



# Cidades**Digitais**

BUILDING A COOPERATIVE  
AND INNOVATIVE ECOSYSTEM

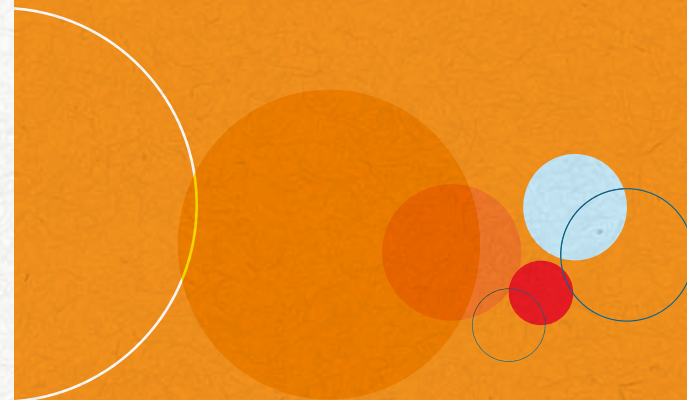
Ministério das  
Comunicações

GOVERNO FEDERAL  
**BRASIL**  
PAÍS RICO E PAÍS SEM POBREZA



# 1.

The digital inclusion should encourage the practice of citizenship, providing possibilities for cultural, educational, social and economic promotion of the Brazilian society. The Internet is an essential tool, but alone it does not ensure social development or the promotion of social justice.



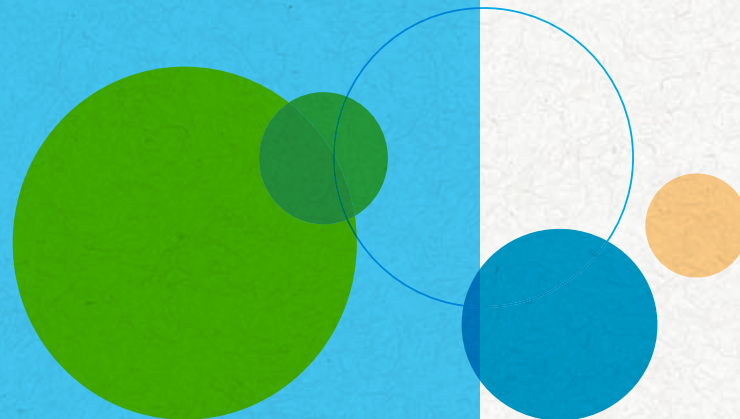


## 2.

The revolution brought to society by Information and Communication Technologies (ICTs) is essentially cultural. By changing people's behavior, the real digital inclusion should involve enhancement of citizenship, people's self-determination ability and search for knowledge and information.

## 3.

We want to contribute to the construction of a digital culture that is democratic and transformative, through a strategic public policy. In order to achieve these goals, collaborative links among the federal government itself, other government agencies, civil society and the productive sector are necessary.





# 4.

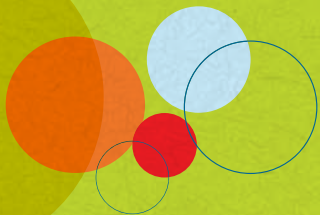
Our challenge is to converge common interests, which could allow us to speak the same language, creating integrated channels, networking and building an innovative and cooperative ecosystem.

## THE DIGITAL CITIES PROJECT

The Digital Cities Project was established by the Ministry of Communications through Ordinance No. 376, of August 19, 2011. This ordinance defines the Digital Cities as local digital networks of communication in Brazilian cities, focused on digital inclusion, with the following goals:

- Improvement of quality and transparency in public management
- Improvement of quality of services provided to the population
- Democratization of the Internet access
- Fostering of a creative and sustainable economy
- Creation and development of contents
- Building of collaborative environments on open networks
- Stimulus to local development

Digital Cities is a structuring project, the goal of which is to contribute to a digital culture in Brazilian society, with the establishment of a continuous and effective policy that integrates several actions for digital inclusion, and that is sustainable over the time. The project allows the improvement of management tools, providing content and tools for local governments, allowing transparency and participation of the civil society, enabling the formation of an open digital network that allows the relationship among different levels of the government,





and between government and society, as well as the establishment of critical mediation channels. It is a transformative perspective of inclusion, as it offers the society access and sharing of contents that allow people to have an active role, changing the reality that surrounds them. This means ensuring communities autonomy and ability to lead in decisions related to them.

The creation of a digital network interconnecting digital cities is an opportunity to make the experience of sharing public management easier in a national level. On the other hand, it is also an important channel for the integration of other government policies that have digital inclusion as their target, or that depend on it to improve their efficiency and their respective results. The Digital Cities Project allows the coordination of the several federal government actions in the cities, and also the improvement of municipal management and services provided to the population. The construction of this cooperative and innovative ecosystem brings great benefits to all regions of the national territory, especially for the most distant ones.

## THE PILOT PROJECT OF THE MINISTRY OF COMMUNICATIONS

In line with the National  
Broadband Program – PNBL, the  
Digital Cities Project of the Ministry  
of Communications provides  
for the implementation of the  
following actions:



## INFRASTRUCTURE

- Implementation of connection infrastructure between local public organs and equipment, and to the Internet, through a ring of optical fiber that will connect public organs and equipment (access points of government) according to the specificities of each municipality.
- Installation of points for public access to the Internet for free use by the population
- Installation of infrastructure management solutions for network operation
- Evaluation of network compliance to international standards

This infrastructure model was based on the following guiding principles:

- DURABILITY** It is a structuring, long-term project.
- SIMPLICITY** The technology model (metro ethernet) is consolidated, allowing easier installation and maintenance of the network.
- SCALABILITY** The infrastructure supports increased traffic, following the increase in demand, and allows the expansion of the connection points.
- INTEROPERABILITY** The management protocols are open, preventing technological lock-in of municipalities' governments.

## CONTENT AND SERVICES

- Installation of electronic government contents (in free software) in the areas of finance, taxation, education and health, with support for migration, training, hosting and assisted operation. The goal is to contribute to municipal management improvement, the integration with other spheres of the government, and the improvement of public services.
- Training and support to public and community areas for the use of digital technologies, turning them into centers for training and transmission of information, and for integration of communities in areas where they are installed.
- Training and capacitation of civil servants on information/communication technologies to be used as tools in the public management to promote citizenship.
- Promotion of joint training initiatives, in partnership with other social and institutional programs focused on the usability of equipment installed, thereby contributing to the construction of a digital culture.
- Support for innovation and construction projects of creative content, and of applications for use in electronic governments, favoring initiatives that allow the adaptation of such content and applications to language patterns compatible with the various local cultural realities.
- Fostering of local development, stimulating creative economy.
- Interaction with other policies of the federal and state government.
- Participation of BNDES (Brazilian Development Bank) in financing of network expansion, implementation of new content, modernization of equipment of small providers and project implementation in municipalities that adopt the model of Digital Cities of the Ministry of Communications



## SUSTAINABILITY

The infrastructure implemented in the municipalities will be donated by the Ministry of Communications (MC) who, in turn, will require the maintenance of network operation. For this service, the MC established guidelines that municipalities should adopt, pointing out the following possible solutions to ensure its sustainability:

- a) Maintenance, by the municipality itself, separating in its budget the resources required for this purpose.
- b) Partnerships with other local, regional or state public institutions.
- c) Concession of the use of infrastructure for commercial exploration of the network, resulting in financial and/or technical returns to its maintenance and operation.

## IMPLEMENTATION OF THE PILOT PROJECT

The implementation of the pilot project of the Ministry of Communications had as its starting point the publication of the Public Notice Call 01/2012-MC for the selection of proposals of municipalities or municipality consortia. The implementation of the Digital Cities Project in selected locations will have a character of pilot experiment, for adjustments and consolidation of the project, according to the following phases:

**PHASE 1** - Through public notice call, 80 municipalities were selected at the place where the project will be implemented. The choice followed some criteria that favored municipalities with low-density connection to broadband, lower levels of development, small populations, from North and Northeast regions, and that formed consortia..

**PHASE 2** - Bidding and hiring of companies responsible for implementing the optical network, including the provision and installation of equipment and software necessary for its operation, technical support, transfer of technology and assisted operation during a period of six months, with the purpose of the municipality appropriating the implemented technology.

**PHASE 3** - Formalization of cooperative agreements involving the Union and the benefited municipalities by means of which joint efforts will be established, with distribution of responsibilities, for the feasibility of the project. In these terms of cooperation, responsibilities will be distributed as follows:

- **Union** – agrees to install the fiber optic ring and connection



equipment, to donate it with the respective charges, provide the transfer of technology, and ensure the network assisted operation.

- **Municipalities** – agree to provide a local management team to be trained, in order to be able to monitor the project; to contribute to the logistics for the implementation of connection infrastructure; to share the responsibility for implementing actions related to digital inclusion; and to provide the information required for the installation of infrastructure.

**PHASE 4** - Formalization of a donation agreement with the network and connection equipment infrastructure charges for the municipalities, document in which they agree to be responsible for the conservation and maintenance of the network and equipment; for the adherence to contents of e-government; for the training of civil servants and trainers on the use and management of the network; and guarantee of free public areas of access to the internet for the population.

**Phase 5** - Implementation of the contents of e-government in the areas of financial management, taxation, health and education.

**PHASE 6** - Training of municipal civil servants on management and use of the network installed, and for use and management of e-government contents.

## INSTITUTIONAL ARRANGEMENTS FOR SUSTAINABILITY

One of the great challenges of the Digital Cities Project is the interaction of social actors such as the various agencies of the federal government, the partnerships shared among the spheres of government, the relationship with educational and research institutions and with different bodies in civil society, the relationship between municipalities (through consortia or associations), with the local productive sectors and the civil society. Initially, the project should be feasible through direct partnerships with state and local governments and/or universities, technical schools and nonprofit civil society organizations.

The most challenging and most complex step of the project is that which involves the construction of a solid and consistent institutional arrangement, which ensures the maintenance of digital cities and the implementation of specific actions in the municipalities. Due to economies of scale and the technical characteristics of this type of initiative, most municipalities will not be able to individually guarantee the maintenance and sustainability of digital cities. Thus, it is necessary to establish cooperative arrangements that allow shared management of physical and financial resources.

Various types of arrangements can be constructed:

- **Formation of public consortia:** a consortium is formed exclusively by federal agencies, and may adopt the form of a legal entity governed by either public or private law. In both cases a public association must be constituted that can be an autarchy, in the case of consortiums governed by public law, or a nonprofit entity, in the case of consortiums governed by private law. In addition, the public consortium tends to greatly reduce the extinction or termination of a contract, once the legal and financial consequences are much higher than in



case of conventional instruments of partnerships among federal agencies, such as the covenants and partnership agreements.

- **Infrastructure Concession:** In this mode the municipality can make the concession of the network to private companies for its commercial use, offering in return the maintenance and expansion of the Digital City, without degradation of the original network;
- **In either situation proven ability to** manage the network and Metro Ethernet and expansions of the Digital City should be required.

In all cases, and predicting possible expansions of the network and provision of services, the consortia or the private or public entities should have the license for Multimedia Communications Service (SCM) granted by ANATEL (National Telecommunication Agency).

## EXPANSION OF INFRASTRUCTURE

With the creation of the local arrangements, it is possible to expand the network infrastructure and services of the Digital Cities. This can also be an opportunity for the establishment of articulation networks of public policies among municipalities and of municipal administrations and society, since new channels for articulation, with transformation potential, will be formed during this process, allowing new social actors to take ownership of ICTs and begin to see these technologies as a channel of effective participation, with great potential of return to the specific communities and society in general.



## CONCLUSION

As noted in PNBL: “Besides infrastructure, the projects of digital cities have a broader focus than just interconnect public buildings and provide communication services.” They work on digital inclusion - through the modernization of public management in improving the quality of services provided to the population – and on cultural, educational, social and economic development of all society. Much more than an action of implementation of connection infrastructure, the Digital Cities Project is a public policy for the construction of a unifying center of digital culture for social development.

### REALIZAÇÃO

**Ministério das Comunicações**

Secretaria de Inclusão Digital

### PARCEIROS

Presidência da República | Secretaria de  
Relações Institucionais

Ministério do Planejamento, Orçamento e  
Gestão | Secretaria de Logística Tecnologia  
de Informação

Telebras

BNDES

Inmetro

Rede Nacional de Ensino e Pesquisa (RNP)

Universidade Federal de Ouro Preto

Universidade Federal do Pará

Universidade Federal do Paraná

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