

Self financing mapping and cadastral agencies, data services and INSPIRE – Is there a conflict?

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Swedesurvey AB

- An **International Consultant company**, owned by the Swedish Government
- Provides **services** worldwide **within Land Governance, NSDI and Human Resource Development**
- Acts as the **Overseas Agency of Lantmäteriet**, the Swedish mapping, cadastre and registry authority



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Agency for Real Estate Cadastre (AREC)

- The National Mapping and Cadastre Agency of the Republic of Macedonia
- Competences in: Geodesy - Information Technology – Legislation
- Cooperates with Swedesurvey in a capacity building project



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Problem formulation

- Why a high degree of self financing (fees)
 - *Decision by the parliament (ministry of finance)*
 - *Promotes customer orientation*
 - *Less dependent on political decisions (budget cuts, ...)*
- Free data movement
 - *Growing tendency that INSPIRE services are available free of charge*
 - *Citizens expect services free of charge*
- How does this match?



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Degree of self financing (Lantmäteriet, SE - 2011)

Division	Income (M€)	Self financing
Cadastral services	99	86.4 %
Land and geographic information	77	52.8 % *
Land registration	16	0.5 %
Other	37	99.6 %
Total	229	71.2 %

*) Around 56 % Land Information and 44 % GI



Self financing AREC (MK)

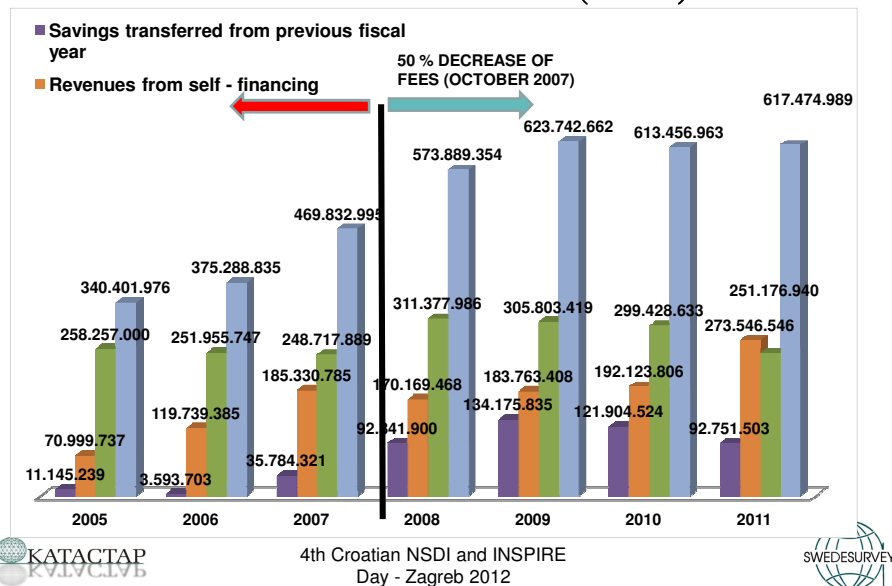
- Current self financing around 60%
- Main external source of income is cadastral services
- Geodata production financed by own resources (self financed and governmental budget), supported by WB project and JICA (Japan grant for TM 25K production)



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Revenues AREC (MK)



Geodata services (SE)

- INSPIRE services: View services free of charge. Download services not there yet.
- Public services free of charge.
- Professional services: According to data sharing agreement
- 3rd party commercial services: Specific agreements



Example: Ortophotos

- Main quality elements: Age, spatial resolution, ...
- Main clients: Swedish Agricultural Board, Swedish Defence, Lantmäteriet, Commercial companies (Eniro, hitta.se, ...)
- Cost and quality
 - A third of the country updated every year
 - Spatial resolution: 0.25 / 0.48 meter
 - Total cost: Around 3.5 M€ annually
 - Self financing (fees): Around 70 %



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Data sharing agreement - cooperation

- Geoportal – single point of access
- Too complicated to have many different types of agreements, controlling the access
- Many cities are also selling data to Lantmäteriet (updates of addresses and buildings)
- Solution: One agreement for all involved public agencies and authorities



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Issues to be addressed by the data sharing policy

- **How to distribute the costs for information among users of the information?**
- **How to distribute the revenues among the suppliers of information?**
- All together some 23 agencies are pointed out to supply information according to INSPIRE, of whom only 4 must charge license costs
- Any public agency or municipality can join the agreement in order to use the information (approx. 350 users)



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Basic principles

- **Investigate and calculate the flow of money between involved parties at present**
 - Approx. SEK 46 Million/year between governmental authorities and suppliers of information
 - Approx. SEK 55 Million/year between municipalities and suppliers of information
- The aim of the business model is not to increase the revenue but to distribute the current amount in form of fixed annual fees between users according to agreed principles



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Basis for sharing of costs

- **Parameters which are:**
 - Agreed in advance
 - Stable over time, but adjustable
 - Easy to understand to which category an organisation belongs
- **Joint parameters:**
 - Need of geodata
 - Geographic area of interest (municipality, region, nation)
 - Benefit (back-ground, essential)
- **Additional parameters:**
 - For state agencies: Turn over
 - For municipalities: Number of inhabitants, total area, densely built-up area, population density



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Underlying parameters for municipalities

Area (hectare)

Intervall	Faktor
Mer än 1 000 000	5
200 000 – 1 000 000	4
100 000 – 200 000	3
40 000 – 100 000	2
Mindre än 40 000	1

Population

Intervall	Faktor
Mer än 700 000	24
400 000 – 700 000	21
200 000 – 400 000	18
100 000 – 200 000	15
50 000 – 100 000	12
25 000 – 50 000	9
10 000 – 25 000	6
Mindre än 10 000	3

Population density (persons/hectare)

Intervall	Faktor
Mer än 10	10
3 – 10	8
1 – 3	6
0,3 – 1	4
0,02 – 0,3	2
Mindre än 0,02	0

Built up area %

Intervall	Faktor
Mindre än 2	5
1 – 5	4
5 – 20	3
20 – 50	2
Mer än 50	1

The underlying parameters are summed up and used as input for determination of the the over all municipality parameter.



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Principles of data sharing policy

- **Revenue**
 - Total revenue fixed over time.
 - Revenues are shared according to required levels of self financing
- **Costs**
 - Each partner get a cost “score”, updated annually
 - Cost per score is determined by total revenue and total cost score for all partners
 - If more parties joins the agreement, the cost per partner decreases



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Geodata market development (Lantmateriet, SE)

- INSPIRE services
 - Free view services: Too early to say anything about trends
- Free public services
 - Slight increase in number of services. Large increase in number of access
- Professional services
 - Large increase in parties joining the data sharing agreement
 - Large increases of downloads
- 3rd party Commercial services
 - Steady level of revenue and number of agreements
 - Large increase in access to 3rd party services



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Geodata market development (AREC, MK)

- INSPIRE services
 - Not yet ready, planned for first half 2013 (discovery and view services)
- Free public services
 - Slight increase in number of services. Large increase in number of access.
- Professional services
 - Services for notaries and private surveyors introduced 2011
 - Any trends development following INSPIRE services
- 3rd party Commercial services
 - In the workplan for 2014



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Self financing mapping and cadastral agencies, data services and INSPIRE – Is there a conflict?

- Lantmäteriet and AREC have both a high degree of self financing services (60 - 70 %)
- Free public services are increasing in number and importance
- Stable income from other types of services, which are also growing in number and usage
- Swedish geodata sharing agreement a success so far
- Free data movement has an impact on the development
- Cost / quality relationship important



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