Estonia: the most advanced digital society in the world?

Description

In October 2014, Apple launched a major communications campaign around a new feature on its devices: the ability to sign PDF documents using a trackpad. Immediately, Estonian Prime Minister Taavi Rõivas reacted in a tweet: *“Dear Apple, if you are interested in how files are digitally signed, contact any Estonian.”*



With this provocation, the Estonian Prime Minister sought to highlight his country’s pioneering position in the digital sector. In 2015, 95% and 97% of Estonians already had digital identity cards enabling them to sign documents digitally. For this country of 1.3 million inhabitants, which can claim to have developed the most advanced digital identity card system in the world, the digitization of most of its public services and a wealth of experience in cyber security, the title of “*most advanced digital society in the world*” is perhaps not misplaced.

Estonia, a laboratory for digital innovation

Suppose Estonia is one of today’s digital pioneers. In that case, it is first and foremost because it has benefited from a context favorable to creating a new model based on this characteristic. In 1991, with the collapse of the USSR, the country regained its independence and inherited the Soviet Union’s technological systems. Until then, Tallinn had been one of the largest cybernetics research centers and the nerve center for telecommunications in the Baltic republics. However, faced with the challenge of reconstruction, Estonia will use this asset to launch the development of an ambitious digital infrastructure, which has been established as a national strategy. This strategy is designed to meet the challenges of both democratic transition and economic reconstruction.

1994 saw the introduction of the first strategic plan entitled Estonian Information Policy Principles, which aimed to develop information technologies. The Estonian Parliament ratified the project, allocating 1% of the GDP to financing these new technologies. Then, in 1996, Tallinn launched the Tiger Leap initiative, a program to develop the country’s IT infrastructure. This included equipping all state schools with computers that pupils could use to study.

From then on, digitalization never stopped. 1996 the first online banking services were introduced, and in 2000, tax returns could be filed online. In 2001, the X-Road platform was set up, enabling 99% of public services to be centralized on a single interface accessible online 24 hours a day, seven days a week. Then, in 2002, the first digital signatures saw the light of day, at the same time as Internet access was enshrined in the Estonian Constitution as a natural right of citizens. The digital race continued with online voting in 2005, followed in 2008 by the “e-health” system, which involves digitizing patient records to provide complete profiles of each patient, thereby reducing bureaucracy and providing access to vital information in emergencies.

Finally, in 2014, Estonia made its last major digital shift: that of e-residency. The government introduced a system of digital Estonian resident cards accessible to everyone. Playing on the confusion with the Estonian citizenship card – which is also digital – e-residency reveals an Estonia that sees itself as a *“borderless digital society that any citizen of the world can join.”* The message is hitting home, and Internet users worldwide are beginning to sign up, including Finns, Russians, Ukrainians, and Chinese…

Between renewed governance and “nation branding.”

While communication around e-residency and the all-digital society is highly effective, it raises many questions about the changes it could bring, particularly in the relationship between the State and its citizens. The digitization of virtually all public services has profoundly altered general practices. In the case of e-residency, it even raises questions about the resident status, and it's the country's link with the territory of the country. A citizen generally belongs to a territorial political community where access to rights and privileges depends heavily on the physical residence and a shared national identity. Finally, the centralization of so much data necessarily raises the question of its protection and the degree of trust in the State. The State guarantees that no one can manipulate this data for purposes other than those set out in advance. Citizens are informed when the authorities, service providers, the police, or doctors consult their data. Transparency prevails, since, according to the 2014 Eurobarometer, 51% of Estonians trusted their government, compared with an average of only 29% of Europeans.

However, behind the emphasis on the administrative and political revolution that Estonia seeks to promote, we find a strategy of influence and economic attractiveness whose objectives seem much more concrete. The e-residency aims to recruit "10 million e-Estonians eventually"; in other words, to make it easier for foreign companies to register in Estonia, which is already attractive thanks to its advantageous tax system (income tax is 0% for companies whose profits are reinvested in the country). So it is, above all, the economic rationale that prevails in this project. For a country like Estonia, the possibility of expanding its national economy by offering foreign nationals the option of registering a company electronically in Estonia and managing it remotely could stimulate the development of new electronic services and bring in revenue for the State.

Moreover, although attractive on paper, the e-residency system has a few things left unsaid, which considerably curb the project's ambitions. Firstly, e-residency is not entirely a digital system. Firstly, e-residency is not wholly a digital system. Physical presence is still required at certain stages of the e-residency application process. For example, you must go to an Estonian police station, consulate, or embassy to be identified. In addition, the program has been heavily criticized for its lack of services designed explicitly for e-residents. Most digital services aim to facilitate access to public services for citizens in Estonia rather than creating new services for e-residents. The final criticism comes from the Estonians themselves: with so many digitized benefits, there is now an increased risk of inequalities linked to the digital divide.

The security challenge of digital citizenship

By opting for an all-digital society, the authorities have exposed the country to the vulnerabilities associated with the risk of cyber attacks. This issue remains at the heart of Tallinn's concerns, and its credibility depends on its ability to protect itself. Awareness of this issue began on 27 April 2007, when Estonia suffered its first cyber-attack targeting a state structure. Against a backdrop of de-Sovietisation already well underway in the country, the Estonian Parliament moved a statue to honor the Soviet soldiers who fell in the Second World War, the Bronze Soldier, from Tallinn city center. In the eyes of the country's Russian-speaking community – which makes up around 35% of the total population – this memorial, which also houses the bones of Soviet soldiers under its base, represents a cultural heritage. For the Estonian majority, on the other hand, it is a symbol of the Soviet occupation and the abuses committed by the Soviet authorities in the country. Violent demonstrations erupted in the city and across the country, with widespread media coverage in Russia on the eve of 9 May, a critical day of commemoration. A series of cyber attacks paralyzed many public services. For the Estonian government, there is no doubt that the attack originated in Russia and was even directly piloted by the Russian government. The attack prompted Estonia to take a long, hard look at itself as it sought to establish itself as a pioneer in cyber security.

Since then, Estonia has developed a Cyber Defence Centre of Excellence in Tallinn, the fruit of cooperation between the country and NATO. This center aims to develop research and training in cyber security. Furthermore, since 1 January 2021, the Estonian Ministry of Defence has also set up the CR14 (Cyber Range 14) program, which offers cybersecurity-related training to national and international partners from the private and public sectors. Through initiatives such as these, Tallinn seeks to establish itself as a benchmark for cybersecurity and continue promoting its model. These initiatives appear to bear fruit, as the International Telecommunication Union's Global Cybersecurity Index ranked Estonia as the 3rd most secure country in 2020.

What developments?

Estonia's digital policy has proved to be a great success from a technological point of view, enabling the country to develop numerous innovations and position itself as a pioneer. In addition, its active communication policy around flagship projects such as the e-residency has enabled the development of a positive national brand. In this way, the choice of digital technology has helped Estonia stand out from the crowd, giving it a crucial competitive advantage in political and economic terms, which is particularly important for a country of size.

Today, the country is focusing on the development of artificial intelligence: in 2019, Estonia set up a legal artificial intelligence system enabling it to arbitrate autonomously on minor offenses. However, new developments could be on the horizon, raising more questions about the relationship between technology and political life.

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Thumbnail: e-Estonia.

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