

GOLD VI

**Case-Based Contribution
to Chapter 6: Connecting**
*GOLD VI Report on Pathways
to urban and territorial equality*

Digital Villages: Guaranteeing digital connectivity in peripheral areas

In partnership with:

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Digital Villages: Guaranteeing digital connectivity in peripheral areas

ORGANISATION NAME

UCLG Digital Cities - Bilbao

CITIES/COUNTRIES IT COVERS:

Tusheti (Georgia) and Iztapalapa (Mexico)

CHAPTER

6: Connecting

SUMMARY

Innovation and digital connectivity are areas in which territorial differences are several and common. The initiatives that are developed towards digital equality can effectively reduce these differences. Both in **Tusheti** (Georgia) and **Iztapalapa** (Mexico), multistakeholder initiatives are tackling inequalities, helping communities which were socially disconnected, in obtaining digital access, skills and rights.

Tusheti, a region located in the Caucasus Mountains, is considered one of the highest and most isolated settlements in Europe. Until 2018, it was hardly connected to Internet and telephone networks. In 2017, the Internet Society partnered with several Georgian Internet organizations to launch the project to connect this remote region to the Internet. The project target was to build high-speed fixed-wireless Internet and ensure the operation and sustainability of the network involving local agents such as the Tusheti Development Fund as the network operator, and local residents.

On the other side of the world, in the inner suburbs of Mexico City, Iztapalapa, its largest city district, can be found. The city district has more than 1.8 million inhabitants in an area with a high population density and has been named by some as a space of poverty. Due to the low digitalization level of the area and the need to engage the citizens of the neighbourhood in the digital life, the local government, together with the private telecommunications companies Telmex and Telcel, and the Carlos Slim Foundation, decided to create a public, permanent and free space in which the inhabitants of the area and visitors could access new technologies.

Innovation and digital connectivity are areas in which territorial differences are several and common. The initiatives that are developed towards digital equality can effectively reduce these differences. Both in **Tusheti** (Georgia) and **Iztapalapa** (Mexico), multistakeholder initiatives are tackling inequalities, helping communities which were socially disconnected to obtain digital access, skills and rights. The first case is framed in a rural area, and the second is framed within one of the most populated cities in the world. Still, technologically speaking, both areas experienced a degree of digital disconnection. Non-profit organisations played a strong role in guaranteeing digital connectivity in both areas, but the role of local governments or public organizations as facilitators and maintainers of these innovations cannot be taken for granted.

Tusheti, a region located in the Caucasus Mountains, is considered one of the highest and most isolated settlements in Europe. It is located in a rugged terrain, with a relatively sparse population which, until 2018, was hardly connected to Internet and telephone networks.

With more than 5,000 inhabitants and more than 1,000 households, Tusheti is one of the most visited regions of Georgia. For instance, in 2017 it received 14,000 tourists during the summer. Still, during winter (from mid-October until the end of May), the region becomes completely isolated, only being reachable by helicopter due to the road becoming impassable. During these months, the communication with the region's populations used to completely cease.

In 2016, several stakeholders signed a memorandum of understanding in which they expressed the desire of mutual cooperation to provide Tusheti residential

settlements and tourist centers with fixed wireless Internet service. One year later, in 2017, the Internet Society, a non-profit organization who promotes Internet development throughout the world, partnered with several Georgian Internet organizations to launch the project to connect this remote region to the Internet. The project's target was to build high-speed fixed-wireless Internet (a system that brings the Internet signal via radio waves transmitted by a base station instead of using a cable) and ensuring the operation and sustainability of the network involving local agents such as the Tusheti Development Fund as the network operator, and local residents. The project sought to open new opportunities for tourism, cultural preservation and, more importantly, to provide communication channels for healthcare and potential emergency situations.

During the implementation of the project, a main broadband network of more than 43km, as well as other 4 connection points on the top of the mountains, were built and the necessary equipment (such as WiFi transmitters-receivers) was installed. The project had a sustainability approach and implemented solar energy systems so that the network could power itself. Still, this did not happen without challenges, since batteries can be damaged by hard winter temperatures and solar energy supply in long winter nights cannot be always guaranteed.

It was made clear that the network, which after being built was transferred to "Tusheti Development Fund", had to be managed in a non-profitable way and, thus, a 10% profit limit over networks' operational and capital expenses was established. Also, the Internet costs for many full time residents are covered by the Development Fund during winter time.

One of the fundamental elements to ensure the sustainability of the project was the targeted training on e-commerce and other Internet-related skills and technologies launched in the region by the Government of Georgia, which allowed a higher involvement of the local population.

As a result of the project, tackling connectivity issues in the region created both economic and social revenues. On the economic side, it enabled the growth of the tourism sector as the local population became able to make promotional activities, take advantage of booking platforms and also give Internet access to visitors (a service in high demand in tourist destinations). Furthermore, it gave the population access to online markets to sell local products. On the social side, the population got access to online resources, being able to use educational, e-health and e-government services, to communicate with their relatives during winter time, and to access job markets. According to data from the Tusheti Development Fund,¹ in 2019 there were already 69 Internet users, which were expected to grow to 120 as of 2022.

Making changes in transport infrastructures in remote locations (such as roads in rugged terrains) can be very costly and technically challenging, but this case study demonstrates how a more affordable option such as setting Internet connection in these places, can make a difference, especially if local agents are involved.

On the other side of the world, in the inner suburbs of **Mexico City** (Mexico), **Iztapalapa**, its largest city district, can be found. The city district has more than 1.8 million inhabitants in an area with a high population density (16,220/km²) and has been named by some as a space of poverty.

Due to the low digitalization level of the area and the need to engage the citizens of the neighbourhood in digital life (providing them with digital competences and access to digital services), the local government, together with the private telecommunications companies Telmex and Telcel, and the Carlos Slim Foundation (a non-profit organization for the development of Mexican society),² created a public, permanent and freely accessible space in which the inhabitants of the area and visitors can access new technologies and courses. As a major contribution, the local government contributed with the public space to the project and the private sector with the equipment and operational activities.

The project, called *Aldea Digital Iztapalapa TELMEX TELCEL (Iztapalapa Digital Village TELMEX TELCEL)* and launched in 2017, had the main objective of promoting digital inclusion in the country. It was born from a popular event (with more than 400,000 annual attendees) of the same name that regularly took place in Mexico City.

The open area had 865 square meters and offered free Wi-Fi, free educational activities, guidance for entrepreneurship and promotion of small and medium-sized companies and interactive demonstrations of cutting-edge technological services and solutions. It opens seven days a week for people of all ages and aims to increase development opportunities, the transformation of small businesses and improvements in the quality of life of children, youth and adults.

Capacity building is of special relevance, and since its foundation, *Aldea Digital Iztapalapa* offers more than 120 courses and workshops every year. *Aldea Digital Iztapalapa* provides training in the following areas: computer programming, multimedia, robotics, teacher

1. See: <https://www.facebook.com/TushetiFund/>

2. The Carlos Slim Foundation is financed by its president Carlos Slim, the richest person in Mexico, who has donated more than USD 4.2 billion to the foundation in its lifetime [source: Forbes]. Carlos Slim is also the president of the telecommunication companies Telmex and Telcel.

training, web design, human development, digital citizenship, digital inclusion, entrepreneurship and education platforms (through the “Aprende” platform).

One of the aims of the educational programme is the promotion of skills and talents to respond to the challenges of the digital age. For instance, the focus on digital citizenship and inclusion among these courses can be considered as a very good practice, since it goes beyond providing technical skills and serves to create more engaged and proactive citizens by providing them with tools and knowledge.

The two cases presented show how joint public and private sector engagement can powerfully boost social inclusion in remote or disconnected areas. Still, in order to engage citizens in digital life, there needs to be a focus on how

to engage them. The two presented cases also put a focus on enabling digital entrepreneurship, highlighting the impact that this can have on life opportunities, also presented with specific examples in the case of Tusheti, as digital business models start to become more dominant.

The transferability of these projects can be considered high provided that a sufficiently solid network of stakeholders can be mobilised. Their engagement can be seen as a major challenge *a priori*, but it becomes fundamental for the complete success of the projects, meaning that a true digital inclusion is achieved through them.

References

Report Connecting Tushety; The Impact of Community Networking in Europe's Highest Settlements (Dec. 2018). The Internet Society

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In particular, the present paper has contributed to Chapter 6 on “Connecting”, which focuses on the role of local and regional governments in increasing urban and territorial equality through improving connectivity between and within cities and citizens through more equitable transport, infrastructure and digital connectivity planning and interventions.

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