Land Surveying, Mapping & Cadastre in Estonia
Some Milestones

Tambet Tiits
14.11.2017
ESTONIA

1154 Tallinn marked on the world map of Al-Idrisi

 Territory: 45 339 km²
 Population: 1.316 million
 The capital: Tallinn
 Forests cover ca 55%
 1521 islands, over 1000 lakes

e-Estonia: advanced digital society
 First country to offer e-residency

Carta Marina 1539, Olaus Magnus (fragment)
The royal power of Denmark in Estonia (1219 - 1346)

• The oldest known Land Cadastre in Estonian territory is Liber Census Daniæ (the Danish taxation list) from the 13th century

• The list contains about 500 Estonian place names and the names of 114 local vassals, including relations regarding land property
The royal power of Denmark in Estonia (1219 - 1346)

- 1248 Tallinn gained Lübeck city rights
- Later in the 13th century cities governed by the Lübeck law formed into a powerful trade association, the Hanseatic League
- Lübeck law was applicable in Estonia until 19th century

The oldest preserved codes of the Lübeck law in Tallinn are from 1257 in Latin and 1282 in German (copy).
The royal power of Denmark in Estonia (1219 - 1346)

- The oldest preserved compilation of administrative documents of the Tallinn City Hall is the real property book, starting with year 1312
The royal power of Denmark in Estonia (1219 - 1346)

• In 1265 by the order of king Valdemar II border of Tallinn was determined, demarcated and documented. Regular checking of borders and showing up for citizens were organized.

• As the boundary was long, this survey normally took place as a festive procession. The ceremony was called a „border riding“. 
The royal power of Sweden in Estonia 1561 - 1710

- Tallinn, documentation of the land parcels and boundaries was started on the basis of geometric surveying and mapping data of the townships.
The royal power of Sweden in Estonia 1561 - 1710

• 1628, the Swedish State Land Survey (Lantmäterikontoret) was established under the guidance of Andreas Bure
• 1680 the Riksdag (the Swedish parliament) declared the great reduction (great cadastre) of manors.
• 1681 Lantmäteriverket Livonia the Land Surveying started the survey and land valuation in Livonia, Estonia and Saaremaa

Cadastral plan of Lümanda manor, 1695
The royal power of Sweden in Estonia 1561 - 1710

• 1632 the University of Tartu was founded
• Geodesy and land surveying were also taught there
• 1665 professor J. Schelenius, compiled the first textbook in Estonia on land surveying and geodesy
The royal power of Russia in Estonia 1710 - 1918

- The Baltic region constituted a separate entity in the empire, self-governed based on Baltic Civil Law
- 1785 Land Registry in all cities
- Surveying, mapping was continued same way
- LA and Surveying until 1918: 
  North Estonia
  South Estonia and North Latvia
  West Estonia (Saaremaa, Muhumaa)
  East Estonia (Petseri, Ingerimaa)
  Cities (Tallinn, Tartu, Pärnu)

_Cadastral plan of Matsalu manor (1754), compiled by land surveyor J. Guthardt_
The royal power of Russia in Estonia 1710 - 1918

Struve Geodetic Arc

- Triangulation chain from Hammerfest on the Arctic Ocean to Ismail on the Black Sea, along the 26E meridian, 2822 km. (1816 – 1855)
- Friedrich Georg Wilhelm Struve, professor of astronomy and geodesy of the Tartu University
- 2005 Inscribed on the UNESCO World Heritage List
Estonian Republic 1918 - 1940

- **The Land Act** was passed on October 10, 1919
  - Land reform 1919 – 1934
- In 1920-s cadastral surveys:
  - took place under limited time
  - geodetic network covering the entire territory of the country was under development
- 1924 Baltic Geodetic Commission was established in Helsinki (Finland, Estonia, Latvia, Lithuania, Poland, Denmark, Sweden)

Surveying in Estonia 1933 – 1943

- Cadastral plans - “sometimes abusive drawings, of which there is no daring to speak about; and which is to be explained by a specific method, which often does not meet the requirement of law “, Richard Tiitso (Head of National Cadastral Administration), 1931
Estonian Land Board (AD 1990)

- Responsible for National Cadastre
- Producer and provider of spatial data services
- Topographic mapping
- Geodetic and legal surveying
- Land valuation, management, zoning and readjustment
- INSPIRE, ESTHub - Copernicus program
Land Administration

National Land Administration
• Land Registry
• Land Cadastre
17.10.1991 Land Reform (LR) Act
LR 98,5% completed (2017)
• Quality of Cadastre
• L-Est geodetic reference system
• 2018 Estonia is switching to the EVRS
Geoportals

Land Board’s Geoportal (2009)  (http://geoportaal.maaamet.ee)
   - Land Board’s data and services
   - Map application is X-GIS

   - INSPIRE services are made available
   - “gateway” through which spatial data, metadata and services, INSPIRE compatible services, are published and made available
   - Estonian NSDI
Milestones of our time

Copernicus program, Sentinel satellites
Agreement on 13.09.2016
- European Space Agency and EAS (including ELB)
- Estonian Land Board is developing ESTHub
  - operational by the end 2018
Location, location, … space!

• New technology and business models
• Where?
  • Property location, location, space (3D, marine)
• How?
  • Planning/zoning, development controls, environment conservation requirements, restrictions
• Legal clarity
• Sustainable environment
• Allocation of resources, value
Thank you!

Further information:
www.maaamet.ee
geoportaal.maaamet.ee