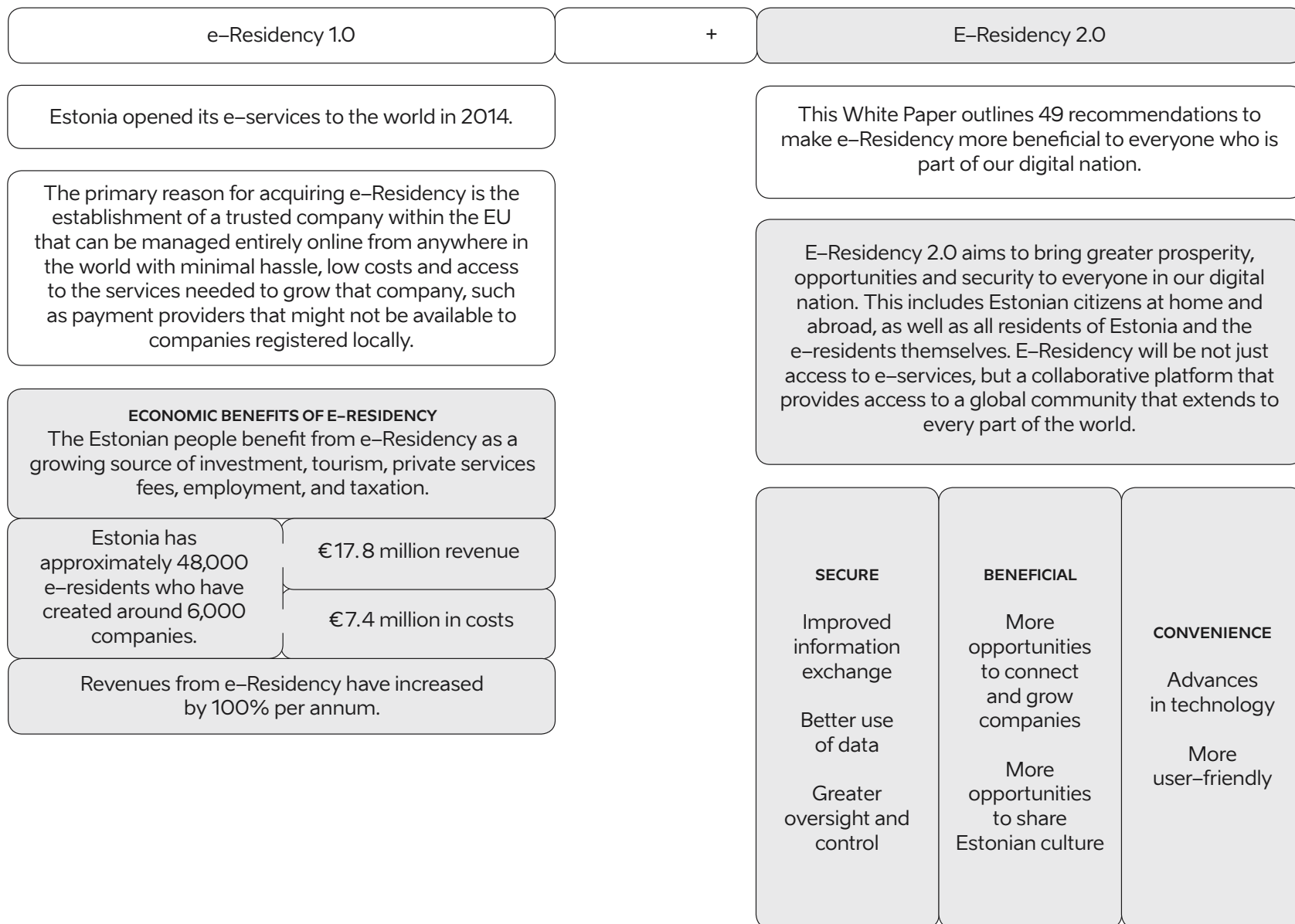


E-Residency 2.0 is national initiative in Estonia based on cooperation between the public and private sector and so the White Paper was developed and originally written by the e-Residency programme in the Estonian language. This English version has been prepared for the benefit of the e-resident community and other international audiences so the translation intends to preserve the meaning and provide greater clarity where appropriate.

Overview	4
Introduction	6
Who are Estonia's future e-residents?	16
Business Environment	26
Legal Environment	40
Technology	52
Culture & Society	62
Acknowledgements	72
Endnotes	77
Definitions	78
Links	79



At 8 o'clock on a Tuesday morning, three people are granted e-Residency in the Republic of Estonia — a consultant named Pierre who in any given year works from five different countries; Azumi, a programmer from Japan; and video artist Miguel from Brazil.

By 2 o'clock that afternoon, our brand-new e-residents have already registered companies in the Republic of Estonia. Pierre starts his company through e-Residency because he wants to be based in a transparent and trusted jurisdiction with paperless management, Azumi registers his company so he can offer services within the EU market, and Miguel does so because he wants to produce a VR film and hopes to find partners among the global community of e-residents.

The following week, Pierre hires Silvia, an accountant from the southern Estonian town of Võru. Azumi teams up with Tõnu, a graphic designer from Tartu, and Miguel finds a producer called Paul and recruits him as CEO. All these contacts evolve into mutually beneficial business and cultural ties.

This is a vision of 2030 when stories like these are the norm among the e-Residency community, which is now several million strong. Estonia has created a new international market and a global platform for collaboration. In one way or another, e-residents account for billions of euros in business activity. The Estonian people reap a noteworthy part of the value generated by the e-Residency programme, in the form of increased business, investment, partnership opportunities, jobs and tax revenues. E-Residency is even a boon for Estonia's national security and has helped promote Estonian culture around the world.

Today, this scenario is already coming true. Estonia has taken the first steps by becoming the first country to establish a global community of e-residents. Close to 50,000 people have signed up. These location-independent entrepreneurs have founded Estonian companies, invested in Estonia, travelled to Estonia, conducted business with Estonian companies, created new

jobs in Estonia, and generated increased tax revenues for Estonia. Many of them have come to view Estonia as more than a location-independent government service provider and so they have also helped to spread the word about Estonia and disseminate its values worldwide.

However, all this shouldn't be taken for granted, as e-Residency is still essentially an experimental platform in the beta stage.

To make Estonia greater with increased prosperity and security, we should build a more convenient and secure e-Residency platform. This White Paper recaps the story of e-Residency to this point and sketches a roadmap for the future, based on recommendations developed through the efforts of more than 100 people.

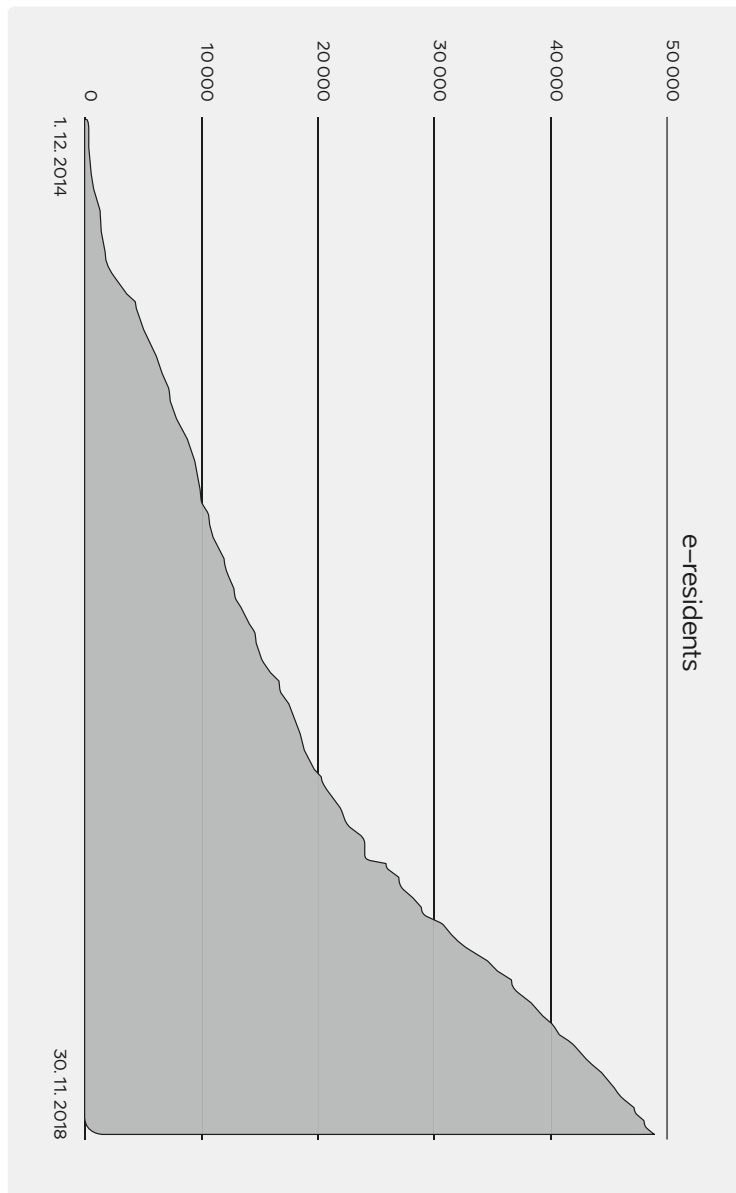
How did e-Residency begin?

Over the last 20 years, Estonia introduced digital versions of most of its public services, using the X-road secure data layer as the backbone of the system. Using their government-backed digital identity, people who are citizens and/or residents of Estonia can go online from anywhere to complete almost any interaction with their state, such as voting, filing tax returns, authentication, registering names for their children, and dozens of other functions. In addition, they can use their same digital identity to access an increasing number of private sector services that also benefit from online authentication, such as banking.

Estonia's digital infrastructure continued to develop, like a startup refining its services, yet the quantity of users who could benefit was always limited to the number of citizens and residents. If the number of users could also be scaled up like a startup then it was theorised that all users would benefit from the improvements brought about by this economy of scale and the startup would also return larger benefits to its shareholders — the people of Estonia.

In 2014, the Estonian state decided to provide digital identities, along with access to Estonia's digital services,

Figure 1. Cumulative growth in the number of e-residents over four years (December 2014 to 30 November 2018)



to citizens of other countries who do not have residency in Estonia. These people were known as e-residents and received e-Residency digital ID cards, which are not to be confused with citizenship documents, travel documents or residence permits, but can be used by e-residents to authenticate themselves online and sign documents digitally.

By taking this step, the Estonian government turned citizens of countries all over the world into potential 'users' of Estonia's services. The next step was to consider which Estonian services were most valuable and relevant to these e-residents, as well as how their use by e-residents could bring value to Estonia.

In the first four years, foreign nationals from 165 countries joined the programme. Early applicants had to travel to Estonia or visit an Estonian embassy abroad, prove their identity, give their fingerprints to the Estonian state and pay a state fee of €100 (previously €50 for the first year) – and they became e-residents.

The number of companies founded by e-residents has grown at a faster clip every year, even though opening bank accounts has been complicated, there was no English-language support for many of the services at the outset, and conducting international business has remained complicated on key issues, such as taxation, for all companies no matter where they are registered.

At first, Estonia sought entrepreneurial people around the world who were interested in living and working with more freedom globally and could give Estonia an idea of what e-residents would most need developed for them next. In partnership with organisations across the public and private sector, services were developed and amendments to legislation were proposed. Companies dedicated to providing services to e-residents soon emerged, and a number of payment service providers allowed e-residents to set up business accounts.

The programme demonstrated it is profitable from an early stage

The first wave of e-Residency included many micro-enterprises and small businesses, such as a Brazilian video game developer, a German insurance expert and a graphic designer from Turkey. All told, e-residents founded 6,000 companies in the first four years. The e-Residency programme holds clear economic benefits for the state. Total government spending on e-Residency up to the end of 2018 adds up to 7.4 million euros, and during the same time period, the state will receive state fees and direct tax revenue of 17.8 million euros.

International taxation is complex for everyone conducting business globally no matter where a company is registered so this is one issue that the White Paper addresses and requires international co-operational. However, Estonia already has a highly transparent business environment and this is one way that Estonia helps ensure taxation is paid correctly and fairly where it is owed, whether that is in Estonia or another jurisdiction. Registering a company in Estonia does not automatically mean that the company's taxes are paid to Estonia.

Soft power and security

Besides founding companies, people joined e-Residency out of the desire to support Estonian culture and their interest in the technology that powers e-Residency. A number of e-residents have become "evangelists" for Estonian digital society – for example, Taizo Son, Mukesh Ambani or Tim Draper, who have promoted e-Residency as a breakthrough approach to public services.

Major world organizations have taken an interest in e-Residency. For example, e-Residency joined forces with the United Nations Conference on Trade and Development (UNCTAD) as a founding member of the eTrade For All initiative.³ Estonia is also a founding member (along with

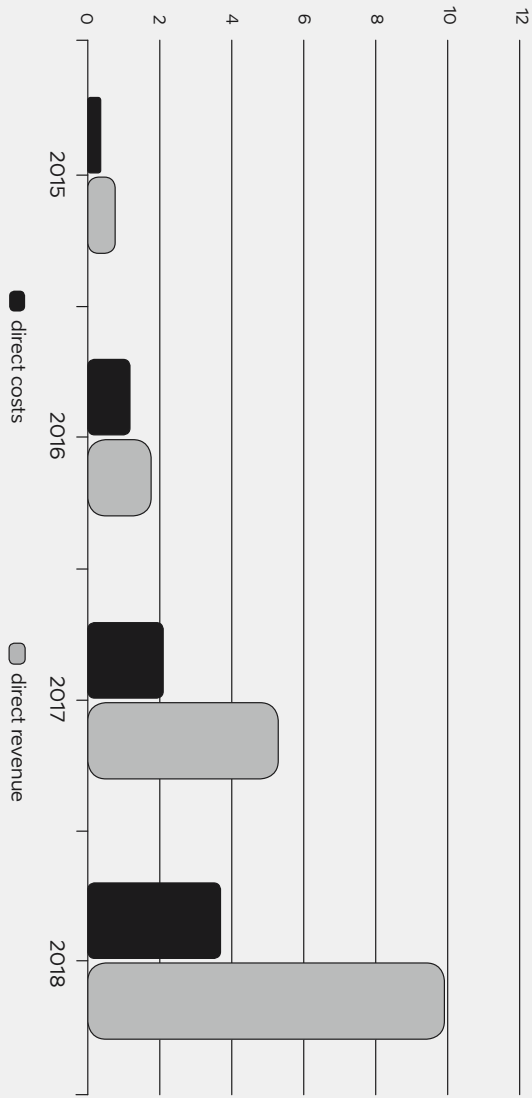
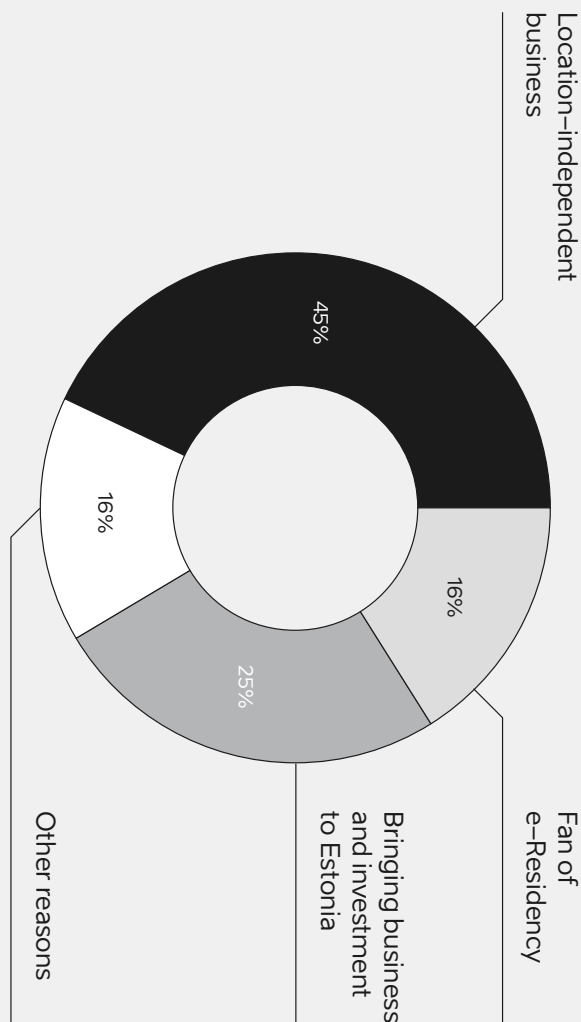


Figure 2. The graph shows the direct costs (in black) related to e-Residency, including the e-Residency programme budget (salaries, sales and marketing, PR and business and product development) and the expenses of the Police and Border Guard Board, the IT Development Centre at the Ministry of the Interior, the Centre of Registers and Information Systems, the State Information System Authority and Chamber of Notaries on additional workforce and development projects). Gray denotes direct financial receipts for the state, including state fees paid by e-residents and taxes paid by new companies they have established. Even excluding indirect income such as investments by e-residents and tourism, Estonia's brand value and export by Estonian companies to e-residents, the Estonian state's profits from e-Residency by the end of 2018 will be 10.4 million euros.¹

Figure 3. Why did they become e-residents?²



the UK, South Korea, Israel and New Zealand) of the Digital 9 organization of digitally advanced countries.⁴

Influential international publications have called Estonia one of the most advanced digital societies in the world.⁵⁶⁷⁸⁹ Internationally, Estonia gets mentioned for e-Residency as much as for all other topics combined.¹⁰

Interviews conducted in summer 2018 by the e-Residency team with Estonian decision-makers revealed that many respondents felt e-Residency will also contribute to increasing Estonian national security. The consensus among the interviewees is that Estonia's influence in the world cannot be realized in silent isolation – it has to be based on the country's good reputation and close international ties, which is exactly what e-Residency will help establish.

The ideas behind e-Residency are thus compatible with the fundamental principles of Estonian security policy, which emphasises that close international relations and global awareness are essential to advancing national security.¹¹ For Estonia, it is important to form alliances with other countries in the world and relations with their citizens, ensuring more people have an interest in Estonia's future. Through strong business and cultural ties, Estonia's importance in the world will grow. By the same means, the deterrent effect on potential aggressors and national security will also increase.

The e-resident community has had a supportive attitude toward Estonia. As a token of recognition and trust, the Estonian state has granted e-Residency to such well-known, influential international people such as His Holiness Pope Francis, German Chancellor Angela Merkel, Japanese Prime Minister Shinzō Abe and businessman and philanthropist Bill Gates.

Criticism of e-Residency

Although it has bred many success stories, e-Residency has not been immune to criticism. Critics have noted that

the experimental nature of e-Residency has led to haste and lack of clarity. It has been argued that the startup-like philosophy adopted at the launch of e-Residency will have to be supplanted by a more stable framework as the programme matures.

In 2017, a case of fraud involving e-Residency came to light. The scheme involved appointing foreign nationals who exercised only a formal role to the management boards of companies in financial difficulty. The spring of 2018 saw a public debate between the startup community and financial sector, which drew criticism of the e-Residency programme from representatives of the Estonian Banking Association. It was plain to see that e-Residency can go forward only through cooperation between all stakeholders, taking into account their common interests.

The debate culminated in Estonian President Kersti Kaljulaid and the e-Residency programme making a joint call for the drafting of a new White Paper on e-Residency. In the course of the summer and autumn, tens of Estonian experts, politicians, officials and business figures put their heads together on how to reduce the risks related to e-Residency and increase the benefits generated by the programme.

E-Residency 2.0 as an influential community in every corner of the world

E-Residency 1.0 was a proof-of-concept experiment conducted by Estonian government departments and companies that demonstrated that there is demand for e-Residency around the world. It also proved that Estonia was able to earn revenue from e-Residency. Further developments could make the dream of a 10-million-strong e-Residency community a reality and provide an answer to the question: “why do we need so many e-residents, anyway?”

E-Residency 2.0 is the new and improved version of e-Residency. It’s a springboard for the export of Estonian services, products and culture through a robust community that extends to everywhere in the world. By this means, we make our economy and culture greater, and bolster Estonian security too.

For e-residents, Estonia offers increasingly convenient ways to successfully pursue activities independently of their location. Indeed, digital nomads — professionals who live and work in more than one country and offer cross-border IT and consultation services — are one focus of the programme. E-Residency gives them a way to establish trusted companies in the European Union and remotely manage them with low overheads.

E-RESIDENCY 2.0

WHO ARE ESTONIA'S FUTURE E-RESIDENTS?

In cooperation with e-residents,
Estonia can help promote
development in the fields of
economy, culture and security

The benefits generated from
e-Residency can be measured and
directed more precisely

Already today, all e-residents undergo
thorough background checks

A risk-based approach will make even
more comprehensive background
checks possible in future

There are ways of establishing
controls on e-residents engaged in
unlawful activity

Estonia has always extended beyond its borders. Like other countries, we have been surrounded by an international community of Estophiles, business partners, culture aficionados, and political allies. Estonia was the first in the world to accord official status to this constellation of supporters, by giving these people the e-Residency platform to make it even more effective and rewarding to network.

Basically, Estonian e-residents are people who deemed it necessary to apply for the status, pay state fees and entrust their data to the Estonian state, and whose application has been approved by Estonia. In this regard, e-Residency is like driving privileges — if a person meets the legal requirements and wants to have a driving licence, the state doesn't start imposing additional demands such as what car they drive at a given time and where they want to travel. At the same time, drivers are expected not to endanger other motorists and must obey the law.

From the other vantage point, the Estonian state has its own objectives in developing e-Residency. In the same way, the state has its own goals in deciding where to build four-lane expressways, parking garages and airports to stimulate the economy, while restricting traffic in parks and courtyards for public safety and environmental protection. Estonia's e-Residency objectives are tied to improving the economy and advancing its culture, supporting the country's security, and combatting money laundering, scams and other criminality.

In light of these objectives, the Estonian state is seeking e-residents who are directly or indirectly ready and able to take part in the Estonian economy or cultural sphere. For this purpose, we first have to visualize how different groups of e-residents impact Estonia.

A detailed understanding of this impact allows new decisions to be made — for example, Estonia wants to increase the size of the bracket made up of e-residents who contribute 100,000 to 500,000 euros per year in Estonia in the form of direct taxes and job creation.

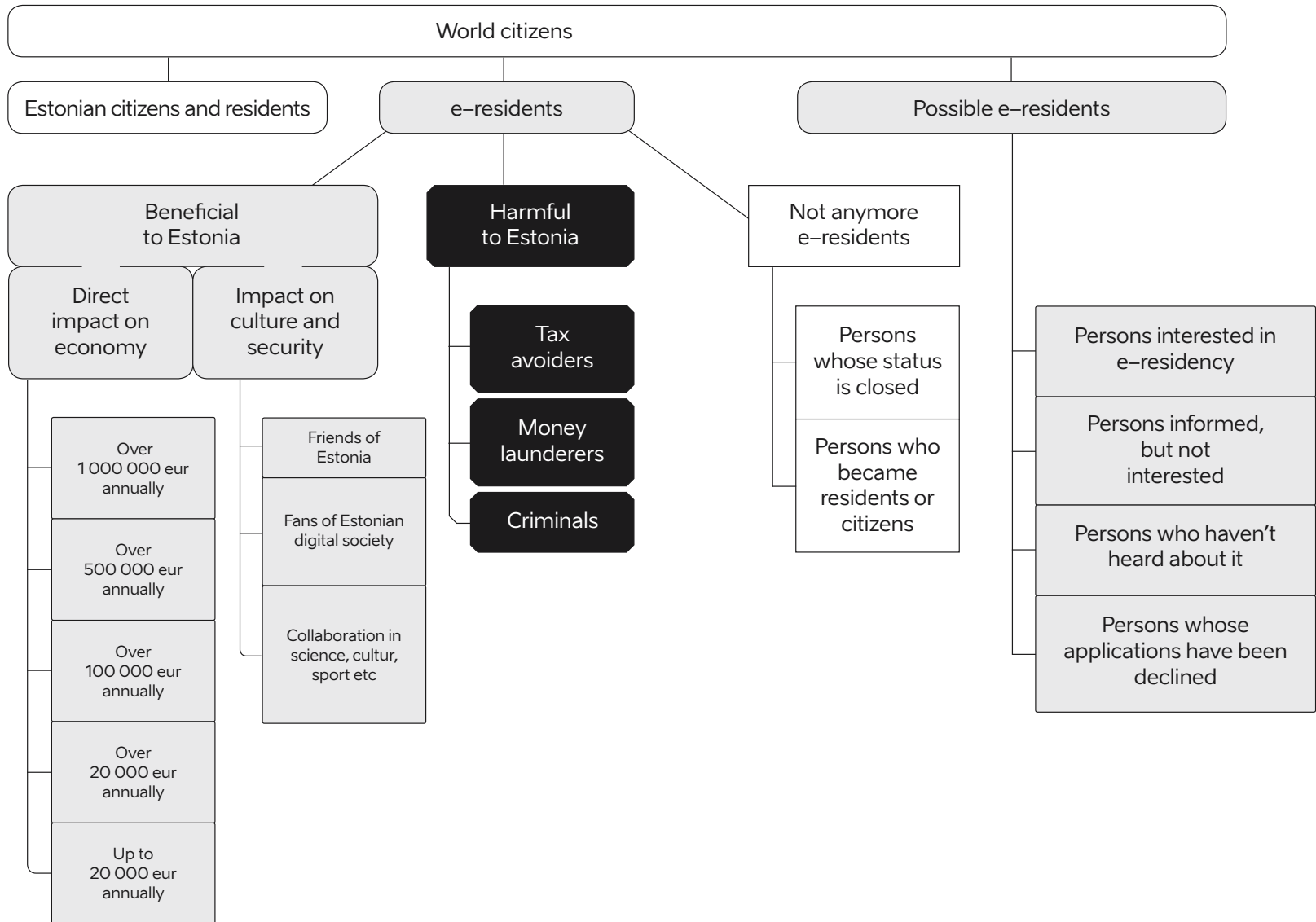
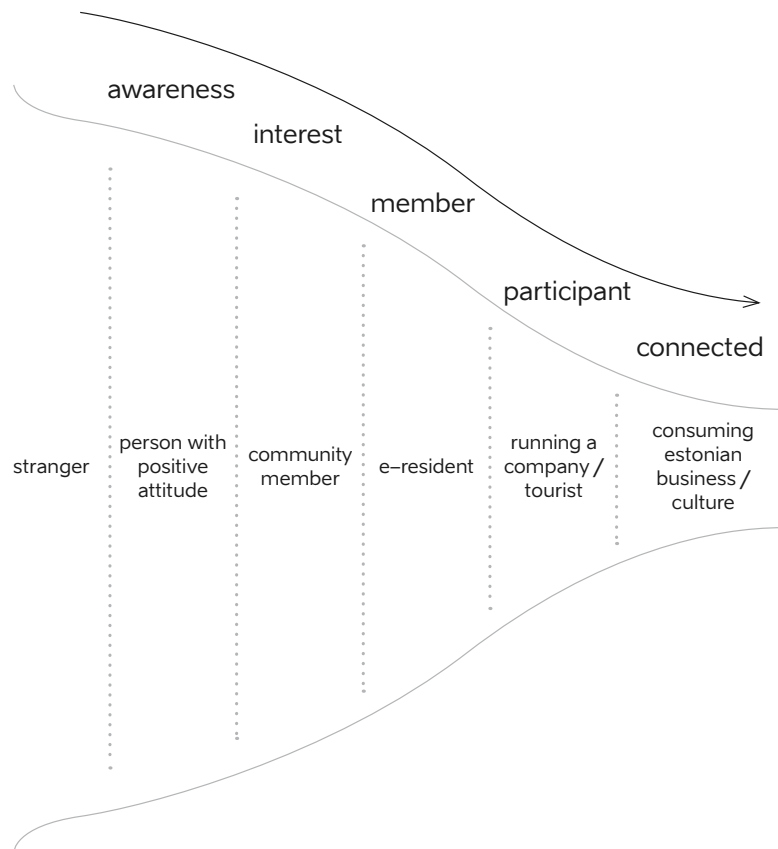


Figure 4. E-residents viewed on the basis of economic, cultural and legal characteristics



Unfortunately, every community also has people who don't follow the rules. A detailed understanding of the impact also makes it possible to quickly detect any e-residents who are engaging in illegal activity, warning them at the first violation and taking punitive action when necessary.

As we develop e-Residency, we must realize that some e-residents find themselves in an unknown cultural, social and economic environment and they have to get up to speed on many new aspects related to the Estonian and European legal space and norms. Mistakes committed out of ignorance are possible. It's a good idea to offer not just first-time offenders, but all e-residents clear information on the rules – what is acceptable activity in Estonia and what is not.

If a person who violated the law demonstrates that they are earnest about getting in step with correct practices in Estonia, they can continue on as an e-resident; if not, the certificates are cancelled on their e-Residency digital ID card, essentially meaning that their e-Residency is revoked.

Becoming an e-resident of Estonia is usually an incremental process. For every entrepreneur or cultural figure who is robustly engaged with Estonia, there are many who are just starting to learn about the possibilities Estonia has to offer. Some of these people will move closer to Estonia over time, engaging in more substantial cooperation. The better people get to know the Estonian state, people, society and economic space, the more they will be interested in contributing to Estonia personally – and if they have developed more substantial ties to Estonia, the contribution will also be an economic one. Subsequent government cabinets will decide whether, in some cases, e-residents who make a commitment to this path could be granted physical residency as well.

Specific proposals:

- 1 In cooperation with the state and private sector, creating a detailed data-base on e-residents' economic activities
- 2 Engaging more with Estonian universities and think tanks to contribute to discourse on e-Residency topics, calling on the research community to study the impact of e-Residency, developing future scenarios and engaging in cooperation
- 3 Setting a goal of growing the number of influential e-residents and keeping the percentage of e-residents engaged in harmful practices at 0.1% of the total number
- 4 Implementing an automatic biometric system
- 5 Developing a basic document that educates e-residents about Estonian values and the legal environment
- 6 Ensuring that the application process

for becoming an e-resident is based on available information and risks related to specific individuals

- 7 Analysing possibilities for making changes to the systems such as the Population Register that would allow the state and the e-resident themselves to terminate their e-resident status
- 8 Creating for e-residents the possibility of updating their data in the Population Register, such as a change of address
- 9 Establishing a legal basis for processing e-residents' data (from Police and Border Guard, Tax and Customs Board, Centre of Registers and Information Systems and Statistics Estonia), so that the programme could carry out in-depth analysis, which will help to maintain the programme's focus better and more clearly
- 10 Looking for ways of bringing more female entrepreneurs on board, in order to diversify the e-Residency community

E-Residency will create a new, fast-growing market for Estonian companies run by citizens and residents

Revenue from e-Residency already now outstrips expenditures

Annual doubling of volumes could be set as a goal

The programme's focus should be placed on digital nomads — location-independent professionals

For the first time in history, Estonia has a chance to create a global market with rules based on its values, and increase the size of Estonia's economic space several fold.

Already today, e-residents' companies are expanding the Estonian economic space. Consider a company like the new-generation optic cable network pioneer Estonian Fiber OÜ, which recruited eight workers in Estonia over half a year and pays workforce taxes of more than 15,000 euros per quarter. Estonian Fiber's German owners say e-Residency helps them keep management costs down.

Estonian economic space is also expanded by Good Stuff Solutions OÜ, an e-resident company with 84 employees, which paid 37,000 euros in taxes in the third quarter of 2018, or Ukrainian Rent Service OÜ, whose workforce taxes flowed in at a similar pace — 43,000 euros in Q3.

Along with these examples, e-residents had founded 6,000 companies by the end of 2018.

To reap economic benefits from e-Residency, Estonia has to resolve the problem of e-residents' access to banking, make e-Residency easier to use, and offer e-residents new, more competitive services. In the sense of economic benefits, it's important that as many Estonian companies as possible take part in proposing new services.

Estonia gets a return on e-Residency in a number of ways:

1. When an e-resident registers companies in Estonia, other Estonian companies can earn revenue by providing services to them.
2. More work for Estonian service providers means more jobs for the Estonian population.
3. E-residents also create jobs directly, and pay taxes on both their workforce and profits earned and distributed in Estonia.

4. The e-Residency community is also a business networking community – Estonian entrepreneurs can find contacts in other countries in the world more easily by going through the e-Residency community.

5. Successful microenterprises founded by e-residents get bigger over time, and it is possible that as they grow they will continue doing business in Estonia, bringing in more investments and creating jobs. The addition of high-salaried positions will translate into more consumer spending and tax revenue.

Feedback from e-residents indicates that they earn income from e-Residency because it gives them access to the EU market and other e-residents' market, they find it easier to do official business, and they can save on overhead costs thanks to transparent and digital means of doing official business.

To this point, the main criterion for gauging the performance of the e-Residency programme has been the growth in the number of e-residents, but we believe that as the new indicator, Estonian state revenue from e-Residency should at least double each year. That means that the growth of the number of e-residents and the number of companies founded by e-residents, and their sales and turnover figures should continue to grow.

In developing e-Residency services and sales, Estonia should, at least for now, focus on people to who Estonia is naturally best-poised to provide services.

The number of digital nomads – specifically, entrepreneurs that operate mainly in IT, software services and consultation fields with no requirement for a fixed location – is growing all over the world. They're entrepreneurs with a mobile lifestyle who might live in many countries in the course of a single year and who do cross-border digital business. The number of digital nomads is constantly growing.

Location-independent entrepreneurs generally run small businesses. That creates a disproportionate burden on them to have to deal with lawyers, accountants and other advisers to navigate the laws and rules in different countries. This is where the e-Residency programme comes in – thanks to the Estonia's digital public services and the streamlined business environment, the e-Residency programme has good prospects for being an affordable, transparent and trusted business environment for digital nomads.

Estonian entrepreneurs also stand to gain from relations with location-independent entrepreneurs through a marketplace created by the Estonian state and "ask a local" service. The Estonian business community would have access to a global network of business contacts, and a source of partners for distributing Estonian products and services in places around the world.

For example, if an Estonian company wanted to export dried blueberries to Seoul, they could ask local e-residents for recommendations and contacts for local stores and distributors, all the way up to meeting up with locals and picking their brains for more ideas for business ventures in South Korea.

The platform must become easier to use

The Estonian e-Residency platform has to be uncomplicated and user-friendly. The selection of services has to be broad and accessible through a single website (for more on this, see the Technology chapter)

The e-Residency team is developing a marketplace meant for helping Estonian, as well as international, companies provide services to e-residents. This would be a services export platform and eventually a store where e-residents can access private and public sector services, all rolled into one.

To increase ease of use, all of the interfaces will have to be translated into English. New amendments to

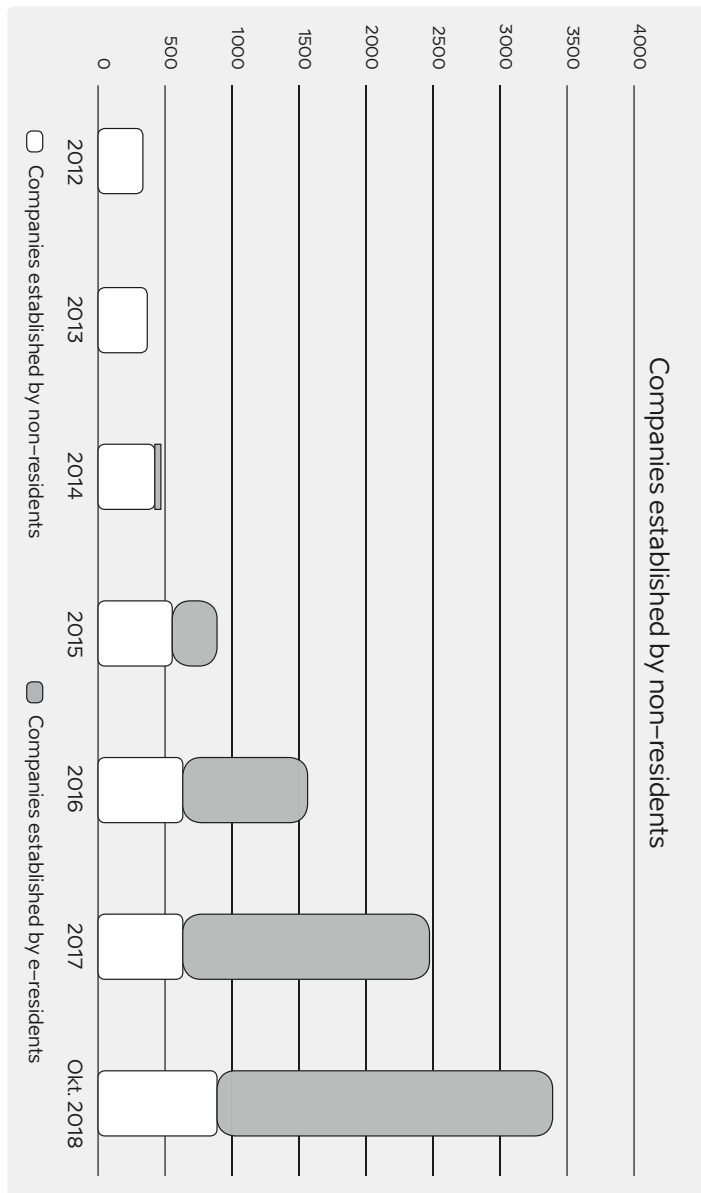


Figure 5. The table shows newly created companies in which one of the partners or shareholders is an e-resident. Companies that predated the start of the e-Residency programme are not included.

legislation, regulations and explanatory notes will have to be translated in a sufficiently timely fashion to allow e-residents to read and comment on them.

Physical space should not be overlooked when it comes to establishing an environment for e-residents. Authentication of e-residents should be possible in every major region – three cities, São Paulo, Bangkok, and Johannesburg, are key examples of where physical representation could be expanded next. A co-working space could be established in Tallinn as well for e-residents physically present in Estonia to meet and telework. This idea can also be implemented in cooperation with the e-Estonia Showroom or private sector.

E-residents can get support on the subject of paying and managing taxes

E-Residency does not offer tax optimisation services or condone tax avoidance or its variations. One idea that has been discussed in the context of e-Residency is that Estonia could help e-residents file taxes in their home country.

As of today, the idea does not see such a step as realistic; however, it is possible now for Estonia to develop a machine-readable tax return downloadable by all e-residents. Even if there isn't immediately high numbers of users for such a tax return form, the feature would emphasize the transparency of the e-Residency platform. In future, foreign tax authorities may start requesting information from the Estonian Tax and Customs Board in machine-readable form, as it would mean lower costs for the foreign authority in assessing taxes on their country's residents.

Some digital nomads live in a given country for only 2–3 months at a time. This type of nomad can choose their tax residency and their home country. If these kinds of entrepreneurs become e-residents, Estonia can offer

a social tax model where Estonia collects social tax and also provides health insurance and pension to them.

Such a system must not place additional strain on the existing social insurance system in Estonia and could be treated separately from the social security system enjoyed by Estonian citizens, as a type of state health insurance and funded pension that brings in additional revenue for the state. Meanwhile, digital nomads would gain an easy way of interacting with the social security system of one specific country. Naturally, such a solution would make it possible at a future date to offer healthcare to e-residents; which would in turn contribute to the export of Estonian healthcare services.

Solutions to banking problems exist

Three years ago, the Estonian government and Estonian-based banks worked together to improve the ability of non-residents to access business banking for their companies under simplified procedures, by way of video link for opening an account. Wider tightening of banking rules worldwide made it challenging for the benefits of this change to be implemented by the private sector however. For understandable reasons, it became harder and more complicated for European banks to offer bank accounts to non-residents who had no clear tie to the destination country. For some e-residents, opening a traditional bank account in Estonia became extremely complicated.

Besides traditional banking, a number of payment service providers have emerged. Using a combination of these various services, e-residents can cover most of their needs for traditional business banking. As a consequence, Estonia managed to reach agreements with service providers such as Holvi, Payoneer and others that allow e-residents to open IBAN accounts in various EEA countries.

Thanks to amendments to the Commercial Code

set to come into force in January 2019, contributions to companies can be paid in from an account held with any credit or payment institution based in an EEA country. This resolves one challenge for e-residents – where confirmations of paid-in share capital from foreign payment service providers were not previously accepted.

For many e-residents, opening a bank account with traditional Estonian-based banks is still possible. E-residents that can demonstrate a connection to Estonia or are running a single-shareholder company with easily trackable income, both of which make up a significant proportion of the e-resident population, are the most likely to obtain traditional banking in Estonia.

For other companies, it can be harder (and more expensive for the bank) for an early stage company established by a non-resident, although they do now have more freedom to choose from banks and payment institutions across Europe thanks to the amendment to the Commercial Code already mentioned. In addition, if an e-resident has already obtained an IBAN account with a financial services provider to establish a company with employees in Estonia, it will have a significantly easier time opening a bank account at Estonian-based banks. In this way, the influx of e-residents will ultimately also feed Estonia's traditional banking market.

One of the biggest challenges remaining is understanding this complex variety of choice and how its availability or advantages differ depending on the circumstances of both the company and the owner. To make life easier for e-residents and banks, a bank account wizard for e-resident companies should be developed in 2019. This utility would take into account the e-resident's personal and company background and match it against the requirements and advantages for different credit and payment institutions in Estonia and beyond.

Promotion of e-Residency

To this point, promotional efforts for e-Residency have been a joint effort by the Estonian government, companies, the people of Estonia and e-residents. Often government officials have done more than is expected of them to market e-Residency. A good example of this is the work done by the Estonian foreign service all over the world. Based on the conviction that Estonian e-Residency could inspire people in future as well, Estonia could do more to smooth the way for promotional efforts.

Partnerships with large organizations such as the UN, Digital 9 and others should be continued to test new ideas that point up Estonia as one of the world's digital society leaders. Estonia can create partnerships with business organizations such as Wework¹² to guarantee that e-residents enjoy convenient service anywhere in the world.

Estonia can use the e-Residency platform for disseminating other successful Estonian ideas and business models around the world. One such idea is the creation of a global Estonian school franchising model based on the success of Estonian schools on the PISA standardized test. The outcome would be a global network of Estonian schools, which offer, for a tuition fee, a certain standard of education for e-residents' children and other comers.

In cooperation with an international think tank, Estonia could create an Ease of Doing Digital Business index based on which the countries of the world are ranked in terms of how easy it is to get things done with those countries digitally. Estonia's interest in creating such an index would be to exhibit its expertise in the field of digital society.

Specific proposals:

- 1 Translating into English all legislation, emails, service descriptions, website and other important texts needed by e-residents in their business
- 2 Creating an e-Residency Marketplace on the programme's website to support export by Estonian companies
- 3 Creating an "ask a local" service for supporting business contacts with Estonian citizens, residents and non-residents
- 4 Setting doubled revenue every year as a new performance target
- 5 Based on economic goals, results of risk analysis and proposed risk management measures, opening outlets where external service providers would be able to issue e-Residency digital IDs, in addition the current network provided by Estonia's foreign representations. The first three would be strategically located

in cities with growing business volumes:
São Paulo, Bangkok and Johannesburg

- 6 Developing a franchising model to engage partners for establishing e-residents' centres
- 7 Creating for e-residents a company bank account wizard that would point e-residents in the direction of the most suitable credit or payment institution
- 8 Continuing work to increase the number of banking and payment service providers that serve e-residents
- 9 Continuing efforts to make the Estonian business environment more attractive to trustworthy payment service providers
- 10 Developing an international standard for transmission of tax information between countries in machine-readable form

- 11 Developing a simple guide that explains the entrepreneurial environment, taxation and reporting to e-residents engaged in cross-border enterprise
- 12 Creating an international Ease of Doing Digital Business index
- 13 Encouraging new fields for enterprise (nature conservation, tourism, culture and media, sport and leisure time and government initiatives such as the Maritime Administration's electronic ship registry) in the e-Residency communication portfolio

The e-Residency programme should focus more on quality, not just quantity of companies

The most important tool for hedging risks is transparency

Taking risk-based ex ante and ex post checks to a new level

When e-Residency was launched, more was said about quantity of companies founded by e-residents than their quality. The aim of the Legal environment chapter of the e-Residency White Paper is to make proposals for improving quality by harnessing the power of the legal system.

Estonia has different kinds of e-residents, and their needs vary. Some e-residents have extensive connections to Estonia. Others use e-Residency as a platform and springboard to Europe. There are also e-residents who are not engaged in business.

An important question is how the legal environment could be supplemented to curtail misuse of e-Residency, reduce financial sector risks and increase the contribution that e-residents make to the Estonian society and economy. We could discuss what kinds of actions Estonia needs from the private and public sector, what we need from the EU or even at the world level. It is important to foster an understanding of how we can get the Estonian vision of e-Residency's legal framework into the consciousness of a judge in Germany or a lawyer in the US.

The objective of the legal environment is to find a balance between the expectations of different interest groups — one that is in line with the Constitution and Estonia's international obligations. In promoting e-Residency, we have to hedge the related legal risks, and do so in a way that does not diminish the practical benefits of e-Residency. The chapter describes problems that will have to get a legal solution as we go forward. It should be noted that many of the problems noted in the White Paper also apply to non-residents, residents and all companies registered in Estonia, not only e-residents.

Opportunities

Because of its novelty, e-Residency is poised to capture a large market share of trust-based services and offer Estonian companies a significantly larger consumer base.

By drawing businesses and investments to Estonia, we will increase tax revenue and offer e-residents and their companies convenient services.

One such example is the idea of collecting taxes from digital nomads, mentioned in the Business Environment chapter.

According to various estimates, the number of digital nomads globally is continuing to grow at ever faster rates, and for many the average stay in a given country is about 2–3 weeks. These are people who often drift between different tax systems and most countries in the world would not conclude that they are based in their country. Therefore, these people aren't clear on where they should pay taxes, and to what extent.

It shouldn't be like that. There are close to 200 countries in the world, which means there are close to 200 finance and social welfare ministries and 200 tax and social insurance boards. But there is another jurisdiction with intense economic activity but does not have a finance ministry or social insurance board and that's the Internet. Estonia has a potential way of filling this void.

As things stand, these digital nomads would have to artificially claim domicile in a single country, which they are generally free to do, or rely on insurance products offered by the private sector for their healthcare coverage and pensions. Estonia could offer digital nomads a way to pay personal social taxes and be insured in exchange. Social tax service could be offered or, in the future, general tax service based on income and social tax assessments.

As long as the digital nomads are not in the country, their Estonian insurance package would include travel insurance based on an annual premium, to cover the unforeseen situations that may arise anywhere in the world. Currently, such services cost 60–80 euros a year in Estonia.

To increase the trustworthiness of companies founded by e-residents, an improved system of credit ratings can be established. Estonia would be capable of

doing this based on the data collected on e-residents and their companies. This will also facilitate the efforts of banks to comply with anti-money laundering rules.

E-Residency need not be limited to services provided to e-residents by the Estonian state and Estonian-based services providers. It will make it possible to offer global access to e-services through authentication and recognition of digital signatures outside the EU's eIDAS regulation and through bilateral international treaties. For example, after Brexit, e-Residency could have benefits for companies already registered and operating in the UK, as it will give them access to EU public-sector services in digital form.

Risks

E-Residency has not led to new risks, but some of the risks already present in today's economy may be amplified by e-Residency. We recommend developing a risk-based approach to issuing the e-Residency digital ID card, based on the standard principle of using known information to make the best decision possible about future behaviour.

The countries of origin of e-residents have different risk levels, as cooperation is not at a sufficient level with all countries. In the big picture, countries of origin fall into three categories: EU and EEA countries; third countries with visa freedom; and third countries with which the EU does not have visa freedom. Although there are some outliers in the last category, in general the third countries that lack visa freedom require more scrutiny.

Since time has shown that many e-residents will want to visit Estonia at some point, it is a good idea to screen citizens of countries in the third category — already in the course of processing the application for the e-Residency digital ID card — as to any clear circumstances that would rule out granting a visa to that specific citizen.

The digital ID card application process is a way to evaluate the general trustworthiness of the person and whether their statements are accurate; their status and ties in their country of origin, why they wish to become an e-resident and whether they are capable of using digital ID; and whether the person has been flagged by any monitoring mechanisms.

Similarly to migration proceedings, processing a digital ID application focuses on the national identity of the applicant as stated in their internationally recognised travel document. Without one-to-many biometric comparisons, multiple identities cannot be ruled out, but once the automatic biometric identification system is introduced, existing data can be checked and identity conflicts resolved.

Because the basis for denying, suspending and revoking the e-Residency digital ID card are the same as the grounds for denial and revocation of visa and residence permit and the grounds for establishing a prohibition on entry to the Schengen area, it is possible in the case of an unfavourable outcome to strip a person of their e-resident status and establish a Schengen entry ban – depending on the gravity of the violation.

A small country's greatest enemy is a poor reputation, whether it's being thought of as a tax haven or a refuge for criminals, which then harms the country's ease of doing business globally. A coercive measure can't be limited to solely revoking digital ID certificates or closing an e-resident's company, as these actions would sever ties with the person and make it harder for them to discharge their obligations to the state. Consideration should be given to how to detect various problems as early as possible through automated solutions.

Ideas for measures have been proposed – for instance, sharing and posting e-residents' debts and restrictions on activity on the Estonian company registration website, or establishing a restriction on founding new companies if the person is a board member

in a company that has failed to file its annual report within a given year.

Estonia has too little information on the operations of e-residents' companies outside Estonia, so it is worth exploring ways to further increase transparency. The state has required Estonian companies with foreign-based management board to appoint a contact person, but that contact person has no obligation to possess information about the activities of a company operating abroad. As a result, further thought should be given to how to supplement the information submitted to the company registration portal when a company is founded. For example, during the company registration process, the applicant could be asked where the company's establishments will mainly be located, in what fields the company will transact business, and in which country the company will pay its taxes. The above information would assist oversight bodies in performing ex post verification.

Many e-residents get business support from business services providers. We should analyse ways of making such services at least partially compulsory for e-residents. Then we can think about ways in which these services providers can share information on the e-resident's operations with the state in cases where the operations are not based in Estonia.

As business service providers have occasionally provided prohibited services to e-residents, it is important to review and tighten up the process of applying for activity licences in these fields and shore up supervision over these activities.

Potential money laundering, fraud and other illegal activities committed by unethical entrepreneurs, potentially including e-residents and their companies, are always easier to prevent than to deal with the consequences. At the moment, tax-related cooperation with EU countries and countries with taxation treaties is taking place. Additional cooperation agreements should be signed with OECD countries.

When registering a company, applicants should provide information on where they will pay taxes and be asked to provide consent for the Tax Board to receive simplified data from foreign countries (country of location + countries in which the business operates). If an ex post check finds that an e-resident's Estonian-founded company is operating in the e-resident's own country of location and the company is required to pay taxes there, the Estonian tax board could notify that country's tax authority.

There could be an online option, similar to the one used by Airbnb, for requesting documents from e-Residency applicants or existing e-residents (conducting proceedings, compulsory enforcement actions, issuing of activity licences etc.).

How other countries respond and view e-Residency is also beyond the Estonian state's direct control. If Estonia's legal concepts are not recognized in the e-resident's country of location (companies are not recognised as resident in Estonia, taxation of non-residents etc.) Here, too, the only solution is putting out constant, consistent and accurate information to the rest of the world. The work of explaining the requirements of Estonian legal acts and how consequences of violations will be dealt with must be done already at the stage where applicants applying for e-Residency and in the process of providing services.

For a small country such as Estonia, the state's own capacity to contribute is certainly a challenge. The state has limited resources for developing public services' reliability, security and user experience. Potential legal disputes and claims against the Estonian state in connection with different treatment of Estonian residents and e-residents; shortcomings of administrative proceedings carried out with regard to e-residents in absentia (violation of the right to be heard); infringement on the privacy of e-residents; possible ways of mitigating these: asking for consent and waivers from e-residents in the terms of service.

Specific proposals:

- 1 Introducing the nature of e-Residency to international legal experts, such as the fact that Estonian e-Residency is not a contributor to tax avoidance or evasion
- 2 Creating an effective means of providing state services remotely (e.g. e-notary)
- 3 Initiating bilateral agreements with the principal countries of origin of e-residents for exchange of data needed for early warning systems (prohibitions on enterprise, for obtaining data from the criminal records database and other databases)
- 4 Ensuring that supervisory institutions have sufficient human and technological resources for conducting risk-based ex ante and ex post checks on e-residents
- 5 Analysing the possibility of collecting social tax from digital nomads to fund provision of health insurance and pension fund

- 6 Improving background checks of prospective e-residents before they become e-residents, obtaining information and asking e-residents to declare data on their past activities.
- 7 Shoring up due diligence business service providers applying for an activity licence. Analysing how service providers could share information related to the activity of e-residents' companies with the state
- 8 Engaging in cooperation with anti-money laundering organizations to ensure that Estonia places high in rankings of countries with the lowest money laundering risk
- 9 More precisely defining the roles and responsibilities of the Police and Border Guard, Tax and Customs Board and other law enforcement and oversight bodies in conducting background checks on e-residents

Besides the digital ID card, Estonia must look for new and more convenient means of authentication for e-residents

Estonians must also benefit from updates to the e-residents' technological platform

The e-Residency website and data exchange must be taken to a new level

With an eye to the development of the digital government, we recommend supporting R&D for mapping new technological opportunities

Technology should be a means, not an end unto itself. Thus, e-Residency technology should support Estonia's economic, social and cultural objectives. As the electronic public services that e-residents need are also part of the package of services used by Estonian citizens and residents, most of the technological facilities used for e-Residency could also reach ordinary citizens. If necessary, only the view for end users could vary, just as the Eesti.ee page looks different to the e-Residency website, e-resident.gov.ee.

Digital identity and means of authentication

The number of means of authentication will have to be increased to make the use of digital identity more convenient. Today's e-Residency digital ID card is quickly becoming outdated and handing one out to e-residents is a resource-intensive activity. Delivering the chip cards is an expense for the Estonian state and e-residents themselves, and it is inconvenient to use.

The main problem with the chip card is that it can't practically be used with mobile devices. The software exists, but ID card readers are not made to be connected to a smartphone. The practical use of the e-Residency ID card also depends on external parties such as operating systems and browser developers. We need to analyse how e-residents can be offered mobile possibilities for authentication and digital signing. Also, we should consider that SIM-card-based solutions in foreign countries are currently impractical.

Mobile means of authentication for e-residents could be "approved" and activated in the course of meeting with an Estonian representative at an embassy or other issuing point. Thus, in the case of a positive decision, a brand-new e-resident could start using the services immediately with no need to go in a second time. That would mean that people applying for e-Residency could choose whether they would prefer a mobile

solution, digital ID card or use their own country's means of authentication, i.e., provided that we consider it the equivalent of Estonian means of authentication for the purposes of the eIDAS regulation. If a person opts for their own country's means of authentication, activation of e-resident status can take place immediately after they pass their background check.

E-residents have a digital identity issued by the Estonian state, and currently it can be used through a physical means of authentication — the e-Residency digital ID card. Yet e-residents also have other digital identities (such as ones issued by their home country or commercial services) and they come in all different levels of security and trustworthiness. We should analyse whether e-residents could administer their electronic identities as needed through a single secure platform. It will be important to ensure that the user has control over the information they share with, say, service providers.

User experience

Services needed by e-residents should be available through a single portal. It should be analysed whether it makes more sense to have a website aimed solely at e-residents, or to assign e-residents a separate role in the state portal. Arguments in favour of a separate portal are the fact that it could be used before becoming an e-resident — besides the first-time application, it could also be used to check one's status. Today the greatest number of queries are to check status and make an appointment. The new portal could be a further development on the current e-resident.gov.ee site.

The portal should have a single style across all services and ensure access to everything the e-resident needs. Besides the Commercial Register, Tax Board and other agencies, and managing one's own data, the site should be an interface for the services provided by private sector companies through the e-Residency Marketplace,

discussed in the Business Environment chapter. The current situation — where the e-resident has to fill out additional fields each time they sign up for a new private-sector service — can certainly be simplified.

An e-resident should be able to configure their desktop as needed — the default should be simple access to all of the main functions. Instead of a catalogue of hundreds of services, they could have the possibility to choose from logical groups of activities.

In building this kind of site, it would make sense to standardize and re-use the most common components. For example, payment solutions for credit card, PayPal or online banking should be standardized for all state services. Access to services (SSO), user interface frameworks and all other essentials should also be as standardized as possible.

It should also be considered that services (or a portal of this kind) can never be fully completed. User behaviour and feedback are important inputs for constantly developing further.

Data transfer

Exchange of data between state and private sector could be made more efficient. It would make it much easier for the private sector to develop the services e-residents need. The main challenge is administering the permissions and authorizations for using e-residents' data and retrieving one's own data from the public sector through the data transfer APIs.

E-residents should have the option of granting and rescinding access to data concerning them. To safeguard security and conform to regulations, there will probably have to be a standardized approach to administering these privileges and authorizations, yet the approach also has to be decentralized, through the X-road protocol at the same time. For instance, private sector service providers could develop an environment where people can authenticate themselves, request information concerning themselves

through an X-road query and then allow the service provider to use the information.

Exchange of information in the private-sector-to-state direction as well as vice versa could be improved. Estonia wants to ensure high security and an impeccable reputation for the e-Residency programme, and to do so, we could consider asking the private sector for reports on the conduct of e-residents. As an example: if a bank decides to end a relationship with an e-resident, the state could analyse why the bank did so and if necessary, suspend or terminate the person's e-resident's status. If the state decides to revoke the certificates on the e-resident's card, an automatic notice should go out to banks and payment service providers with which the police has an agreement on exchange of information and which provide payment-related services to e-residents — in this way the banks and providers would also be aware of the fact that the state has decided to revoke the certificates and why it did so. A similar exchange of information could be possible in a standardised form between different private sector service providers. Such activity would need additional analysis from the legal and practical perspective.

The legal analysis could, among other things, answer the question of whether the e-resident themselves should be able to access their report and, as to the practical analysis, it should be made certain that the additional administrative burden on private companies would not make them less keen to provide service.

To help make the exchange of information more flexible and secure, a verifiable claims model could be implemented over the digital government platform (e.g., the Population Register confirms the person's age, the bank confirms liquidity, or a university confirms that the person holds a degree etc.). The e-resident could share such confirmations with other parties at their own discretion.

Cyber security

Cyber security is an ongoing process that is part of the e-Residency programme. E-residents should have the possibility of conveniently and rapidly checking actions and transactions executed from under their identity or concerning themselves. The integrity of such an audit log could be ensured using blockchain-like public ledger technology similarly to a number of Estonian state registries that already today use it.

Innovation

The e-Residency programme provides the possibility to pilot new solutions at a global level. As mentioned at the beginning of the chapter, technology is a means, not an end. Thus, we have to start by defining the problem or describing the desired solution. At the moment, the hottest keywords are blockchain and artificial intelligence. In the following, we briefly touch on some of the potential ways these technologies link up with e-Residency.

Blockchain technology could be viewed above all from the decentralization aspect. For example, the use of the community crypto token Estcoin or decentralised registers could be analyzed. In the latter case, registries are not clustered together in one data centre but are spaced apart in real time and synchronized between data embassies.

Similarly, blockchain has a possible role in identity management — if Estonia wishes to create an international digital identity, it will require international cooperation. Under the established rules, countries have to be able, at minimum, to create, modify and delete the identities pertaining to their own citizens. Pan-European or global databases or other “super-databases” are no longer conceivable in today's society, and this we could examine technological solutions where different parties can write records based on consensus, thereby creating a trustworthy system.

As to AI, we could consider “artificial intelligence e-Residency” by offering the possibility of registering and certifying algorithms and administering authorizations through e-Residency. Estonia could offer an environment for testing AI-based solutions. While today the e-Residency programme provides a possibility for use of strong digital identity for people, tomorrow we could offer a solution for secure and controllable use of AI.

Specific proposals:

- ➊ Analysing possibilities for an alternative means of authentication and digital signing for e-residents, including a mobile solution or use of the home country digital identity with the highest eIDAS qualification
- ➋ Analysing the possibility for e-residents to be able to associate different digital identities and manage their data on a single administration platform
- ➌ To improve user experience, analysing further development of the e-resident web environment into a portal that would consolidate the necessary services and exchange of information with the Ministry

of the Interior, the Centre of Registers and Information Systems, Tax and Customs Board, the Ministry of Foreign Affairs and other institutions

- ➍ To create new private sector services, analysing ways for e-residents to be better able to access their own data through the X-road data exchange layer
- ➎ Continuing roundtables at the state level with officials and technologists: These would, among other things, serve a venue for further analysis of AI e-Residency, blockchain-based digital identity and a community-based Estcoin token
- ➏ Inviting leading international thinkers, both boosters and sceptics, to Estonia to discuss topics of the future of digital society. For example, it will be key to continue discussions on the impact of Internet voting and other important technologies

Many e-residents have become supporters of Estonian culture and help disseminate Estonian values

In cooperation with the digital state, Estonian culture both new and old can get more exposure

The e-Residency platform will contribute to creating a global digital repository of Estonian culture

We welcome interest from e-residents in learning Estonian and participating in Estonian society and culture

In his famous 1963 address, President John F. Kennedy said: Two thousand years ago, the proudest boast was *civis romanus sum* ["I am a Roman citizen"]. Today, in the world of freedom, the proudest boast is "Ich bin ein Berliner!" After Kennedy's speech, "being a Berliner" no longer meant just living there or being from there — it meant intellectual and cultural affiliation, casting one's lot with the West.

The words "I'm an e-resident of the Republic of Estonia" could also be a proud boast with a broader meaning, and "e-resident" could mean something more than a paying customer of Estonia's digital state services. Many e-residents are now supporters and champions of Estonian culture. They support the country voluntarily, and Estonia can reciprocate by offering clear values and a rich culture.

The e-Residency programme will be successful only if it benefits all Estonian communities, offers them more possibilities for interaction with each other. It affects Estonian citizens in Estonia, the diaspora, all Estonian residents and also, naturally, the e-residents themselves.

The discussion about e-Residency has thus far focused mainly economic, technical and national security issues. We have been concerned with the return the state and or economy will get from e-residents, whether the supporting infrastructure and people will be up to the task, and what risks the programme might amplify.

As there are few joint discussions, Estonian IT and culture live in different comfort zones.

Thanks to the rapidly growing community of e-residents, there is now a new situation: both spheres have more to gain from cooperation. The Estonian IT sector needs Estonian culture to give people additional reasons to be an e-resident of Estonia in particular. The Estonian cultural sector may find in e-residents a broader audience and possibility to work more closely with world-calibre talent.

The Estonian cultural community and social sector

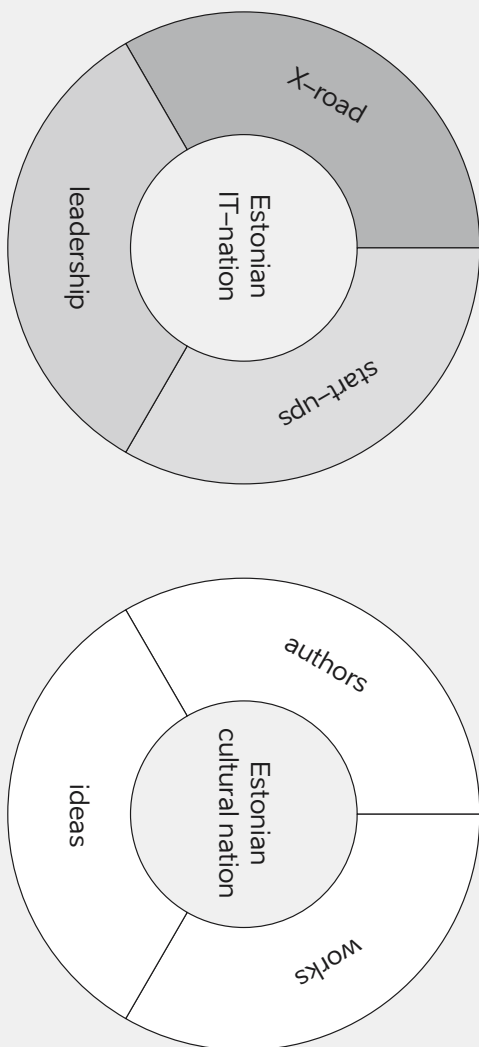


Figure 6. As there are few joint discussions, Estonian IT and culture live in different comfort zones.

leaders currently lack a clear sense of the possibilities and value of e-Residency, and e-residents lack stable and smooth access to our cultural storehouse. Nor have people yet thought about what messages and activities might appeal to e-residents.

Thus, it is time to start devoting attention to developing a cultural platform that would help the Estonian intellectual sphere and society become even greater in the global digital society thanks to e-Residency. Just as Estonia desires to harness e-Residency to bring in broad-based revenue, e-Residency can help to find a broad audience for both traditional Estonian culture and new-generation digital culture.

We need changes in this area, and practical interdisciplinary cooperation between the e-Residency programme, the Ministry of Culture, the Ministry of Economic Affairs and Communications, the Ministry of Education and Research and other organizations, because the question about synergy between e-Residency and Estonia's long-term cultural strategy will become a question of Estonian culture's transition into the digital age and the creation of a global digital repository of Estonian culture.

The creators and distributors of culture, from the Arvo Pärt Centre to the Estonian National Museum or the Estonian Film Institute, can seek out e-residents and offer them possibilities to become acquainted with Estonian culture, learn the language, and understand the values.

At the practical level, it will soon be possible to envision cultural ties being established through the "ask a local" tool, which would help Estonian culturalati more easily find partners and performance venues in specific cities. "Asking a local" can work both ways — Estonians can get ideas from e-residents for consuming Estonian culture. Cultural topics could be added to the e-Residency Marketplace to help e-residents get better information on international Estonian culture events.

Estonia could involve cultural and societal organizations and international talent as experts in developing the digital cultural state. The experts' decision to contribute to Estonian development will not be affected by only the economic dimension but the cultural dimension of e-Residency as well.

We recommend starting to educate e-residents about the broader "Estonian story" and offering them a chance to learn about our history and culture. As the starting point, we propose a documentary-style podcast, with the first season focusing on how Estonia became a Republic and later a digital society too.

At the level of society, Estonia wants to be seen as a transparent country where it is easy to get things done, boasting a Nordic values space, low corruption, digital infrastructure, and top-flight museums, festivals, concerts, urban space and nature. All these are factors for the culture and society level. The reason that people might select (and do select) these assets over our competitors' offerings is not based only on economic preferences. Just as importantly, it stems from the fact that their own values are compatible with the principles enshrined in Estonian culture and society.¹³

International and Estonian social scientists have published works (with others forthcoming) that help make sense of the impact of e-Residency. It is in Estonia's interests to continue such efforts to understand the state and societal opportunities and risks of e-Residency and thereafter introduce them to the world.

Specific proposals:

- 1 Engaging in cooperation with the Tourist Board, Ministry of Culture, embassies and event organizers to offer the e-resident community more information about Estonian cultural collections and important events
- 2 Every e-resident is potentially a friend and supporter of Estonia. We recommend creating a community leaders programme that supports more active friends of Estonia with slides, printed matter and other material necessary for presentations.
- 3 Ensuring that the "ask a local" function could also be used for exporting cultural events
- 4 Discussing with the e-resident community how to better take initiatives like Let's Do It World Cleanup Day global
- 5 Encouraging e-residents to visit different regions in Estonia, by putting together work and holiday packages —

specially geared to e-residents — to small towns and rural locations

- 6 Organizing an annual e-Residency week with events in Tallinn and Estonian embassies around the world
- 7 Creating new ways for cultural contacts, by holding hackathons aimed at developing e-Residency apps in the fields of society, culture, media and education
- 8 Giving e-residents curated access to seminal artefacts of Estonian culture — digital books, music, performance and films (like the documentary *Singing Revolution*)
- 9 Working with Estonian Public Broadcasting for producing regular English-language news summaries about Estonia for e-residents
- 10 Starting a series of documentary style podcasts for e-residents

- 11 Coordinating e-Residency activities with the Estonian Culture 2030 strategy and action plan to be drafted in the Ministry of Culture in 2019

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Kaspar Korjus
Managing Director of e-Residency
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ENDNOTES

- 1 Source: Deloitte
- 2 On the basis of data from e-residents' application forms
- 3 <https://medium.com/e-residency-blog/un-and-e-residency-join-forces-to-empower-entrepreneurs-in-the-developing-world-ea834005f85e>.
- 4 <https://www.ict.govt.nz/assets/Uploads/D5Charter-signed-accessible.pdf>.
- 5 <https://forbes.com/sites/peterhigh/2018/01/15/lessons-from-the-most-digitally-advanced-country-in-the-world/>.
- 6 <https://www.newyorker.com/magazine/2017/12/18/estonia-the-digital-republic>.
- 7 <https://qz.com/work/1241833/one-of-estonias-first-e-residents-explains-what-it-means-to-have-digital-citizenship/>
- 8 <https://www.wired.co.uk/article/estonia-e-resident>.
- 9 https://www.huffingtonpost.com/apolitical/inside-the-worlds-most-ad_b_10856718.html.
- 10 E-Estonia media monitoring, 2017, Meedius
- 11 http://www.kaitseministeerium.ee/sites/default/files/sisulehed/eesmargid_tegevused/395xiii_rk_o_lisa.pdf.
- 12 <https://www.wework.com>
- 13 Tamppuu, P., & Masso, A. (2018). "Welcome to the virtual state": Estonian e-Residency and the digitalised state as a commodity. *European Journal of Cultural Studies*, 1–18.

DEFINITIONS

E-Residency

E-Residency is a new personal status that countries can use to engage in cooperation across borders with citizens of other countries.

Estonian e-resident

Estonian e-residents are people who have been granted e-resident status by the Estonian Police and Border Guard Board.

Estonian e-Residency programme

The Estonian e-Residency programme is responsible for developing Estonian e-Residency pursuant to Estonia's state objectives.

Digital nomad

Entrepreneurs who choose to embrace a location-independent, technology-enabled lifestyle that allows them to travel and work remotely, anywhere in the world.

Ask a local

A proposed tool accessible within the e-Residency website to connect Estonian citizens, residents and e-residents to support business growth and share Estonian culture globally.

eIDAS

Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market, aimed at facilitating cross-border e-services.

LINKS

Estonian-language website:

e-resident.gov.ee/eesti

English-language website:

<http://e-resident.gov.ee>

statistics:

goo.gl/o6E9ZE

submit an application:

<http://apply.gov.ee>

Facebook:

<https://www.facebook.com/eResidents/>

Twitter:

https://twitter.com/e_Residents

Instagram:

https://www.instagram.com/e_residents

Youtube:

goo.gl/NiK1Li

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