Colombia’s Government headed by the President of the Republic, the High Advisor for Governance and Administrative efficiency and the Minister of Information and Communication Technologies are committed to a good administration and management as a guiding principle in implementing public policies and in the relationship between Government and citizens, and for this, the Online Government has been defined as a strategy for Good Government management. In this sense, Online Government constitutes a fundamental component to “implement the policy of cero paper, stimulate the development of online Government services used by third parties based on public database, the expansion on the offer of channels taking advantage of technologies with high levels of penetration such as mobile phone and digital television, the provision of online paperwork and services and the promotion of participation and democracy through electronic media”\(^1\).

Aware of the fact that Information and Communication Technologies (ICT) have become an essential tool for countries development, in terms of a direct correlation between penetration and use of internet, appropriation of the ICT, employment creation and poverty reduction, the Government has responded to this needs in a decisive manner searching for ways to promote mass usage of the internet to take a leap into democratic success, through the Live Digital Plan (Plan Vive Digital)\(^2\). For this purpose, there was settled three ambitious goals for 2014, in order to:

- Increase on 350% the towns connected to broadband through fiber optics, by expanding this infrastructure from 200 to 700 towns in the country.
- Connect 50% of MIPYMES to the internet and 50% of Colombian homes.
- Increase in 400% internet connections, from 2.2 million (including fixed connections of more than 1.024kbps and wireless of more than 3G/4G) to 8.8 million

In order to achieve these goals, it’s necessary to stimulate the supply and demand of digital services through a digital ecosystem, for which Online Government has a preponderant role as it seeks for Colombians to have an easier and more productive life, thanks to a wide supply of digitals applications and contents. Thus, the goal is to achieve higher efficiency; transparency and citizenship participation, making 100% of national institutions and 50% of territorial institutions provide all the services of online Government.

\(^1\) Article 194, page 90 of Ley en discusión del Plan Nacional de Desarrollo.  
\(^2\) “Plan Vive Digital.” (Live Digital Plan website).
In addition to this objective, through Online Government, it has been proposed to work on a wide supply of paperwork and online services, to improve its quality and expand the interoperability between State institutions, promote electronic participation and create and develop an open market of online Government services. To achieve these goals, the following initiatives, which are currently on the process of execution, have been established.

1. Glass urn (http://www.urnadecristal.gov.co/): Its goal is to empower citizens to use all the participation and citizen control mechanisms that currently exist on the Colombian Political Constitution, through the use of the ICT. This initiative, invites all citizens to have a direct dialogue with the Government in order to have a more interactive and transparent political life, on which every citizen is the guardian and watcher of their leaders. Also through social networks such as Facebook, Twitter and a web portal, citizens, through proposals and questions, weekly decide which topics they would like to discuss with the President and his Ministers. In this same line of work, the national government has also created a television space and has enabled a toll free line for national use, where they also rise inquiries exposed in social networks and additionally collected during the Programmatic Agreement for Prosperity (Accountability), a space where citizen concerns are solved.

2. Online Government on the territorial level: It supports the state’s renewal, promoting the access to online Government to all citizens and public servers from every town and department. The strategy seeks the generation of local capacities that allow settling institutional bases to continue the improvement of its phases on towns and departments. Currently it involves 100% of all towns (1.101 towns and 32 departments) with internet presence.

Nowadays and until 2012, the Online Government Program will continue joining all Colombian towns and departments on promoting the
implementation of the Strategy, not only promoting timely and accurate
disclosure of information on mayor’s and governor’s websites, but also
supporting the creation of more and better online interaction channels with
citizens, and the development of online paperwork and services that benefit
local populations. Therefore for the year 2014 all 1.101 towns and 32
Colombian departments will count with at least three online paperwork and
one online service, as well as online interaction spaces that will allow to
activate a two-way communication between territorial entities and their
citizens and increase their participation on the decision making of public
matters.

3. Online Notaries: Its goal is to develop and implement solutions aimed to
improve the processes that involve the access, interaction and transaction of
information through the use of online Government tools in the Colombian
notaries. For the year 2011 all notaries will have transactional websites.
Also, The Unique Colombian Notary Portal will be created: Developing a
solution that will allow showing information through a unique notary portal on
the web, regarding the activity and services of the 827 notaries in the
country, through micro sites for the 520 subsidized notaries and links to the
websites of the other 352 notaries. In addition, the Unique Window of Notary
paperwork will be created to anticipate online paperwork all over the country
(The first online paperwork available would be the request for a copy of
Birth, Marriage and Death certificate). The Ministry ICT, through Online
Government will provide the means to the implementation of these
developments to notaries and other institutions involved in the process
(Sectional Registries and Town Halls) referred to the guidelines and aspects
considered in the Government online territorial initiative.

4. Online Control: Its goal is to develop online solutions aimed to improve the
report and control processes of public administration management. For
which will be coordinately developed with the General Accounting Office of
the Republic, a unique online system to report, audit and control all the
General Accounting Offices in the country that allows the improving of
information capture mechanisms and alert and risks identification. Thus,
regarding to the complaint, in coordination with the General Accounting
Office of the Republic, General Prosecution of the Nation and the General
Attorney of the Nation, the initiative pretends to generate a Unique Window
of State Complaints that a. Classifies the type of complaint: fiscal,
disciplinary, criminal, etc. b. Addresses the complaint to the responsible
entity and c. Allows the complainant to know the state of his complaint from
the beginning to its outcome.

5. Electronic system of Public hiring - SECOP: The goal is to set the
transactional phase of the Electronic System for Public Hiring in all the
national and territorial public entities that by law are enforced to do so. Also,
its technical operation will be performed, as well as the training and
entailment of the national and territorial entities and the training and
entailment of proponents.
6. Anti-paperwork and No Paper Policy in Public Administration: Its goal is to establish guidelines to make paperwork more efficient and effective and eliminate the use of paper on the management that public entities execute, as for its internal processes as for the services they provide towards the citizens, these policies should be aligned with the green Government and environment care world policies. To achieve this objective, the regulatory and political framework will be defined and the anti-paperwork and no paper policies, as well as the methodologies and strategies for their deployment inside the Colombian public administration.

7. Online Corporations: The goal is to develop online solutions that allow the corporations of the Legislative Branch to improve the information opening processes and the interaction with citizenship through the creation of new participation channels and online democracy. We will provide company to the Congress of the Republic, to the Departmental Assemblies and to the Municipal Councils during all the required phases for this process, from conceptualization to the execution of the portals.

8. Innovation center: The Center’s Goal is to perform, strengthen and promote the development of technological services and the Government online policy, through the creation of a Research, Development and Innovation Center, speeding research and technological development, training and capabilities improvement of public servers, citizens and employers, as well as the generation of knowledge in Online Government, therefore three components were defined a) The component of I+D+i in which will be performed technological development activities, revision of practical improvements both national and international as well as performance of trends and citizen analysis, companies and entities needs. b) The component of abilities generation where all the support to the formation of the human resource, transfer of human knowledge, development of P.H and masters schemes will occur, as well as the definition of a certification scheme. c) Assessment to the implementation of the Government on line strategy. The Center’s vision is to be referent in the region and the world.

9. Government intranet: The goal is to impulse development, implementation and operation of the technological platform that enables the flow and information interchange in a standard way, between State entities, with appropriate levels of service (security, availability, capacity). This platform leads into a more efficient use of State resources and allows developing in an optimal way the online Government services. The Government intranet is composed by two elements:

a. Technological Infrastructure: It combines three elements. (1) The High Velocity Network which is a private network of high-tech data that interconnects public institutions at high speeds, with high levels of availability and security and provides converged and collaborative services, to allow an efficient transfer of information between government organisms and to improve the services that are offered to
the citizens, on December 31 we had 110 entities working on this network; (2) The Data Center is a processing, storage and disclosure information center, with adequate levels of quality service, contingency, business continuity and computer security. It works under the computing on demand mode, which means that public user entities only pay for what they consume, in this way we count with 63 solutions from 17 national entities; and (3) The center of citizen contact, is the integrated point of contact where, through different channels such as telephone, email, interactive chats and fax, we provide care, immediate respond and follow up to the citizens, companies and public servers requests, to December 31 of 2010 We had done 18 campaigns of different entities.

b. Interoperability Platform: Is the set of tools needed for the interaction of solutions and information systems between diverse entities. Online Government cannot be understood as the development of all the information systems that the Government require, but as the interoperability between them. Interoperability platform incorporates: (1) Interoperability framework, determines the guidelines and recommendations for an efficient information interchange between State entities, in relation with the strategy of Online Government, the enactment 1151 of April 14 2008 and the “Manual for the implementation of the Online Government Strategy” in this order, there have been defined 4.642 data elements. (2) The online office worker, a software that organizes the different paperwork and services offered by the state entities through modern schemes based on an architecture aimed towards services that allow the use of digital signatures and online payments, so time is diminished and processes are optimized. In addition, it incorporates a solutions ensemble such as the time print, online notifications and authentication; we carry 60 services using this software.

10. Information systems and services in support of National Emergency and Digital Strategies: This initiative seeks the strengthening of information services and systems that allow the risk management for emergencies in Colombia, communication with the citizens and the consolidation of citizenship interaction and participation through Colombian #brigadadigital

Therefore, the Ministries, their joint entities, entities of the Judicial and Legislative Branch have defined certain initiatives that will promote more and better online applications, with concrete and quantifiable goals for the current Government.

Meanwhile, Colombia has assumed the challenge of evolving its Online Government Strategy, which has been implemented in a systematic and coordinated way through a five stages pattern (information, interaction, transaction, transformation and democracy) of mandatory fulfillment for public administration by means of a presidential decree, both in national and local

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3 Decree 1151 de 2008.
environment, from the criteria clearly outlined in the Online Government manual\textsuperscript{4}, that allows institutions to generate a diagnose\textsuperscript{5} of their condition as a base to formulate\textsuperscript{6} its action plan and advance on the model phases. This way, from Conpes 3650 de 2010 the strategic importance of the implementation of the Colombian Online Government is declared.

While this model has resulted to be a success and has been constituted in a reference for other countries\textsuperscript{7}, it’s been evidenced changes on the use and appropriation of technology as a tool to improve public management, services provision and transparency.

This is why Colombia, committed to the development of Online Government in the country and due to being in charge of the electronic Government not only in a regional but in an international level, has began since late 2010 an open and participative process for the collective construction of the Online Government Strategy evolution, under a vision that beyond the public management that facilitates the citizen relationships with the State, falls into the people who build the State, taking advantage of the ICT for the country’s welfare.

This vision begins at pondering the State as a collective construction in which, the potentialities of each person may be placed at disposal of others, and meanwhile, public institutions answer in an effective way to society concerns, in which ICT may play a fundamental role that therefore generates a positive impact on the public management, the competitiveness and over the society.

Even though this new perspective is currently and until late April on a discussion stage, on vive.gobiernoenlinea.gov.co the innovational aspects of the model are highlighted:

- It has a strong approach referring to the collaboration in and between State institutions, as well as with the society overall.
- The mature model allow to identify, diagnose and transform the State operations and the service provision at charge without ignoring the latest advances that the national and territorial entities have had. The model defines an iterative and evolutionary process and it’s based on a principle of incremental and continuous improvement that allows the integration of diverse components, activities, goals and moments that support it. In this order of thoughts, the phases (information, interaction, transaction, transformation and democracy) are built in components that evolve through four levels of maturity (initial, basic, advanced, and continuous improvement).
- Introduce not only the public management institutions in all branches and levels but also to private ones that practice management functions (Such as

\textsuperscript{5} Metodología para elaborar diagnósticos de Gobierno en línea. (Methodology to elaborate Online Government diagnose).
\textsuperscript{6} Metodología para formular planes de acción de Gobierno en línea. (Methodology to formulate Online Government action plans).
\textsuperscript{7} Colombia is a leader in Latin America and the Caribbean in Electronic Government and the ninth at global level in Online Government services, according to the United Nations report 2010. It is pioneer in improvement of public management from the use of ICT, according to the CEPAL. And Online Government is the component that has mainly contributed Colombia to lead into the region in a sustained way the Doing Business index.
Notaries, the Chambers of Commerce, public service companies, for example).

- It begins from the need of characterizing and analyzing the users as each institution clients, the processes, information generated from it, schemes of services provision and resources at hand.
- Incorporates the supply of open data for the generation of services with increased value by third parties from the use of this data, as the no paper in public administration.
- Strengthens the chain approach of procedures, which involves changes in the way institutions operate, promoting the exchange of information as well as the reorganization of processes and services under the acknowledgement of customers and multiple channel supplies.
- It aims to the creation of conditions to empower and involve citizens on the decision taking from a representative democracy to an open participatory one thanks to the use of the ICT.
- It offers a continuous increasing on public institutions levels in which the citizen determines the kind of services to offer.
- Evaluates a technology skill level of back office available to each public entity, as well as the definition of a model for its constant evolution.

In this context, the role of the Online Government program is to coordinate, outline guidelines and offer actions and tools that supply Institutions the implementation of the Online Government Strategy. We have at disposal the State Portal as an integrated point of access to information, which is also a platform to offer escort services to the population as the virtual advisor (chat available on the Web) and the Contact Center for the Citizen (toll free line available on the country) through multiple channels.

A. USER TAKE-UP AND TRAINING

Since Online Government benefits are only a reality if there is a critic mass of people and companies using it so there could exist a return of investment in terms of savings, efficiency and public satisfaction, the Online Government Program has been promoting since 2008 a line of work aimed to promote citizens the use of Online Government.

During 2008 a strong brand was generated and there was hard work invested on its positioning to make it closer to people through a campaign with television advertisement, radio jingles, press and magazines releases on massive media and street presence, in order to generate awareness of the fact that Online Government exists and it enables an easier relationship between citizens and the State.

In 2009, the campaign was targeted to experience; marketing research has demonstrated that the paradigm of access has changed because people consider that the biggest barrier to interact with Online Government is not knowing how to do it. Because of this, under the message “Online Government

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8 Programa Gobierno en línea (Online Government Program).
works, try it” a tent with the colors of the national flag did a journey of 7.500 Km on the county, visiting 16 departments and enabling a direct work with people from all ages, socioeconomical levels and diverse interests, approaching them to the use of information, paperwork and online services in 1.147 hours of educational workshops during 6 months of execution.

On 2010, we began our work from the fact that a good experience is a good story, and the best way to trust is when someone who I can relate with tells me about it. Therefore, a contest through massive media was set in order for people could send videos about their good experiences with Online Government and the winners were the stars of the commercials broadcasted during 2010 sharing their stories with Colombians.

This user take-up and training actions, called “Vive Gobierno en línea” (Live Online Government) were recognized in 2010 by the Registry of Internet Directions for Latin America and the Caribbean, the International Center of Research Development, the Internet Society and the Economical Committee for Latin America and the Caribbean, as the initiative that has contributed the most on the development of information society on public management in Latin America and the Caribbean (www.premiofrida.org), above online paperwork solutions and services presented by other countries of the region.

In addition to the strategy of Live Online Government, Colombia has pursuit actions of formation on Online Government inside public management with annual plans called “Get ready” (Prepárese) to public servers both national and territorial, through which have been aware and trained from 2008 to 2010, around 120.000 public servers in Online Government and Government Intranet Service. Finally for 2011 to 2014 it was defined that a formation scheme that goes from awareness to certification and specialization on online Government topics.

These actions have had a direct impact on the growth of knowledge and use of online Government in the country; it has grown from 22% to 90% of the population (knowledge) and from 6% to 39% (usage) between 2008 and 201010.

Further, the ministry of ICT performs different actions, such as Magdalena’s, Pacific’s and Amazon’s sailors, vessels that during 2008, 2009 and 2010 have traveled around three important rivers of the country, training people on faraway regions with emphasis on the native population and vulnerable groups, on the use of technology for their everyday lives. And as the initiative of Digital Citizen, through which are trained and internationally certified Colombian’s digital competences, more than 30.000 Colombians have accessed it and it’s expected that by 2014 it gets 2.470.000 more11 citizens to use it. Also, keeping on with the goal of internet mass usage, with Compartel Telecenter projects, alliances have been made to sensitize and train citizens in the access and consultation of information, paperwork and state services. By the year 2012 all new Tecnocenters from Compartel will have computer equipment dedicated so

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10 Market research online Government Program through quantitative surveys to the citizens, entrepreneurs and public servants.
11 Ciudadano Digital (Digital Citizen).
citizens can access the Portals of Colombian States, its information and services. These TecnoCenters will also have trained staff that will offer a personalized help to online Government paperwork users, this in order to achieve the goal of providing the usage and appropriation of local communities.

B. ACCESSIBILITY OF INTERNET OR MOBILE CONNECTIVITY TO ALL

As previously referred, the massive access and use is a Government priority for which has been assumed a total commitment through the Live Digital Plan. It is known that penetrations are high on the upper social classes, and significantly smaller on the lower ones which are precisely where the biggest part of Colombian population is concentrated; due to this it’s been assumed the challenge to make of this population a market that can be approached with affordable services and ends. Similar situation occurs in the companies, as penetration in small, medium and large companies is pretty high, in micro companies it is extremely low, belonging to the 96% of Colombian companies.

The plan focuses on propelling penetration of bandwidth through the expansion of the national network of fiber optics given the Colombian geographical characteristics, nevertheless, we are aware of the fact that mobile connectivity is very significant, in a country where cell phone penetration is close to 100% and thanks to cell phone technology there is a bigger internet penetration because of the availability of mobile internet.

The demand of mobile internet in the country is growing and the traffic is also significantly increasing; if the demand continues increasing, the spectrum may be saturated or the capacity of transportation to main cities, for which it is required to study future assignments on new bands for 3G and 4G networks. To motivate the coverage of mobile internet on faraway towns, the Ministry ICT will have to assign a spectrum in return of a pre-established coverage and penetration goals of mobile internet.

The plan aims to connect 63% of all towns on the country to the national network of fiber optics for 2014; the 37% remaining will continue to be connected through other technologies such as microwave, wireless and satellites. To these faraway locations where there aren’t better communication alternatives, the Compartel Program will continue providing its services for telecenters, schools, hospitals, libraries and other public institutions, through the infrastructure initiatives in rural areas of the Live Digital Plan.

But, as previously established, not only the access is a priority but also the usage, additionally taking into consideration that demand stimulates the supply, both in coverage as in quality. For this, the plan contemplates diverse initiatives from the reduction of internet taxes (IVA) and schemes to benefit the lower socioeconomical levels, to the thrust to development of content and applications and the increase in range of telecenters into a new model, the tecnocenters, where it will be also possible the access to education actions to promote its use.

12 See Live Digital Plan Document.
C. ACCESSIBILITY OF SERVICES TO VULNERABLE GROUPS

In relation to actions drawn to vulnerable populations, the Online Government Strategy has promoted from its beginnings the development of diverse websites and applications that fit the level of accessibility Double A (AA) of the W3C for the guides (WCAG) version 2.0 so the access and usage of technologic tools becomes easier for these vulnerable populations. Additionally, different government entities have applied a strategic use of technologies seeking to benefit those vulnerable populations and help them with the mechanisms to access diverse state services. There are some concrete examples of this type of services and we will refer to some of them.

A first case is the possibility to obtain the certification of the Identification System of Potential Beneficiaries of Social Programs (SISBEN) through electronic channels, which not only represents time and effort saving for the more vulnerable citizens but also makes the access easy to many other services of education, health, nutrition, amongst others. This service, which is managed by each municipality, began its actions from a concern belonging to a Colombian town´s city hall to finish with long lines made by economically limited citizens who formed them from very early in the morning at the SISBEN offices to obtain their certification to be replaced for an online consult for which the telecenters and cyber cafes managers were trained, as well as the health centers so they could also perform the consult directly. Nowadays, this scheme has been copied on 260 towns.

Another example is the case of the Presidential Agency for Social Action and International Cooperation which in the framework of the Security Feeding Network Program has enabled an information system that contributes into focusing on resources and perform controls so this actually arrives to the most vulnerable people in the country, complemented with the use of text messages through mobiles to inform the population about obtaining the benefits.

Finally, it should be highlighted the fact that entities such as the National Institute for the Blind and the National Institute for the Deaf perform a continuous labor on standard definition, accessibility conditions, trainings and escort to many entities so they can develop their easily accessible tools to vulnerable groups, taking into consideration the framework of the Online Government Strategy.

D. MULTI-CHANNEL SERVICE PROVISION

The State modern initiatives have promoted the usage of diverse channels, demanding entities for the deployment of offices and schemes for citizen service, as well as the development and evaluation of multichannel services. In

13 www.accionsocial.gov.co.
14 www.inci.gov.co.
15 www.insor.gov.co.
this way, the Online Government Strategy has promoted the implementation of electronic channels different to internet for the services provision, according to the characteristics of each public entity and their users. Likewise, the National Citizen Service Program has established guidelines to incorporate electronic channels to improve the citizen care from behalf of the State.

From the Online Government Program, the following initiatives have been led:

1. The Colombian State Portal-PEC is the integrated point of Access to information, paperwork and services of the Colombian State through electronic media. Through the portal www.gobiernoenlinea.gov.co all citizens, employers, foreigners and people interested in general may access to basic information of all entities of Colombian Public Administration, also the paperwork and services belonging to each one of them. The mobile version of the portal was implemented during the second semester of 2010 and its use has been reported on diverse operational systems such as IPhone, IPad, iPod, SymbianOS, Android, Windows and BlackBerry. The PEC handles in an integral way participation online tools for all the State entities such as forums, blogs, chats, social networks and opinion surveys, it has information from 4.349 paperwork and services; and contains 6.355 links to public entities. The mobile version of the PEC was implemented during the second semester of 2010 and the first trimester of 2011, and has generated 6.671 visits through mobile devices, which have reported 8 operational systems as: IPhone, iPAd, iPod, symbianOS, Android, Windows and BlackBerry. During the first trimester of 2011 the Colombian State Portal was visited by 2.157.447 citizens, approximately 15.000 people amongst foreigners, public servers, organizations, entities and citizens.

2. The Online Government Strategy has placed at disposal of public institutions, the people and enterprises of the Center of Citizen Care, which is the integrated point of contact where, through different channels such as Telephone (toll free line), email, web, interactive chats, fax and social networks, provides customer care, immediate response and follow up to citizens, companies and public servers requests are responded. The benefits of relying on a citizen care center bring the citizen time saving due to the use of electronic channels that diminish search times and transportation to offices, it also helps the citizen towards information requests, sending the request to the competent entities, approach to the citizen from the State through a centralized and multichannel attention of the entities’ and citizen’s requirements, easy access to services and support through the integration of different medias and interaction technologies with the citizen and the entities. Up to December 2010, the center of citizen contact attended an average of 2 million calls a month to solve concerns, as well as helping people on the use of online paperwork and services. Also through Twitter, people keep a direct contact with Online Government and receive personalized care.

3. The National Government through the Online Government Program, as from reported in CONPES 3249 of 2003, has developed and operated the electronic system for Public Hiring – SECOP on its formative phase through
the unique Hiring Portal (www.contratos.gov.co) since April 2003. SECOP is an electronic system that allows the contractual consult of information regarding processes that are managed by the State entities subject by law to the General Statute of Public Hiring. The portal’s main goal is to promote transparency, efficiency and the usage of technologies for the announcement of public acquisitions so employers, public entities and citizens in general are benefited. This system seeks to improve the ways to access information related to what the State buys and hires, with the subsequent economical impact that generates on the small, medium and large companies, on the national, local and international levels.

The transactional phase of SECOP, which is currently developing, constitutes itself as a managerial system based on a technological support tool for public hiring to the online selection process performance with the support of electronic media, which integrates the related information systems, facilitating information regarding these processes and delivering tools to State entities to modernize and optimize contractual management.

According to the previous states, SECOP on its transactional phase seeks the following objectives:

- Facilitate and speed the contractual entities’ management, reducing the time use on selection procedures.
- Have at its disposal reliable information for the decision making of Government acquisitions.
- Incorporate technology as an instrument for practical improvements on the public management and seek, through the definition of adequate policies, influence on the state’s efficiency.
- Generate savings through the decrease on the use of inefficient traditional media
- Reduce the administrative workload used on the conclusion of contracts.
- Eliminate the multiplicity of hiring reports that entities must elaborate and now the system will supply.
- Reduce suppliers’ costs linked to their participation on public hiring processes, through the elimination of the diverse existing tolls to hire with the State.
- Increase in a significant way the number of competitors.
- Minimize the thought of corrupt processes and increase the suppliers and citizenship’s confidence on the entities’ contractual management.
- Supports the management aimed to the citizen and strengthen participation schemes.

On 2010, 1,919 public entities published their hiring processes on SECOP, with 115.00 hiring processes available for more than 23 million of dollars.

On the other hand, it’s important to highlight that Colombia switched from having 73 services offered through electronic media on 2007 to more than 540 on march 2011. Even though the advance is smaller on the territorial level, big cities have specific plans and projects defined to impulse the use of online Government. This channel offers, besides from services, support and
orientation tools such as chats, request channels, complaints and claims, help and FAQ. Close to 90% of national entities have these tools.

As it was previously mentioned, due to the mobile penetration in Colombia, public institutions are implementing services through this channel, most of them of the SMS type and are focused on the provision of information. Regarding the landline and fax, all public institutions have landlines, toll free landlines and fax that are used as support or complementary mechanisms for the provision of information and services. The majority of the use of these channels is focused on following the application’s states and the communication of results. In some cases it’s been implemented other service channels such as huts provided with internet connection to ease the access to information and transactional services or mobile spots that facilitate personalized care to population residing on faraway areas or with limited connectivity access.

As representative examples there is the Presidential Agency for Social Action and the International Cooperation, with a strategy to facilitate the access to its services through alternative ICT channels – on-site, by phone and virtual- in function of the needs, limits and preferences of their users, concentrated on diverse groups of vulnerable population. This strategy combines the use of a Telephone Care Center to provide general information about the services and specialized online consult to the beneficiaries of the Families in action process, who are a population on a displacement situation and informative campaigns, amongst others; mobile care center spots with the ability to transport to the regions and places of the country where its services are required, with a trained facilitator to orientate and inform to who may concern about services and access to information systems; text and voice messaging sent through population mobile phones settled with information regarding the activities and benefits and; virtual care on the website, where users make their requests, which are channeled to the institutes in charge.

Another example is the national institute of roads, which implemented the electronic service http://viajeroseguro.invias.gov.co that allows registered users to know the state of national roads and program travel routes. The service provides information of each route on aspects as fuel dispensing stations, hospitals, police stations, bridges, problems on the road, existing tolls and the value of each. At the time the user registers, he receives a text message with the procedure and the passwords. When a route is programmed, he receives alerts to his mobile informing situations that may affect the road.

On the other hand, the Agriculture and Rural Development Ministry, www.minagricultura.gov.co, offers a mobile information and communication system through text messages with information regarding its different systems like prices of agricultural products, subsides, incentives and rural opportunities, credit instruments, amongst others.

The National Civil Defense, www.defensacivil.gov.co, implemented a service of text messages through mobiles to spread information about disasters and emergencies. The service has mainly ease the call for volunteers to the attention of massive impact events.
E. WHOLE-OF-GOVERNMENT AND ONE-STOP SERVICE PROVISION

Taking as a reference point the citizen's and enterprise's needs, it has been identified the existing relationship between public institutions through a scheme called chain of paperwork, which is generated at the moment that an institution executes a paperwork required by a citizen or company and in order to fulfill its demands the access to one or more institutions in order to gather the requirements (documentation) needed for its execution.

The Online Government Program (Gobierno en línea) has designed some guidelines\textsuperscript{16} so public entities identify, prioritizes, optimize and automate the paperwork chains, through mechanisms as unique windows, facilitating citizen or company interaction with the State. Some Government operations that have became paperwork chains are:

- Unique window of Exterior Commerce (www.vuce.gov.co): It enables the operation management of exterior trades (import and export). It integrates 18 institutions for the execution of 98 paperworks (before the chain there were 200) and the approval times went from 15 to 1 per day.
- Unique window of sanitarian registry (www.invima.gov.co): It allows any employer located in Colombia or abroad to execute paperwork for a request, renovation or modification of sanitarian registry.
- Unique window of property registration (www.registratupropiedad.com): It simplifies paperwork in processes that involve purchasing or selling properties. On its first phase, it allows citizens to perform queries regarding simple trading properties and queries to 80 notaries in Bogota and Barranquilla to perform the registration process. With this chain it has been reduced in a 95% the required steps to perform this paperwork, it has also eliminated around 88% of the requirements, 96% of required documentation and 98% of contacts in real (not digital) windows.
- Unique window of household subsidy: This chain seeks to facilitate the request performed by a citizen to access a household subsidy, in which 7 public institutions are involved. Through this chain 1,300,000 low income families annually require help to get a house, which on their case can only be obtained through this subsidy.
- Unique window of environmental paperwork: this chain allows the fast interchange of information between the citizen and the authorities in order to reduce the time and the displacement required to obtain a license or an environmental permission, in which 35 public institutions are involved. Through this chain of paperwork approximately 42,000 applications of licenses and permissions are managed annually.
- Simultaneous inspection of merchandise in ports: This chain allows importers and exporters to perform electronic inspection requests, for which six institutions who are involved are coordinated through an electronic agenda so the inspection is performed at the same time, avoiding unnecessary and expensive merchandise transportation. Additionally, if the documentation that

\textsuperscript{16} See metodologías sobre cadenas de trámites.
holds up the process is previously sent, emission time of inspection result is lower.

Additionally, there has been some advances on the understanding of the needs both in the offer of non sensitive open public data (public institutions) and in the demand for the generation of services with an increased value by third parties, through conversational events, focus groups and quantitative surveys that allow to establish the guidelines to incubate the firsts open Government actions in the country. With the higher demand data and with bigger facilities to dispose on a readable by machines format, it's been structured an open data challenge to encourage the supply of applications generated by the young developers of the country on the biggest gathering space to this public, Campus Party\textsuperscript{17}, soon to be in the middle of this year.

F. ASSESSING THE ENVIRONMENT

Attending to the latest trends of environmental care, it's been developing the initiative of no paper on the public administration, which integrates the management of electronic documents through the optimization and automation of common procedures to all public institutions, such as the management of human resource, accounting, purchase, legal management, amongst others. It seeks to reduce the procedures that traditionally are held in paper, replacing them with procedures and electronic documents which is supposed to facilitate the creation, access and interchange of information, increase the productivity and transparency of entities, while the impact on the environment is reduced.

With regard to address environmental concerns, diverse actions are taking place. In relation to the winter wave that the country has faced on the last months, the Ministry ICT and the Online Government Program have been supporting the National System of Prevention and Attention to Emergencies and Disasters (www.sigpad.gov.co), through a risk management process focused on the use of information and ICT as fundamental elements to the relief of emergency cases.

The Ministry ICT leads the #BrigadaDigital\textsuperscript{18}, an initiative that promotes the citizenship participation, specially from people who are passionate with technology and are connected to social networks, in order to articulate actions between public institutions and citizens so they support the achievement of the objectives of Live Digital Plan. #BrigadaDigital Is formed by different squads, in diverse topics like the digital inclusion of women in the development and good use of the ICT, cyber safety, Colombians abroad, applications of TIC to save life, forcefulness of the Colombian videogame industry, poverty overcome, blood donation, risks regarding the children population on internet and convergence. Through #BrigadaDigital was promoted the voluntary donation of resources through SMS to help victims of the current winter wave and joined the work of the Humanitarian Colombian Fund\textsuperscript{19} so by the means of the

\textsuperscript{17} See information: Campus Party Colombia.
\textsuperscript{18} See information about #BrigadaDigital.
\textsuperscript{19} Colombia Humanitaria.
informational system the supervision of destination and execution of the resources become possible.

Public administration has developed a group of services that support environmental issues, in which they are:

- The Colombian environmental information system (www.siac.gov.co), is an integrated ensemble of actors, policies, processes and technologies involved in the management of environmental information to ease the generation of knowledge, decision making, education and social participation to a sustainable development.
- The information system of national policies regarding air quality (http://web2006.minambiente.gov.co:8091), which allows consulting all the information regarding national politics referred to air quality.
- The information subsystem about air quality (www.sisare.gov.co) to the capture, storage, transfer, process and consult of information that allows the unified generation of information regarding air quality in the country.
- The consult of chemical substances and dangerous waste (http://web206.minambiente.gov.co:81/sustancia/búsquedas.aspx) which allows the identification of those substances and wastes included on the Stockholm, and Rotterdam conventions and the strategic approach to chemical products management.
- The Information subsystem about use of natural renewal resources (http://noreimako.ideam.gov.co:7782/mursmpr/index.php) to be managed by competent environmental authorities.
- The forecast and alerts portal (www.pronosticosyalertas.gov.co), with meteorological daily forecasts of the geographic regions and the main cities in the country, as well as alarms about phenomena of hydro meteorological or climate origin and its level of threat.
- And the climate change portal (www.cambioclimatico.gov.co), to contribute on the access to information and creation of abilities on the climate change topics.

Finally online Government is a reality in Colombia and has the commitment of high areas of the National Government, public entities both national and territorial, academy, private sector and above all, millions of Colombians whom as citizens and entrepreneurs constantly use online Government.