



e-estonia: beyond digital

the coolest digital society



Author

Date



a modest country

extending beyond its borders

- + population: 1.3 million
- + area: 45,339 km²
- + currency: Euro
- + member of: UN, EU, NATO, OECD, WTO, CERN etc.
- + employees in the ICT sector contribute to 10% of the GDP



benefits

fastest decision making



100% of
services are
online



1000+ years
working time
saved



tax declaration
in 3 min



99,6% banking
transactions
done online



2% GDP saved
thanks to digital
signature



our highest rankings

#2

FREEDOM HOUSE
2024
internet freedom

#4

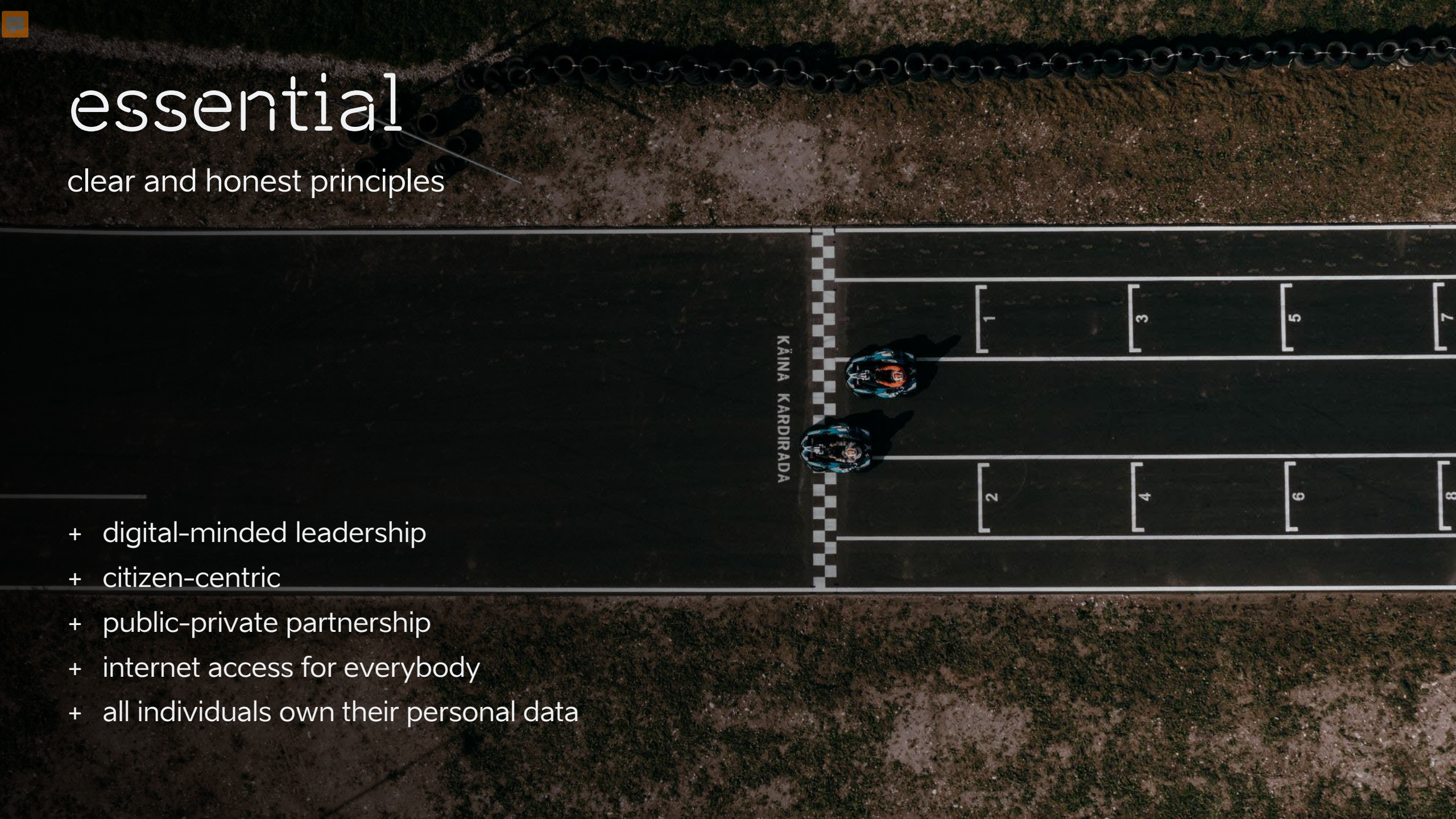
DESI 2025
digital public services
for citizens

#1

OECD 2025
tax competitiveness
index

#2

UN e-Government
Survey
2024

An aerial photograph of a motorcycle race track. Two riders on blue and orange bikes are positioned at the starting line, which is marked by a checkered pattern. The track is divided into eight numbered lanes (1-8) by white lines. The background is a dark, textured surface, possibly grass or dirt. The word 'essential' is written in large white letters in the top left corner, and 'clear and honest principles' is written below it. A list of five principles is on the left side of the image.

essential

clear and honest principles

- + digital-minded leadership
- + citizen-centric
- + public-private partnership
- + internet access for everybody
- + all individuals own their personal data



living the digital future

seamless integration of digital services into everyday life

- + once-only principle
- + all Estonians have a state-issued digital identity since 2002
- + all government services are available online

e.g.:

- + 100% of medical prescriptions are handled online
- + e-portal of Transport Authority provides 6x faster and 20% cheaper transparent services
- + e-marriage and e-divorce via e-population register



digital society is a team sport

shared responsibility and teamwork inspire innovation

- + public-private partnerships
- + cooperation with the academia
- + e-Government solutions built by the private sector, used by the public
- + security-by-design based on Estonia's cyber security expertise



electronic ID

the strongest identity since 2002

- + electronic ID is compulsory
- + 64% use ID-card regularly
- + 17% people use mobile-ID
- + 60% use smart-ID
- + 144 000+ e-Residents



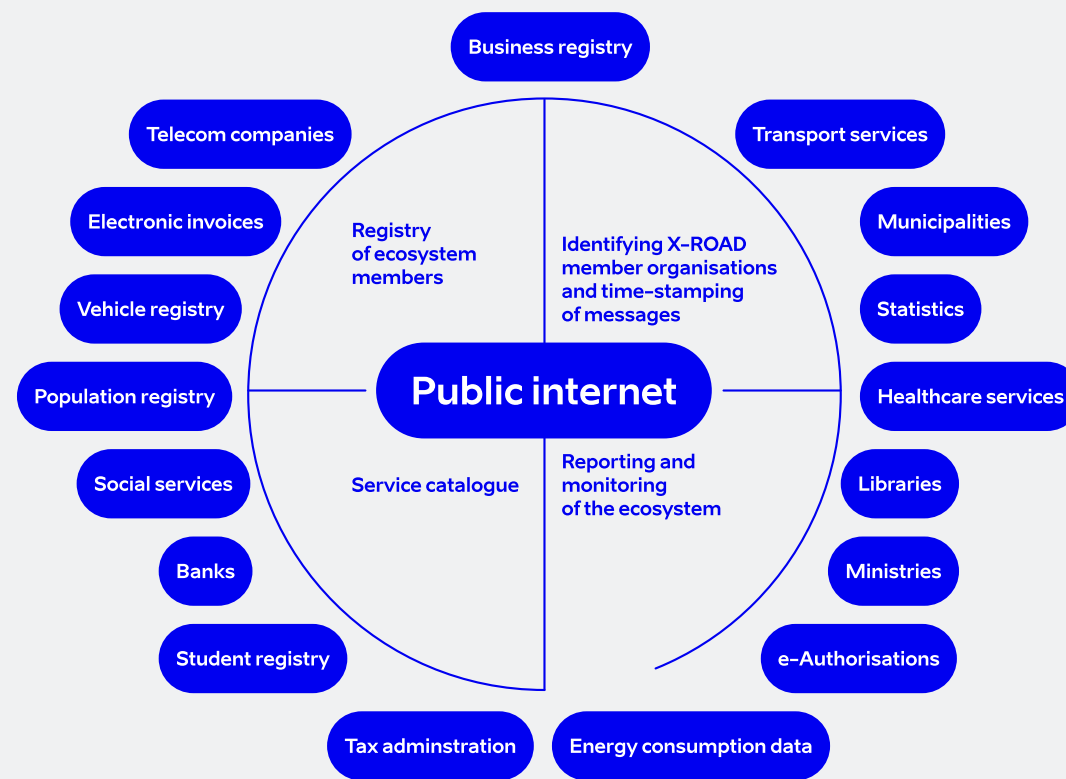
x-road

probably the world's most widely used digital public infrastructure for data exchange

X-Road® – an open-source platform for secure data exchange between organisations, used by the world's leading digital nations.

X-tee – the Estonian X-Road® ecosystem since 2001

- + saving 3 million working hours annually
- + over 3,000 different services
- + over 2,5 billion transactions per year
- + over 500 million citizens as end-users





three pillars

the safest combination to information security

Confidentiality

e-Identification:

ID-card

mobile-ID

Smart-ID

e-residency card

Integrity

Data Embassy

Data Tracker

Availability

X-Road®

cyber security

the strongest competence

- + first large cyber attack against a nation state in 2007 and constant cyber attacks to this day
- + home of NATO CCDCOE and EU IT agency
- + Locked Shields
- + cyber defence league, cyber command and cyber reserve
- + data embassy

Estonian CyberTech
cluster





space cyber range

protecting satellites, securing trust

- + building Europe's first space cyber range with ESA
 - + providing a safe environment to test and certify satellites and ground systems
 - + enabling cyber defence training through live-fire and spoofing/jamming simulations
 - + supporting ESA, NATO CCDCOE and industry to secure space infrastructure
 - + integrating CybExer's cyber range with Spaceit's satellite operations platform
 - + preparing for rollout from 2026 with ESA missions and OPS-SAT ORIOLE
- 



data embassy

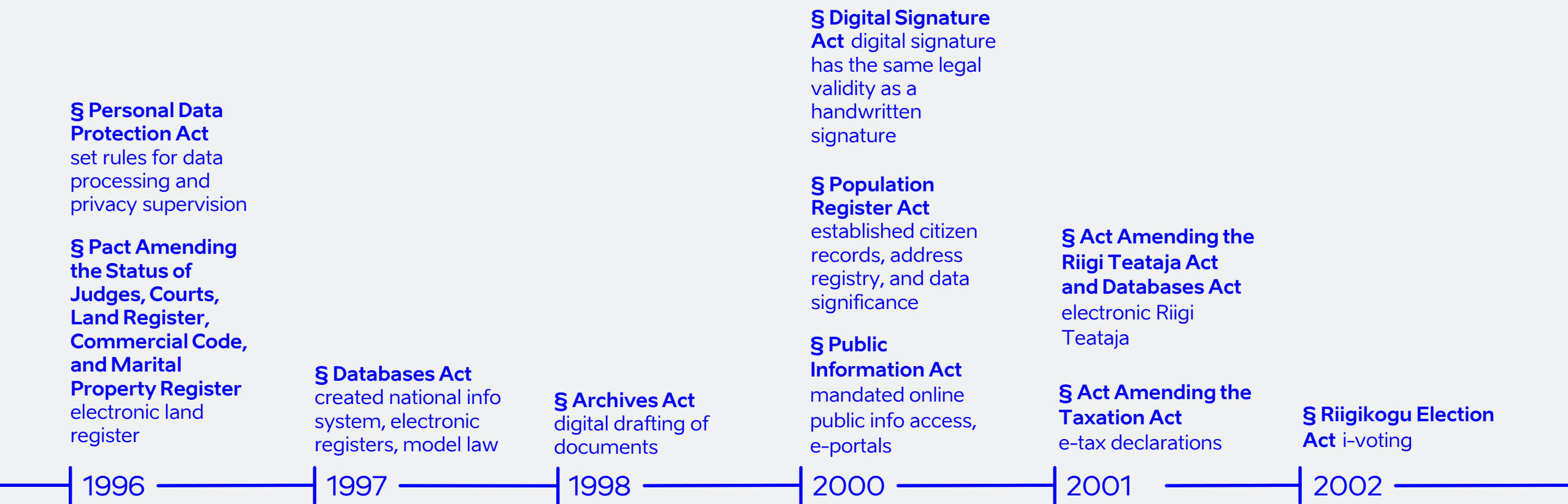
digital continuity of Estonia as a state

- + first data embassy in Luxembourg
- + strategically important datasets
- + highest level of security
- + future: additional locations
- + Estonia as a host country



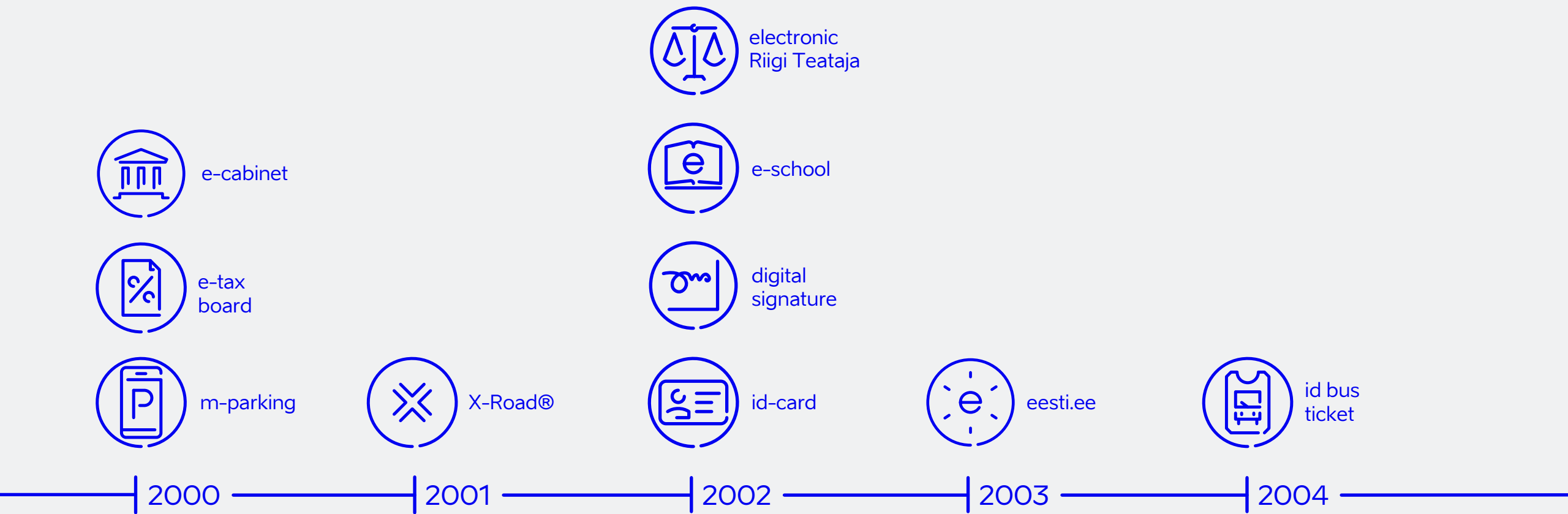


e-Estonia acts timeline





e-Estonia timeline





e-Estonia timeline



e-police
system



e-notary



mobile-id



keyless signature
infrastructure



i-voting



e-justice



company
registration
portal



e-health
system

2005

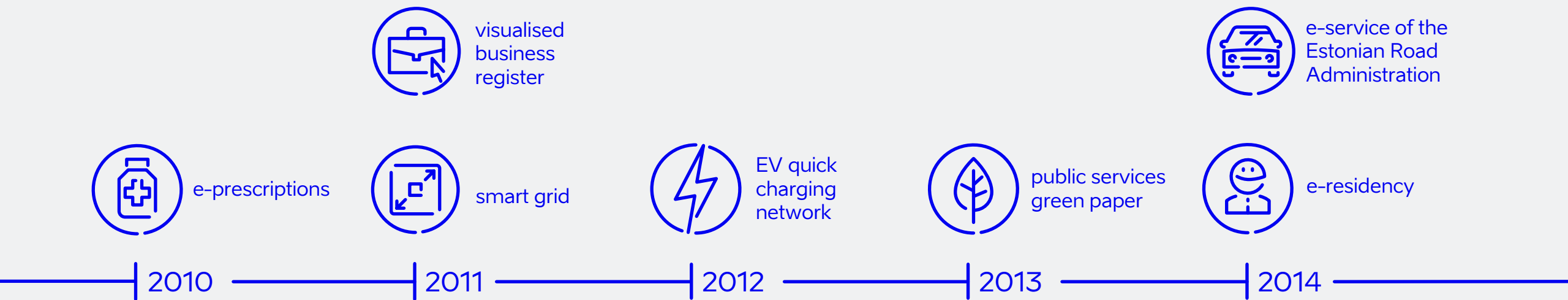
2006

2007

2008

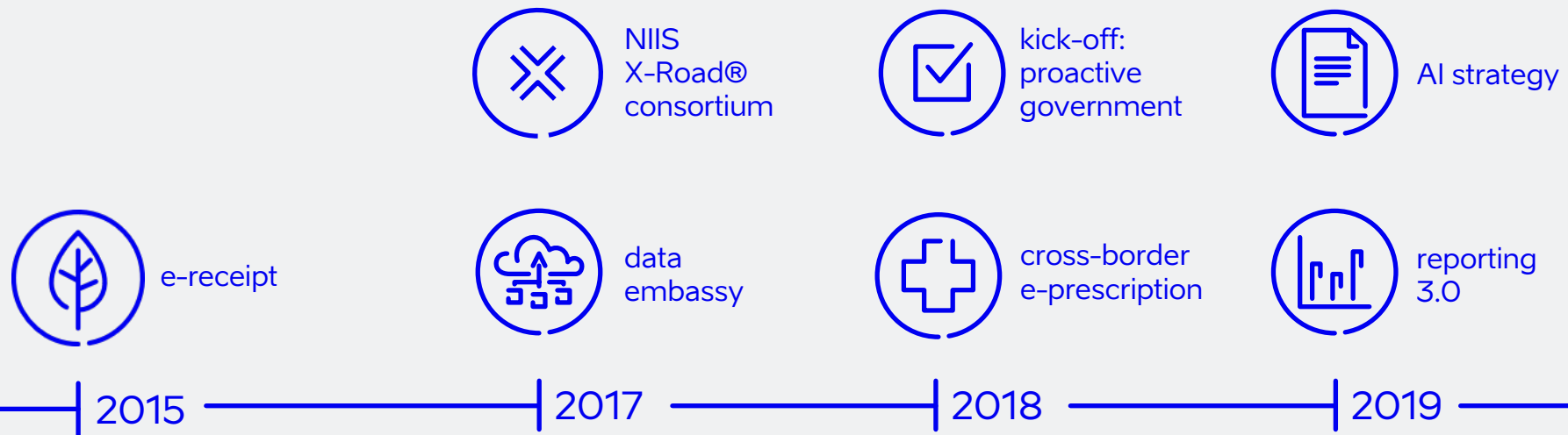


e-Estonia timeline





e-Estonia timeline





e-Estonia timeline



proactive family
benefits



e-notary for
remote verification



50 public sector AI
use cases



7 invisible
services



bürokratt



e-marriage



mobile app



e-divorce



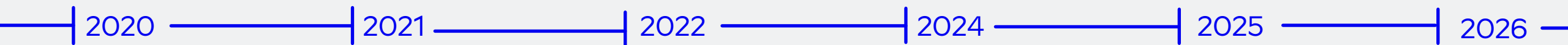
100%
services online



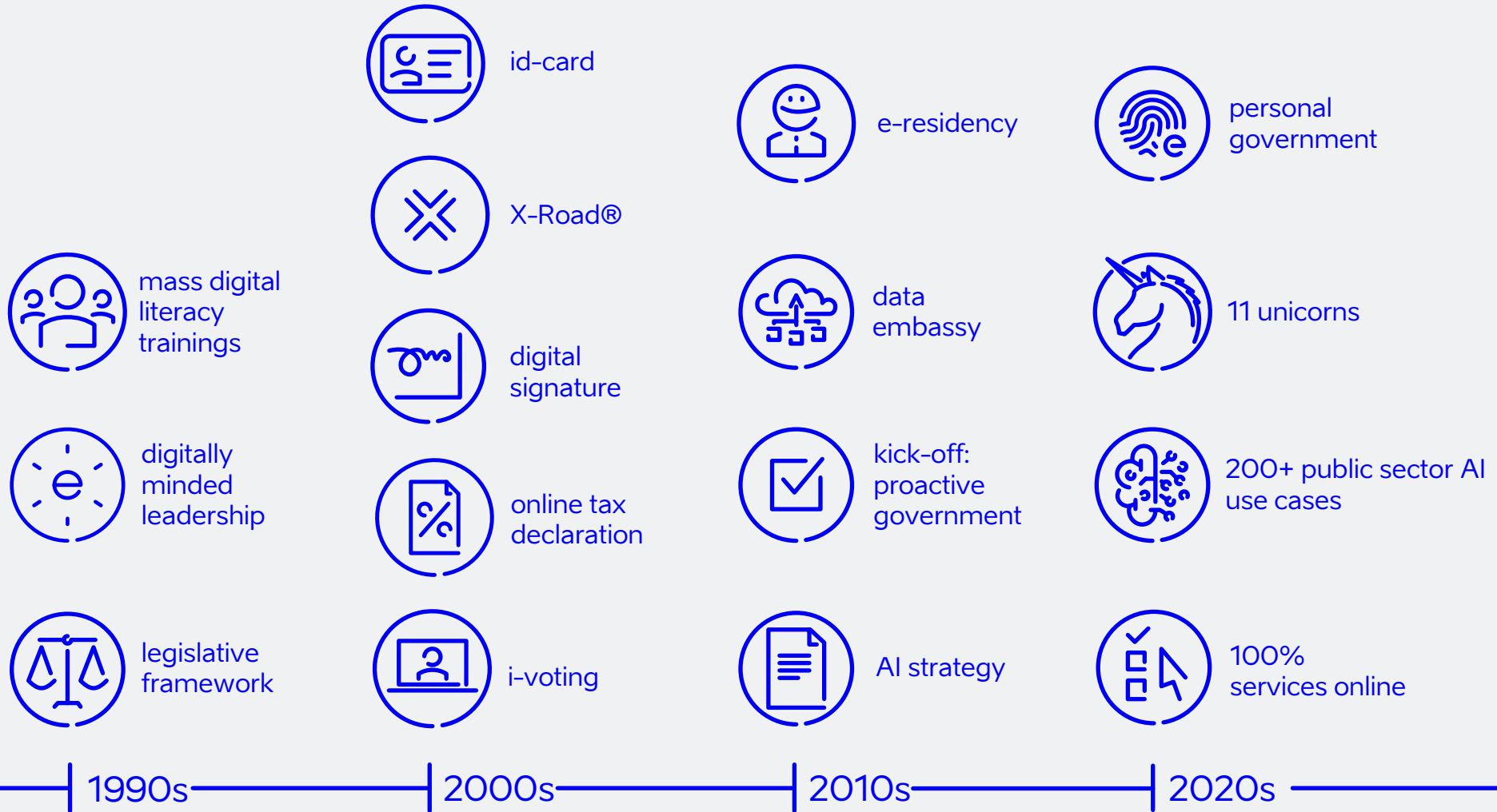
AI Leap



Eesti..ai



e-Estonia timeline





innovating for a future- proof tomorrow

future-ready mindset is our starting point

- + 11 unicorns, #1 per capita in European Union
- + #1 largest share of data economy in Europe
- + digital integration in education, e-diary eKool since 2002
- + cryptography and blockchain pioneers, KSI blockchain #1 in national use





making illegal things legal

paving the way for innovation

- + prove locally, scale globally
- + data-driven legislative change
- + testing solutions in real-world conditions





straight to business

nothing should get in the way of a good idea

- + under 3 hours to start a company
- + paperless and hassle-free e-taxation
- + e-Residency — Estonian e-services for world citizens
- + Startup Nation — supporting ecosystem





facts

#6

economic freedom in
Europe

#1

OECD tax
competitiveness index

99%

companies established
online

99%

banking transactions
online



you can also become an e-resident!

estonian startup ecosystem

- + 1600+ startup sector companies
- + 11 unicorns - #1 per capita in the European Union
- + 1% of companies attract 12% of private R&D expense
- + Startup Estonia - support, model documents & visas
- + an agile and close-knit ecosystem





deeptech

research meets innovation in the New Nordic Tech Valley

- + complex solutions with complex obstacles
- + cooperation with universities and science parks
- + regional support with global impact
- + breaking regulatory barriers

public private partnerships

going the distance together

- + 51% of the ICT sector's revenue is coming from international clients
- + 19% of total export
- + 6.6% of total employment is ICT specialists with 26.8% women
- + meeting place for global innovators
- + future-proofing through expertise

e-Residency

become an e-resident today



- + first in the world
- + 185+ countries
- + 144 000+ e-residents to date
- + 44 000+ e-resident companies
- + >400M € direct positive economic impact on Estonia



real-time economy

new mindset change for governments and businesses



first positive
use-cases

- + taxonomy – systematized data, not reports
- + transition to automated reporting and once-only principle
- + seamless data exchange directly from ERP to state
- + trustworthy and controllable
- + make value for the company and increase productivity

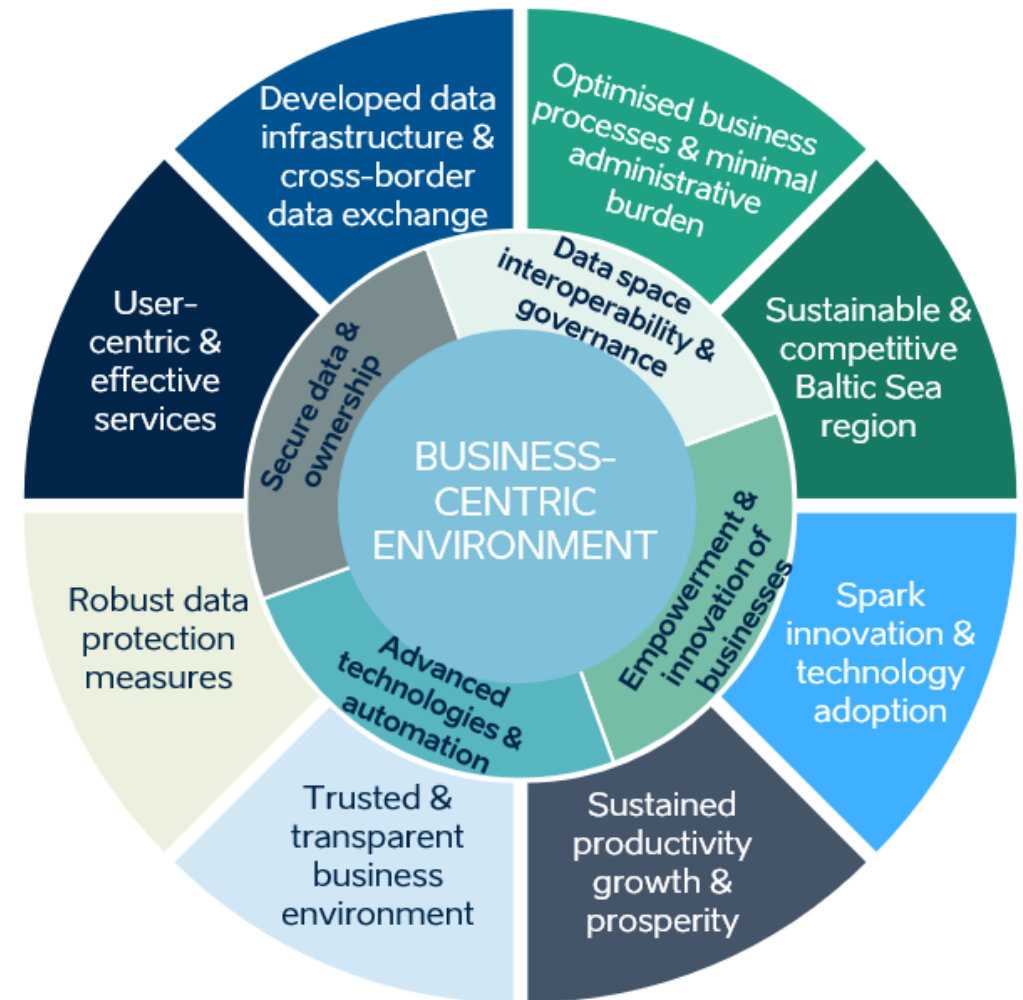
standardised business reporting

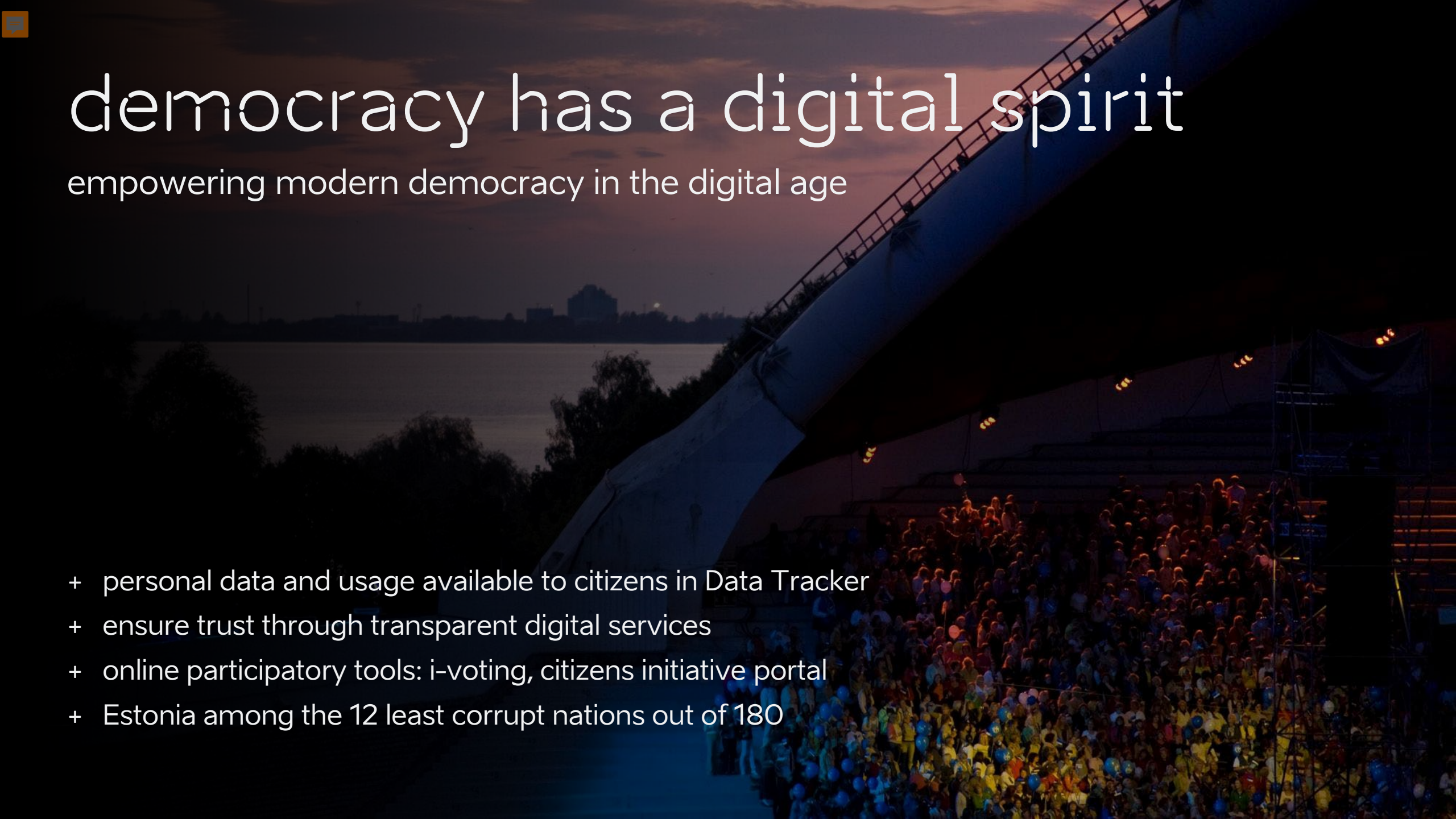
Key elements:

- + Unified and standardised **data across agencies**
- + **Private sector active participation**
- + Financial and non-financial data on business activities (tax declarations, annual reports & sustainability)

Once Only Principle — inserting vs submitting data

- + **Sustainability (ESG) reporting** (water, waste, air, package, fuel, labour and workforce data, etc.)
- + **the principle of minimalism**



The background of the slide is a photograph of a large crowd of people at night. The crowd is illuminated by warm, orange and yellow lights, possibly from a stage or festival. In the background, a large bridge with a white railing and a walkway is visible, spanning over a body of water. The sky is dark with some light clouds, and the overall atmosphere is festive and communal.

democracy has a digital spirit

empowering modern democracy in the digital age

- + personal data and usage available to citizens in Data Tracker
- + ensure trust through transparent digital services
- + online participatory tools: i-voting, citizens initiative portal
- + Estonia among the 12 least corrupt nations out of 180



i-voting

voting over the internet since 2005

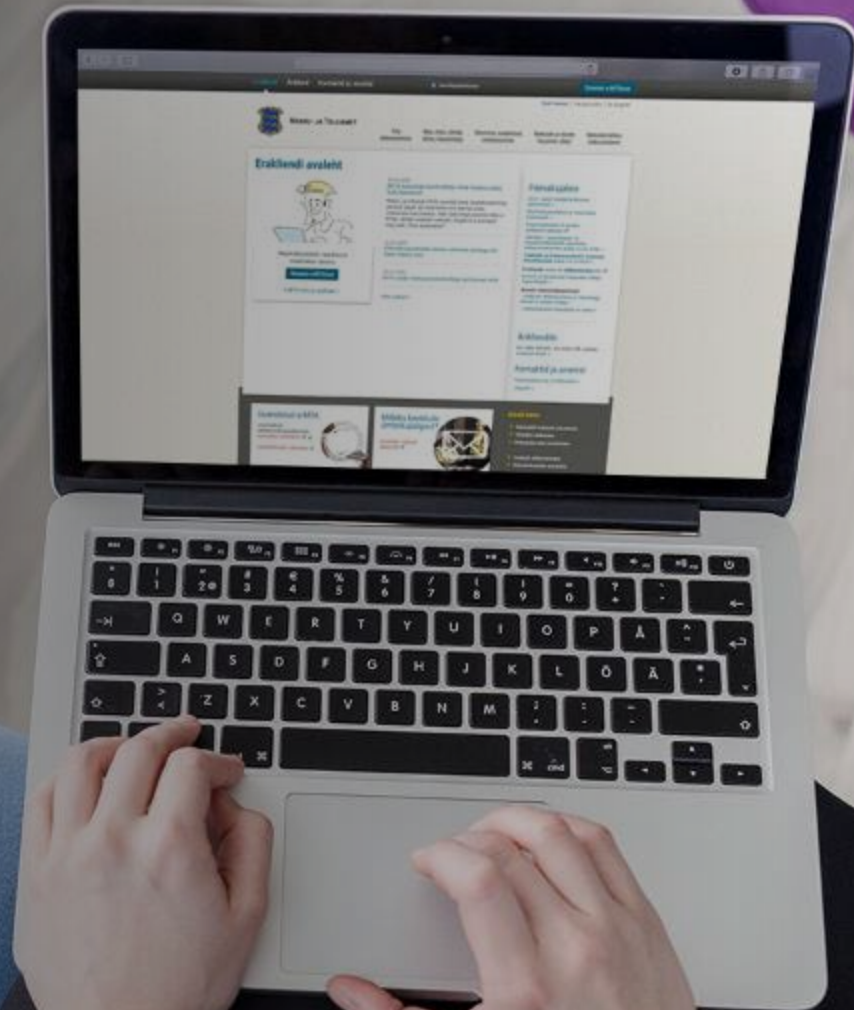
- + first and safest in the world
- + time and location independent
- + strictly optional
- + possibility to change your vote
- + up to 3 times cheaper
- + 51% i-voted in the 2023 parliament elections



e-tax

the first public online service since 1999

- + taxes filed in 3 minutes with digital ID
- + pre-filled forms with automated data
- + applies to all types of taxes
- + 99% of income taxes are declared electronically



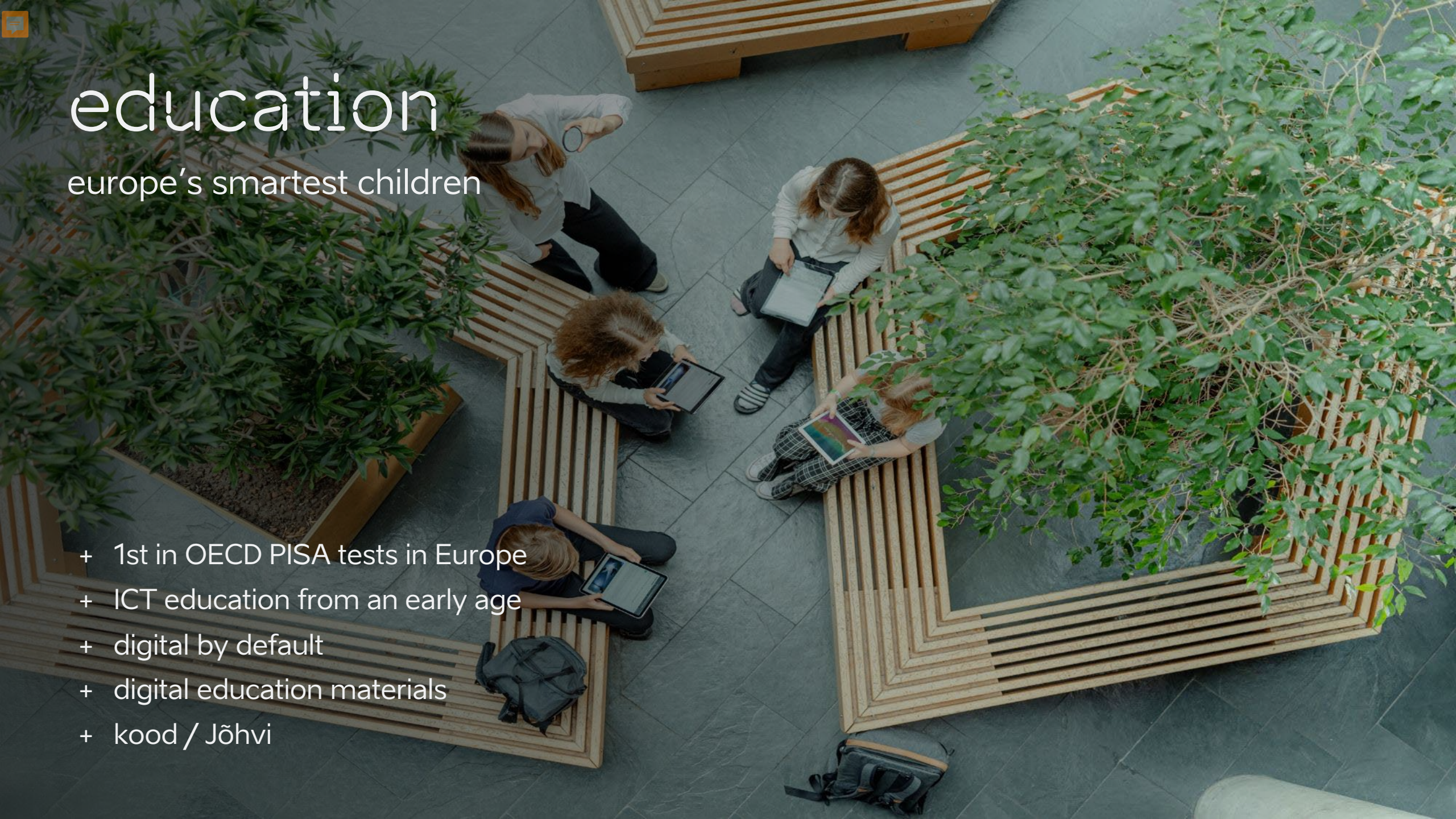


e-health

data-powered personalised health

- + 99% of health data has been digitised
- + e-prescription
- + e-ambulance
- + biobank with 210 000 donors – 15% of Estonians
- + personalised medicine





education

europe's smartest children

- + 1st in OECD PISA tests in Europe
- + ICT education from an early age
- + digital by default
- + digital education materials
- + kood / Jõhvi

don't ban, teach instead

preparation for the future

- + unless we all, collectively, decide to stop using AI, we must all, collectively, learn how to use it responsibly
- + importance of the teachers
- + ensuring safety through smart regulation

61%

jobs requiring
generative AI assistance
in the next decade



Launch of
2025 AI Leap

supporting the learning curve

engaging the brightest minds



Unicorn Squad
empowering
girls in tech



EstCube launching
student-made
satellites to space



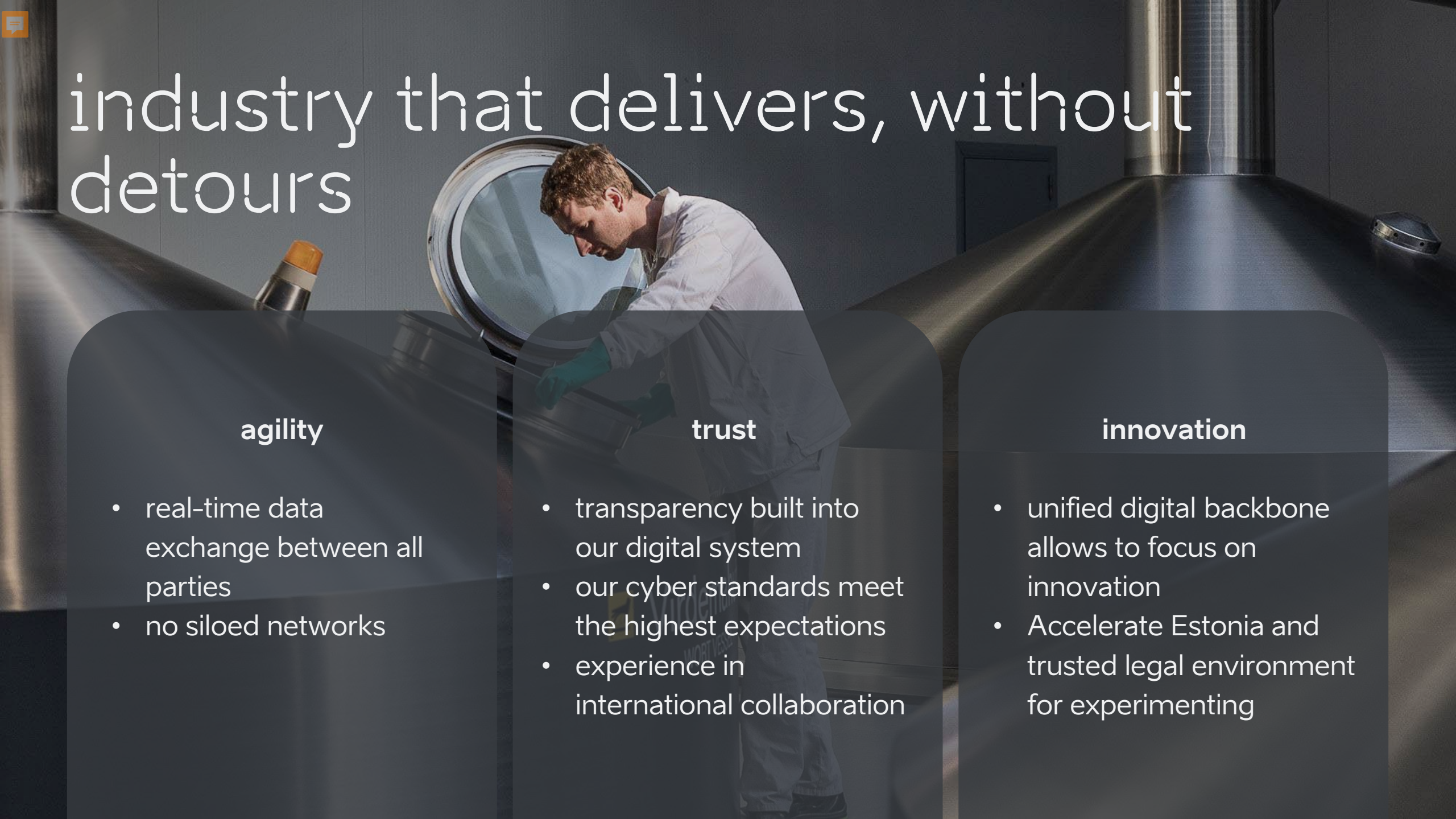
Formula Student
encouraging
engineering in
motosports



Solaride paving the
way for solar-
powered vehicles



CyberSpike making
cyber defence
competitive

A man in a white lab coat and green gloves is looking into a circular hatch of a large industrial tank. The background shows more of the industrial facility with large pipes and tanks.

industry that delivers, without detours

agility

- real-time data exchange between all parties
- no siloed networks

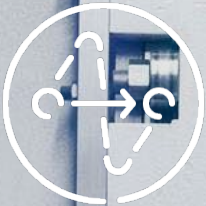
trust

- transparency built into our digital system
- our cyber standards meet the highest expectations
- experience in international collaboration

innovation

- unified digital backbone allows to focus on innovation
- Accelerate Estonia and trusted legal environment for experimenting

agility meets ambition



no red tape and
direct contact with
decision-makers



25% of university
graduates come from
STEM fields



connection to EU
market and compliance
with its security
standards



fast and agile
digital ecosystem



high environmental
awareness expanding
to industry



experience in global
trade and international
partners



smart city

smartest living environment

- + shared platforms
- + cross-border projects
- + unique semi-autonomous solutions
- + urban data collection and sharing
- + Estonia as a testbed





defence

hub of agile, adaptive and advanced defence

- + we make iron smart
- + providing advanced solutions to enhance global defence capabilities
- + rapid innovation and adaption enabled by favourable business environment
- + we pledge over 3% of GDP to defence, work closely with NATO and support Ukraine to contribute to global security
- + 2/3 of the defence industry's output is exported, exponential year-on-year growth with growing international demand

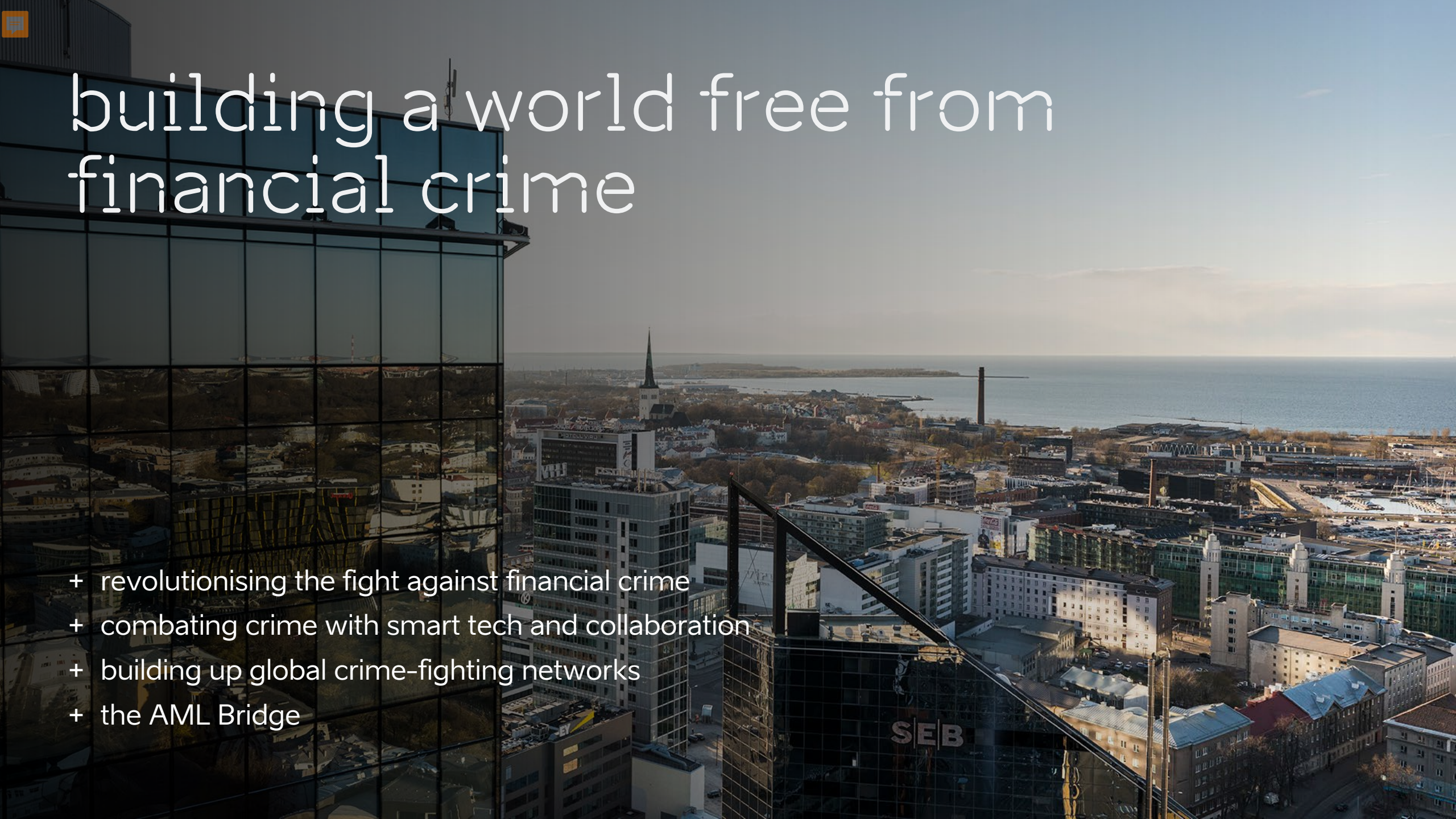


make everything more efficient

the journey never ends

- + cut your own Christmas tree
- + fishing and hunting licences
- + reporting a crime
- + cemetery Portal Haudi
- + vehicle history check
- + smart-road map





building a world free from financial crime

- + revolutionising the fight against financial crime
- + combating crime with smart tech and collaboration
- + building up global crime-fighting networks
- + the AML Bridge

digital agenda 2035

Estonia, full of digital might

- + human-centred, trustworthy, efficient and resilient digital society.
- + secure, personalised and proactive public services powered by AI agents.
- + transparent and human-controlled use of data and artificial intelligence.
- + secure cyberspace and reliable ultra-fast connectivity across Estonia.





shaping an AI-literate future

eesti.ai
economic growth
enabled by AI:
2030 ↑ 25%
2035 ↑ 50%

shaping an AI-literate future

healthcare

quality of care
doctor time
optimization
chronic disease
prevention

AI-skills

100 000 AI-
literate citizens
1 000 000 free
lessons

business

added value per
employee %
export increase %
1000 AI
companies

governing

increase in
service quality

education

AI-literate
teachers and
students
increased quality
of education

IT-hardware

covering the
increasing GPU
needs of public
and private sector

eesti.ai

economic growth enabled by AI :

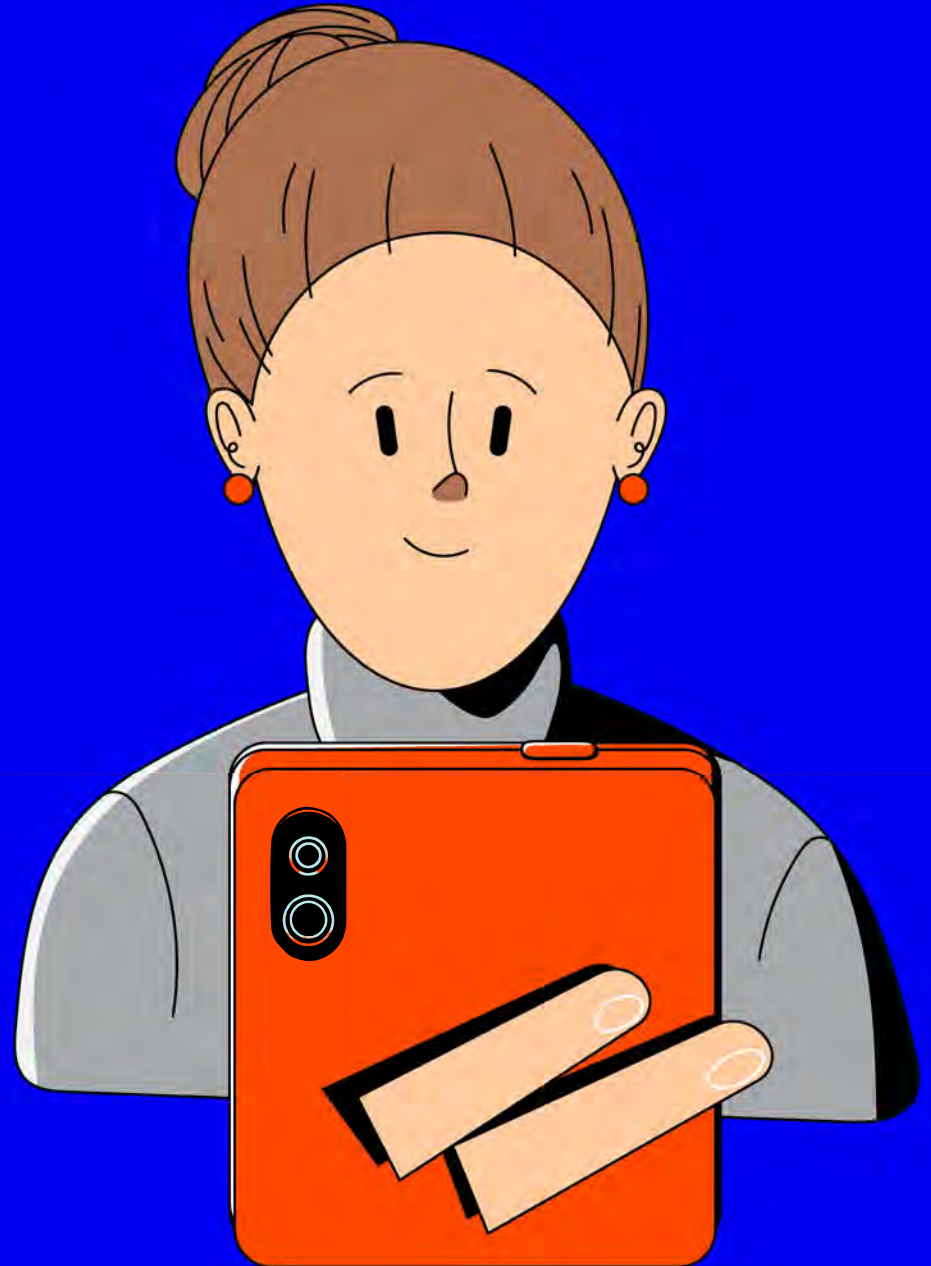
2030 ↑ 25%

2035 ↑ 50%

bürokratt

virtual assistant for government services

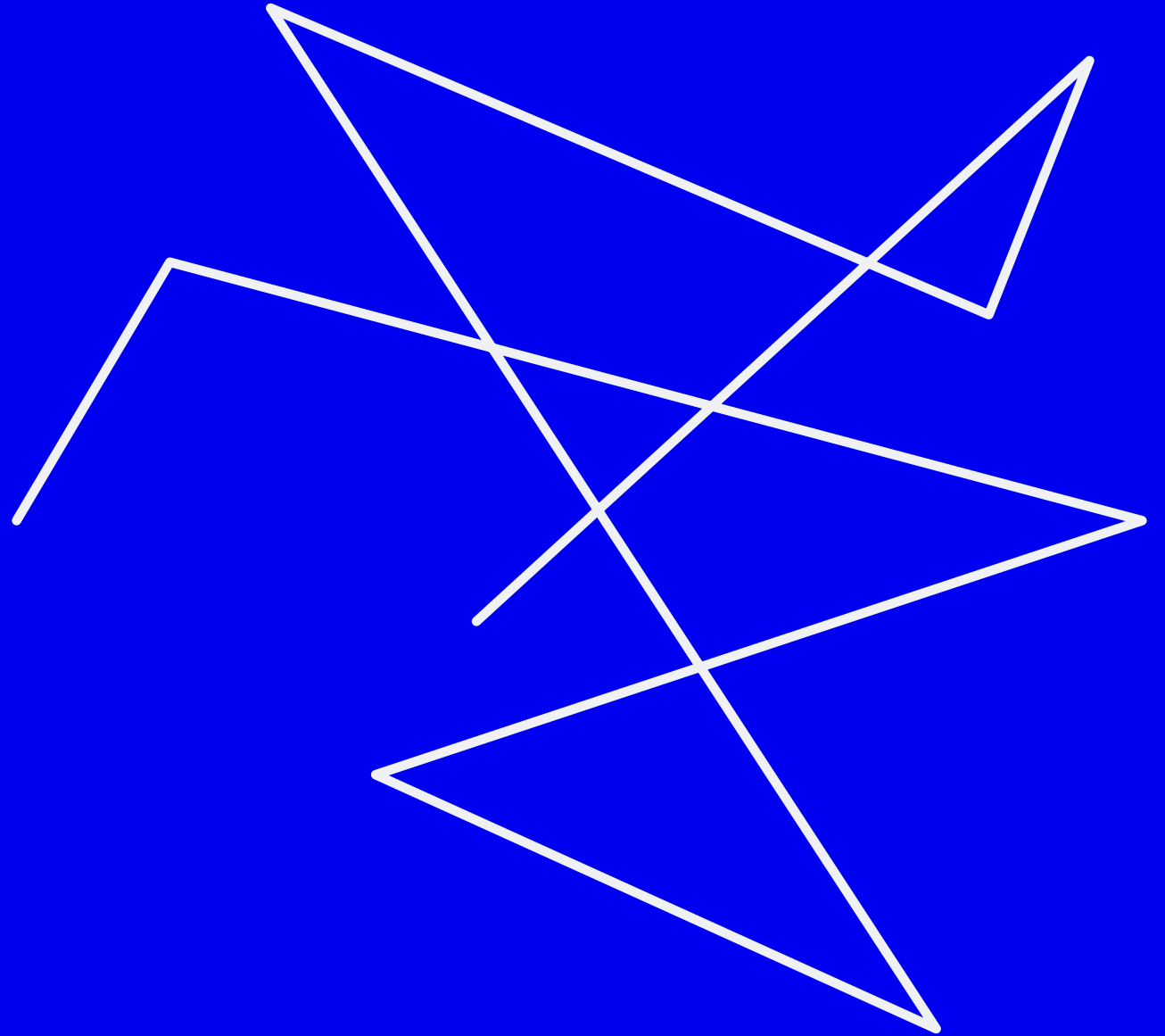
- + all government services & info from one place
- + works 24/7
- + channel and device agnostic (chat, sms, e-mail, phone, voice assistant)
- + open-source and free





kratt

national AI strategy



- + public-private partnerships
- + government initiative
- + 200+ use cases in public sector



international cooperation

- + Estonia cooperates with digital-minded countries: D9+, Digital Nations, DGX
- + public-private partnership that works beyond borders
- + NGOs' power in digitalisation: Estonian Association of Information Technology and Telecommunications
- + EU Global Gateway

A group of four people, three women and a child, are dressed in traditional Romanian folk costumes. They are standing in front of a rustic wooden wall. The woman on the left is holding a smartphone up to take a selfie. The child in the center is laughing joyfully. The woman on the right is smiling and looking at the camera. The costumes are colorful and feature intricate embroidery and traditional headpieces.

personal government

90%

user satisfaction goal by 2030

redefined relationship between a citizen and the government in the post-digital era

our children,
raised in
a digital society,
never having
had to visit a
government
office —
how will they
imagine the future?



welcome to post-digital era

decades of digitalisation has resulted in a society where almost everything is digital. and that opens new possibilities.

Digitization era
2000—2010
e-Government

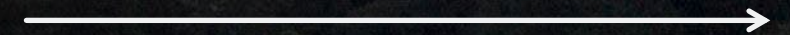
Enhanced traditional public services online. More efficient information processing.

Digital transformation era
2010—2020
Digital Government

End-to-end digital replacement of traditional public services. Whole-of-government approach to service delivery.

Post-digital era
2020—...
Personal Government

Citizen-centric digital-first new type of services and capabilities without traditional analogues. Whole-of-society approach to service delivery.



A woman with long dark hair, wearing a dark jacket and pants, stands on a rocky beach. She is holding a camera up to her eye, looking out over the ocean. A camera on a tripod is also visible next to her. The beach is covered with large, smooth, dark rocks. The ocean is dark and calm, with a few small waves visible in the distance. The sky is overcast with heavy, grey clouds. The overall mood is contemplative and serene.

estonishing future

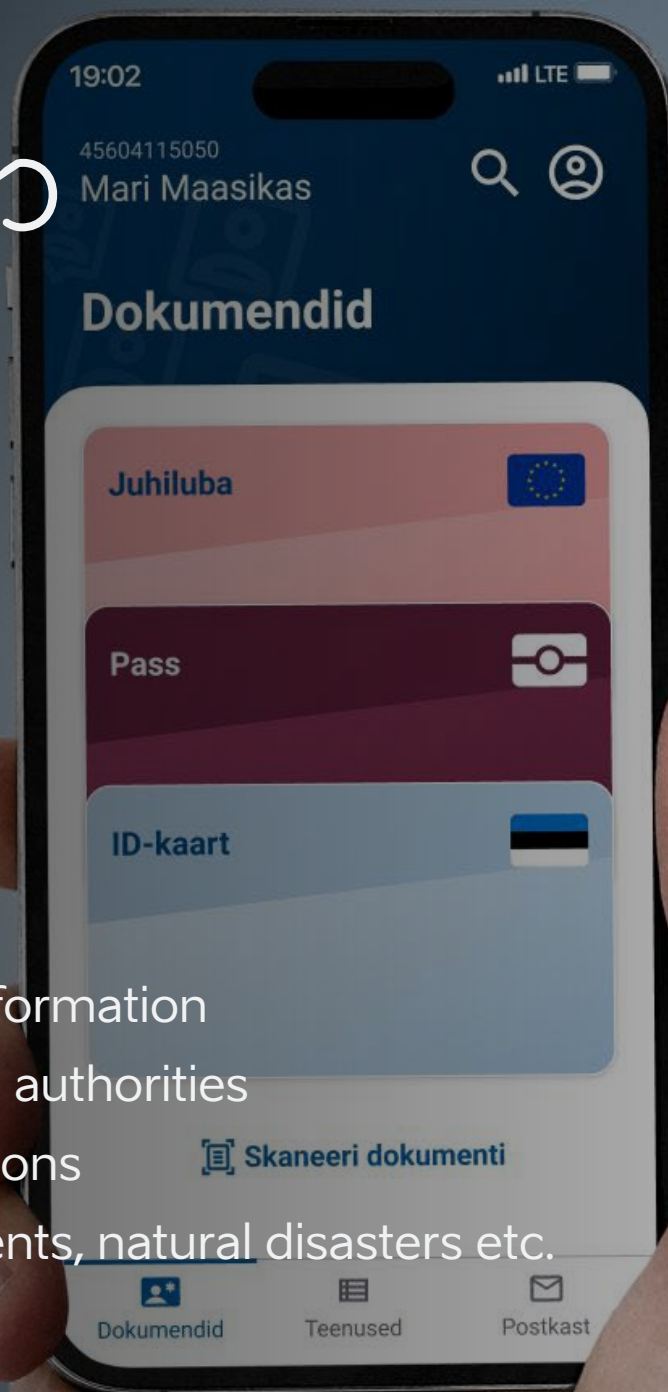
seamless e-services available 24/7

- + proactive government
- + AI in government services
- + cross-border digital governance
- + personalised medicine
- + environmentally sustainable digital state
- + citizen-centric data governance

eesti.ee app

digital state in your pocket

- + convenient access to one's information
- + fast communication with local authorities
- + view and manage e-prescriptions
- + receive notifications on accidents, natural disasters etc.
- + use the data tracker



potential substitute
to physical
documents



access to virtual
assistant bürokratt
in the future



proactive government



starting a
business



childbirth



buying
a car



driving
licence



start of
school



unemployment
& job search



marriage



divorce



disability



military
service



change of
residence



retirement



death
(succession)



building
houses



falling victim to
an accident



falling victim to a
crime



lessons learned

how Estonia succeeded

- + digital-minded leadership
- + keep it short and simple
- + transparency works
- + shared platforms are quicker
- + service design matters
- + public-private partnership
- + start-up mentality



stronger together

let's keep in touch!

sign up for our newsletter and follow us:

📧 e-Estonia
e-estonia@eis.ee

materials

