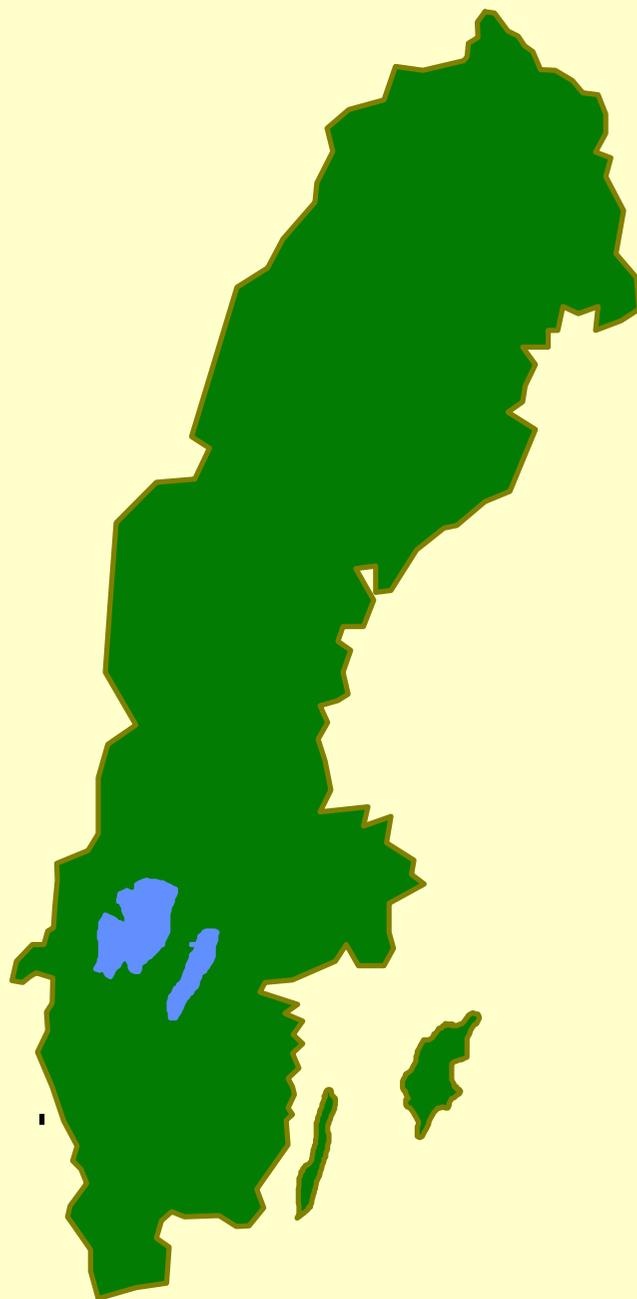


The Swedish Land Information System

and its Importance for Economic Development

Tommy Österberg
Swedesurvey





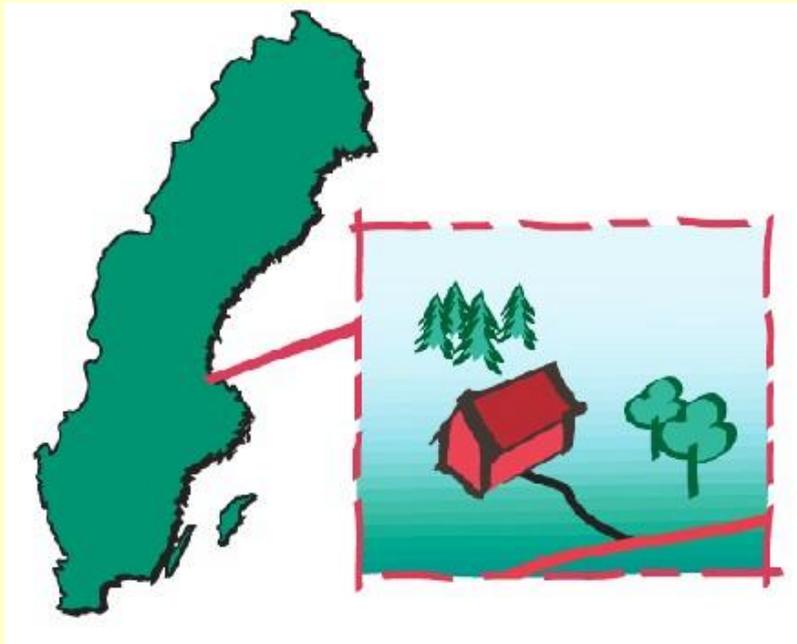
SWEDEN

- 9 million inhabitants
- 450 000 sq. km
- 21 Counties
- 291 Municipalities
- 4.6 million properties in the Real Property Register

Land in Sweden, areas

	<i>1,000 km²</i>	<i>%</i>
<i>Cultivated land</i>	36	8
<i>Forests</i>	240	53
<i>Populated areas</i>	13	3
<i>Swamps</i>	50	11
<i>Mountains</i>	72	16
<i>Lakes, rivers</i>	39	9
<i>Total</i>	450	100

FACTS AND FIGURES ABOUT SWEDISH LAND



Taxation (2003)

- U Assessed value
470 000 million US\$
- U Total real property tax
2 800 million US\$
- U Transaction tax, titles mortgage
760 million US\$

Value of real property

- U Total market value
860 000 million US\$ (Jan 2004)
- U Total value of mortgages
315 000 million US\$ (Jan 2004)

Value of limited companies

- U Total value of shares at the
Stockholm Stock Exchange
340 000 million US\$ (Jan 2004)

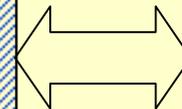
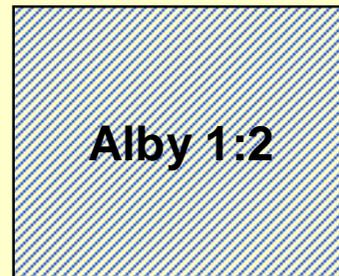
Macro Economics

- U GNP 2004
330 000 million US\$
- U State budget 2004
100 000 million US\$

The Swedish Land Information System

• Real Property Register

- Area
- Address
- Coordinates
- Easements
- Buildings and apartments
- Public land use regulations



Geographic data bases

- Land use
- Topography
- Hydrology
- Vegetation
- Constructions

Land Register

Title and Owner
Mortgages
Encumbrances

Taxation Register

Land Use
Constructions
Value

Population Register

All people living at
the real property, civic
number, postal address

The Swedish Organisation of Land Administration

Land Registration, Registration of Rights

- Ministry of Justice
- National Courts Administration and National Land Survey
- Local Land Register Authorities, 7

(from the 1st of July 2006 transferred to Lantmäteriet)

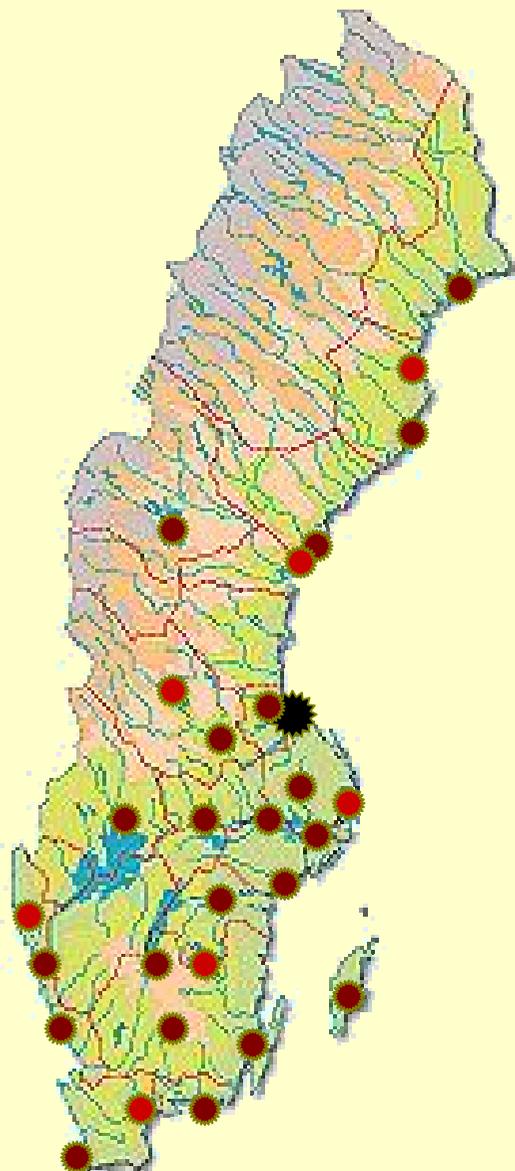
Real Property Formation, Registration of Real Property

- Ministry of Sustainability
- Lantmäteriet, National Land Survey
- Cadastral Authorities, 21
- Municipal Cadastral Authorities, 38

The National Land and Geographic Information system, the LIS

- Ministry of Sustainability
- Lantmäteriet, National Land Survey
- Information Division responsible for Bases Information and the Infrastructure for Land and Geographic information





Local Organisations

Cadastral organisation

Headquarters 

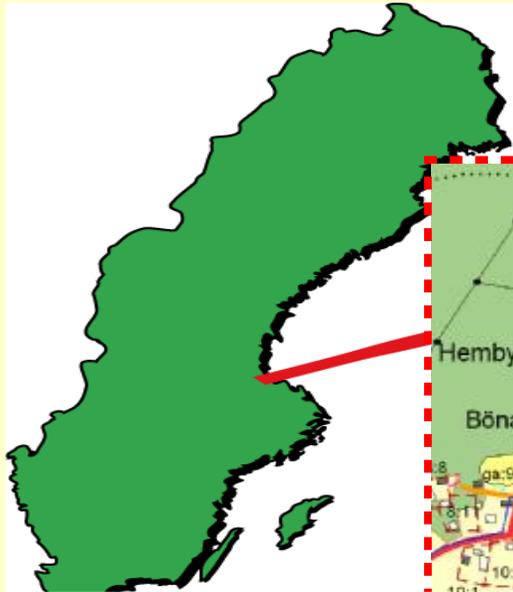
Cadastral Authorities
21 

Local offices 100
(Municipal offices 38)

Land Registration

Land registration
Offices 7 

Components in the Land Information System



•Digital Cadastral Index Map

Property Tax Assessment Part

- W Total Assesst Value
- W Assesst Value for Land
- W Assesst Value for Buildings
- W Basis for Valuation
- W Owner

Building Part

- W Building Unit
- W Address
- W Co-ordinate

Address Part

- W Address Unit
- W Property Unit

Real Property Part

- W Property Unit
- W Joint Property Unit
- W Co-ordinates
- W Plans, Regulations and Rights
- W Joint Facility
- W Cadastral Index Map

Land Register Part

- W Title
- W Leasehold
- W Mortgage
- W Rights
- W Notifications

Components in a Land Administration System

The situation in Sweden



- Real Property Part
 - W Property Unit
 - W Joint Property Unit
 - W Co-ordinates
 - W Plans, Regulations and Rights
 - W Precincts
 - W Joint Facility
 - W Cadastral Index Maps

- Land Register Part
 - W Title
 - W Leasehold
 - W Mortgage
 - W Rights
 - W Notifications

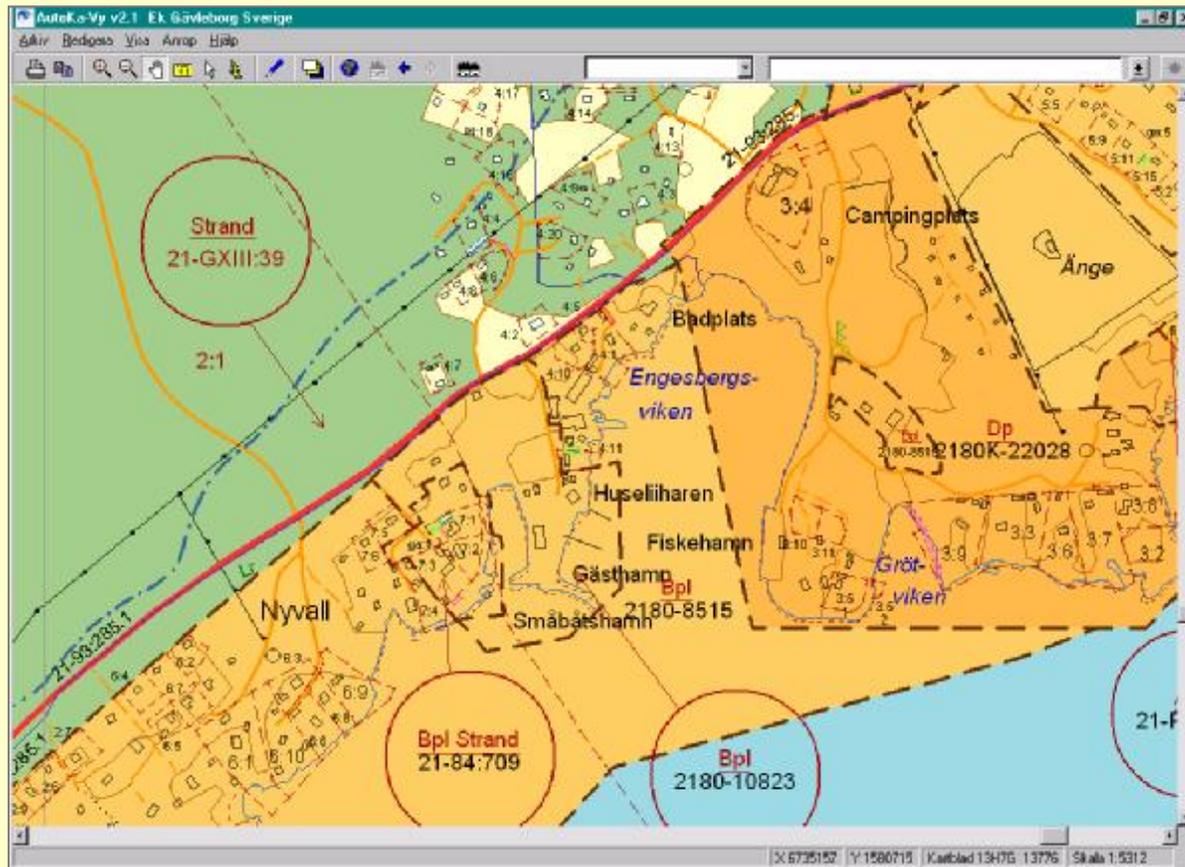
- Building Part
- Address Part
- Taxation Part

**3.3 million
Living Real
Property Units**

15 000 Property formation
100 000 Title transfers
460 000 Mortgages

- A good legislative framework
- Effective central national institutions that co-ordinate property formation and land registration
- Integrated information system for real property and land register supporting the institutions and the market
- Electronic mortgages certificate system
- A well functioning real property market, low transaction costs, title and mortgage over a day

Cadastral Index Map

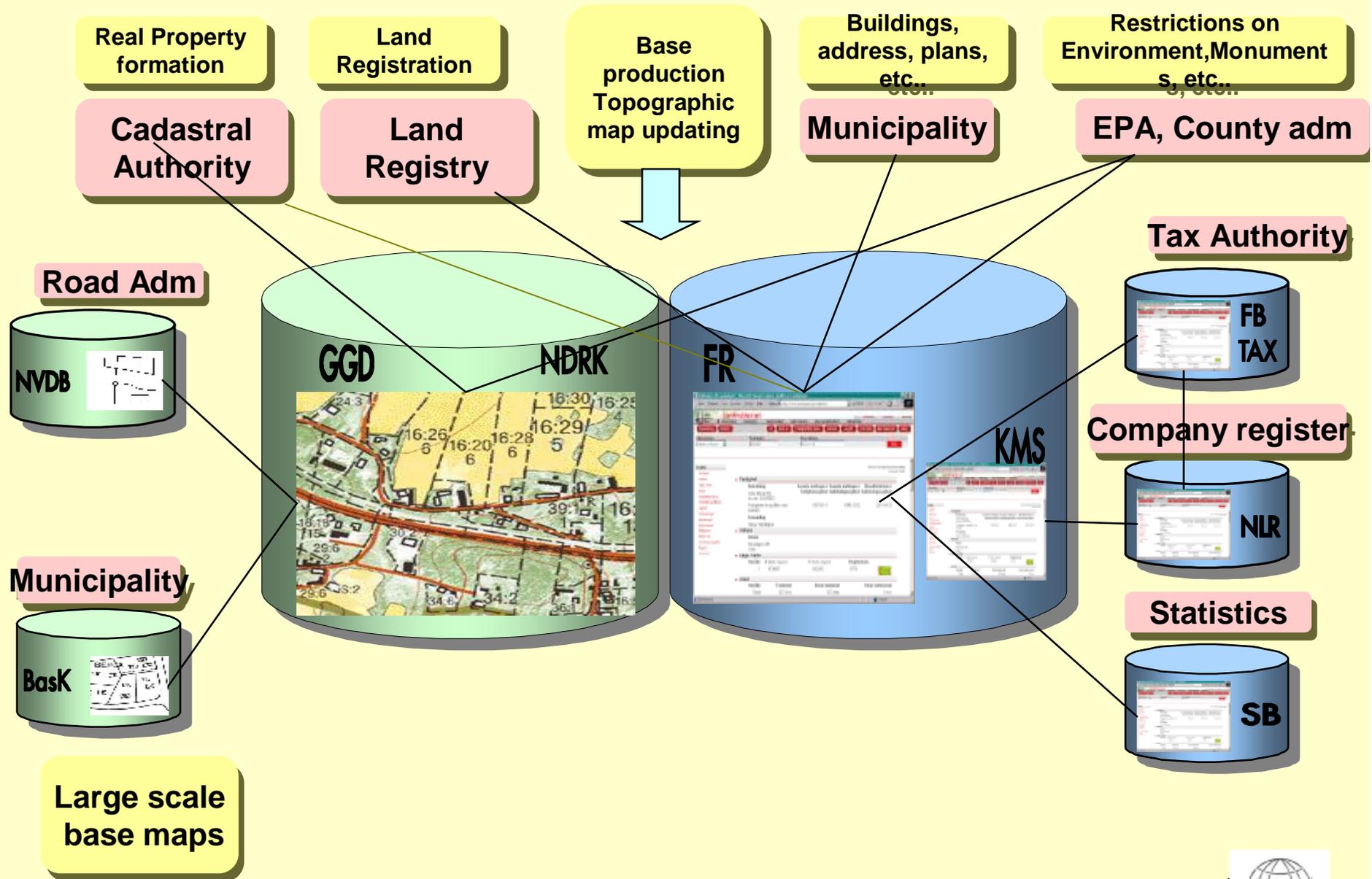


Contents

- Real properties
- Plans and regulations
- Easements

Based on land use map in scales 1:5000-1:20 000

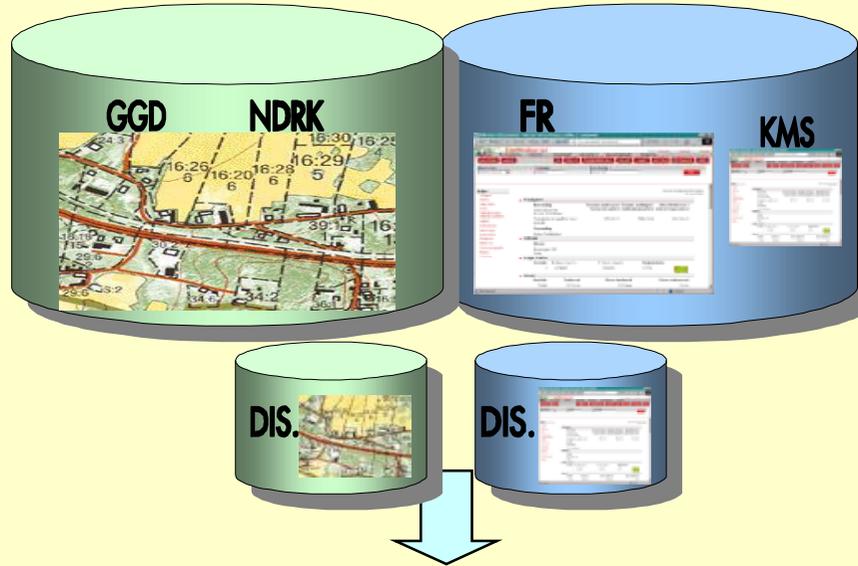
Information infrastructure, Spatial Data Infrastructure



Services and products in the Land Administration sector

Geographic information

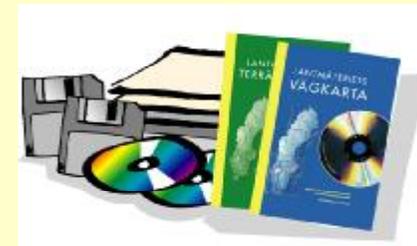
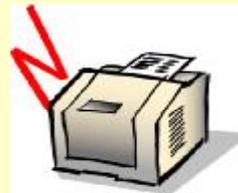
Real Property information



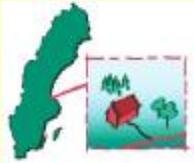
Products and services

Distributors

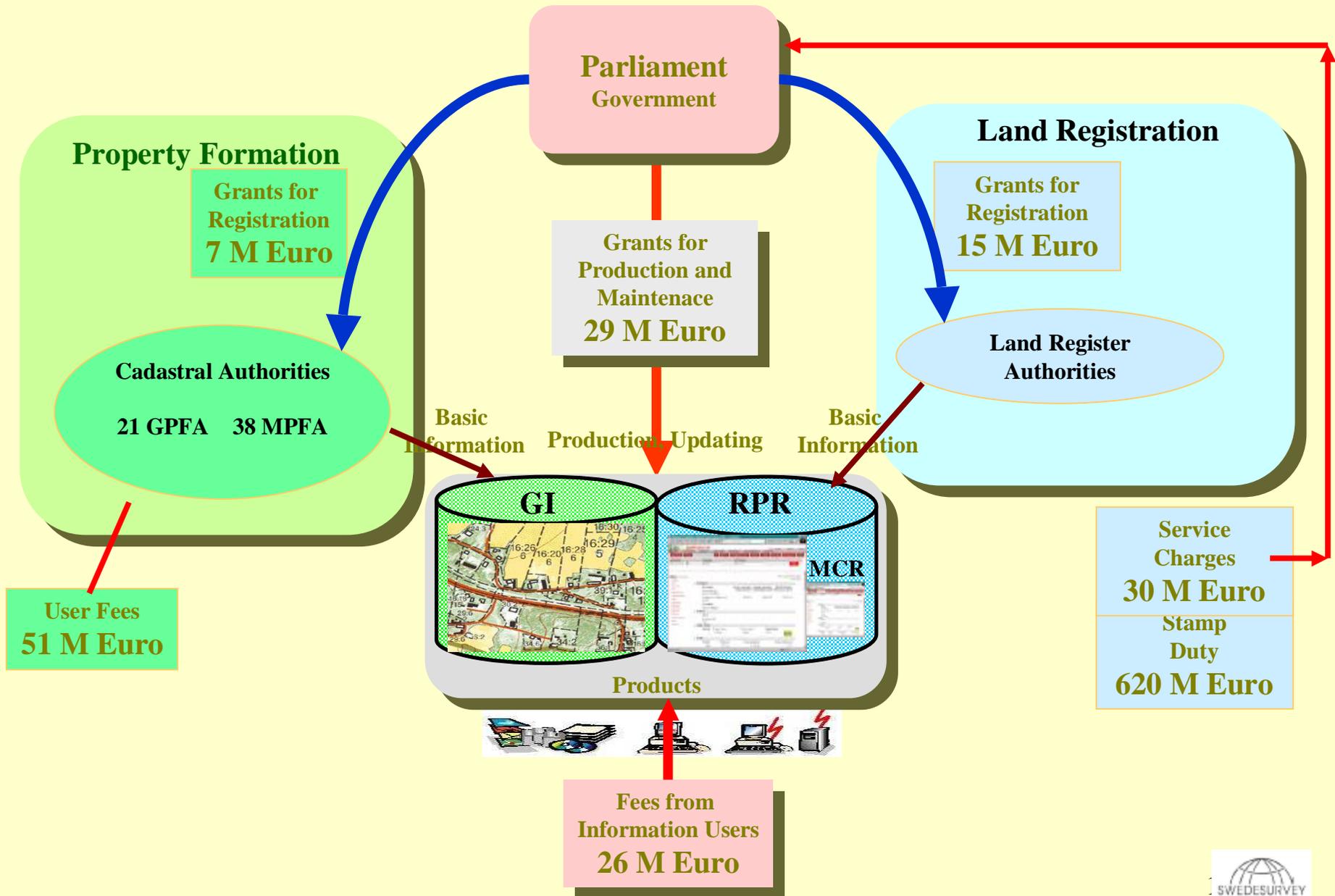
Value Added Services



USERS

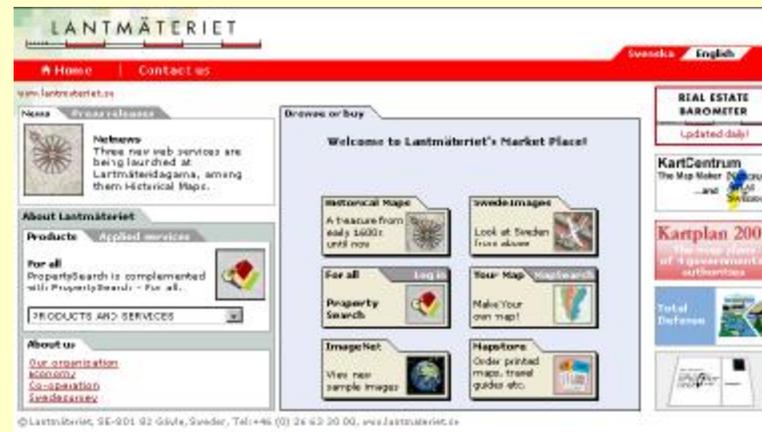


Principles for financing of Land and Geographic Information in Sweden



e-commerce on Lantmäteriet's web site

- Property Search
- Your Map
- MapStore
- SwedeImages
- View Forest
- Historical Maps



- Information restricted according to the Data Integrity Act
- Delivered in .pdf format
- 3 USD
- No industrial, agricultural or military properties
- Graphical and attribute data <24 hours old

FastighetSök
14 Augusti 2001

Fastighet

Adress: Huvudgatingsvägen 13

Areal			
Område	Totalareal	Därav landareal	Därav vattenareal
Totalt	840 kvm	840 kvm	0 kvm

Lagfart	
Köp	Köpeskilling
1964-05-03	210.000 SEK, avser hela fastigheten.

Inskrivningar	
Nr Inskrivningar	Inskrivningsdag
1 Nyttjanderätt brunn mm	1927-09-06

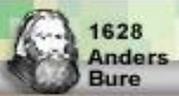
Rättigheter	
Servitutsutredning ej verkställd	

Planer, bestämmelser och formlämningar	
Planer	Datum
Stadsplan Bengtsfors köping	1956-12-21

Taxeringsuppgifter			
Taxeringsenhet	Småhusenhet, helårsbostad för 1-2 familjer (220)	Uppgiftsår	Taxeringsår
	Omfattar hel registerfastighet	2000	1999
Taxeringsvärde	därav byggnadsvärde	därav markvärde	
285.000 SEK	211.000 SEK	74.000 SEK	
Värderingsenhet småhusmark 001			
Taxeringsvärde	Basvärde	Riktvärdeområde	
74.000 SEK	76.000 SEK	1580001	
Tomtareal	Vatten o avlopp	Strand	
840 kvm	Kommunalt vatten	Ej strand eller strandnära tomt	
	Kommunalt avlopp		
Fastighetsrättsliga förhållanden			
Självständig			
Värderingsenhet småhusbyggnad 001			
Taxeringsvärde	Basvärde		
211.000 SEK	216.000 SEK		
Bebyggelseyp	Total standardpoäng		
Friliggande	33		
Bostadsyta	Blotrymmesyta	Värdeyta	
90 kvm	60 kvm	102 kvm	
Nybyggnadsår	Tillbyggnadsår	Värdeår	
1943	1998	1981	
Under Byggnad	Tillbyggnadsyta	Fastighetsrättsliga förhållanden	
Nej	30 kvm	Självständig	

Åtgärd	
Fastighetsrättsliga åtgärder	Datum
Avstyckning	1942-09-17





Lantmäteriet

HOME ABOUT US CONTACT US

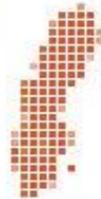


CHOOSE MAP
Stockholm (färg)

SEARCH

 CLEAR SEARCH

Zoom
32 m/pixel



SverigeBilden™

GENERAL INFO DIGITAL IMAGE PRINTED IMAGE

[Help](#)

Zoom Tools: Click and drag within the image window or click on the zoom bar.

Panning Tools: Click and drag for desired pan or click on arrows on each side of image window.

For a digital download, click on Digital Image.
For a print version, click on Printed Image.

[Example images](#)

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LANTMÄTERIET

Startsida | Kundtjänst | Här finns vi



HISTORISKA KARTOR

1. Sök karta 2. Ditt val 3. Betala 4. Leverans

Gör ditt val nedan: [Läs mer](#)

- Digital karta via internet
- Digital karta via CD
- Tryck - litet format [Läs mer](#)
- Tryck - stort format [Läs mer](#)

Välj format

jpeg

LÄGG I KUNDKORGEN

TILLBAKA NÄSTA

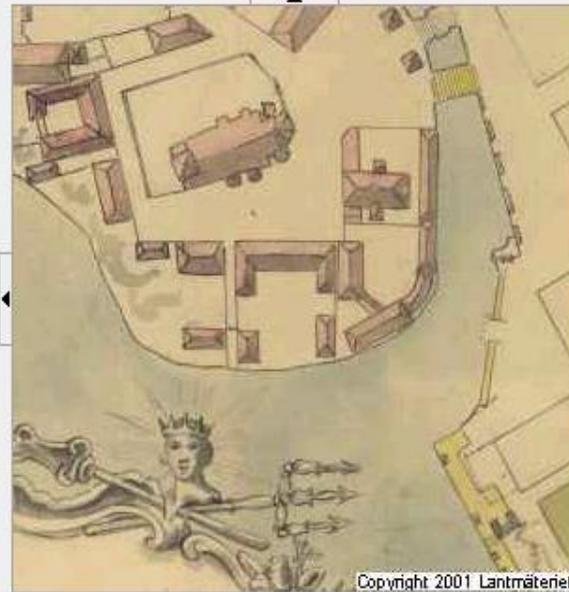
Stad	Innehåll	Årtal
Stockholms stad	Karta över Stockholm	a
Stockholms stad	Karta över Stockholm	b
Stockholms stad	Karta över staden me	a
Stockholms stad	Karta över staden me	b
Stockholms stad	Karta över staden me	c
Stockholms stad	Karta över staden me	d
Stockholms stad	Karta över staden me	e

HJÄLP?

ZOOM



VERKTYG



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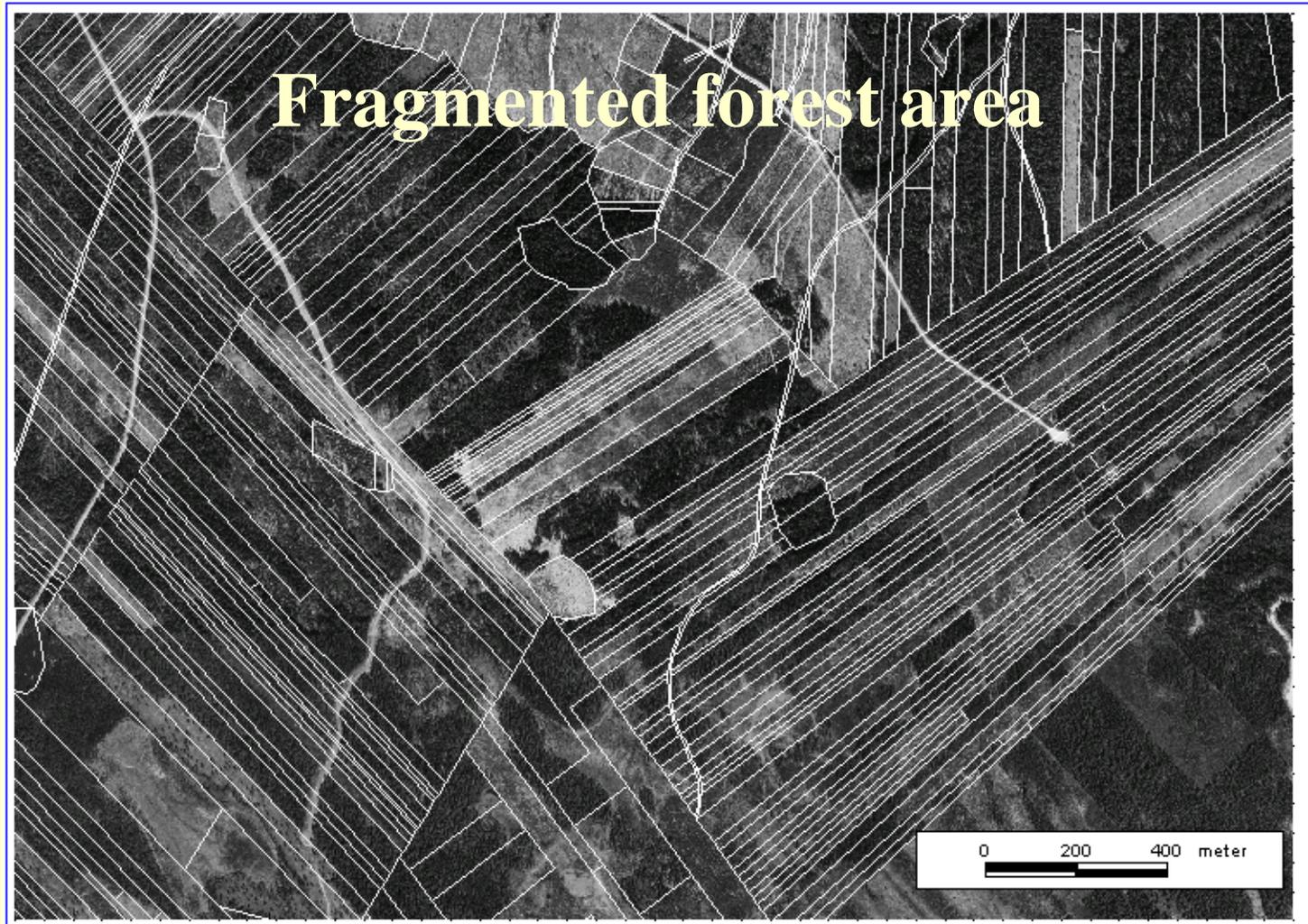
Kartområde: 4954 x 6014 bildpunkter
 Filstorlek: 9 Mb (uppskattad)
 Pris: 223 kr inkl. moms

Kundkorgen är tom

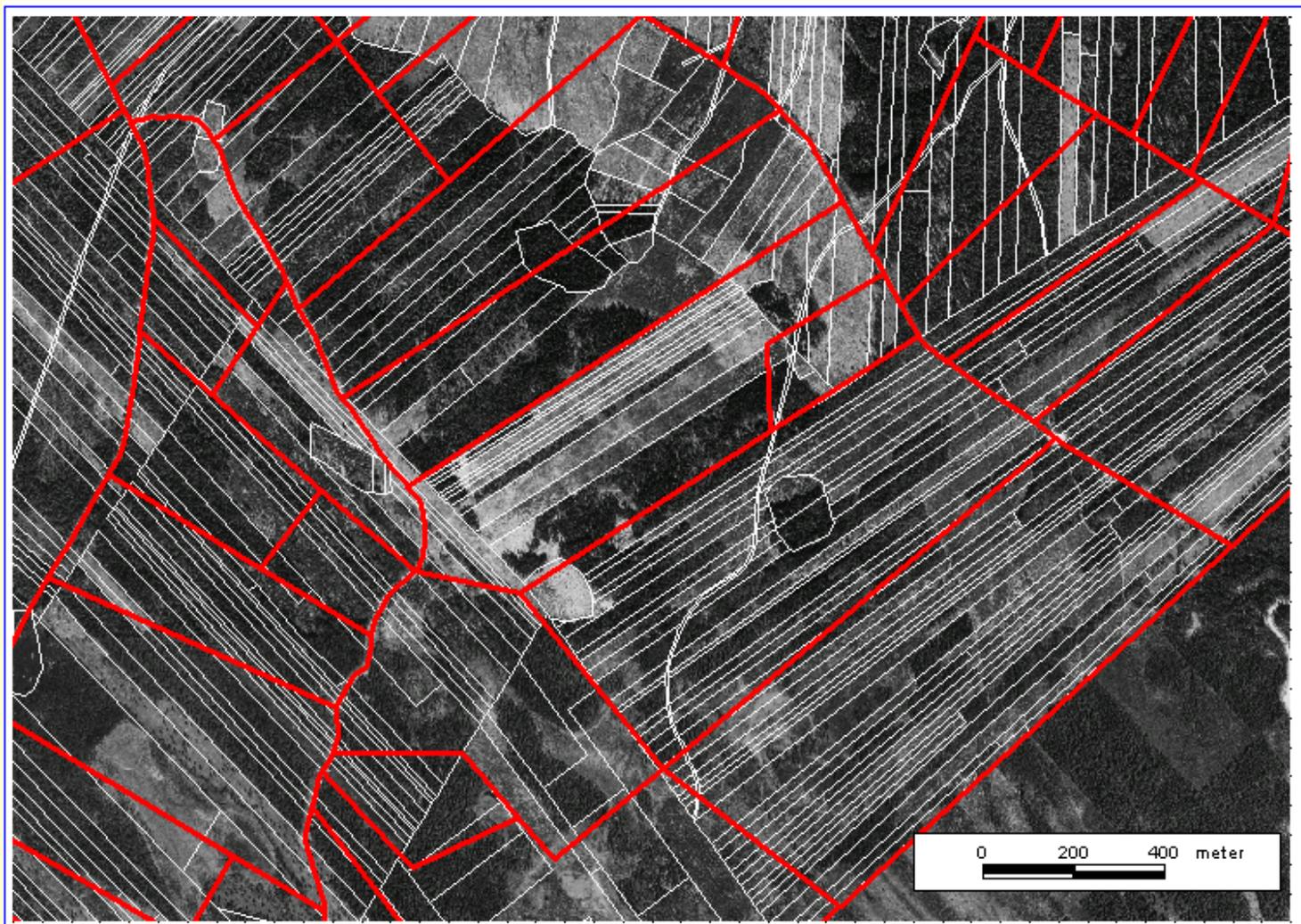
GÅ TILL KASSAN

Om Historiska Kartor

Land Consolidation



Consolidated forest area



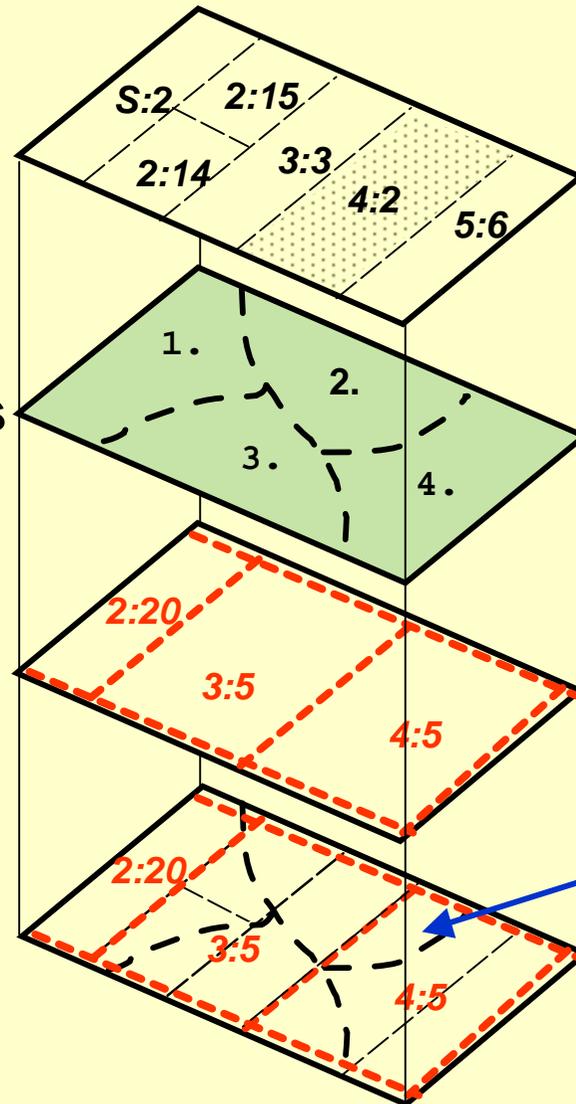
Overlay-techniques in Land Consolidation

Layers

- Properties

- Forest stands

- Reallotment design



Economic settlements are calculated by intersection between

- "old" properties
- forest stands
- "new" properties

Each little figure has information about:
previous owner, new owner and value



TECHNICAL CADASTRAL SURVEY using GPS

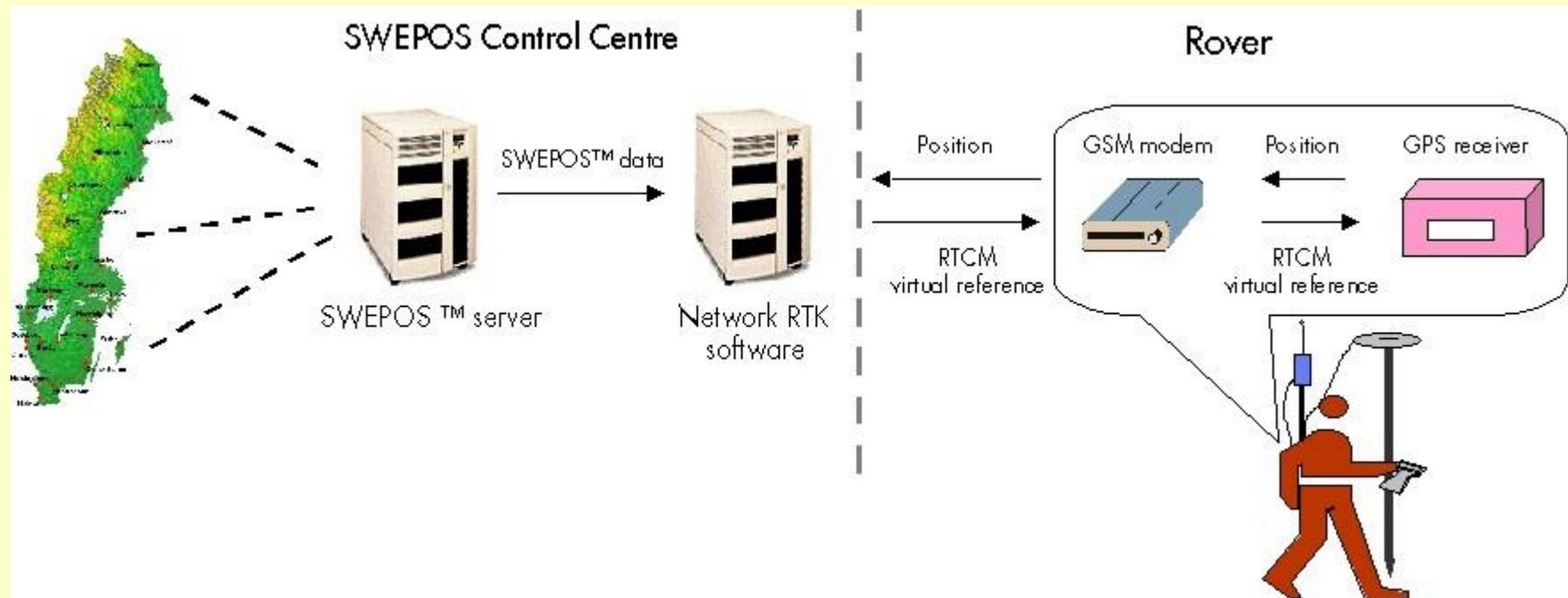
Connecting cadastral surveys in rural areas to the national reference system.

Technical cadastral surveys, larger real properties or where many real properties are involved.

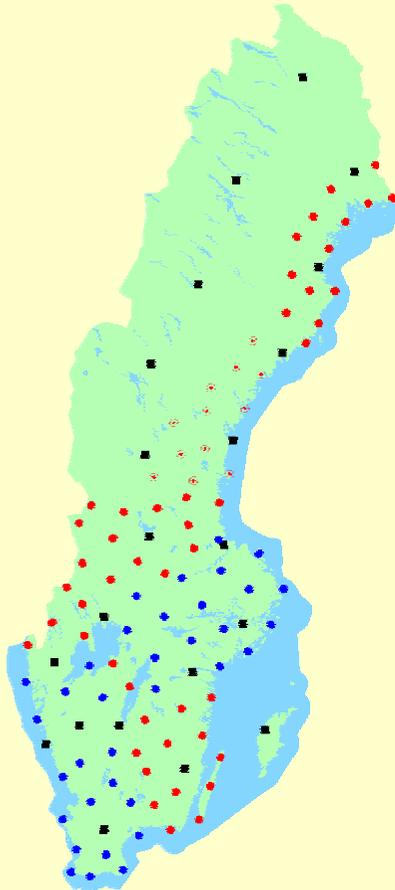
Staking out (long) real property boundaries in rural areas (forest, national parks ..)

Usually real time

Network RTK

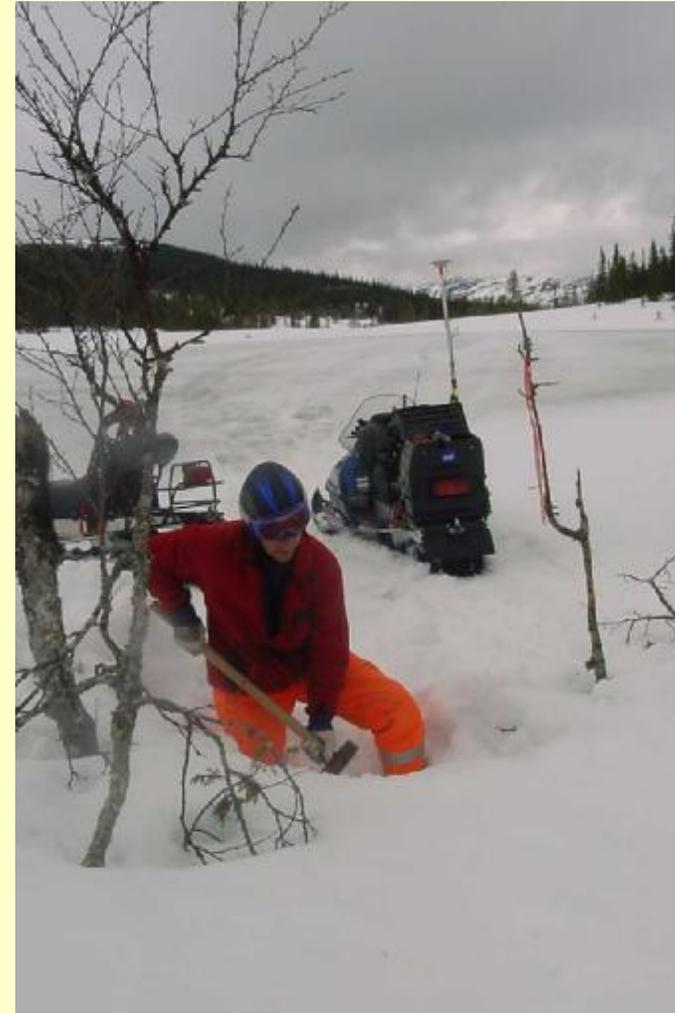
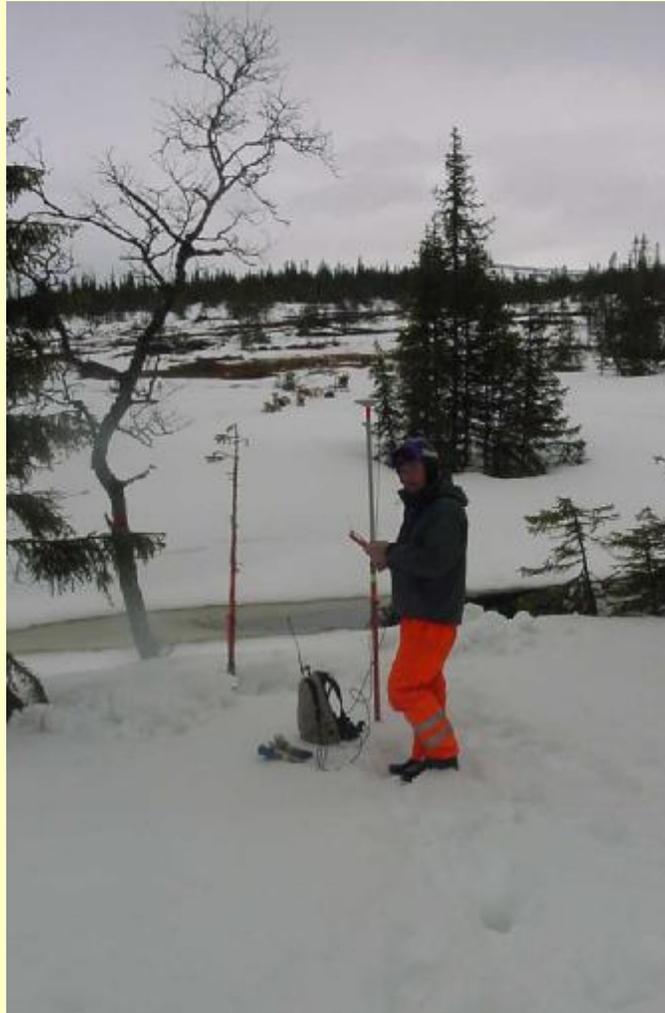


GPS in Sweden

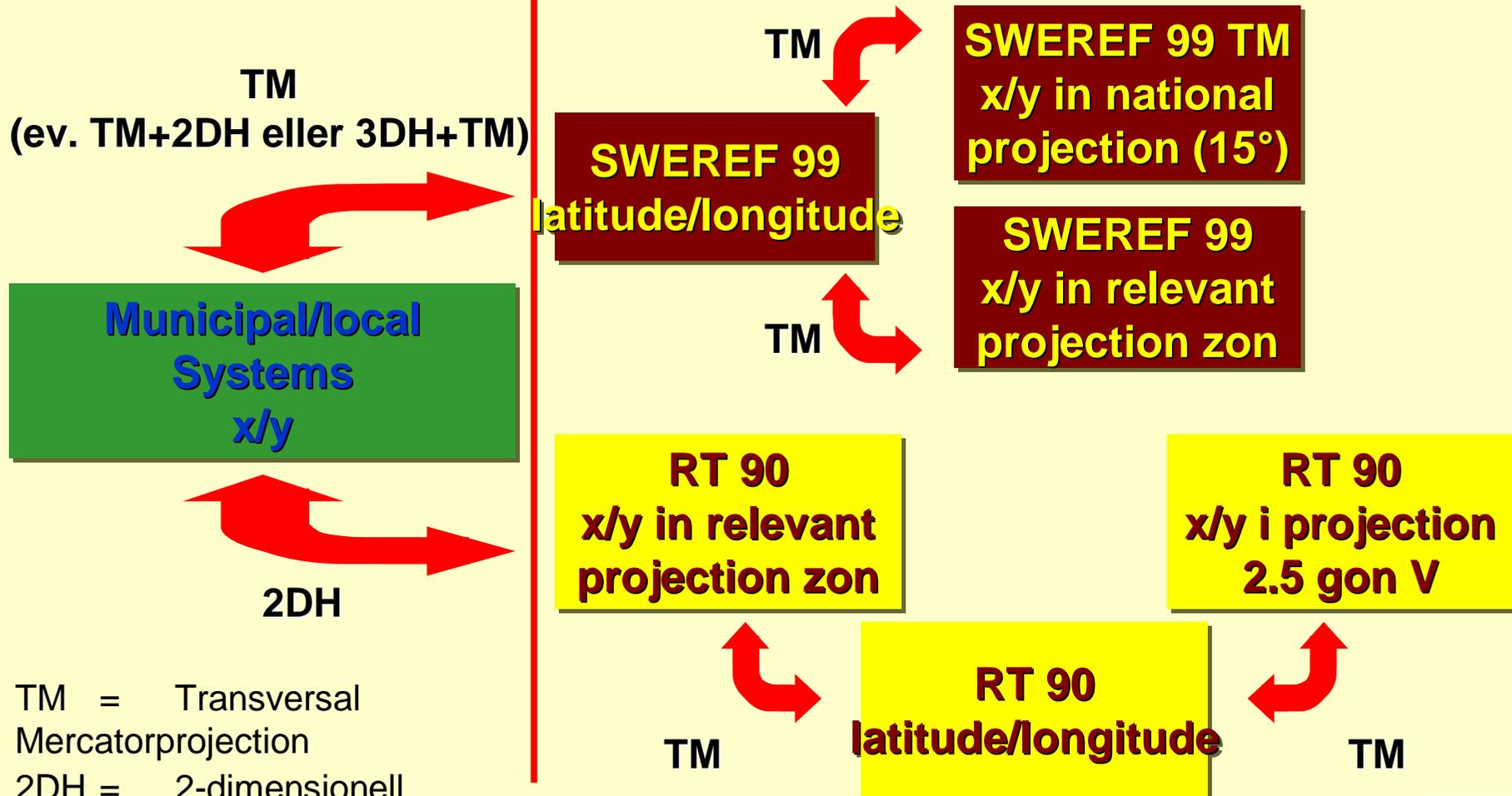


- 1998 SWEPOS operational for real-time positioning on the metre level, DGPS
- 1999 Distribution of RTK corrections from some of the SWEPOS stations
- 2000 Initial tests with Network RTK
- 2001 Automated post processing service established
Network RTK in production

*Staking out
and finding a
real property
boundary
mark with
RTK*



Transformations



TM = Transversal
Mercatorprojection
2DH = 2-dimensionell
Helmerttransformation
3DH = 3-dimensionell
Helmerttransformation

