



Utility networks in Estonian Restrictions Information System

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The Constitution of the Republic of Estonia article 32

- ❖ Everyone has the right to **freely possess, use, and dispose** of his or her property
- ❖ Property shall not be used **contrary to the public interest**
- ❖ Restrictions shall be provided by **law**

Restrictions: legal grounds



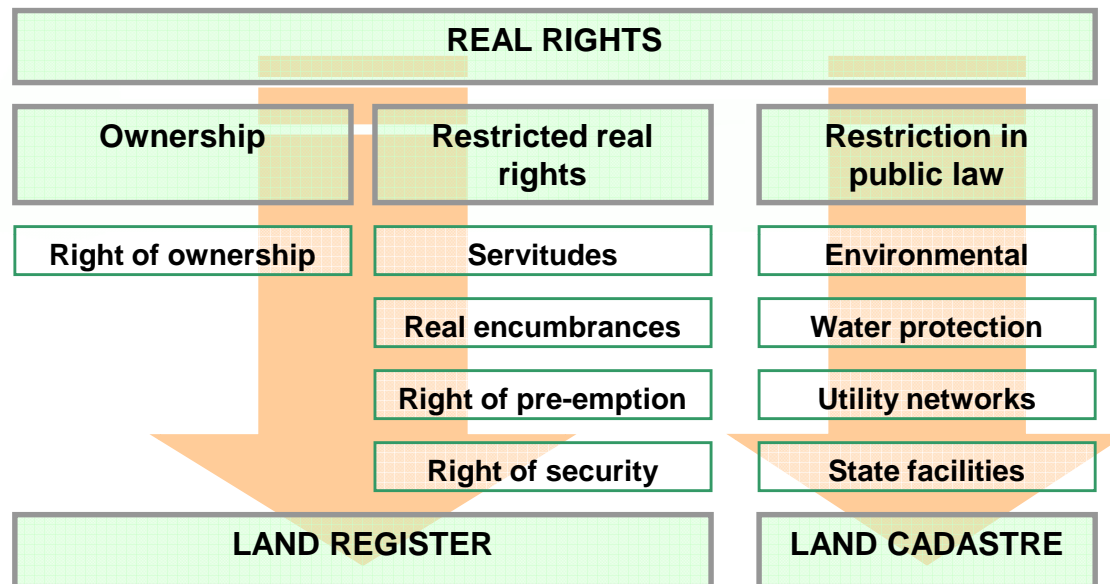
Law of Property Act article 140 to 141

- ❖ A restriction pursuant to law is valid **without entry in the land register**

Land Cadastre Act article 12

- ❖ The cadastral registrar shall enter the location of objects which give rise to restrictions on the **restrictions map**

Restrictions: legal grounds



Restrictions: legal grounds



Main feature groups are:

- ❖ Water and water economy
- ❖ Forest and forestry
- ❖ Roads, utility networks and constructions
- ❖ Protected natural objects (environmental)
- ❖ Planning and state essential facilities
- ❖ Heritage conservation

21 acts give rise to restrictions.

100 features what must be collected.

Restrictions: legal grounds



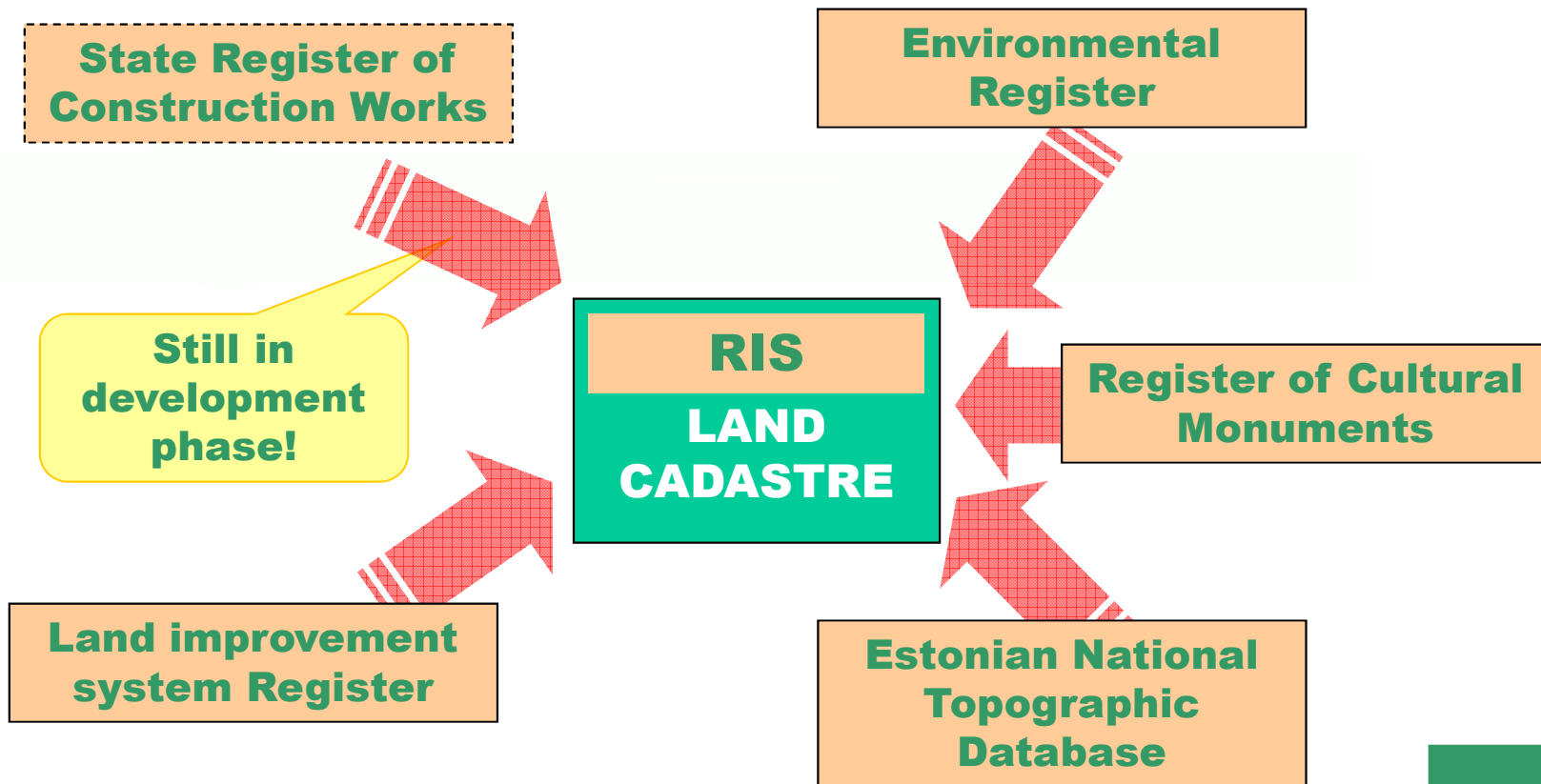
Object which gives rise to restrictions are

- ❖ Any land objects which:
 - ❖ gives rise to restriction zone (**42 different zones**)
 - ❖ can spatially identified (X,Y,Z)



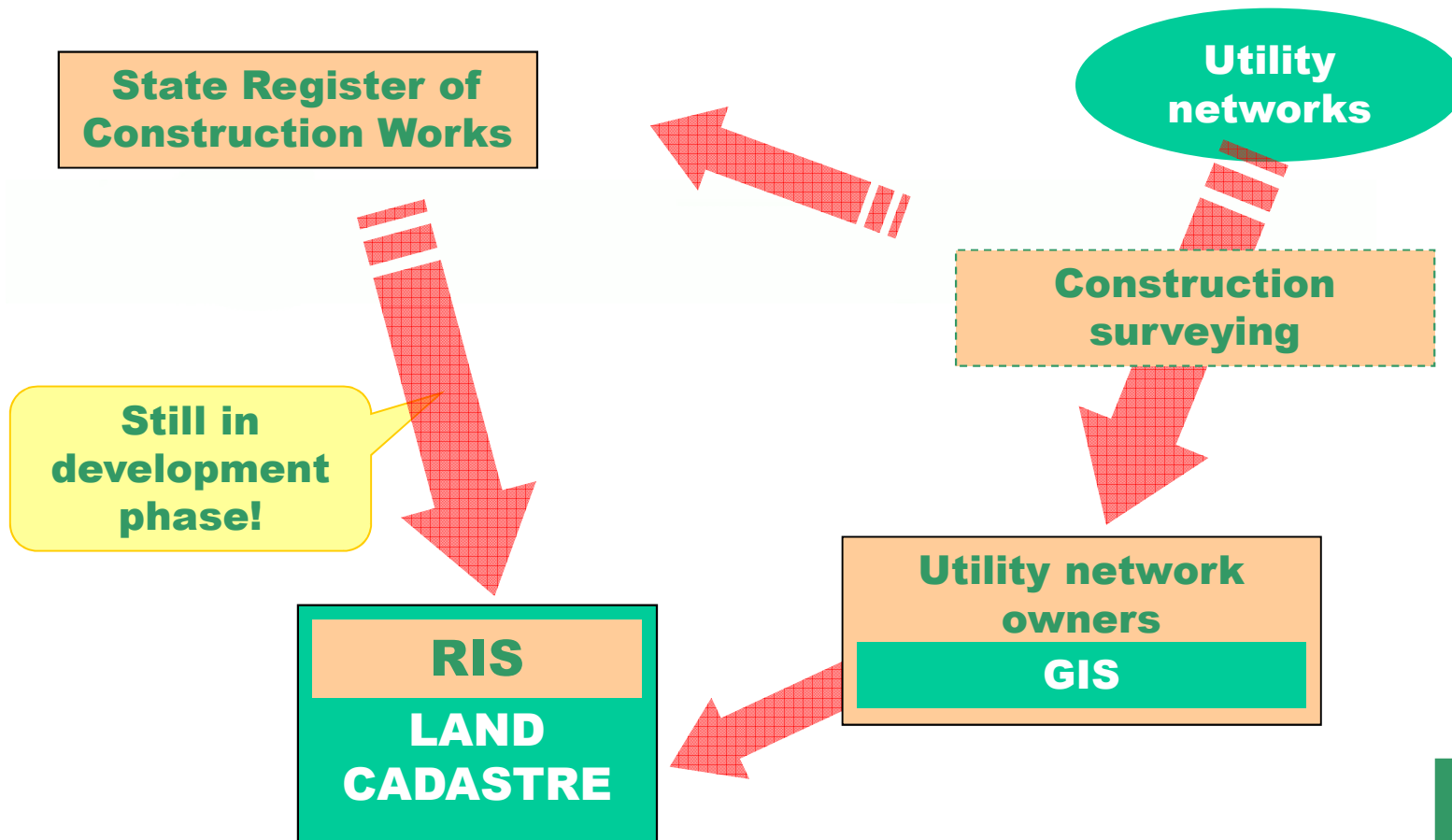


Restrictions data exchange





Restriction data exchange





Utility network statistics

- ❖ 23 different utility network companies are in data exchange;
- ❖ About 90 thousand km utility network lines
- ❖ About 17 thousand km underground lines
- ❖ About 70% of cadastral units are covered any kind of restriction zone caused by utility network



Utility network restriction zone overlap of cadastral units

Power lines	61%
State roads	26%
Gas installations	3%
Pressure equipments	2%
Railways	1%
Telecommunication lines	1%
Water supply and sewerage systems	1%

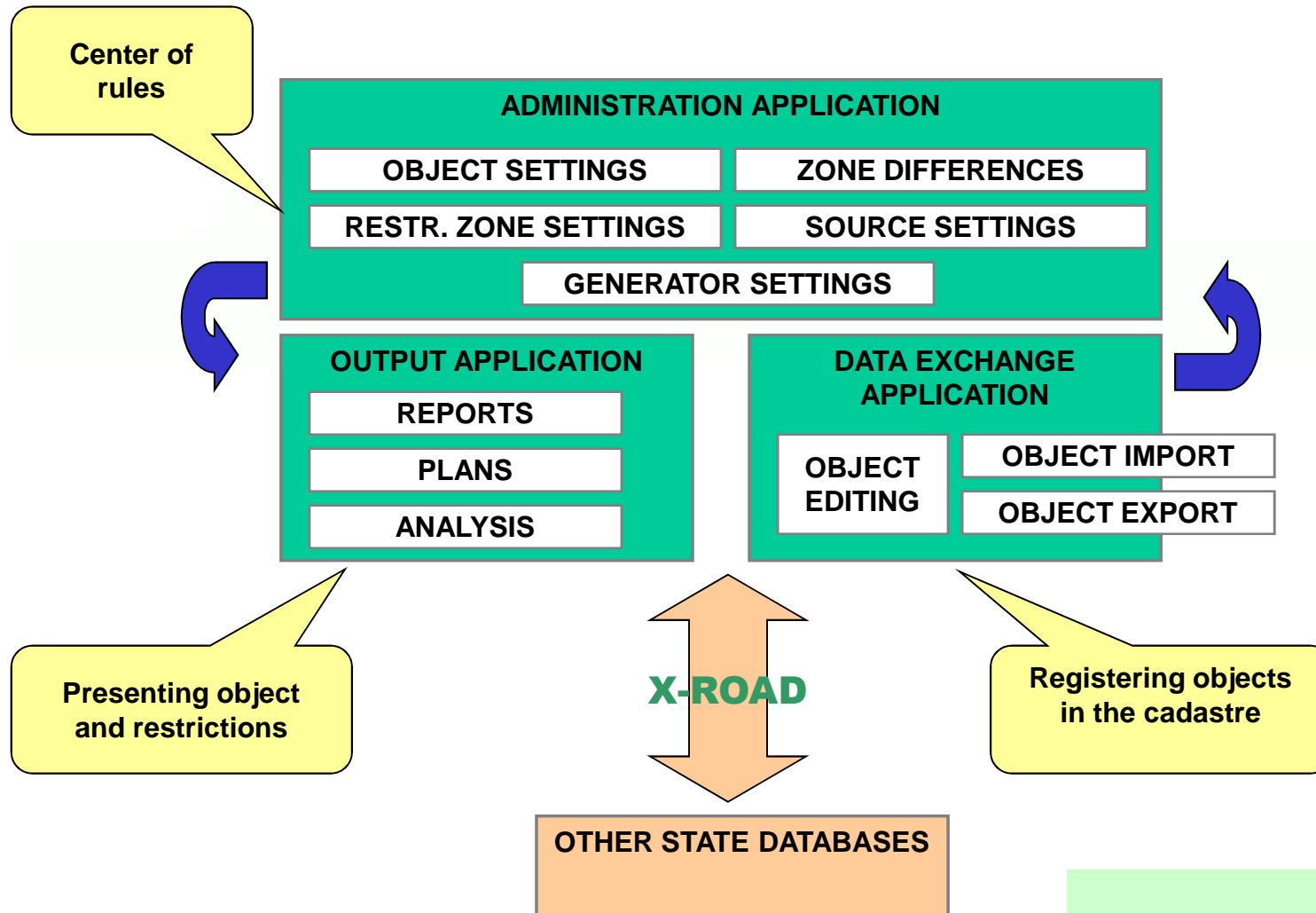
Restrictions Information System (RIS)



Main principles of the RIS are:

- ❖ **Able to collect restriction object data from different sources**
- ❖ **Generate and renew restriction zone according to valid law**
- ❖ **Spatially relate restriction objects and zones to cadastral unit**
- ❖ **Able easy data exchange and represent for interested persons**

Restrictions Information System (RIS)



Restrictions Information System (RIS)

MAA - AMET

Estonian Land Board



Cadastral unit data

Row #	ID	TUNNUS	NIMI	GEOMETRY1
1	T0007505	52801:003:0003	Kuuse	(2003,Null,Null,(1,1003,1),(644455,32,6459617,49,644447,61,6459633,61,644383,42,6459638,18,

Intersected cadastral unit restriction data

Row #	ID	CU_ID	KPO_ID	NAHTUSE_LIIK	PIIRANGUVOOND	GEOMETRY
1	14924061	T0007505	20102859	2.8.1.5	102	(2003,Null,Null,(1,1003,1),(644363,68,6459631,26,644366,747599919,6459
2	15137569	T0007505	20099976	2.8.1.5	102	(2003,Null,Null,(1,1003,1),(644383,04,6459633,55,644369,781086226,6459
3	11958393	T0007505	120006161	5.1.1.5	301	(2003,Null,Null,(1,1003,1),(644400,98,6459627,23,644368,352508278,6459
4	12093650	T0007505	120007477	5.1.1.5	301	(2003,Null,Null,(1,1003,1),(644363,68,6459631,26,644372,842749732,6459
5	15370302	T0007505	150193098	6.1.1.1	304	(2003,Null,Null,(1,1003,1),(644372,42,6459623,36,644365,453791607,6459

Restriction zone data

Row #	ID	KPO_ID	PIIRANGUVOOND	GEOMETRY
1	1458045	150193098	304	(2003,Null,Null,(1,1003,1),(644246,8,6459825,73,644246,76,6459826,48,644246,45,6459827,16,644245,91,64599

Objects which give rise to restrictions data

Row #	ID	VID	NAHTUSE_LIIK	PINGE	LIINI_NR	GEOMETRY
1	150193098	M4801429	6.1.1.1	0,38	F2/SUVILAD	(2006,Null,Null,(1,2,1,5,2,1,9,2,1,13,2,1,17,2,1,23,2,1,27,2,1,31,2,1,37,2,1,41,2,1,45,2,1



RIS interface acceptable data exchange formats:

GIS data formats in direct import :

- ❖ **GML**
- ❖ **ESRI Mapping Software Shape File SHP**
- ❖ **MapInfo Table TAB, MAP, ID, DAT**

CAD data must be transformed, restructure and attributed through the transformation process

Restrictions: Web map service



Web based restriction map is public:
<http://geoportaal.maaamet.ee>

Land board geoportal restrictions WMS:

- ❖ **Able to search cadastral unit**
- ❖ **Able to search restriction object**
- ❖ **Able to print A4 and A3 paper formats with scale**
- ❖ **Able to save prints in pdf**
- ❖ **Able to directly link to searches: [Link1](#) [Link2](#) [Link3](#) ...**

Why



Why such the distinctive system is a good?

- ❖ **Keep clean land register of recurrent restricted real rights**
(Restrictions are provided by law)
- ❖ **To pre-empt legal conflicts at ownership interest**
(Spatially presented restrictions are better perceptible)
- ❖ **To give better base data for regional planning**
(All data from one base)
- ❖ **To support fair land taxation**
(Fair taxation – good mood)

Thank you!

FINISH

