

Digital continuity and the architecture behind it!

Allan Allmere
Project Director (Architecture and Infrastructure)
Ministry of Economic Affairs and Communications

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- # Project Director (Architecture and Infrastructure)
- # Ministry of Economic Affairs and Communications



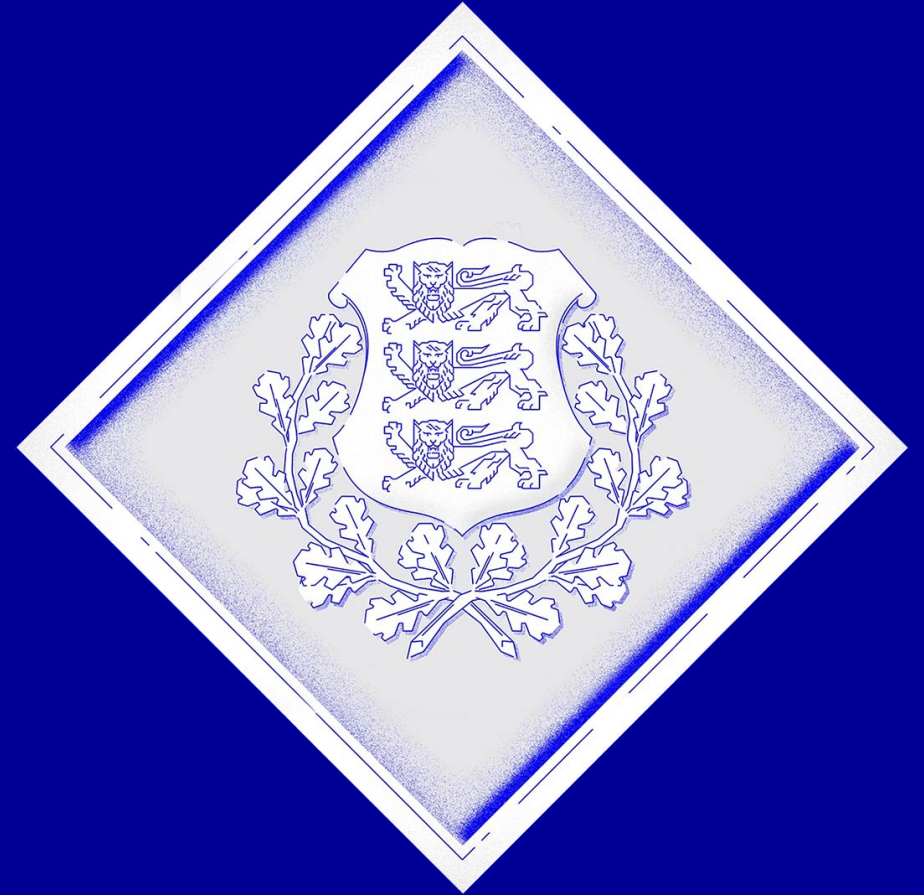
**GOVERNMENT
CLOUD**



**DATA
EMBASSIES**



MARKETPLACE



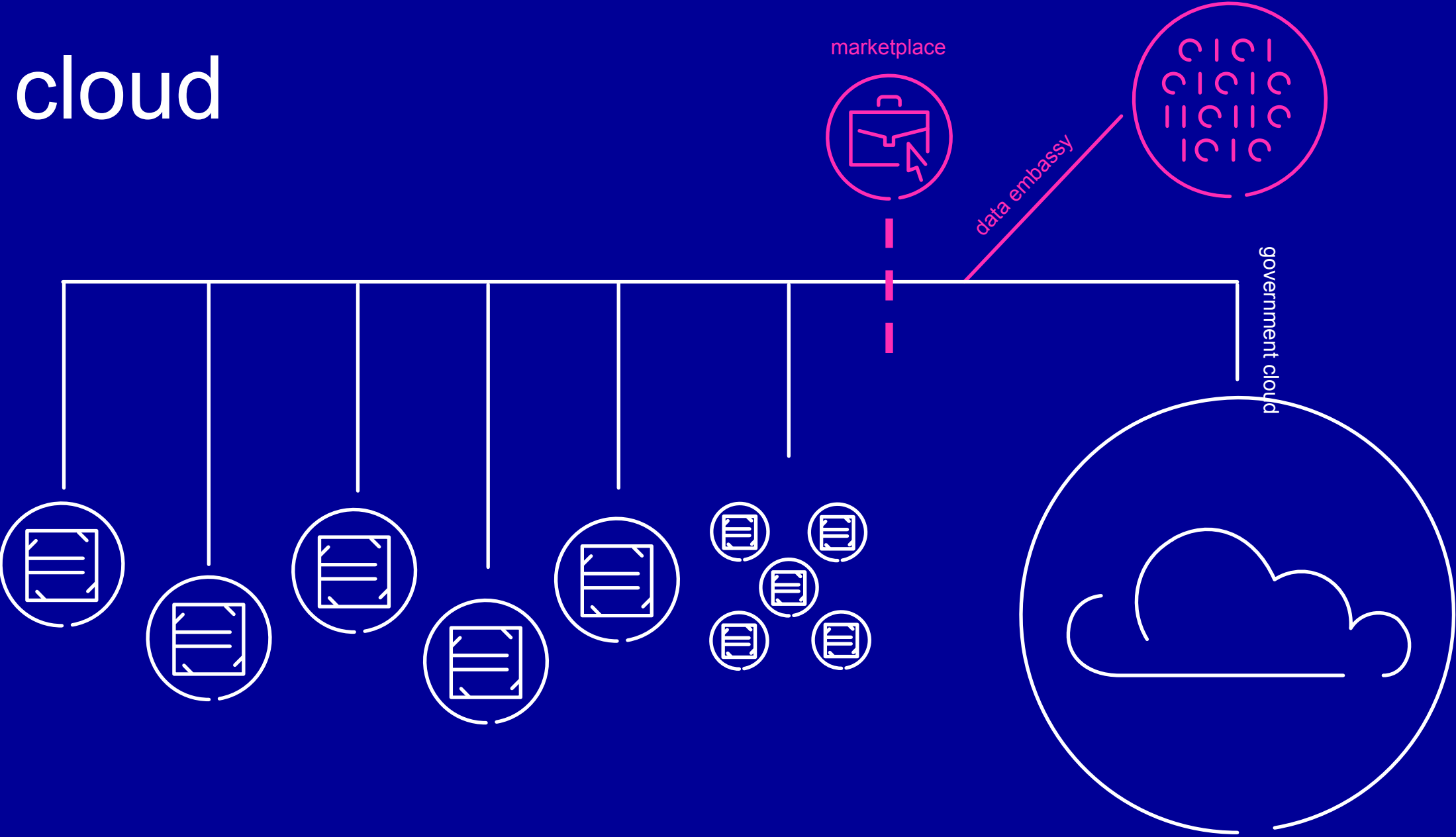
A blue-tinted photograph of a room. A neon sign in the upper center reads "enter e-estonia" in a lowercase, rounded font. To the right of the sign, a round analog clock with a dark face and light-colored hands is mounted on the wall. The room has a wooden ceiling with exposed pipes and some hanging light fixtures. The overall atmosphere is dim and tech-oriented.

enter e-estonia

Estonia is a digital country today and
even more tomorrow

Critical dependency

cloud



Data embassies: for toughest times

- Digital continuity is critical for Estonia, as we rely on digital solutions in the government. We do have a need to backup and run critical data and systems outside of Estonian territory.
- The definition of a “data embassy”. By the term we mean “a data centre”, which indicates a facility used to preserve the data and information systems.
- Agreement has been made in the spirit of Vienna Convention (therefore the name Data Embassy) to give necessary guarantees of immunities and privileges on the basis of existing international and national law



Data
embassy
S

where/why

- The first data centre is a physical room that is located in Luxembourg's national data centre.
- We chose Luxembourg as the first data embassy site because:
 - + readiness and flexibility to work on a new concept;
 - + highly secure data center facilities (TIER 4 level of security, the highest level of security for data Centres);
 - + their space – our equipment;
 - + legal innovation: sovereignty over data hosted abroad under International law
 - + connectivity.
- We have been operating the Estonian data embassy in Luxembourg from end of 2018.



Availability of the agreement

**Agreement
between
the Republic of Estonia
and
the Grand Duchy of Luxembourg
on the hosting of data and information systems**

The Republic of Estonia and the Grand Duchy of Luxembourg, together referred to as “the Parties”,

HAVING REGARD to the Memorandum of Understanding (MoU) between the Ministry of Economic Affairs and Communications of the Republic of Estonia and the Ministry of Media and Communications of the Grand Duchy of Luxembourg, signed on the 14 of November 2016,

WHEREAS this Agreement is in the spirit of the Vienna Convention on Diplomatic Relations,

WHEREAS the Vienna Convention on Diplomatic Relations is not sufficient to set a legal framework for the hosting of data and information systems,

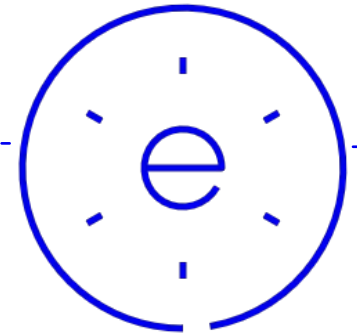
WHEREAS this Agreement is concluded within the framework of the diplomatic relations between the Republic of Estonia and the Grand Duchy of Luxembourg,

INTENDING to specify the means for effective cooperation between the Parties and support by the Parties which are essential for the successful and effective operation of the premises hosting the Estonian data and information systems,

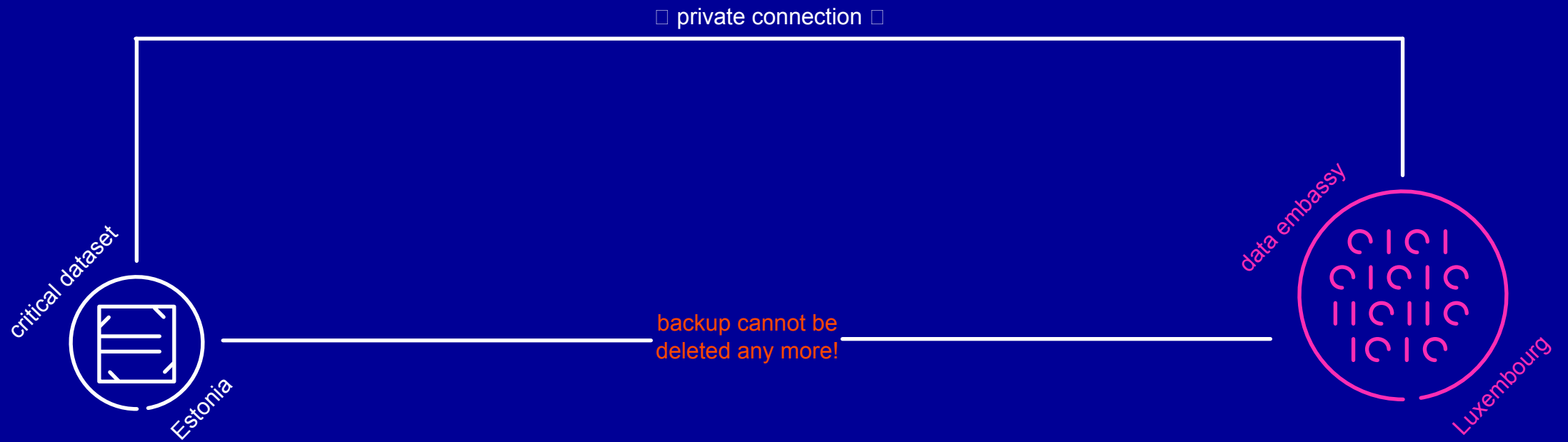
WISHING to conclude an agreement governing the legal status of the premises hosting the Estonian data and information systems, with the necessary guarantees of immunities and privileges on the basis of existing international and national law,

HAVE AGREED as follows:

Available at: https://www.riigiteataja.ee/aktilisa/2280/3201/8002/Lux_Info_Agreement.pdf#



The idea behind it



Starting list: most critical datasets

#1

E-file
(court system)

#3

E-land
register

#5

Company
register

#7

State Gazette

#9

Land cadastral
register

#2

Treasury information
system

#4

Register of
taxable persons

#6

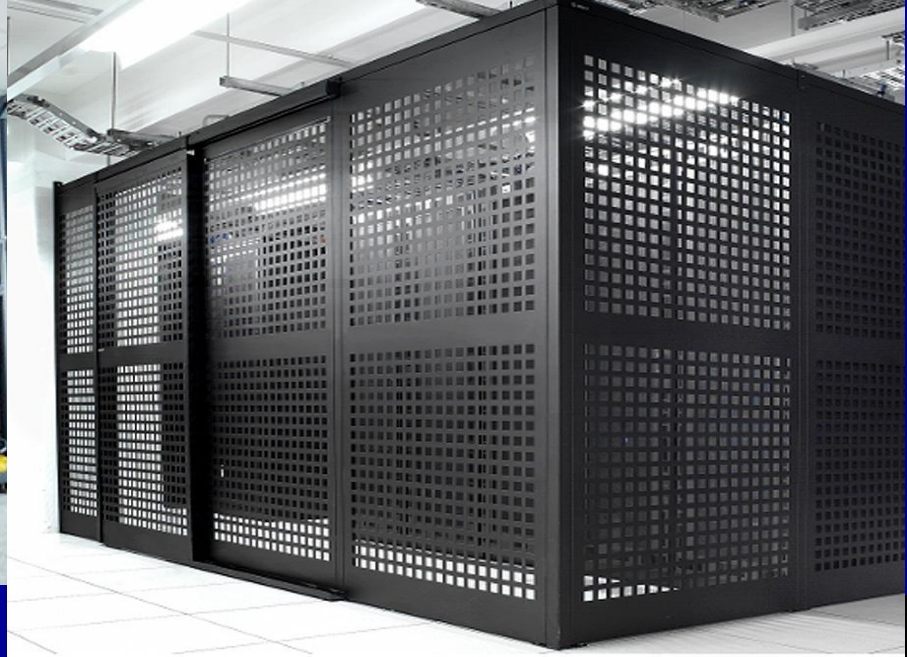
Population
register

#8

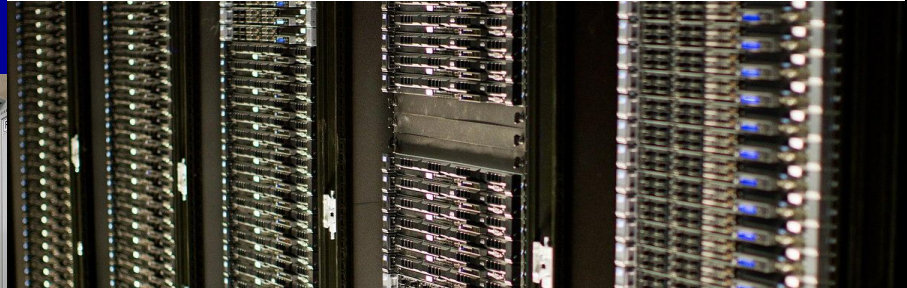
Register for identity
documents

#10

National pension
insurance register



server room



STARTUP


PROJECT

- 1) Crude back-up of critical data
- 2) Readiness to operate live from data embassies
- 3) Extension: next site(s)



The image features a group of people, likely refugees, silhouetted against a background of cracked earth. The background is split horizontally into a blue upper half and a yellow lower half, representing the Ukrainian flag. The people are carrying various items, including bags and a suitcase, suggesting they are displaced. The text is centered over a semi-transparent grey rectangle.

**What happened in
Ukraine and what
can be learned**

- 
- A large field of sunflowers stretches towards the horizon under a blue sky with scattered white clouds. The sunflowers are in full bloom, with bright yellow petals and dark brown centers. The field is dense, and the perspective leads the eye from the foreground flowers towards the distant horizon line.
- Help from private sector / countries
 - Over the internet
 - Moving Equipment (West/Across the Border)
 - Cloud competence
 - Mess who/where - central leader
 - They can manage
-



Quickly to the cloud

- The law needs to be changed
- Negotiate with each institution separately
- Skills (online help; private sector at a better level)
- What is really important or can be deleted
- You can't put everything in the cloud (exotic hardware, architecture, etc.)
- Volumes/resources started to decrease in the cloud





FIVE recommendation

- I – Plan ahead
- II- Take care of fast connection
- III – Updating legislation
- IV – Skills and fast migration
- V - Prepare and practice

Thank you!

