



Building Blocks for the Future
PILAR I – SOCIETY

Ecosystem approach to e-governance

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everythink



About this white paper

This document aims to compile and summarize the speeches, thoughts and bold ideas shared during the Open Sessions of the 2021 Annual Event of the Business and Innovation Network, recording, for future reference, the contribution of a group of impressive people from all over the world who gathered in Porto to share, evolve and create knowledge and visions for the future of Humanity. This was a collaboration between BIN@ Network and Everythink, a design company.

About BIN@ Business and Innovation Network

Business & Innovation Network (BIN@) is an international network of academic and industry partners engaged in supporting open innovation and the creation of sustainable forum for sharing good practices and opportunities in innovation. BIN@ promotes a set of activities ranging from brokerage events to softlanding opportunities for startups. BIN@ has currently around 4500 delegates worldwide and so far has held 14 international events in Portugal, UK, Brazil, Romania, Poland and one fully digital event. You can see more about our activities on the official website: www.businessandinnovation.net.

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EVERYTHINK is an award-winning studio for creativity, design and innovation, established in 2008 in Porto. Through design, they put creative methodologies and strategic thinking at the service of companies' innovation, to create new services, products and experiences, impacting people in a positive, easy and happy way. Everythink's approach with customers, users, and stakeholders is key to create new products, services and experiences, with a positive impact on people's lives. The team works on different areas and outputs, offering diversity and experience in an effect of cross-pollination offering innovative insights, efficiency and time-to-market. Find more at www.everythink.com

Ecosystem Approach to e-Governance

A conversation with



Robert Krimmer

University of Tartu, Skytte Institute

Robert Krimmer is a Professor of Governance at the University of Tartu in Estonia. Originally from Austria, grew up very far away from the capital, halfway between Vienna and Paris. He went to university in Vienna, with a quite digital context back in 1988 when, everywhere else, at that time, everything was done on paper, already using, for instance, video text. Through that, he got interested in these matters, not only academically but also personally, so he was always interested in digital transformation. And because of these need and interest in digital ecosystems, he is now working in Estonia to understand digital transformation of the public sector and helping to promote and implement this transformation.

How can you turn paper based processes into a digital ecosystem? This is the reason why I ended up in Estonia, because I found this is the most receptive, the most welcoming, and also, in that sense, a time machine that allows us to see what are the effects of a society that goes heavily digital. How to achieve that and what are the impacts of the digital transformation of the public sector. By public, I mean, basically all of our environment, our information society approach, and the elements that come through that, trying to identify success factors and hindrances.

Estonia is a case study of understanding what are the special factors that work as a pressure cooker, to let things happen, which otherwise would take longer, or which are harder to achieve for the countries, like Germany or even the US. The US is heavily digitalized in the private sector, but in the public sector, it's not in Stone Age, but it certainly takes more time. And in Estonia, basically, the corona times were not really a big challenge because things are more advanced.

My third child was born in August last year. For him, I had zero bureaucracy contact. One hour after he was born, the midwife came and brought a little wristband, which had his 11 digit code on there. Using that code, I could go online and give him his name, and get the birth certificate two days later by email encrypted. Then I got all the family benefits online, and so on. But that was possible because there was a unique identification and authentication.

Identity, Data Protection and Data Sharing

Having a personal ID issued to every citizen is really a key element. But just issuing hardware is not enough. You need to build the ecosystem, providing interesting and useful applications. In Estonia, there was the Internet voting effort, that introduced internet voting in 2005. In the beginning only 2% of the voters casted their vote online, which wasn't too much, and was almost disappointing. But of those 10,000 voters, two thirds of them were first time users of the ID card. And that was obviously an interesting enough application. We see that in other countries as well. Democracy seems to

be something for which people are willing to learn technology. But it's not what gets people to use technology. You need to have something that's useful enough that you use it daily. It should be similar to something you do every day, like requiring it for online shopping or getting your test results. In Austria, right now, whenever you get a test result, you can store it in your wallet and you use your mobile signature for that purpose. Once you have that, you basically have a ecosystem of a feedback channel. And that, in Estonia, was online banking. For the online banking to require ID cards, they introduced the transaction limit whenever you wanted to make a transaction over 400 Euros, which back in that date, 2006, 2007, was the average wage salary, This minimum wage also shows the economic development that the country has taken. But that is also another important thing, **people need to know that digital is good for them**. They need to have a success factor. And obviously, if the country basically doubles its GDP in something like 15 years, and it has invested heavily on digital, people will believe that digital was bringing them the increase of the GDP, but more likely, was the access to the free market and joining European Union.

So, success, of course, is also important, as well as positive feedback, but also for digital is, also, to have a different or more modern understanding to data protection. **Data protection is really, really important, but it cannot be in the sense of don't share information.** We need to share information, although, in a controlled, accountable and transparent manner. We need to know how is our data being used. What is it being used for, and, in case it was misused, we need to have possibilities for remedy.

With the data tracker, which is part of the citizen portal in Estonia, you can see how the data is used, by whom, and at what time. You can limit the access to your private data using the health platform where you can have this information sphere of control. You can only have it for your doctor, or you can limit your doctor from seeing that you went to another doctor to get a second opinion.

The third core element, along with identity, and data protection, is about data sharing. You need to have an enabler and data sharing platform. There was a paper by Lean and Lean in 2001, which developed the stage model, which basically consists of four stages. The first is cataloguing that we provide information to the citizens, where they can access the different services, the second stage is offering services. Then it starts with integrating the services between different levels of administration, the so called vertical

integration. Then, when you go to a practitioner, your family doctor, as well as you go to the federal hospital, they use the same data. That's called vertical integration.

And then, there is horizontal integration that is agnostic of the sector in which you're using the data so that when you, for example, apply for a driver's licence, you need to show that you're fit to drive, right, so that your doctor can provide you with the certificate you're fit for driving. And that can be accessed in the central government portal.

And we need Europe to have this horizontal integration. I'm the best example. I'm a so called digital immigrant, I immigrated to Estonia, and not only had to move there physically, I also had to move my data, my birth certificate, my marriage certificate, my university diploma, and all of that happened on paper. Why? It won't be so much more trustworthy as we see now, with the COVID vaccination password, if we will do that digitally signed that we can trust. We need to have a data exchange for Europe.

First identification, second is data protection, third is data sharing, and then as a last I will give kind of like the outlook for the single digit gateway regulation, which basically means by the end of 2023, we need to be sharing data, European wide, mandatory digitally

Roadmap for operators for the digital age

We have the biggest motivator to maintain systems with the so-called path dependence in the public sector. You all have that symbol for path dependency in front of you lying there. Look at your keyboard. Why are the keys assigned like that, like they are right now, that has been defined over 100 years ago, based on the mechanical typewriter so that the keys don't get talked into each other. Why are we using the keys in the same way? Or why are we typing the same way as 100 years ago, when we had a mechanical reason, but that mechanical reason has fallen away?

So there is no reason why don't we manage to change our keyboards. And that is the so-called path dependency, which basically means you're only managed to change when you have an external influence when you have a crisis. And that's exactly what we have right now. COVID is a crisis which enables, which is a kind of pressure cooker. And the same thing is in Estonia, the crisis was when it did became independent, and it had to rethink how to organize the country. And why would we want to organize our country based on paper when we can do it digitally, and, finally, we are able to beat our neighbor, which is our role model, which was Finland at the time? Finland was the modern, the mobile country, the one that had Nokia, the brand that was dominating the world, in the

90s. And basically, for Estonia, in the 1920s, Estonia, and Finland was on par in terms of GDP. In the 90s, obviously, it was like a tenfold difference. The idea was how are we going to beat our Finnish brother. And we only manage that by copying and doing better than they did. And that was doing digital, and the crisis was the possibility to go independent. And that allowed to go forward. And, so, we need to use a good crisis now. The other thing is to build identity, built ways of ensuring that you can protect the data, and then build a transaction layer or a data exchange layer, which is this third element that we not only should do that for our nations, but also on a cross border element. That would be my three steps.

Good Examples

When the Iron Curtain fell, Austria used the opening of the East as an opportunity to do business there, and managed to transform its administration quite well, but not in the same way or not as successfully as Estonia, because for one reason that sounds really weird: there was too much money available. The best example is the Austrian Postal Service. They are basically operating on a civil servant basis. So, the person that is bringing the mail is a civil servant. That means they have a guaranteed lifetime employment. When every year you lose 2% of your turnover, meaning there is less mail to be transported at some point you don't need that many postal

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delivery guys? But what are you going to do with them? They have a lifetime employment right. What they manage, they made an organization where people are paid for doing nothing, so they basically move them to another company. And in that sense, there is money in the system that needs to be spent because there are legal guarantees, but they cannot use that money for innovation.

In Estonia they never went the way for lifetime contracts. Yes, of course, there is the contract without time period, but the overall system is much more fluid that you go to the private sector, because you can do your own startup. I mean, we want to be the next space.

Germany has a huge GDP, with its very successful industrial sector. But, digitization is in stone age. In the 1980s, they had the chance to introduce a fibre network in the whole country. At that time, they had the Minister for telecommunications and there was a Postal Service minister. He was really in charge of the state owned Postal Service. And what he said was, 'we have a cable TV network that is not amortized, so we still have to pay off the depreciation now. So sorry, we're not going to invest into fibre because we haven't paid off our own network'. So had they done that in the 1980s, they would have a fantastic telecommunications network, but they just wasted the opportunity. So today, there's still only cable TV. And using that for internet, of course, works as well. But I mean,

fibre is so much faster, so much more reliable, and so much more future proof than copper cables. And so in that sense that's just giving you so many incidents, that there needs to be several factors that need to come together.

So there needs to be an eagerness, there needs to be an immediate return of success. And there needs to be the actual infrastructure being built. And then last, but not least, you need to have the services and the willingness, right.

In Estonia, taxation service is easy because the system is easy. Estonia has a 20% income tax. Yes, that's not very low. But it's still a very easy tax system, that all the rules for calculating your tax return can be done by a computer. You don't need to have tax advisers. Germany has a hoard of tax advisers. So that type of tax advisor job does not exist in Estonia. So people use the taxation service in a way that 25% of the population is doing the tax return in 24 hours. It's on 15th of February, the tax return opens. And on 16th of February, one fourth of the population has already filed the taxes because it only means one click. And why do they do that? Because when you do it online, you get it within two weeks, transported onto your bank account. If you do it on paper, you only get a half a year later, I will be naturally doing it online. So that's a real deal breaker. So people need to see that it brings them a benefit. So I can give you a list of success factors that I think are useful for that.

Early adopter mentality in Estonia

Early adopter it also a built mentality. I would say the innovation ecosystem that exists in Estonia is certainly different than in many other countries. And that is one of the special factors. The digital transformation is a result, and it's also a push and a pull factor. Estonians are like, oh, but we need to have the next big cool thing. What's that going to be? Oh, we're going to do Siri for e-government. So you need to be able to apply for your password using voice. had they done that without you, with BBC, with CNN coming to the country? likely not because there is no need for that. But it's cool. It's great. It allows you to position the country, it allows you to market the country so there is a push and a pull factor. Pull, when you're interested in the transformation, and push in a sense we need to find the next big thing to get the next news, and what is driving that it's Putin. You need to have an enemy, and the enemy unites the country bringing people together and every report in the West, every interest from the West shows one reason you can attack the country. All of that also, it's very special in that sense, but it also pushes the ecosystem for innovation and brings that step forward. In comparison to other countries, but I wouldn't say that that is the only reason.

Countries that are more proactive, adopting innovation and changing their business are a

bit more successful in terms of economic development. For that we need to have things like the European Union, which is doing those transfer payments, which is trying to build an ecosystem for the whole continent, and tries to pull all countries together. But of course, it's not an easy development. And countries like Estonia, they also struggle. There's not much else than digital. There is basically only the forestry, the agriculture, and then there's the services industry. The industry itself, the second sector is almost missing. There are some lock houses, there is some salmon to export...

There are a couple of innovative companies, like Meiren snow ploughs, but, on a large scale, industry is something where Estonia can evolve. Service sector is really doing well nowadays, especially when it comes to things around Skype and Bolt. Bolt is the only competitor to Uber, from a 27 years old Estonian guy. He just decided he's going into logistics and they're now trying to replace the supermarket around the corner by having a pilot in Estonia. I just say it's not the only thing, but we need to try to share the knowledge. We also need to be cognizant of the context of specific factors that are really unique to different cases. And we need to separate what is context dependent and what is, actually, transferable. ■

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