

Digital Europe Program
How to Accelerate the Digital Transformation
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Public Sector ICT Perspective
On Digital Transformation

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Why Public Sector ICT Perspective ?

- The disruption caused by the digital transformation is at the same time a great challenge and a huge opportunity for everyone. However, it is even more challenging for public sector, because
 - the resources for the transformation are more limited and more inflexible
 - the culture for “the quick revolution” is more immature compared to “the moderate evolution”
 - the needs to change the competence, job and salary structures are bigger
 - the regulation is more strict and public servants are traditionally cautious with it
 - Some of the public sector ICT solutions are both technically and functionally too old to support the digital transformation effectively and/or they slow down the transformation significantly
- => Digital Europe Program is an important opportunity especially for public sector and its ICT operations

ICT Services in the City of Espoo



ICT Services, Projects and Initiatives Supporting Digital Transformation



Agile SW
Development
in Cloud

RPA
Development

ICT Architecture and
Master Data
Management

Advanced Analytics
and AI Experiments

Cloud and Hybrid
ICT Infra
Development

Support for
Digital Experiments

ICT Services for Basic Registers

Systems for Corporate
Groups Services

Systems for Educational
and Cultural Services

Systems for Social and
Health Care Services

Systems for Technical
and Environment
Services

ICT Infra Services

Office and Collaboration
Systems

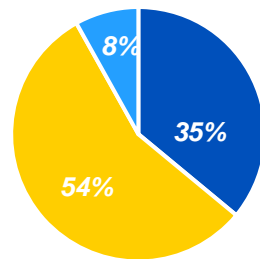
Workstations and
Mobile Devices

Data Center, Capacity
and Communication

IAM and Data Security

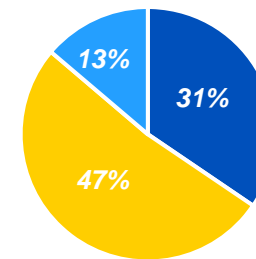
ICT Services in the City of Espoo

ICT Budget and Investments



■ ICT Infra ■ Basic Registers ■ Digital Transformation

ICT Personnel



■ ICT Infra ■ Basic Registers ■ Digital Transformation

Digital Transformation in ICT Operations

Strengths:

- The Espoo Story => strategic support
- Digital Experiments, Innovation Garden, Lean etc. => cultural support
- Framework for City Service Development => architectural support
- Several development programs => operational support
- Investments for ICT Personnel => support for competence development

Challenges:

- Limited financial framework and human resources => ability and courage to prioritize development programs to maximize effectiveness
- Technically and functionally old basic registers lacking Open APIs and suffering from poor MDM => significant investment needs
- Cyber security competences and services are very limited
- Competence development needs both in substance and ICT functions in several areas of digital transformation
- Recruiting professionals for digitals transformation
- The most successful ICT vendors do not prefer public acquisitions
- Difficulties in joint ICT acquisitions in public sector



Suggestions: How to Utilize Digital Europe Program

Digital Skills and Competences

- Boosting ICT professional education generally. Lack of e.g. ICT architects, SW developers, Data Scientists, Cyber security specialists
- Intensive short-term training services for public sector professionals **without vendor or technology locking**, e.g. process automation, agile methods, ICT architecture and master and management, cloud based architectures, advanced analytics and AI
- Development of practical frameworks, templates and other tools for Digital transformation in public sector, e.g.
 - How to tender skillful ICT vendors and flexible contracts
 - How to develop ICT architecture and master data management for digital services
 - How to benefit from open platforms

Cyber Security

- Special support for cyber security start ups and specialized education programs. Not enough skillful vendors or professionals in the market. GDPR has made the market situation even worse.
- Level of ICT infra vendors' competences/resources is also alarming

Digitization of Public Services to Ensure EU-wide Interoperability

- Development of framework architectures, master data models and API standards for different domains in public administration at national and EU level
- Recommendations for efficient utilization of cloud platforms
- Practical guidance how to succeed in public joint ICT acquisitions. Should legislation be modified or applied in more flexible way ?
- Virtual networks e.g. for European cities to share experiences and recommendations

Advanced Analytics and AI

- Guidelines for fulfilling requirements of GDPR and anonymous data in the context of mixing internal and external data bases
- Support for modernizing significant data bases for advanced analytics and AI (e.g. open APIs, data models, insurance of data quality, management of non-structural data)
- Funding and collaboration for experimenting on AI and Machine Learning

