

Implementation of National Spatial Data Infrastructure in Lithuania: INSPIRE and LGII



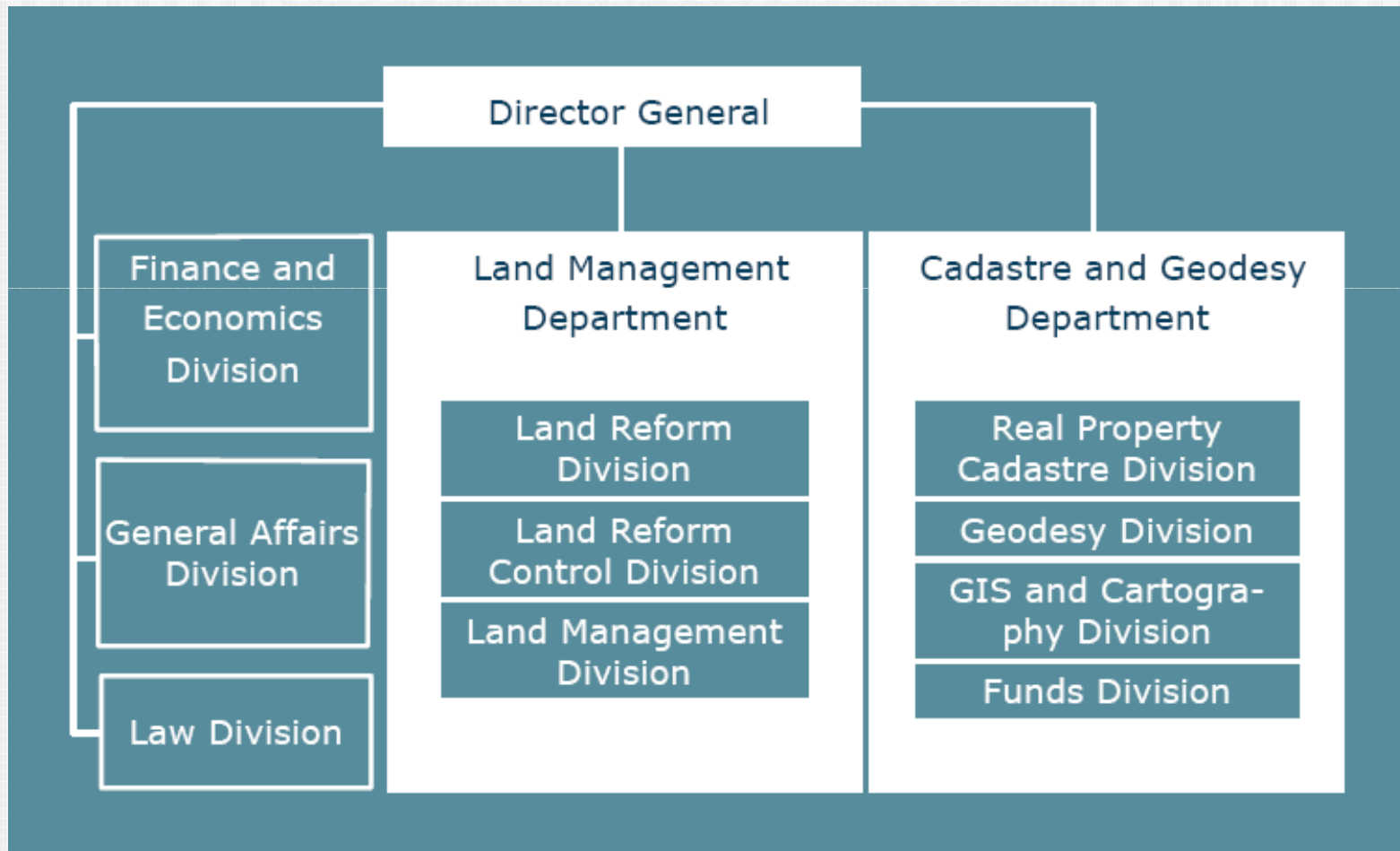
National Land Service
under the Ministry of Agriculture of
The Republic of Lithuania

Cadastral & Geodesy Department Director
Dr. Saulius Urbanas

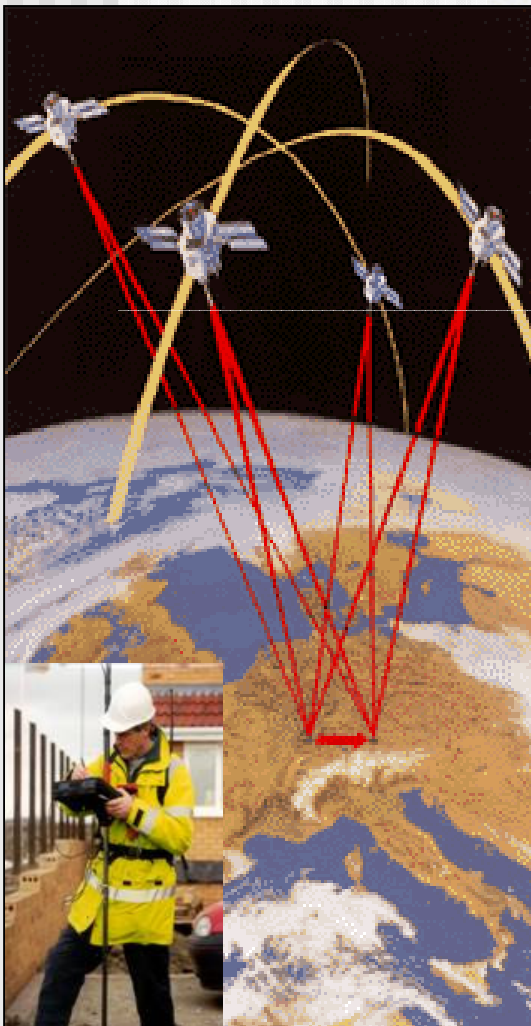
National Land Service in brief

- Established on 1 July 2001
- NLS mission
 - to ensure implementation of state policy in the field of land management and administration, real property cadastre, geodesy, cartography and development of georeferential databases
- 62 staff employees

Organisational Structure



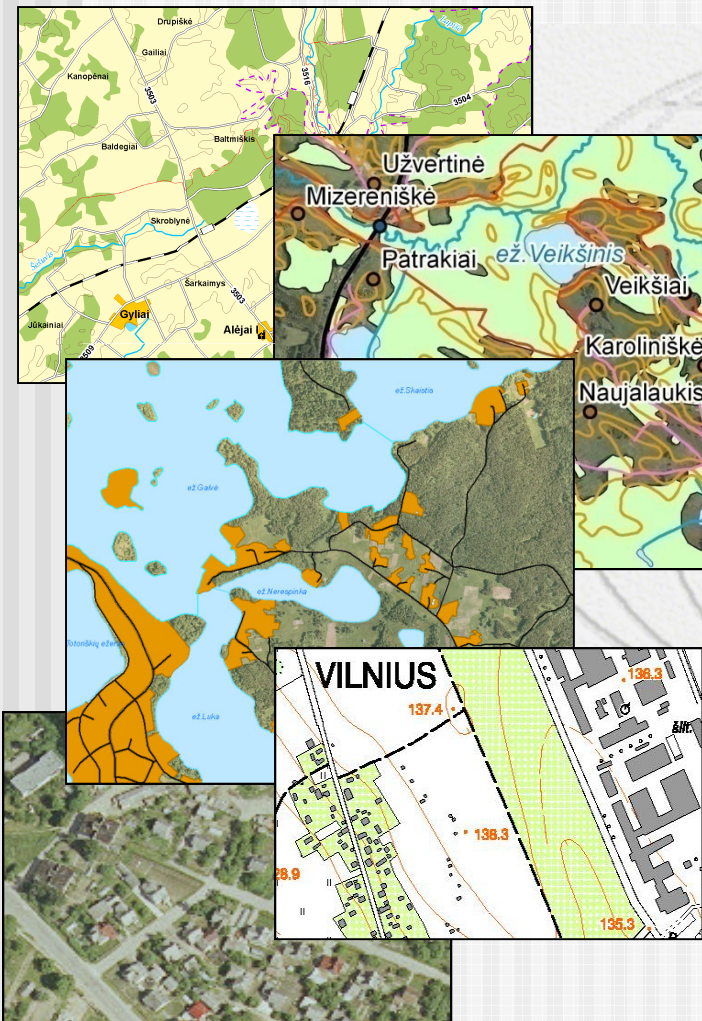
Geodesy



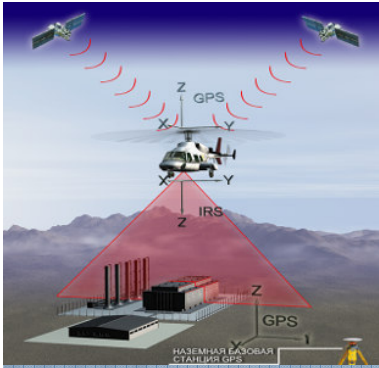
- LitPOS - continuously operating network of Global Navigation Satellite System
 - Operational since summer 2007
 - Widely in use by surveying industry
- Steps defining the vertical State coordinate system



National Mapping: level of details



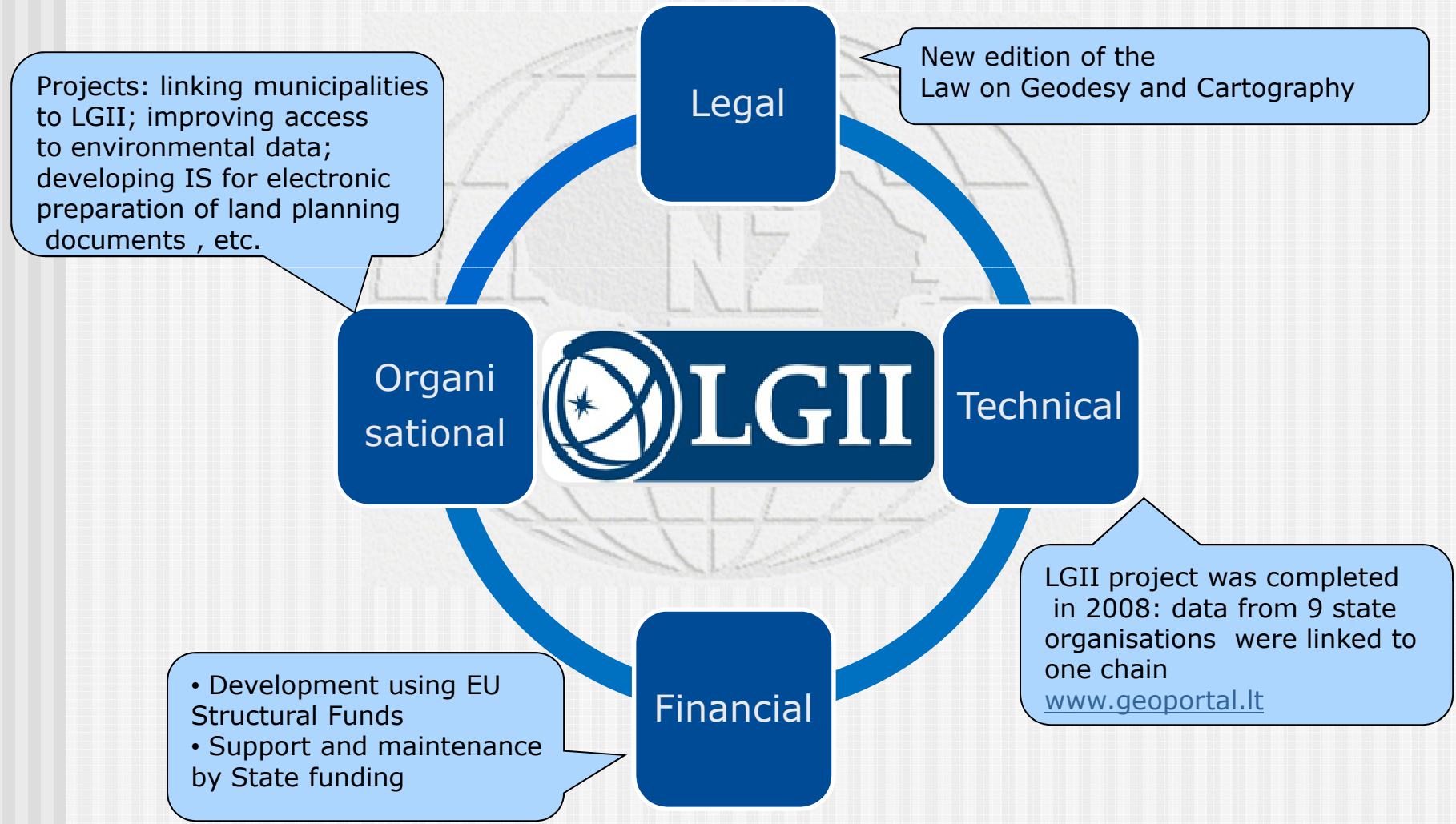
- European, small scale
1:250 000
 - Update: 5-10 years
- National, medium scale
1:50 000
 - Update: 5- 8 years
- National, large scale
1:10 000
 - Update: permanent to 5 years
- Local (municipalities)
1:1 000
 - Update: permanent



New ways of remote mapping



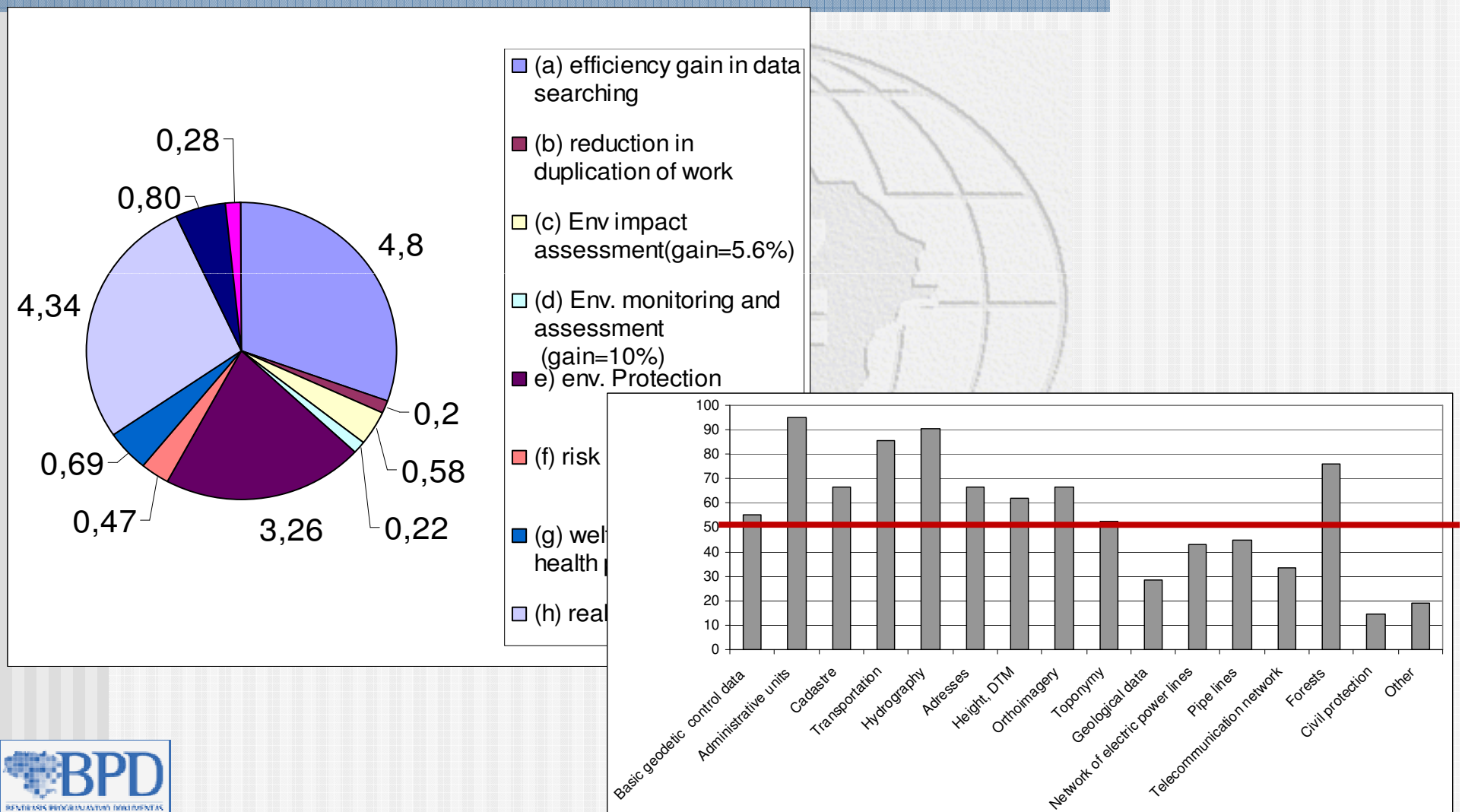
Development of National Spatial Data Infrastructure (NSDI)



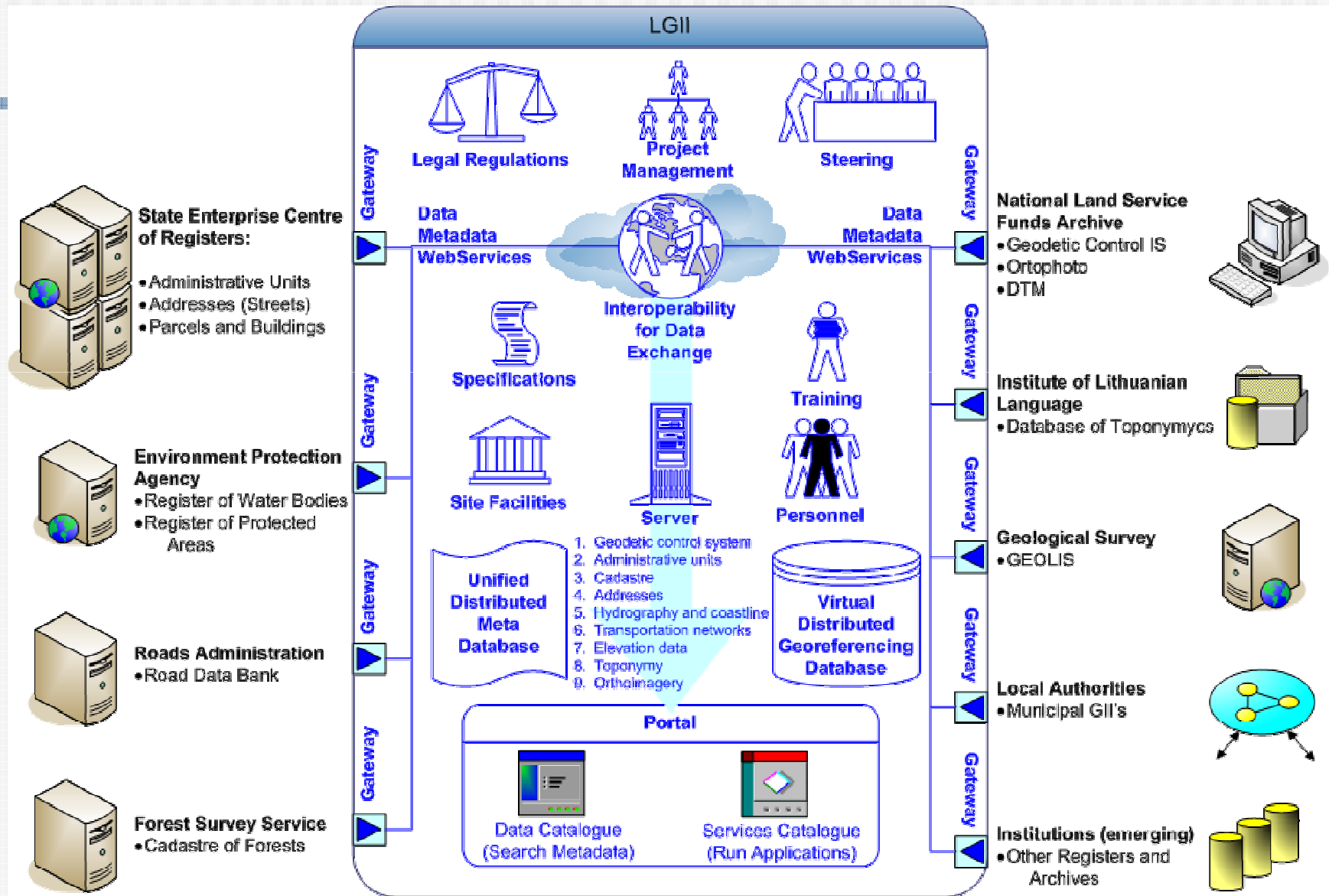
Key changes in the Law on Geodesy and Cartography

- Move from *traditional cartography* to a development of spatial datasets
- Definition of **Lithuanian Spatial Data Infrastructure**
 - LSDI portal as the State IS (services as defined in INSPIRE)
 - Standardisation and interoperability requirements for state data providers
 - Public access to GI data and services if other laws do not define differently
- Introduction of **State base georeferential cadastre** maintaining the most steady spatial objects
- Removing requirements for licenses, but introducing qualification certificates for individuals executing geodetic and cartographic activities

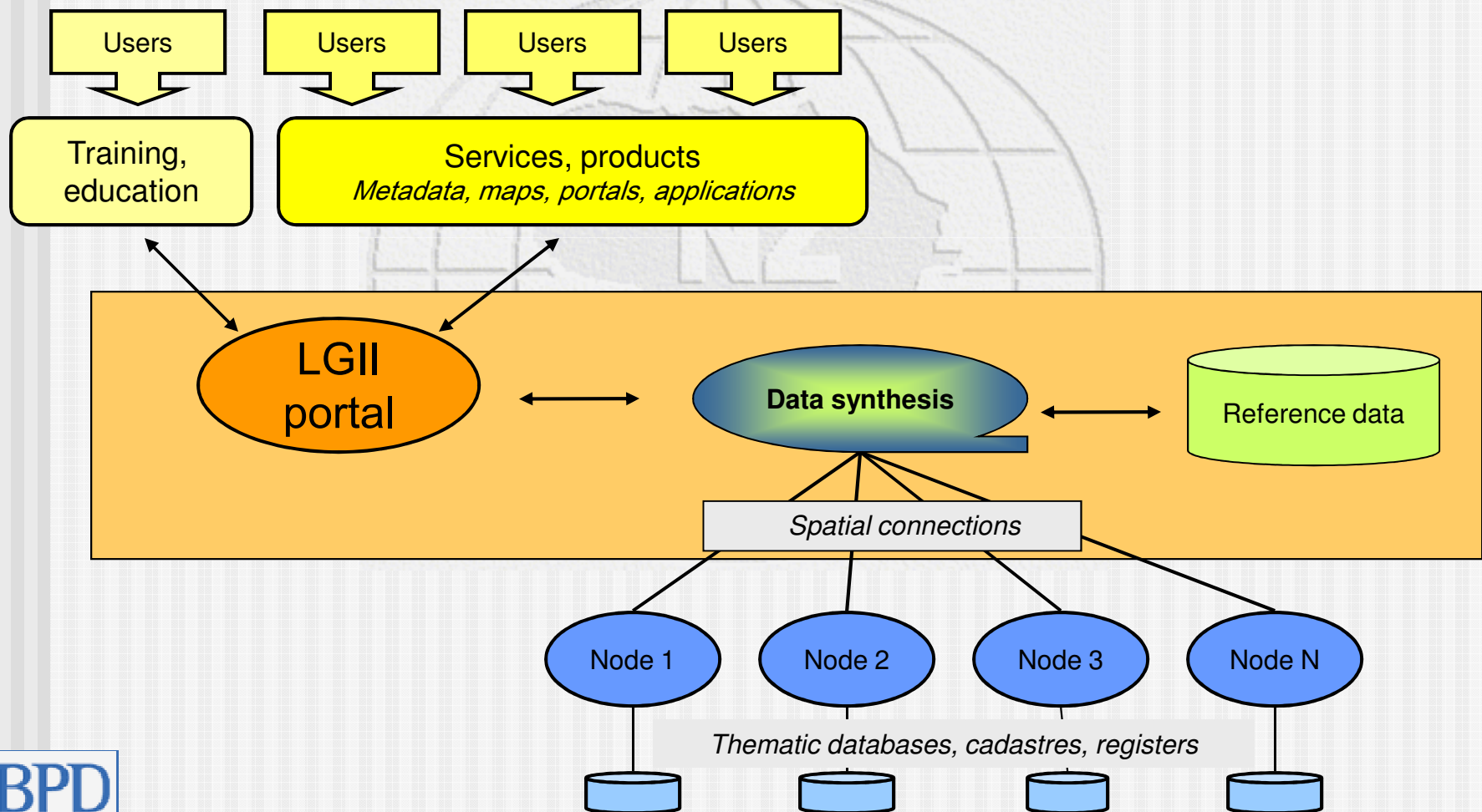
Economical gain and core reference data definition



LGII I-st stage project 2005-2008



Flows of Geographical Information Infrastructure



Relation between the INSPIRE themes and georeferencial base data / LGII partners data

Annex I

1. Coordinate reference systems
2. Geographical grid systems
3. Geographical names
4. Administrative units
5. Addresses
6. Cadastral parcels
7. Transport networks
8. Hydrography
9. Protected sites

Annex II

1. Elevation
2. Land cover
3. Ortho-imagery
4. Geology

Annex III

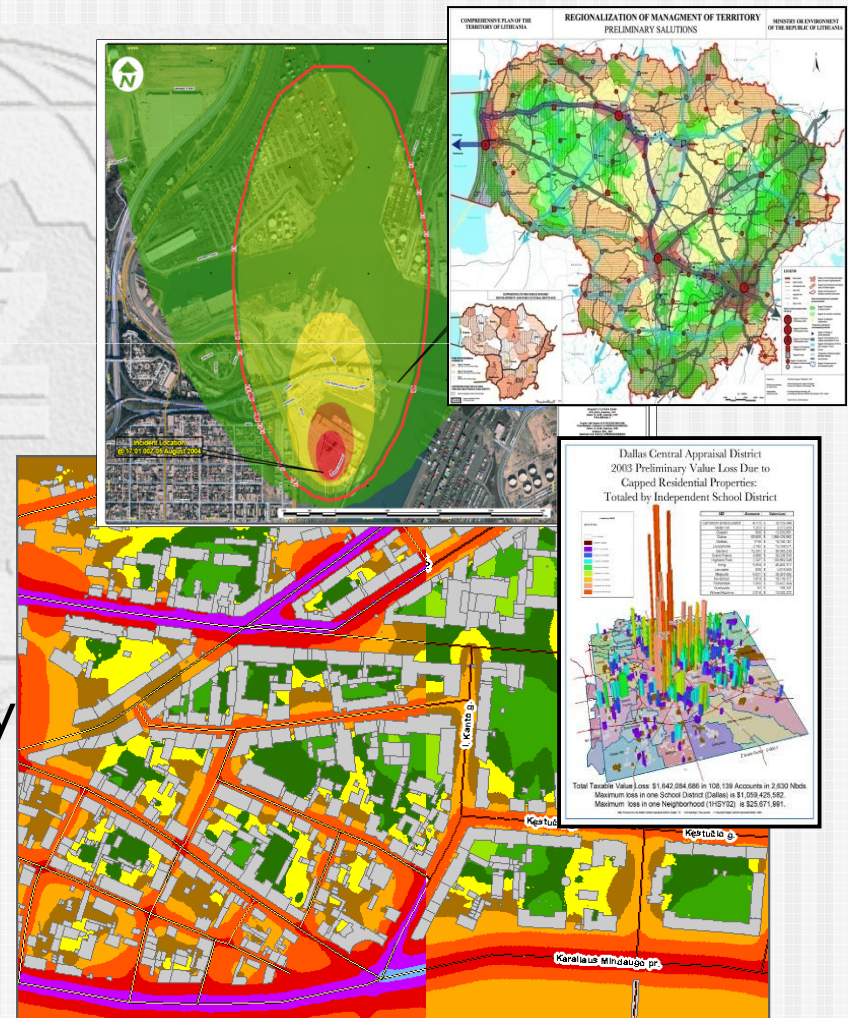
1. Statistical units
2. Buildings
3. Soil
4. Land use
5. Human health and safety
6. Utility and governmental services
7. Environmental monitoring facilities
8. Production and industrial facilities
9. Agricultural and aquaculture facilities
11. Population distribution – demographyArea management/restriction /regulation zones & reporting units
12. Natural risk zones
13. Atmospheric conditions
14. Meteorological geographical features
15. Oceanographic geographical features
16. Sea regions
17. Bio-geographical regions
18. Habitats and biotopes
19. Species distribution
20. Energy Resources
21. Mineral resources

Relation between INSPIRE and LGII components

- INSPIRE implementing rules
- INSPIRE Committee
- INSPIRE data interoperability means
- INSPIRE portal
- INSPIRE metadata system
- INSPIRE network services
- LGII methodology
- LGII Coordinating Board
- LGII data interoperability means
- LGII portal
- LGII metadata system
- LGII platform for webservice applications

Applications and IS for use of LGII

- Land inventory
- Permissions for construction projects
- Environmental impact assessment IS
- Territorial planning IS
- Management System of Permits for constructions
- Management of preserved areas (IS)
- Management of public safety system
- Noise management IS
- Emergency prediction and reaction system
- etc.



Thank you for the attention

