Digital Inclusion in public services

Enhancing digital literacy, skills and inclusion in public services

Despite investments and efforts, the performance in “connectivity” of different European regions is not homogenous. Moreover, our analysis shows two meaningful trends: first, the more confident individuals are with technology, the more they interact online with public authorities; second, the more public R&D budget is devoted to the ICT dimension, the more businesses appear positively “dominated” by technology. This means having a digital infrastructure is necessary, but not an adequate condition to succeed. European governments should focus on enhancing “digital confidence.” A Digital Competence Center represents a possible way to increase digital competences as well as public services’ “inclusion” in peoples’ lives and businesses’ operations.

The European Landscape

Enhancing digital literacy is one of the priority issues that European public administrations are addressing. Despite their investments and efforts, some European governments are still far from reaching their objectives.

Relevant EU Initiatives for Enhancing Digitalization

- **eGovernment Action Plan 2016–2020:** This will modernize digital public services, enabling people to get the full benefits from digital public services that should be available seamlessly across the EU.
- **Horizon 2020:** This promises more breakthroughs, discoveries and world “firsts” by taking great ideas from the lab to the market.
- **The fourth industrial revolution (Industry 4.0):** This aims to leverage differences between the physical, digital and biological sphere, and integrate cyber-physical systems, the Internet of Things, big data and so on.

The actual question is this: “Is Europe ready to embrace digital?” The answer is not as simple as it seems; in fact, there are many variables to take into consideration. The first is the presence of digital infrastructures. Focusing on the **DESI index**

1 DESI (Digital Economy & Society Index) is an official and reliable source which summarizes relevant indicators on Europe’s digital performance and tracks the evolution of EU member states in digital competitiveness.

2 CDCI Index was developed taking in consideration four different variables (source: European Commission – Digital Scoreboard): % Individuals who have never used the internet, % Individuals ordering goods or services online, % Individuals who have obtained ICT skills through formal educational institutions, % Individuals who have caught a virus or other computer infection resulting in loss of information or time.

However, the deployment of digital infrastructure is just one piece of the entire puzzle. To have a better understanding of Europe’s digital landscape, Arthur D. Little has developed two aggregate indicators:

- **Citizen Digital Confidence Index (CDCI):** measure of citizens’ familiarity and confidence with technology.
Corporate Digital Penetration Index (CDPI): measure of how much technology positively dominates businesses

Arthur D. Little has found some interesting correlations that go beyond the infrastructure dimension.

Citizen Digital Confidence Index (CDCI)

Arthur D. Little found that the CDCI index is proportional with the ratio of individuals interacting online with public authorities.

Corporate Digital Penetration Index (CDPI)

Similar considerations also apply to businesses. Arthur D. Little found an interesting correlation between the CDPI index and the amount of public expenditure on ICT R&D.

This means that to ensure a real digital transformation of businesses, it is fundamental for each country to invest in intellectual capital, especially in the ICT dimension.

Next steps: Create competences

The Arthur D. Little analysis shows two main problems. On one hand, to fill the gap in “digital connectivity,” European countries need to invest in digital infrastructures, allowing citizens and enterprises to be completely “wired.”

On the other hand, to fill the gap in “digital confidence,” European countries are called to:

- Create wide, specific and long-lasting competences in citizens
- Direct ICT public spending to the most effective R&D projects, to enhance the environment in which enterprises are immersed

But what does “digital competences” really mean?

According to the “DIGCOMP: A Framework for Developing and Understanding Digital Competence in Europe,”4 a “digital citizen” must be able to retrieve information on the internet to communicate and collaborate through digital media, and so on. This confirms that digital competences are one of the key requirements for citizens’ achievement of goals and objectives.

According to the “European e-Competence Framework 3.0”5, there are some areas of competence that every organization should include to be defined as “digitally covered”: ability to manage IT strategy, process improvement, business change management, technology trend monitoring and so on.

The Digital Competence Center

One action to facilitate the creation of digital competences is the setup of a Digital Competence Center (DCC).

A Digital Competence Center is a coalition of experts that facilitate collaboration (physical or digital) in order to share knowledge and increase the possibility that innovative projects involving digital public services become widespread and successful.

It is an operational framework which includes:

- Organization & processes: resources and operating models to structure and lean the information flow
- Methodologies: structured methodologies to homogenize competences
- Tools: appropriate tools to support collaboration and knowledge sharing

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3 CDPI Index was developed taking in consideration four different variables (source: European Commission – Digital Scoreboard): % Enterprises having a website with some sophisticated functionalities, % Enterprises employing ICT specialists, % Enterprises provided training to their personnel to develop/upgrade their ICT skills, % Enterprises providing portable devices to more than 20% of their employed persons.


The long-term objective of a Digital Competence Center is to create a “virtuous circle” among citizens, enterprises and public administrations:

- **CITIZENS**
  - Diffusion of digital culture

- **ENTERPRISES**
  - Development of new competences useful for business

- **PUBLIC ADMINISTRATION**
  - Increase of “inclusiveness” of public services

A Digital Competence Center represents a way to increase the level of digital confidence in citizens and enterprises, as well as public services’ “inclusion” peoples’ lives and businesses’ operations.

**How to build an effective Digital Competence Center**

Arthur D. Little has identified a framework to build an effective Digital Competence Center.

1. **Start Up**
   - Create awareness
   - Select projects for concrete results
2. **Create results**
   - Animate the Digital Competence Center
3. **Effective Digital Competence Center**
   - Create culture

The biggest risk in the start-up phase of a Digital Competence Center is quick loss of commitment. To avoid this kind of “false start,” Arthur D. Little recommends the following key enabling factors:

- Ensure that the DCC has a concrete scope and the right amount of dedicated resources
- Give the DCC a unique identity which everyone can recognize, for instance, through a brand-new logo
- Create enabling tools for collaboration and knowledge sharing. The DCC web portal represents both a contents window and a working tool containing news, objectives, contacts and publications

To obtain concrete results in reasonable time, it is necessary to focus on a restricted number of innovative projects on public services. Some key enabling factors are:

- Identify some innovative projects aimed at increasing digital confidence in public services: explain how things that were analog could now be used in digitally
- Provide a neutral platform for stakeholders to work together and collaborate. Every project is contained in a dedicated digital forum, enabling users to share questions and information with other users and domain experts
- Design a dashboard to monitor the level of digital competence achieved
- Share knowledge-conducting workshops, both physical and digital
- Share concrete results: on the completion of a single project, Arthur D. Little advises writing a case study on it

Projects should be updated periodically to empower confidence in public digital services.

Some enabling factors to “animate” the Center of Competence are:

- Share knowledge which the Digital Competence Center has created through educational and technical studies, and stimulate collaboration and debates among participants
- Communicate innovations and forthcoming regulatory requirements
- Expand the network, creating interest in a wide audience

Some examples of innovative public services for citizens and enterprises include:

<table>
<thead>
<tr>
<th>e-Government</th>
<th>e-Health</th>
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<tbody>
<tr>
<td>Electronic payments of taxes or other public services</td>
<td>Physician choice</td>
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<tr>
<td>Centralized repository for all citizens</td>
<td>Medical Reports</td>
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<tr>
<td>Unambiguous identification of a person</td>
<td>Payment of prescription charges</td>
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<tr>
<td>Delivery of a service, or of output of services, to the person who is really entitled to it</td>
<td>Booking of health services</td>
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Actual Case: Digital Competence Center for a Regional IT Agency

A regional IT agency’s Digital Competence Center was born from the need for a limited number of IT experts to overcome a slow and often ineffective advisory process with public authorities and institutions.

The key aspects that have led to the Digital Competence Center are:

- Voluntary initiative of a limited number of IT experts
- Periodic and high frequency of meetings
- Use of a structured and recognizable approach
- Spread of a collaborative culture, with the aim of sharing competences and stimulating discussion
- Creation of a “visual identity” (e.g. a unique logo)
- Setup of the DCC’s communication/interaction channels (dedicated mailbox and web portal)
The implementation of the Digital Competence Center has led to a radical change in the approach to how knowledge is handled. With the advent of the Digital Competence Center, in fact, the creation and management of knowledge has become a collective and bidirectional process.

One possible solution is to support the creation of Digital Competence Centers. The center must become a powerful hub, leading to real digital inclusion of public services.

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**Arthur D. Little**

Arthur D. Little has been at the forefront of innovation since 1886. We are an acknowledged thought leader in linking strategy, innovation and transformation in technology-intensive and converging industries. We navigate our clients through changing business ecosystems to uncover new growth opportunities. We enable our clients to build innovation capabilities and transform their organizations.

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