

— **Future-proof
technologies for secure
digital societies.**

Essential facts



Technologies exported to 35+ countries, incl. **USA, Japan, UAE, Ukraine, Indonesia, Malaysia and more**



Roots in academia **since 1960**



Cybernetica AS established in **1997**



Partnerships include **EY, PwC, European Commission, EDF, DARPA, ESA, ENISA**



Architects of **e-Estonia ecosystem**



460+ research articles published since 1992

Clients in 35+ countries

USA
Malaysia
Tunisia
Ukraine
Japan
Benin
Greenland
Azerbaijan
Switzerland
Bahamas
Germany
and many more!



Architects of e-Estonia

enter
e-estonia



Estonia is known as the world's most advanced digital society.

Cybernetica has been a key partner in developing the world-renown e-governance solutions such as X-Road, SplitKey, e-Customs, Estfeed and more.

Architects of e-Estonia

1998

Time
stamping

2000

Digital
Signature
Act

2001

X-Road

2004

eCustoms
for joining
the EU

2005

Internet
voting

Architects of e-Estonia

2006

Sharemind
pilot

2009

Estonian
blue border
surveillance

2011

Strategic
alliance on
crypto-
graphic
security

2014

UXP secure
data
exchange

2014

National
GMDSS
system

Architects of e-Estonia

2017

SplitKey
mobile
identity

2018

Estfeed
Smart Grid
platform

2020

Cyber threat
intelligence
platform
between
Estonia
and US

2022

Secure
Digital
Military
Mobility

2023

SplitKey
CSP

Values

Integrity

Continuous learning

Accountability

Sustainability

Meaningful innovation

Creating future technologies

Solutions with real impact

Top experts in the industry

Novel ways to execute

Resilient partnerships

Turning customers into partners

Support throughout entire journey

We are delivery-oriented



Information Security Research Institute

💡 R&D is in our DNA

40+ researchers

10+ PhDs

Consulting

Contractual
research

Advanced projects

Teaching and
training

Product and
technology
development

Our research domains



Digital identity



Protocol
research



Privacy and AI



Cybersecurity



R&D partnerships include DARPA, ONR, EU Commission, EDF, ESA, Estonian Research Council and Enterprise Estonia

Our accredited Research Institute focuses on information security, cooperating with both private and public sectors.

Solutions



Digital identity



Interoperability



Cybersecurity



Privacy and AI



Tax and customs systems

Digital identity

Next generation mobile digital identity with unbreakable security.

A holistic digital identity value proposition



Technology

Ongoing development of SplitKey products.



Product

Three different SplitKey products for tailored digital identity needs.



Knowledge

Extensive knowledge of digital identity infrastructure.



Experience

Vast experience with major projects at a state level.

Digital identity offering



SplitKey

Smartphone based digital identity technology for secure electronic signing and authentication.



SplitKey+

Additional authentication methods for SplitKey – biometrics and pattern.



SplitKey CSP

Hardware agnostic SplitKey product for digital identity wallets.



Advisory

Consulting service to advise and analyse the current landscape.

i-voting in Estonia



Estonia is the first, and currently, the only state in the world where citizens can elect the government online.

Country: Estonia

Population: 1.3 million

Year launched: 2005

Smart-ID

Authentication and digital signing application utilising SplitKey technology.

Region: Baltics and Iceland

Population: 6.3 million

Year launched: 2017

Partnerships

Strategic collaborations with global partners to elevate digital identity across multitude of regions worldwide.

PwC

Region: Middle East

EY

Regions: North Africa and Estonia

iProov

Regions: EMEA, LATAM and APAC

Collaboration with the Estonian Government

Research projects regarding the Estonian eID ecosystem and i-voting to ensure future-proof security.

Country: Estonia

Population: 1.3 million

Year started: 2000

The Future: Digital Identity Wallets

Strategic partnership with SK ID Solutions and the Estonian Information System Authority to scope and prepare for the development of digital identity wallets.

Year started: 2022

Country: Estonia

Privacy and AI

Protect data from unauthorised processing.

Privacy-by-Design in AI systems



Sharemind MPC

The next generation of data-driven services with end-to-end data protection and accountability.



Sharemind HI

The Application Server provides an API for implementing privacy-preserving services using Trusted Execution Environments.



Data solutions

- + Synthetic data
- + Differential privacy
- + Federated learning
- + Zero knowledge proofs



Advisory

- + Impact assessments
- + Audits
- + Roadmaps and trainings

Encrypted suggestion engine for healthcare

End-to-end encrypted suggestion engine for the CoNurse app with Sharemind HI.

Product: CoNurse

Partner: Cognuse

Region: Worldwide

Year launched: 2023

Predicting patient hospitalisation

Anonymising patients with rare diseases is hard without impacting the dataset and results.

Using Sharemind MPC solves this problem.

Partner: University of Tartu

Prototyped in: 2021

Country: Estonia

Securing analytics on mobility data

Secure processing of mobile phone location data for official statistics with Sharemind HI.

Funding: European Commission

Year launched: 2021

Beneficiary: Eurostat

EUCINF

Cyber and Information warfare toolbox based on machine learning and AI capabilities.

Funding: European Defence Fund

Partners: Airbus, Indra, Leonardo

Year started: 2023

Interoperability

Trust-based data exchange technology to build scalable and secure digital ecosystems.

Interoperability offering



Unified eXchange Platform (UXP)

Peer-to-peer data exchange over encrypted and mutually authenticated channels.



Managed UXP

Cloud-based Interoperability-as-a-Service solution.



UXP Data Privacy tools

Transparency-enhancing technologies for data protection compliance.



Advisory

Full suite of consulting services for building technical interoperability.

X-Road

Cybernetica was the technical architect of the Estonian Interoperability Framework called the X-Road, that helped Estonia save over 1885 years of working time in 2022.

Country: Estonia

Population: 1.3 million

Year started: 2001

Trembita platform

UXP as the core of national interoperability platform
Trembita supports Ukraine's e-government application Diia in providing digital services.

Country: Ukraine

Population: 44 million

Year started: 2017

MyGDX platform

Migrating the existing MyGDX platform to UXP as a highly scalable and secure interoperability technology for the Malaysian federal government.

Country: Malaysia

Population: 33 million

Year started: 2021

Beninese platform and citizen portal

Implementing UXP as the full-scale interoperability platform and deploying a government services portal in the Republic of Benin.

Country: Benin

Population: 12 million

Year started: 2019

Cybersecurity

Be in the know of your network and critical business assets.

Cybersecurity offering



Cyber situational awareness (CSA)

Cybersecurity solutions to elevate the awareness of cybersecurity matters.



Entity behaviour

User and entity behaviour analysis in the networks to gain an understanding of the usage of a system and the actions within it.



Proactive cybersecurity services

Tailored services for organisations and institutions to elevate CSA.



Industrial cybersecurity

Hybrid solutions of CSA solutions and entity behaviour applicable in industrial environments.

Proactive cybersecurity services

Risk assessment

Tailored services



Analysis

Assessment of assets, business processes and critical systems.



Design

Assessment of security and system architecture, risk management advisory.



Implementation

Software composition analysis, secure system development support and more.



Maintenance

Systematic prevention measures incl. vulnerability scan, pentesting, threat audit and more.

ECYSAP

European operational platform for real-time cyber situational awareness.

Funding: European Defence Fund

Partners: Airbus, Indra, Leonardo

Year started: 2020

VORMSI

Cybersecurity threat sharing
between Estonia and USA.

Partner: US Air Force
Research Laboratory

Year started: 2019

FAMOUS2

Next generation of interoperability for armoured vehicles.

Funding: European Commission

Partners: Patria, Indra, Diehl and others

Year started: 2021

EU-GUARDIAN

AI-based incident management solution.

Funding: European Defence Fund

Year started: 2022

Surveillance

Elevating situational awareness at sea through integrated border surveillance and vessel traffic management systems.

Future-proof technologies for safety at sea

Cybernetica provides maritime surveillance, communication and vessel traffic management systems that are utilised in more than 100 locations worldwide spanning seas in Estonia, Europe, Africa and South-East Asia.



Integrated maritime surveillance



Vessel traffic management



Maritime radio communication

Surveillance systems offering



Border and maritime surveillance

Integrated surveillance systems for detecting, identifying, and monitoring objects on the mainland and blue borders. TDoA integration.



Vessel traffic management

Enhancing security of maritime and border environment, marine traffic awareness, and safety at sea.



Coastal radio communication

+ Based on VoIP protocol, over IP network
+ System scalability

Maritime coastal radio communication system

Deployment of complete radio system for Malaysia and Indonesia across both shores of the Malacca Strait.

Region: South-East Asia

Annual transit: 100 000 ships

Year launched: 2016

Vessel traffic management system

Deployment of a comprehensive vessel traffic management system on the Gibraltar Strait – over 100 000 trade ships transit annually.

Region: Europe
and North Africa

Annual transit: 100 000
ships

Year launched: 2023

Border and maritime surveillance

Detecting, monitoring and identification of traffic and targets in a blue border environment on the EU and NATO external border.

Region: Estonia

Localised stations:
Over 200

Year started: 2013

Tax and customs systems

Turn-key software solutions for tax and customs based on decades-long expertise.

Tax and customs systems offering



Software development

Custom software for all tax and customs matters: import, export, transit, VAT, excise and more. Full compliance with EU specifications.



Advisory

We have cooperated with the Estonian Tax and Customs board since 2003. Our expertise played an integral role upon admission to the EU in 2004.

Estonian Tax and Customs Board

Strategic partner to the Estonian Tax and Customs Board since 2003.

Region: Estonia

Import/export system


Transit system

VAT and tax management systems

— Thank you.

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