thomson Aranzadi.

Secretaría Legal y Técnica. Gobierno de la Ciudad de Buenos Aires (2011). *Informe de gestión 2008-2011*. Argentina.

Unión Internacional de Telecomunicaciones (2014). *The world in facts 2014. ICT facts and figures*. Ginebra, Suiza.

Villatoro, P. y Silva, A. (2005) *Estrategias, programas y experiencias de superación de la brecha digital y universalización del acceso a las nuevas tecnologías de información y comunicación (TIC). Un panorama regional*. CEPAL.

Plans, rules, presentations, systems development documents, user manuals and other internal documents used during the implementation of the electronic document management project in the Government of the Autonomous City of Buenos Aires were also consulted.

Glossary

A

Accessibility *(Accesibilidad).* Generic term used to describe the extent to which a system is used by the larger possible number of people.

Administrative Notice *(Providencia)*. Document signed by a public officer in relation to some record file. An Administrative Notice is designed to provide brief information of a record file or to order its processing. In general, its use is restricted to short texts that are processed in a simple manner and not referred to disposition..

Administrative Phase *(Fase administrativa)*. Stage where the document/s provide information to the administration on an internal basis.

Administrative Procedure *(Procedimiento a dministrativo)*. Set of procedural steps conducted not before a judicial court but before an agency under the Executive Branch.

Administrative Proceeding *(Actuación administrativa)*. Internal action related to the total or partial resolution of a procedure, determined by the degree of jurisdiction of each division (repartición) according to the matter raised. Administrative proceedings may be of any of the following types: dossier (carpeta), registry (registro), note (nota), memorandum (memorando), courts' written communications (oficios judiciales) and filings to be added in record files.

Adulteration *(Adulteración)*. Willful change or amendment of the contents or form of a document or product.

Archive *(Archivo)*. Set of documents, regardless of their form and support format, produced or received by an individual or entity, or by a public or private body in the conduct of its activities, and that are kept by their creators or their successors for their own needs or transferred to the relevant archive unit due to their testimonial value.

Archive Conservation *(Conservación de los archivos).* Upon determination of the documents to be permanently preserved in the archives as results of the document assessment process, the archivist's task will mainly consist in preserving such documents and providing the information sought about them.

Archive of e-documents *(Archivo de documentos electrónicos).* Collection of documents produced and signed one individual or legal entity during the progress of the activity that they support and evidence, by means of electronic document management and permanent digital signature. They are selected from the identification and assessment of the series, with adequate authentication and preservation measures and are stored in permanent storage warehouses; they are transmitted by electronic means."

Archive of Proceedings *(Archivo de actuaciones)*. Conservation of administrative proceedings in the divisions where they originated and for the specified archive time periods according to the nature of each proceeding; statute of limitations periods expressly established must be taken into account."

Archive of record files *(Archivo de expedientes)*. In the GCABA record files are preserved in the General Archive of the Autonomous City of Buenos Aires, in compliance with the effective storage requirements and time periods.

Area *(Área)*. Field or sphere of action determined by its level of jurisdiction. Within an organization an administrative area can be distinguished from a human resources area, etc.

Authenticate *(Autenticar)*. Establish the authenticity of a signature or a document. Procedure that validates an action executed in another jurisdiction, or in another country, by affording evidentiary force to a private instrument in trial.

B

Backend. English term denoting a motor or part of a system or software that processes information obtained in the frontend that is the part that interacts with the user.

Back-office. English term that refers to tasks that are not visible to the user of a system or a company, such as support activities.

Backup. English term used to refer to a copy of security archives (backup files).

Beneficiary *(Beneficiario)*. Individual or legal entity that is entitled to receive certain economic benefits or to be acknowledged certain rights on the basis of a contract.

Bidding Terms and Conditions *(Pliego)*. Paper or document comprehensive of the conditions or clauses proposed or accepted in a contract, government concession, auction, etc.

Buenos Aires Compras *(BAC)*. Portal that allows making e-procurement of the public sector of the Autonomous City of Buenos Aires.

C

CABA. Autonomous City of Buenos Aires.

Capture *(Captura).* The actions that result in the registration or saving of a specific instance, representation or status in a digital object.

Central Administration *(Administración central)*. Group of superior hierarchy agencies or agencies of general jurisdiction within the public administration.

Centralization *(Centralización)*. Action and effect of gathering or concentrating the decision of political and administrative issues in the government or its direct delegates.

Circuit *(Circuito)*. A previously established itinerary for the development of a process.

Clause *(Cláusula)*. Each of the provisions of a contract, treaty, will or any similar document, whether public or private.

Code Table *(Tabla de códigos)*. Rules that establish the specific data that compose the identification of record files and administrative proceedings.

Communication Channels *(Canales de comunicación)*. The means through which messages are transmitted between individuals, individuals and machines and between machines.

Computer *(Ordenador)*. An electronic device which is capable of receiving information from the exterior world, internally stores and processes such information to solve or provide a response to a specific request and provides or extracts information on a legible or comprehensible manner.

Confidential *(Confidencial)*. Reserved. Meaning information that cannot be disclosed to the public.

Configuration *(Configuración)*. Preparation of a computer, devise or application for its proper operation.

Connectivity *(Conectividad)*. Connection capability, through an IT environment, of one division or agency with another.

Control *(Control)*. Process to ensure that actual activities comply with and meet programmed activities.

Control Panel *(Tablero de control)*. Tool applicable to any organization and organization level. Its purpose and basic use is to provide an adequate diagnosis of the situation. It is defined as a group of indicators which periodical follow-up and assessment will allow obtaining more information on the situation, with the support of new ICTs.

Cover Page Label *(Carátula)*. Label inserted on the cover of record files and administrative proceedings. It contains a series of standardized data for identification purposes.

D

Data *(Dato)*. Element or antecedent used as a basis to obtain information or to take a decision.

Database *(Base de datos)*. A structured assembly of archives that provides a unique data source for a series of applications. It is the base of the integrated IT systems.

Decentralization *(Descentralización)*. Can be understood as a process (from the centralization) or as a means of operation of an organization. It involves transferring power (and thus knowledge and resources) from a central government towards authorities that are not hierarchically subordinated.

Digital Archive *(Archivo digital)*. Safeguard of the documentation that has been converted from physical to digital support, becoming a virtual location sphere.

Digital Certificates *(Certificados Digitales)*. Those that are implemented and promoted by the enforcement authority and issued by the Information Systems Agency (ASI) in GCABA, as certifying authority, for subscribers to use the digital signature and the electronic signature, in the specified scope of application.

Digital Codification *(Codificación digital)*. Use of different numerical values, such as 0 and 1 binary digits used to represent an object, which accordingly will become a digital object.

Digital Conservation *(Conservación digital)*. Actions conducted to anticipate, prevent or delay the decay of digital documents support.

Digital Medium *(Medio digital)*. Physical material such as CD, DVD, disk or hard disk, used for archiving or storage of digitized data. Also called "digital support".

Digital Print *(Impresión digital)*. Reproduction of documents by means of the use of electronic tools: scanner, digitizer. This technological resource allows for the conversion or replacement of physical archives: paper, microfilm.

Digital Signature *(Firma digital)*. A mathematical scheme that uses a cryptographic method to evidence the authenticity of an electronic document, providing the addressee with the certainty that the message was created by the sender, and that the message was not altered during its transmission or storage.

Digitalization *(Digitalización).* Process whereby a real or analogue image is converted into a sequence of figures that can be electronically accessed.

Division *(Repartición)*. Executive operating unit destined to the specific resolution of one or more matters that require a particular level of specialization.

Division's Acronym *(Sigla de la repartición)*. As per the code table, the division's acronym is one of the essential identification elements of record files and administrative proceedings, together with the number code, year and subject matter.

Document *(Documento)*. Physical evidence of an event or an action performed by institutions, individuals or legal persons, whether public or private, in the performance of their functions; an identified and structured entity comprising text, sound, images and any kind of information inherent in administrative processes."

Document Assessment *(Valoración documental)*. Phase of archivist treatment consisting in analyzing and determining the primary and secondary values of documents, fixing terms of transfer, access and conservation or clearance. The decision of destroying a document is also decided through this process.

Document Group *(Grupo documental)*. Is the largest documentary unit in terms of volume and represents the aggregate documentation originated by a government agency.

Document Management *(Administración de documentos)*. Methodology to plan, manage and control the production, circulation, storage, use, selection and final disposition of documents.

Document Management *(Gestión documental)*. Collection of administrative and technical activities to plan, manage and organize documents produced and received by the entities from their origin until their final destination, for the purpose of facilitating their identification, utilization, information exploitation and conservation.

Document Removal *(Baja documental)*. The disposition of documentation which administrative, legal, tax, accounting or technical value has expired, as well as those that have no historical value.

Document Repository *(Repositorio documental).* Centralized site where digital information is stored and kept, usually databases or digital archives. It derives from the Latin term "repositorium", that means "place where things are stored". These storage sites are usually prepared to be distributed by means of a digital network such as Internet or a physical medium such as compact disk. They may be open for public access or restricted and call for prior access authentication.

Document Reproduction *(Reproducción documental)*. Copy of one ore more document copies by means of different technological procedures: microfilming, scanning, digitization. The goal is to preserve document series or a significant portion of them.

Document Selection *(Selección documental)*. Intellectual and material operation involving the localization of documents or record files that are to be kept or destroyed by virtue of the specified conservation time periods, after conducting an assessment process.

Document Series *(Serie documental)*. Collection of documents that constitute the documentary evidence and support of repetitive actions developed by an agency or by virtue of a function. A document series is part of a document section.

Documentary Analysis *(Análisis documental)*. Array of operations necessary to extract information contained in the primary sources and prepare such information for its subsequent retrieval and utilization.

Documentary Piece *(Pieza documental)*. Document unit, physically detachable, integrated by one ore more documents gathered in such a way that they may be treated as a unit.

E

EDMS Ecosystem *(Ecosistema SADE)*. Collection of functional modules integrated to the Electronic Document Management System (EDMS).

E-government. Electronic government.

Electronic Document Management *(Gestión documental electrónica)*. Document management using digital technologies and IT systems to impose order into the procedures of creation, modification, circulation, registration and storage of information.

Electronic Domain *(Dominio electrónico)*. Method to refer to specific places in the web, usually one phrase or work that allows identifying one Internet site.

Electronic Government *(Gobierno electrónico)*. The provision of public services by electronic means.

Electronic or Digital Document *(Documento electrónico o digital)*. Physical evidence of an event or an action performed by institutions, individuals or legal persons, whether

public or private, in the performance of their functions; in digital support."

Electronic Procurement *(Compra electrónica)*. Purchase of products or services by electronic means, such as the Internet and other IT networks.

Electronic Record File *(Expediente Electrónico) (EE)*. Module of the EDMS ecosystem that manages the rules for the use of a record file in the Government of the Autonomous City of Buenos Aires.

Electronic Record File *(Expediente electrónico)*. Orderly collection of e-documents that are stored in the Single Repository and reflect an administrative proceeding.

Electronic Signature *(Firma electrónica).* Collection of electronic data integrated, linked or associated in a logical manner to other electronic data, used by the signor as a means of identification.

Electronic Site *(Sede electrónica)*. Virtual office installed in the Internet to cater for the citizens' right to interact with the Central Administration by electronic media.

External Initiator *(Iniciador externo)*. Petitioner requesting intervention that does not qualify as staff of a General Direction. It also refers to a citizen who makes a filing with the relevant Front Desk seeking the resolution of a specific problem.

External Routing *(Giro)*. External movement of an administrative proceeding to other Branches of the Government of the City of Buenos Aires.

F

Flap *(Solapa)*. In IT, a flap is an element of the graphic interfaces that allows moving from one document to another or from one section to another in a swift manner. A flap is usually composed of a text field within a rectangular box placed side by side.

Flowchart *(Flujograma)*. A diagram of the sequence of steps of a specific process or proceeding within an organization or sector thereof.

Form *(Formulario)*. Prefixed documents either with texts and boxes combined, or exclusively with fields, that must be loaded or not (mandatory and non-mandatory) controlling their values.

Forwarding *(Pase)*. Action that defines the movement of a record file among the divisions or internal offices of an agency that must be involved in the handling of the record file.

Framework. In software the term is used to define a structure from which a development is made.

"Frontend. Interface or part of a system or software that interacts with the user; conversely backend, processes the information but does not interact directly."

Front-office. Activities involving direct contact with the users or clients of a system or firm.

G

Going Paperless *(Despapelización)*. The goal of converting all paper based documents (physical support) into electronic records (virtual support).

H

Hardware. Collection of logical circuits and electromechanical device components of a computer.

Holographic *(Ológrafo)*. Will that is handwritten and signed by the testator. Autograph. By extension a signature that is handwritten by the author.

Holographic Signature (Firma ológrafa u hológrafa). Manual signature.

I

Implement *(Implementar)*. Establish and launch a new method, process or operational procedure, a new organization structure, etc.

Information and Communications Technology *(Tecnologías de Información y Comunicación) (ICT)*. Online computer systems that expand the scope and potentialities of existing organizations and collaborate in the creation of new organizations. They promote communication, cooperation, participation and exchange of information, experiences, goods and services among citizens and government and private players of the community. A broader concept also includes social communication media and interpersonal traditional communication media with technological support such as telephones and faxes.

Information Systems Agency *(Agencia de Sistemas de Información) (ASI)*. Autarchic agency in administrative, functional and financial matters, under the Chief of the Cabinet of Ministers of the Autonomous City of Buenos Aires, which main objective is to organize and coordinate information technology (IT) and communications with all the divisions under the Executive Branch, providing the City of Buenos Aires with a self-sufficient, reasonable and coordinated e-government plan that will allow citizens access to the Government's information services through IT media, providing transparency to the administration.

Interface *(Interfaz)*. In software, part of a program that allows the flow of information between the user and the application, or between the application and other programs. "Interface" also refers to the set of methods to achieve interconnectivity between a user and a computer.

Internal Initiator *(Iniciador interno).* Division that under a specific Direction, commences its intervention seeking the resolution of a procedure or administrative proceeding.

Interoperability *(Interoperabilidad)*. Capacity of several systems or components to exchange information and use the exchanged information.

Intranet. A communications network that interlinks computers for the exclusive use of a public body, firm or household. It is a private network that may either have Internet access or not.

IT Application *(Aplicación informática)*. Type of program designed as a tool to allow a user to carry out one or several types of tasks. It is usually conceived as an IT solution to automate tasks of different complexity.

IT Security *(Seguridad informática)*. Process to establish and comply with a set of strategies and procedures intended to prevent, protect and safeguard the IT resources of an organization from any potential damage, alteration or theft.

J

Joint Processing *(Tramitación conjunta)*. Unification of a group of record files to move them jointly during a period of time or tranche of the procedure at stake, without losing their individuality at any time, because at some stage they will be processed separately again.

K

Know-how. Technical expertise acquired and capitalized by performance of an activity.

L

Lease Agreement & Contract of Services *(Contrato de locación)*. A lease agreement is a contract for the temporary lease of property in exchange of payment and for a spe-

cified time period. A contract of services is a contract whereby an employee agrees to render services in exchange of payment.

Linkage *(Vinculación)*. Procedure whereby supplementary documentation is incorporated to the record file (notes, memos and presentations). Linkage is made when the documents share the same subject matter of the record file.

M

Memorandum or Memo *(Memorándum o memo)*. Internal instrument of official communication sent to a specific authority requesting for reports, imparting instructions, notifying decisions and to serve as an aide memoir for solving the matter.

Metadata *(Metadatos)*. Optional information attached to principal information, whereby it is possible to decode a message. The most frequently use afforded to metadata is the refining of queries for search engine purposes. By using additional information results are more precise and the user avoids supplementary manual filtering.

Microfilm. Film containing microphotographs of graphic documents for the purpose of facilitating their storage and handling. This technology has become obsolete because of the introduction of tools such as scanners and digitizers..

Migration *(Migración).* Process of moving or transferring digital objects from one system to another.

Monitoring *(Monitorear)*. Controlling, following-up and supervising the development of a procedure.

N

Network *(Red).* An organization of interrelated services. Term that generally applies to a group of interconnected communication equipment.

Note *(Nota).* Official communication instrument referred to minor service issues; written communication related to matters of internal management. The term also refers to the documents issued by the GCABA Executive Branch for communications sent to other bodies or persons of government."

Notice *(Notificación).* Document used to inform about the stage of any procedure of administrative act. It may be private (notice by official form (cédula) or public (notice published in the Official Bulletin).

Numbering *(Numeración).* Procedure whereby record files and administrative proceedings are correlatively sorted out in numerical order. It is an essential identification element, established by code tables, that is added to the division's acronym, year and subject matter.

O

Official Bulletin *(Boletín Oficial)*. Official gazette of the Government of the Autonomous City of Buenos Aires where recently passed laws, executive decrees and regulations are published, which become effective as from the publication in such Bulletin. The Federal and Provincial Governments in Argentina also publish this type of gazette.

Official Bulletin Web *(Boletín Oficial Web) (BOW).* Application of the Government of the City of Buenos Aires for the online management and publication of the Official Bulletin.

Official Communications *(Comunicaciones Oficiales) (CCOO).* Module linked to the Electronic Document Management System (EDMS) that is implemented with a workflow for the allocation, production, revision and e-signature of communication instruments called "Notes" and "Memos".

Official Documents Electronic Generator *(Generador Electrónico de Documentos Oficiales) (GEDO).* System that allows generating, numbering, encrypting and storing electronic documents.

The generated documents are classified in terms of their origin as follows:

Free: generated in the system through a generation workflow that comprises the request, production, revision and signature of documents.

Imported: digital archives that are incorporated and signed.

Documents with "embedded" feature generated in the system through a generation workflow that contains an embedded archive.

Template documents. Documents with an associated controlled form.

Online. Connected to an IT system and directly and instantaneously accessible.

Operating Archive *(Archivo operativo)*. Also called "active archive". It contains the record files that are being processed.

P

Parallel Processing *(Tramitación en paralelo).* Instance where a group of users works on the same record file simultaneously in order to speed-up processing.

Password *(Contraseña).* A user's authentication data, whether physical or virtual, that allows safe access to a restricted area.

Password. A word or sign that allows access to a server.

PDF. Portable Document Format. Format for document storage. PDF documents captures texts, images, hyperlinks and vectorial graphics. Is a multiplatform format of extended use especially in relation to the documentation of manuals and books.

Physical Archive *(Archivo físico).* Physical location where the documents expressed on the paper or microfilm support are stored during their respective conservation time periods or due to their historical value.

Portal. Web site doorway that affords users an easy and integrated access to a series of resources and services related to a same subject matter.

Proceeding Code *(Código de actuación)*. Is the code that defines the type of each different proceeding: dossier (carpeta), registry (registro), note (nota), memorandum (memorando), courts' written communications (oficios judiciales) and any other presentation to be filed.

Progressive Statuses of a Record File *(Estados evolutivos de un expediente)*. The different moments in the conformation of a record file, they constitute an orderly series of administrative proceedings: initiation, remediation, processing, communication, execution, operating archive and historical archive.

Public Administration *(Administración pública).* Function of the Government involving the enforcement of laws and the safeguard of public interests and well-being. Group of all the agencies performing such functions.

Public Contract *(Contrato administrativo).* Contract entered into by the Public Administration with other parties for the purpose of the execution of works, the rendering of services or the supply of goods.

R

Record *(Registro)*. Type or group of data stored in a system.

Record File *(Expediente).* Orderly collection of documents that provide information on a same subject matter and which serve as the antecedent and support for its management or administrative resolution.

Record File Execution *(Ejecución de expedientes)*. Refers to those types of record files which resolution prompts a subsequent proceeding. For example, a call for bids to construct a specific work, once awarded, is completed with its subsequent execu-

tion. Scanner. English term that refers to the apparatus or devise that converts images or documents to a digital format.

Record File Initiation *(Iniciación de expediente)*. Status on which the administrative proceeding is commenced for the resolution of a specific issue posed. The first evolutionary status of a record file.

Record File Remediation *(Subsanación de expedientes).* Repair or amendment made on a procedure. It constitutes the second evolution status of a record file.

Record Files, Registries and Documents Number allocation *(Asignación de número de expedientes, registros y documentos).* Action whereby record files, registries or documents are unequivocally numbered or identified.

Reserved Document *(Documento reservado)*. Type of document featured as a reserved document that may be seen only by those users of the Division that generated such document and who, additionally, hold the authorized profile.

S

Scope of Application *(Ámbito de aplicación).* Physical space or organization covered by a law, executive decree or regulation for compliance and operations purposes.

Service Procurement *(Contratación).* Contract whereby a person is hired to work in exchange for monetary payment or any other compensation.

Sign *(Firmar)*. An action that certifies a document with different levels of security (see "digital signature", "electronic signature" and "holographic signature").

Signature Authentication *(Autentificación de firma)*. Notarial proceeding whereby a notary public establishes the authenticity of a signature. It is used particularly for processing purposes.

Software. The instructions, procedures and supervision of the system electronically resolved.

Specially Numbered Documents *(Documentos de numeración especial).* Documents defined as special in GEDO: Provision (Disposición), Resolution (Resolución), Decree (Decreto) and any others so defined in the future.

Storage *(Almacenamiento).* Accumulation of stored documents, either in original versions or copies that will allow for information retrieval operations. Gathering of documents in a specified space for their subsequent systematic organization.

Subject Matter *(Trata).* Short definition of the procedure that originates the opening of a record file or administrative proceeding. This is one of the information elements that compose the cover page label.

Subject Matter Code *(Código de trata).* Mandatory reference for labeling record file cover pages, to be defined according to the subject matter Nomenclature.

Subject Matter Description *(Descripción de trata)*. The subject matter description is a mandatory requirement to be included in the labeling application. It results from the subject matter Nomenclature, for instance: works, taxes, human resources, etc.

Subject Matter Nomenclature *(Nomenclador de tratas)*. Integrated system that defines the codes sorted out by subject matter: Authorizations (Habilitaciones), Traffic (Tránsito), Cementries (Cementerios), etc. The subject matter nomenclature is mandatory data to be included for cover page labeling purposes and for subsequently forwarding the record file to the relevant body.

Summons *(Cédula de notificación).* Document issued by the Government of the Autonomous City of Buenos Aires or its agencies to notify or summon a citizen or public or private entity on the decision of certain procedure. This document can also be is-

sued by the Judiciary, whether Federal or Provincial.

Survey *(Relevamiento).* Determination of the situation existing in a system. In depth investigation of the areas of an organization.

Systematization *(Sistematización)*. Organization of something according to a system or set of rules and procedures.

T

Technical Assistance *(Asistencia técnica)*. Activities involving the transmission of information and knowledge, instruction, skills training and habit development in administrative and technical processes, for the continuous enhancement of goals.

Token. Electronic devise handed over to an authorized user of a given service to ease the authentication process.

Trackability *(Trazabilidad).* Possibility of identifying the origin and the different stages of a production or processing process, it is the documentary reflection of such stages.

Train *(Capacitar).* Instruct someone by providing skills in the performance of a specific task.

U

Unarchive *(Desarchivo).* Operation consisting in the temporary removal from the General Archive of a record file in order to work on it.

User *(Usuario).* The one who regularly users something. For archive purposes, a person who uses the right to access documentation and information, with the limitations determined by the extent of accessibility of actions and documents.

V

Volume *(Cuerpo).* A record file (expediente) is composed of pages and a collection of pages compose a volume; a record file can consist of one or more volumes."

W

Workflow. Flow of work, analysis of operational issues of a work activity.

List of Acronyms

AFJG Chief of Government Signature Management

ARCH Archive

ASI Information Systems Agency

BAC Buenos Aires Procurement

BOW Web Official Bulletin

CABA Autonomous City of Buenos Aires

CCOO Official Communications

DGTAL Legal and Administrative Technical General Direction

DNI Identity Document

DPS Health Personnel Designations

EE Electronic Record File

EU Single Desktop

GCABA Government of the Autonomous City of Buenos Aires

GEDO Official Documents Digital Generator

GUP Suppliers e-Manager

LOyS Works & Services Contracts

LUE Personnel Single e-Dossier

PF Signature Holder

PSOC Social Plans and Subsidies

RCE e-Civil Registry

RIB Beneficiaries Identification Registry

RLM Multipurpose Dossier Registry

RUDO Official Documents Single Repository

EDMS Electronic Document Management System

SDIN Regulatory Information System

SECLYT Legal and Technical Secretariat

SIGAF Financial Management and Administration Integrated System

TAD Online Procedure

ICT Information and Communications Technology

TUS Subsidies Single Processing e-Platform