

Estonian ICT

The first truly digital nation

The ICT sector in Estonia revolves around the success of e-governance and the booming startup scene, rooted in the scientific community's forays into cybernetics and software development already in the 1980s. The following decade was tumultuous not only from a political perspective, but also from a technological angle, as public and private sectors alike had to lay the foundation and the technical infrastructure for running an efficient and innovative state. This can be described as the starting point for Estonia's pursuit of being one step ahead and boldly doing things as they've never been done before.

Today Estonia is widely recognised as one of the leading digital nations in the world, aspiring to carry the flaming torch further and beyond. This vision stands on three important pillars - building a smart state with a smart economy by smart people. Information technology has greatly contributed towards building Estonia's global presence with fame and glory, especially in the area of public service innovation with the e-residence program standing out as a prime example. But Estonia is also a hotbed for startups, already claiming four unicorns and producing more successful startups per capita than any other country in Europe.



LEADING THE WAY THROUGH GUIDANCE AND ASSISTANCE

Success in ICT is not achieved by merely pooling together talent and funding, as there needs to be a sustainable, innovative and open environment for fostering development. Technology is merely a tool for achieving results and it wouldn't mean a thing without the ecosystem and legislation to support the development. Estonia's ICT export advantage lies in the ability to lead throughout the entire process, owing to the high level of competence covering all nuances and technical details. Rather than just export e-services, Estonians aim to guide and assist and only then develop the necessary technology to match the client's needs, be they public or private sector entities.

While the ICT sector contributes approximately 12% of Estonia's GDP, produces the most value added per employee and pays the most labour tax into the state budget, its importance to the country's economy lies in using innovative ICT solutions for helping other business sectors to advance higher in global value chains. The digitalisation of the entire economy is the focal point of joint endeavours by private enterprises and governmental institutions. Secure and trustworthy services developed by the public sector can find their way to everyday business as well, including industrial digitalisation.

ICT EXPERTISE TRAVELS BEYOND BORDERS

All of this couldn't be achieved without smart and creative people. World-class technical education is the cornerstone of ensuring qualified progeny. Estonia has introduced special education programs to incentivise young aspiring students to choose ICT as their profession, and also to attract talented and capable people from other industries to try their hand at programming. The pilot program "Choose ICT" aims to attract over 500 people by 2020 and already 2/3 of the graduates have switched careers to become junior software engineers.

Thankfully ICT expertise isn't a heavy load to export and travels well beyond borders, extending Estonia's export markets to well over 130 countries. The main export markets for B2B (business-to-business) services and products are in Europe and the US, while B2G (business-to-government) keeps opening up doorways in Africa and the Middle East, where many countries are going through economic transitions similar to those that Estonia had to face in the 1990s. Estonians stand out in the global marketplace for their flexibility and tailor-made solutions and the ability to join forces in partnership for delivering the optimal result.

Estonia's unique talent pool, favourable business environment and a supportive ecosystem make it the perfect test site for launching new products and services or the perfect development hub for major ICT projects. A considerable share of the 30 thousand people employed in the ICT sector in Estonia help to develop and support well-known international companies such as Kühne+Nagel, Transferwise, Bolt, Playtech and Skype - the last four forming the alluring Estonian unicorns club.

WHAT WILL THE FUTURE HOLD?

There aren't many other industries in such a constant development flux as ICT. Future limitations will not be restricted to machines and technology, but to the human users. Estonia will continue as a pathfinding pioneer in the quest for improving the usefulness of ICT without making the users feel threatened or unsafe. Questions of ethics, morality and legal boundaries are becoming more and more evident in the ever-increasing use of artificial intelligence, another sector where Estonia attempts to trail-blaze ahead of the game to find solutions to these exact issues.

Estonia will be able to rely on its solid reputation as an innovative digital nation, its smart people, world-class education system and welcoming business environment for dealing with future change and transformation. What matters the most is the mindset - that Estonia is open to innovation and new technologies and is not afraid to make mistakes, admit them and correct them.

