ESTONIA: digital transformation - what it means and how to achieve it

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Forum of National Archivists (ICA FAN) Abu Dhabi, May 2nd 2019

Slides by e-estonia.com have been used for the presentation

a modest country that extends beyond its borders

+ population: 1.3 million
+ area: 45,339 km²
+ currency: Euro
+ member of: EU, NATO, WTO, OECD, DIGITAL 9
+ ICT sector: 7% of GDP
essential
Clear and honest principles

+ internet is a social right
+ every Estonian resident has an electronic ID
+ 99% of services are online
+ Estonians trust e-solutions

+ once-only
+ digital by default
+ trust-by-design
+ open internet

empowering
Easiest life: only getting married or divorced and selling real estate cannot be done online.

Simplified and fastest business environment
+ a few hours to start a company
+ hassle-free e-taxation
+ full automatisation in tax reporting by 2020
+ e-Residency – Estonian e-services to every world citizen

The healthiest system
+ digital health data
+ digital prescription
+ e-Ambulance
+ personalised medicine
e-Estonia timeline

proactive government
Action plan for life-event service design

TARGET: 7 LIVE BY YEAR 2020
exchange


+ saving 1407 years annually
+ 651 institutions and enterprises
+ 504 public sector institutions
+ 2691 different services
+ over 900 million transactions per year
+ exported to Finland, Kyrgyzstan, Namibia, Faroe Islands, Iceland, Ukraine, and other countries

Blockchain pioneers

Estonia was the first Nation State in the world to deploy blockchain technology in production systems in 2012.

+ e-Health
+ Property and Land Registry
+ Business Registry
+ Succession Registry
+ e-Court
+ Surveillance / Tracking Information System
+ State Gazette
+ Official State Announcements

Estonia uses blockchain technology for integrity verification of government registries and data. No data is saved to the blockchain.
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Rahvusarhiiv

- Established 1920, 2 centres (Tartu, Tallinn)
- 190 employees
- 7 buildings in 4 locations
- 15,600 m² of repositories
- Ca 80 km of records
- 890 TB of digital content
- Film archives
- Digital archives
2004: search catalogue
2005: digital content
2009: online reading room
2010: photo collection
2011: map collection
2011: films, sounds and videos

www.ra.ee

AIS  http://ais.ra.ee/

9 mil. record titles (file level)
• 1999-2009 data input
• 2004 web interface
• AIS 2.0 coming soon
SAAGA www.ra.ee/saaga

- 20,2 mil. images
- Church books, censuses, military records, court files etc

Fotis www.ra.ee/fotis

650 000 photos

Interesting user-selected photographic collections
Register of maps  www.ra.ee/kaardid

- 148 000 descriptions
- 54 700 images

FIS  www.eha.ee/fa/public

- 500 TB
- films, sound recordings, videos
2009 integrated databases, finding aids, services
2013 loan management system
2015 enquiries and payments
Agency – archive - customer
Digital preservation I
Based on OAIS standard (Open Archives Information Systems)

Digital preservation II
- Archival file formats
  - PDF, XML (incl. SIARD2), TXT, TIFF, PNG, WAV, BWF, AIFF, MPEG-2
  - ODF under consideration
- Keep the original
  - if available, we also keep the original
- Multi-site storage
  - at least two locations (Tallinn and Tartu)
- Trend towards "minimal ingest"
  - relaxing transfer requirements and ingesting "as is"
  - take your time for migration etc once the first version of the AIP is safely in storage
- Transition to E-ARK IP
Digital preservation III

- All IT services, except digitization
- Ca 20 people (digital archiving 6...7 people)
- Software development and maintenance – 7...8 people
- IT support and administration – 4...5 people

- Preservica + local layer
- Local pre-ingest tool
- Local access tools
- DBPTK + DBVTK

Digital preservation IV

- Shortened transfer periods
  - Since 2012: 10 years
- Active pre-appraisal
  - More than 97% of records have been fully covered
  - Spring - summer 2017: Appraisal of the Estonian Information System
- Staff development for digital preservation
  - From 2 FTE to about 10 FTE since 2007
- Infrastructure
  - Active development of software and guidance since 2007
    - Digital repository; tools for producers; specifications and workflows; guidelines and training; etc.
    - Cost around 200,000€ per annum (not including staff expenses)
  - State-of-the-art physical infrastructure (Noora)
Cooperation I

"Digital preservation is difficult"
UK National Archives, Digital Strategy 2017 - 2019

- **Processes and tasks:** pre-ingest, ingest, active and passive preservation, metadata management, access and reuse; content validation, identification, migration, etc.
- **Data types:** digitised images, office files, databases, GIS, born-digital audiovisual content, applications, 3D images, ...
- **Usability:** all specifications need to be aligned with IT and archival standards and best-practices; all software has to be scalable, modular, as easy to learn and use as possible

Lack of professional discussion
- No one to talk to and consult with except a few memory institutions (some museums, national library)
- (Almost) no formal education in digital preservation

Cooperation II

- **The National Archives of Estonia is not able to meet the challenges of born-digital alone**
- International collaboration is needed:
  - In developing software together
  - For advancing staff skills and knowledge
- E-ARK proves that:
  - (digital) archivists are capable of working together
  - pragmatic collaboration can provide significant savings for individual archives ...
  - ... and increase the quality of professional discussions and knowledge among experts
- (CEF) eArchiving Building Block
  - More flexible thanks to annual planning (vs tri-annual in E-ARK) and (potentially) less administrative overhead
How should I enter the Cyrillic and Russian name Johannës?

family name
first name
image number(s)

Thank you!
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