Digital transformation of education in Estonia

Policies and measures to support transformation

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strategic approach to digital education

Key enabling condition for Estonian Education 2035

+ digital solutions as tools for educational innovation
  that enable the differentiated and personalised learning

+ educators are familiar with trends, opportunities, risks and methodologies
  related to new technologies, and apply the technologies in a purposeful way

essential

+ population 1,3 mln
+ 300 000 learners in formal education,
  26 000 teachers

+ internet is a social right
+ 99% of services are online
+ Estonians trust e-solutions

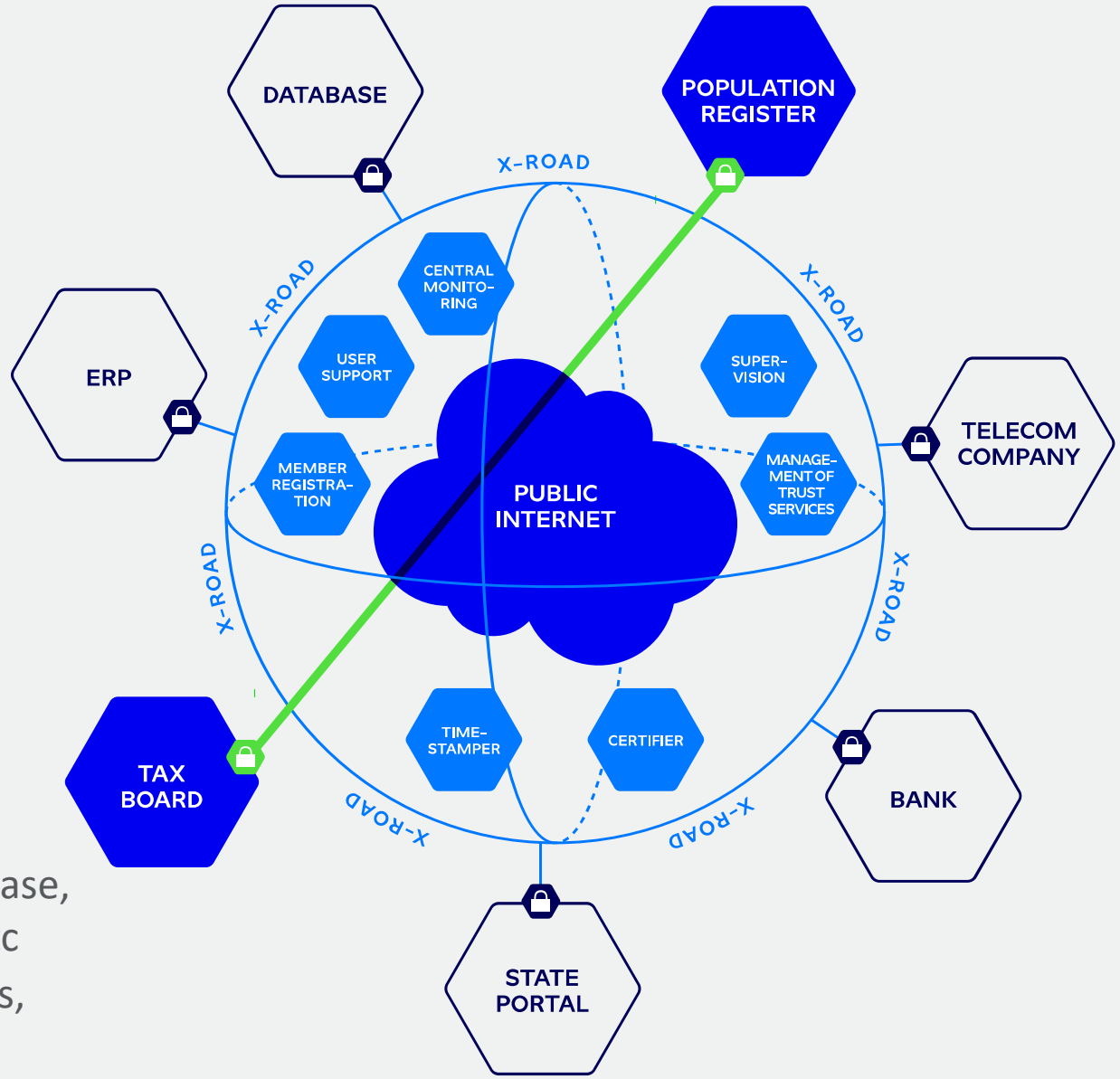
electronic ID

The strongest identity

+ every Estonian has an electronic ID
+ digital signature since 2002
+ HarID for education
  - OpenID Connect/OAuth standard, MIT open source software licence
+ e-Residency

exchange

Security and interoperability



+ Main partners outside education: population database, health board, social insurance, credit institutions etc
+ In education: admission, LMS, EMS, tests and exams, digital learning materials

education technology

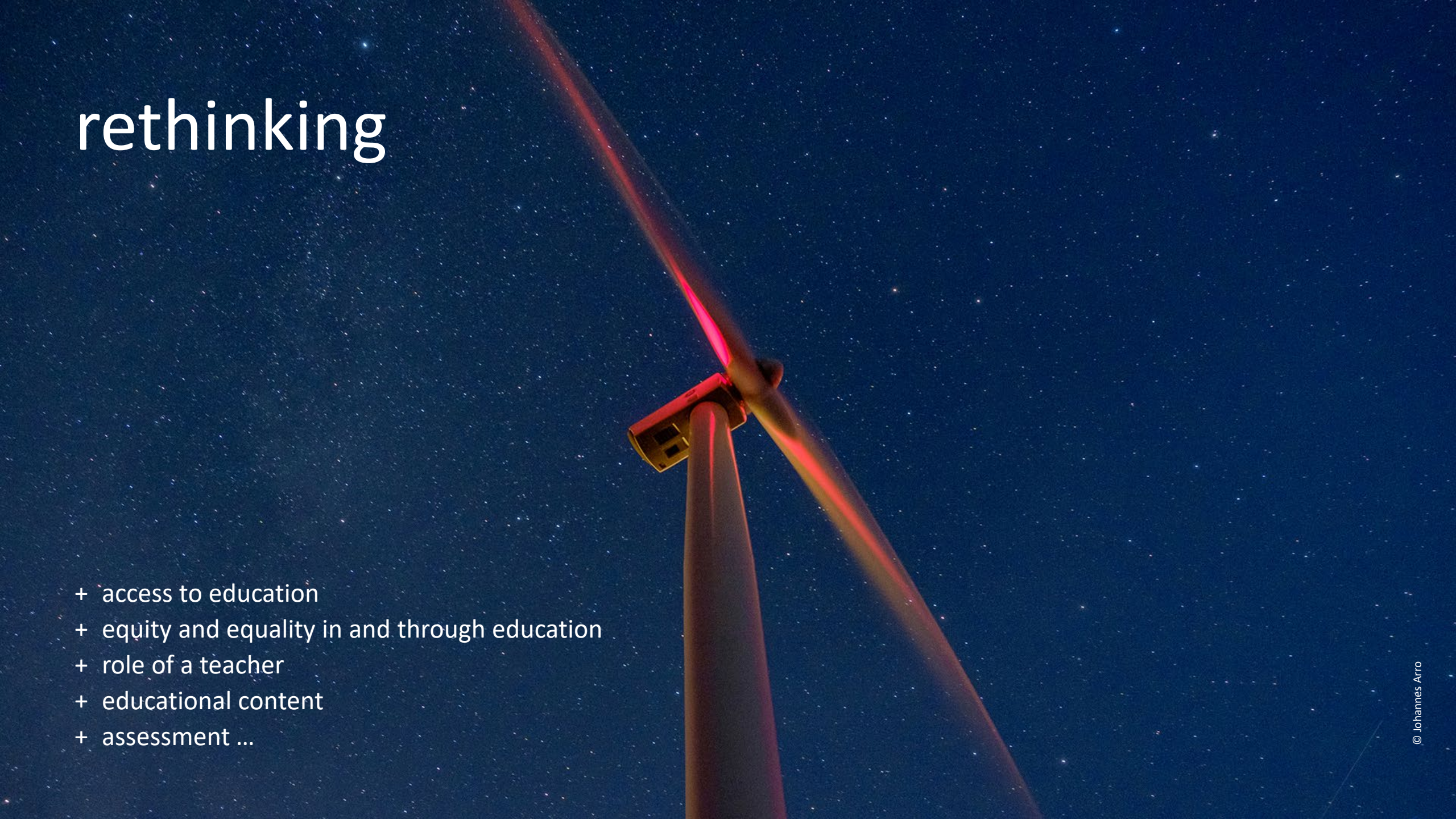
Clear and honest principles

+ once-only
+ digital first
+ user centred approach
+ disclosing the data
+ open source code
+ focus on governance and collaboration

Over 20 digital solutions covering five functional domains

- **Learning management and digital learning resources**
  (e-schoolbag, assessment tools, planning tools etc)
- **Learning administration**
  (entry, graduation, scheduling, transitions, internships etc)
- **School management and governance tools** (ID, AD, webpage, e-shop, accounting, records and documents management, strategic planning)
- **Data services**
  (national registers, statistics, reports, digital credentials, data governance system)
- **Other services** (quality assessment, single digital portal, digital solutions for project management and administrative activities)

rethinking



+ access to education
+ equity and equality in and through education
+ role of a teacher
+ educational content
+ assessment …

digital infrastructure for personalised learning

+ digital solutions as tools for educational innovation that enable the diversification and personalisation of education

+ a systematic approach to the introduction of new solutions

Roadmap for implementation of personalised learning concept at school level

Planning and design

Preconditions:

- Learning outcomes graph
- Learning resources linked to learning outcomes´ graph
- **Dashboard for planning learning outcomes and pathways to achieve the goals for teachers and students**

Organisation of self-driven independent learning

Preconditions:

- Access to quality learning resources relevant and ability to use the resources in purposeful way
- Digitalising the traditional learning activities (digital imprints)
- **Students´ dashboard for navigating the personalised learning pathways**

Collaborative learning spaces

Preconditions:

- Contemporary approach to learning targeting at developing the 21st century skills
- **Teachers´ dashboard for navigating the personalised learning pathways**

Data-driven learning process analysis and design

Preconditions:

- Collecting data – digital imprints – on everyday learning activities
- **Learning analytics dashboards for students and teachers**

a digital focus in lifelong learning – a strategic goal

the digital content development skills in all age groups create equal opportunities for all learners and conditions for increased competitiveness

+ digital competence as a key competence in curriculum
+ ICT basic skills for all
+ ICT related subjects available for all (coding, robotics 3D design and 3D printing)
+ a digital solution for the management of individual educational paths and careers and assessment of skills

policy measures

+ Digital infrastructure support schemes
+ Collaborative networks and co-creation spaces for boosting innovation
+ Investments in digital learning resources and e-services
+ Investments in skills and education technology
+ Investments in research and research uptake
+ Data governance regulations and open data
+ E-services marketplace principles

cooperation with EdTech

fastest growth in sector

+ sophisticated ecosystem
+ 2021 – 50% growth
+ governance of educational data, collaboration with research institutions