Adam Taylor

Estonia, the tiny Baltic state that holds fewer people than San Diego, has been praised recently for both the apparent success of the country's austerity policies (and President Toomas Hendrik Ilves' very public defense of it against Paul Krugman) and the country's remarkable emergence as an Eastern Europe technology hub.

Speaking at the Concordia Summit at New York's Grand Hyatt Hotel on Friday, Ilves was on hand to discuss the latter. The feisty, perpetually bow-tied head of state outlined two clear factors in Estonia's technological success — and made a convincing argument that the United States wasn't doing either well.

First, let's go over how successful Estonia has been. According to the Economist, the country has the most startups per person, and Skype — programmed by Estonians and funded by Danes and Swedes — became an international success story after it was sold to eBay for $2.6 billion (it was later sold to Microsoft for $8.5 billion). That's a situation that many European countries would like to be in.

So how did Estonia — population 1.3 million, GDP per capita $22,100 — do it?

Ilves points back to 1991, when Estonia became a sovereign state after 50 years of Moscow-led Communism. The country was, in Ilves words, a "small, dingy, backwards former Soviet republic." The end of Soviet rule, however, provided a blank slate for new infrastructure, Ilves says, and the country was able to capitalize in two ways:

1. Teaching children to code

Soon after the end of the Soviet era, Estonia showed remarkable foresight by pushing computer studies in schools. Now the country offers programming lessons to children as early as 1st Grade.

Ilves was at this point Estonia's Ambassador to the United States of America and Canada, living in Washington D.C., but he was still able to help, working with education minister Jaak Aaviksoo on the Tiger Leap initiative to computerize and connect all Estonian schools online.

Estonia's emphasis on computer studies was a big gamble that would really take fifteen years to pay off, Ilves says.

"Basically, if you want to transform a society, you have to start with the young people, and give them the kind of education that will allow them to handle the future," Ilves says. Teaching kids a programming language is actually easier than teaching kids a human language, he adds, as it is "far more logical."

The president's interest in computers actually began when he was a teenager living in New Jersey, where, unusually, a teacher taught him to code."This showed me kids can learn how to use computers," Ilves said, though he concedes his own coding skills are uselessly outdated.

Except for these rare exceptions and a handful of Silicon Valley experiments, however, most U.S. schools don't do anything with coding.

2. A government infrastructure that embraces technology

With little government infrastructure left after so many decades of Soviet rule, when Estonia moved to create its infrastructure in the 1990s, it decided to skip paper records and go straight to an electronic system. The result of that, Ilves says, 98% of bank transfers are done online and 25% of people now vote online.

This has a real effect on the startup world, the Estonian president argues. It takes just fifteen minutes to register a company, he says, with digital signatures and the ability to perform background checks instantly. The system has also helped Estonia escape the corruption that has plagued other similar states. "You can't bribe a computer — it just won't take the envelope."

To do this Estonia had to create a very secure Internet, and Ilves asserts that the country has "solved the dilemma of Internet security versus freedom." One example of this is the use of identity cards in the country. These cards include a chip that includes a key pair, which allows the owner of the card to put a secure electronic "signature" on digital documents. The system uses 2048-bit encryption, and Ilves says that even the N.S.A. can't crack it.

Again, Ilves feels that the U.S. and the rest of the Anglo-Saxon world falls behind here. He points out how in U.S. online purchases identity is established by using a credit card and a three digit CVC number on the back. "I can't believe you guys do that," he says. "That is not a secure identity."

The factors named by Ilves both call for a level of public-private partnership that is unappealing to many Americans. And, of course, Estonia is a very different country than the U.S., and there's a reasonable amount of skepticism that the country's startup boom can continue.

It'd be hard to deny there's a logic to Ilves comments, however, and he is a pretty tech-savvy guy himself — just look at how he used Twitter for the now infamous Krugman-spat.

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