

eNorway and Norway Digital as tools in good governance, Risk and Environment management

**Kari Strande, International Director, Norwegian
Mapping and Cadastre Authority**

6th FIG Regional Conference, Costa Rica 12-15 November 2007

– value for Society



International Federation of Surveyors
Fédération Internationale des Géomètres
Internationale Vereinigung der Vermessungsingenieure

WG 3.1: e-Government for e-Citizens

Interactive information flow and communication between providers,
partners and customers Public Private Partnerships (PPP).

E-mail: kari.strande@statkart.no

<http://www.epractice.eu/>

– til nytte for samfunnet



eGovernance participatory democracy

- Value for society
 - participation
 - internet
 - spatial information
- eNorway 2009
- Norway Digital and geoportals
- Municipal Initiatives and examples
- My Page
- Spatial Planning, Risk and Environment management

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Extensive value for the society

Within :

- Municipal administration
- Transport
- Shipping and Fishery
- Agriculture and Forestry
- Telecommunications and Energy
- Defence
- Emergency management
- Imagery
- Environmental and Area resource management
- Property management
- Education
- Media
- Leisure
- Map production, only to mention some examples



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eNorway 2009

Making everyday life more easy for the citizens
Knowledge society with participation from all
Contribute to value adding services
The needs of the citizens and the industry as driving force
Cross sector initiatives

Focusing

- The citizens in the Norwegian digital environment
- Innovation and growth in the private industry
- A co-ordinated and user approached public sector

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eNorway 2009

By 2006:

All Geodata authorities shall be part of Norway Digital
Management standards for data and document exchange

By 2007

eServices for everyone, also those that do not have internet access
80% of public websites following Norway.no quality criteria
Receive public communication and documents electronic
PSI directive adapted

By 2008 and 2009

Reuse of public data shall be based on the free of charge principle
Interactive public services shall be available through the citizens portal My Page
All new ICT systems in public sector shall be based on open source standards

ICT integrated in all subjects through education plans

Methods and tools to measure digital competence

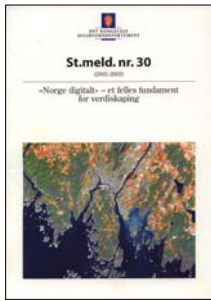
All non sensitive communication between public authorities shall be electronic

All public institutions shall use electronic supported administrative systems and archives

All public institutions shall use eID and eSignature for all relevant services

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«Norge digitalt» - et felles fundament for verdiskaping

«Norway Digital» - a common fundament for value adding services

The Parliamentary White Paper presented by the Norwegian government and accepted by the Parliament on June 18, 2003

The major concept in the White Paper is the establishment of national geospatial infrastructure in support of eGovernment

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Norway digital

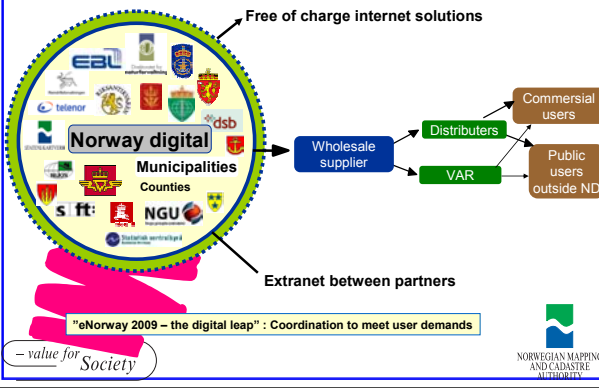
**Assemble
the entire public geodata-Norway
to one empire**

Give a little and get a lot !

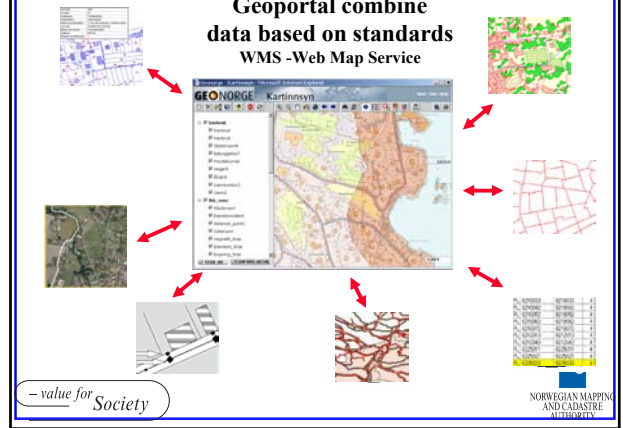
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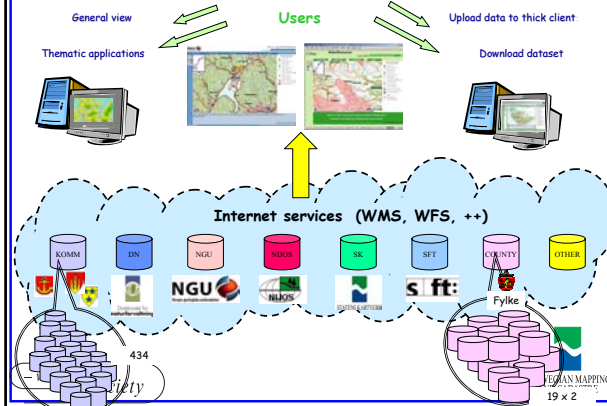
The model



Geoportal combine data based on standards WMS - Web Map Service



The portals:



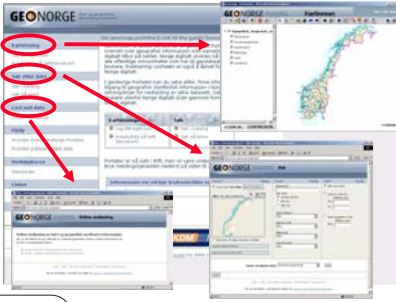
A variety of content, reference and thematic data ...

- reference data, 1:5 mill – 1: 5000
- addresses
- place names
- real estate
- geodetic network
- geology
- wildlife
- pollution
- hydrology
- transport
- cultural heritage
- agriculture
- ...

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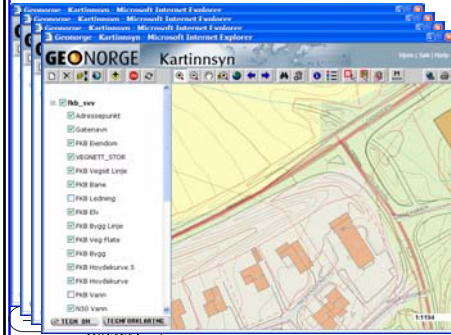
Geodata portal- geonorge.no



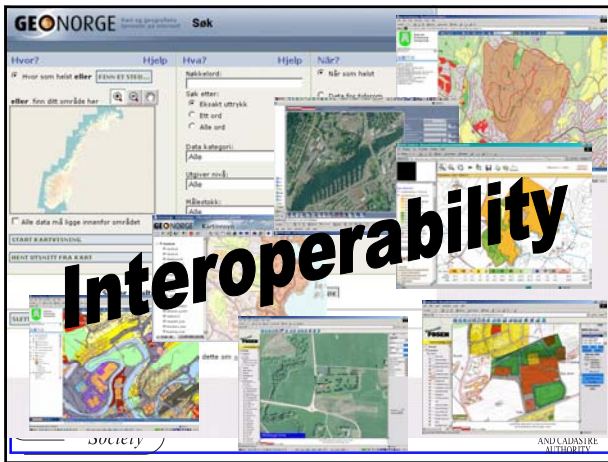
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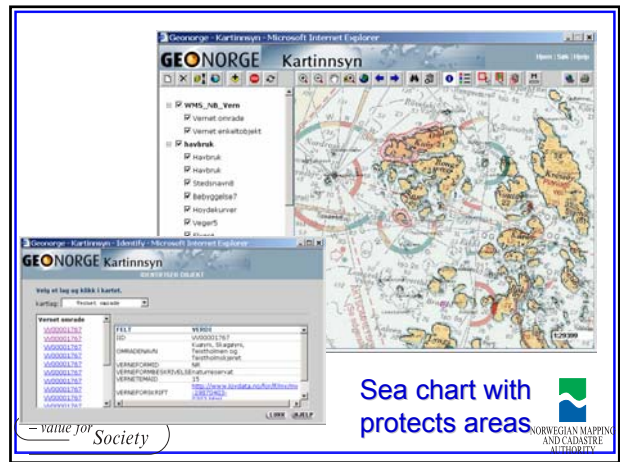
The map viewer ...



Overview
1:50 000 scale
1:5 000 scale
Detail



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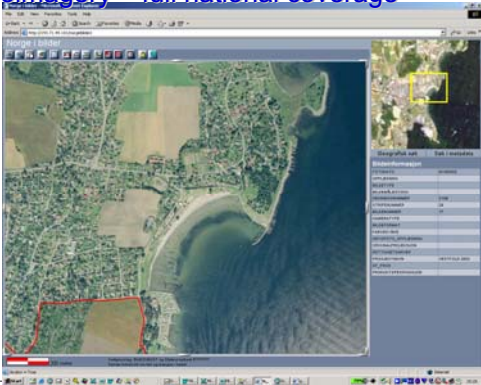


Sea chart with protects areas

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Orthoimagery – full national coverage



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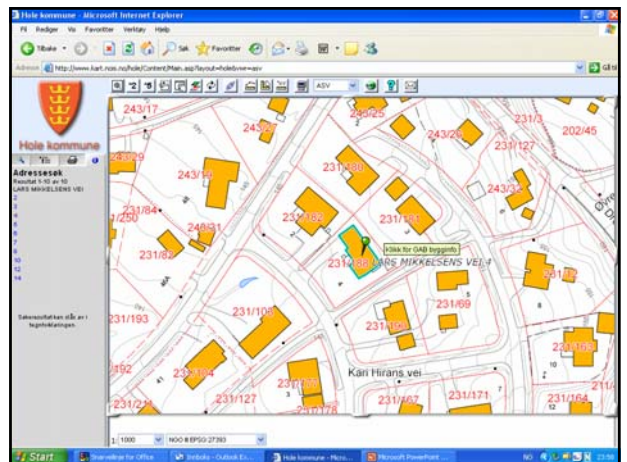
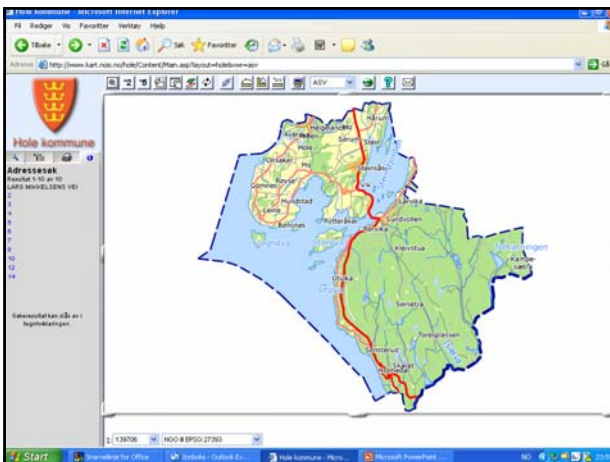
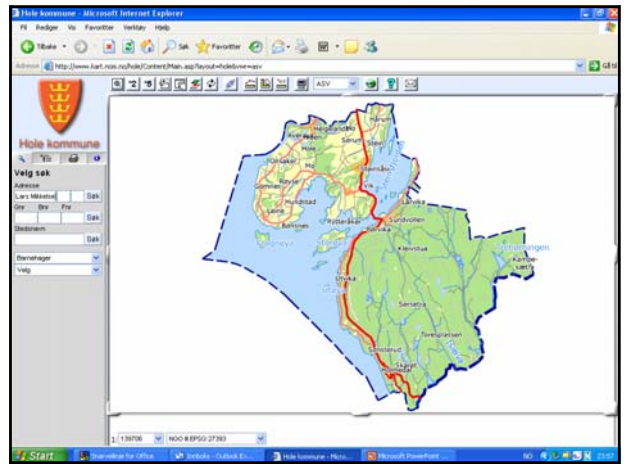


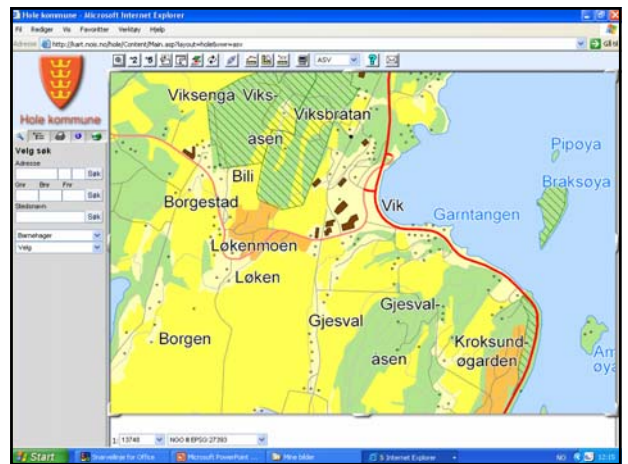
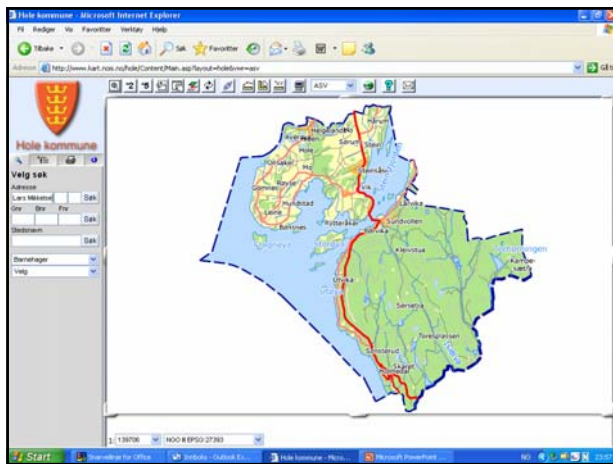
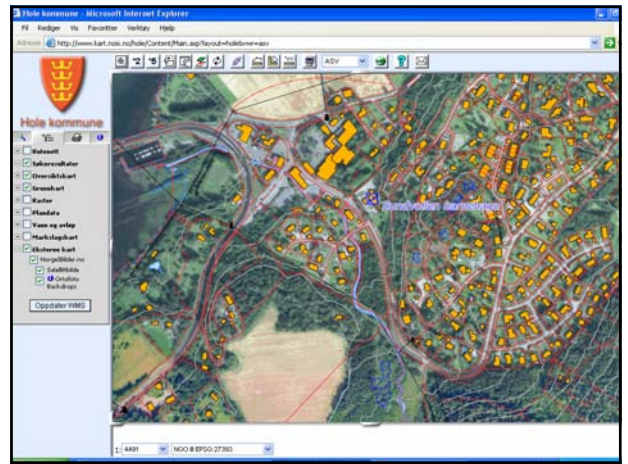
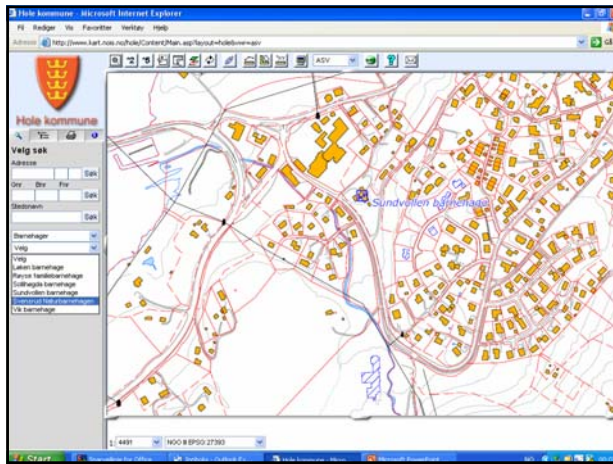
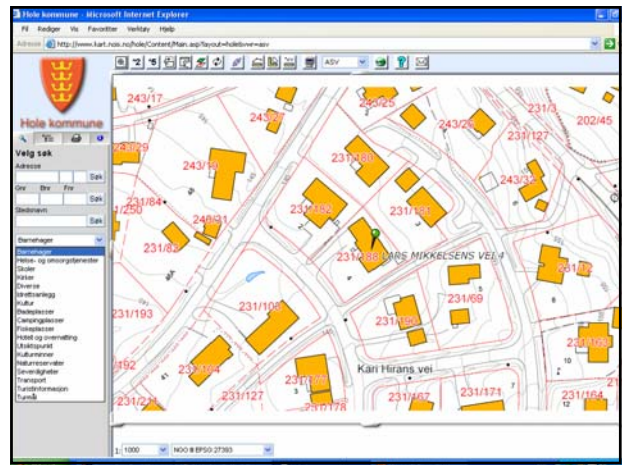
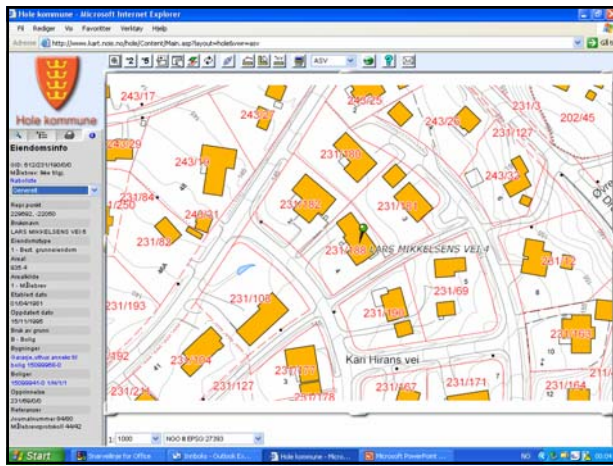
Conditions for the municipalities

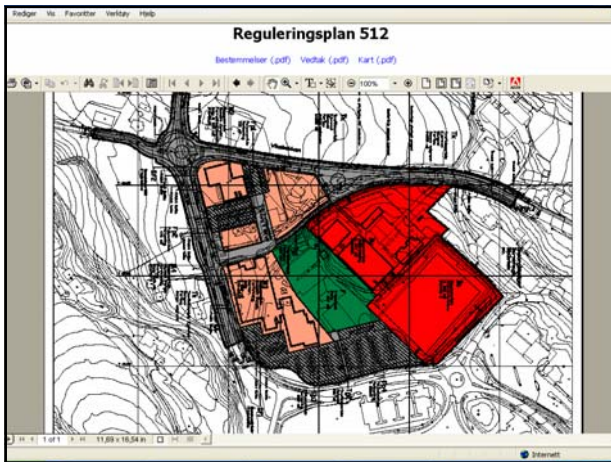
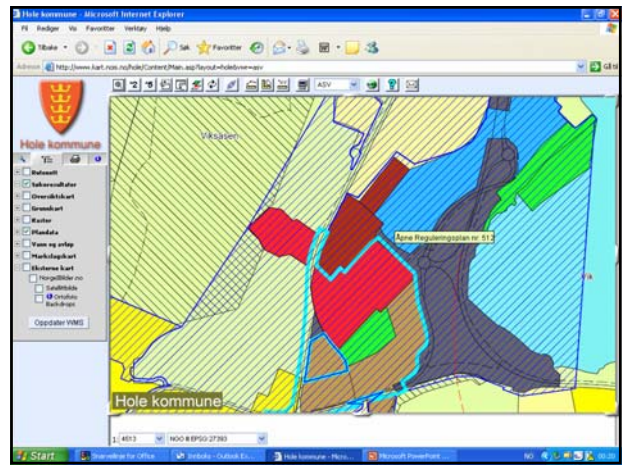
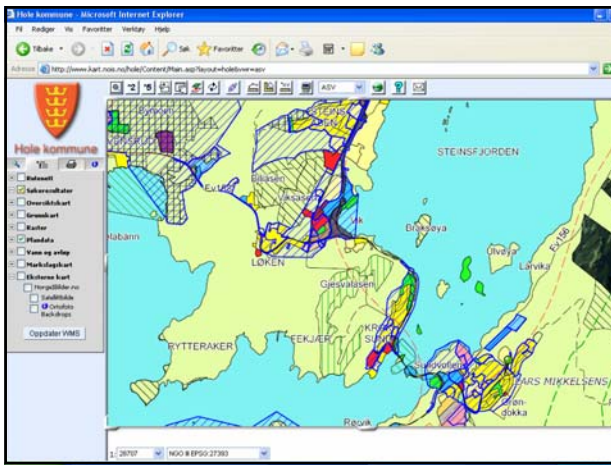
- User functionality must be as good as the solutions they run today
- Good interface to various external registries
- Demand for stable access to external WMS 24/7
- Neighbouring municipalities accessible on the net
- Simple catalogue access to external WMS services
- Quick communication
- External WMS data delivered within the municipality's UTM zone
- Good specifications for the national data sets
- Integration with management tools and GIS tools
- Good and relevant web-services
- Good ordering and payment solutions
- Electronic self service of data and applications from citizens

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Scenario – planning for a new main road

Examples

PROPERTIES
 Omr: 5 br: 4
 Omr: 5 br: 6
 VALUE € 13.4 mill

We start with a base map ...

- ... Potential road line
- ... What about cultural heritage ?
- ... Protected areas ? ...
- ... Farm land ? ...
- ... Properties to be purchased ?

All this info only a couple of key-strokes away !!

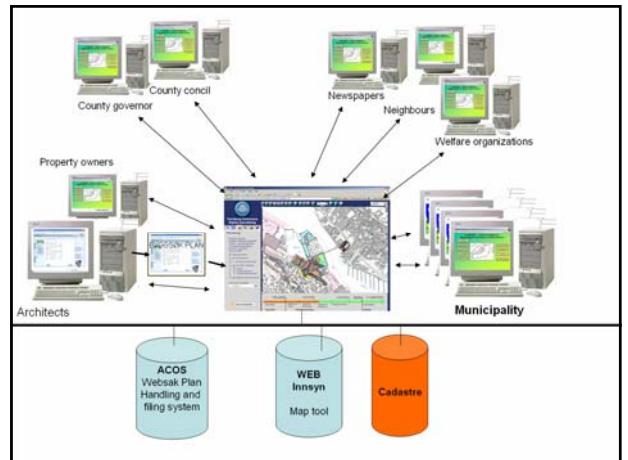
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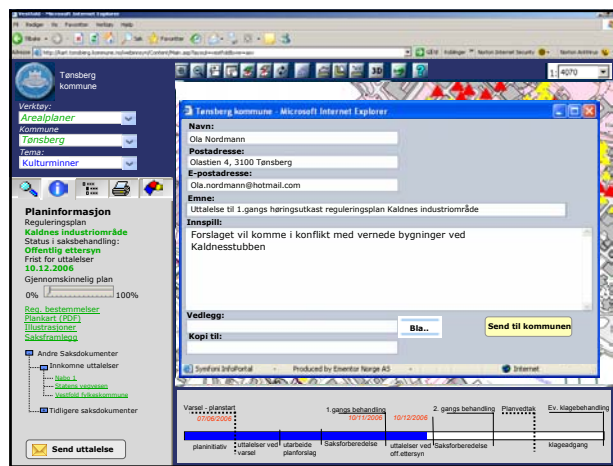
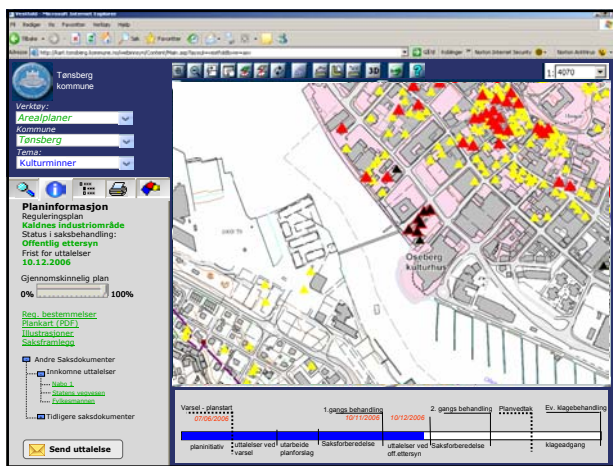
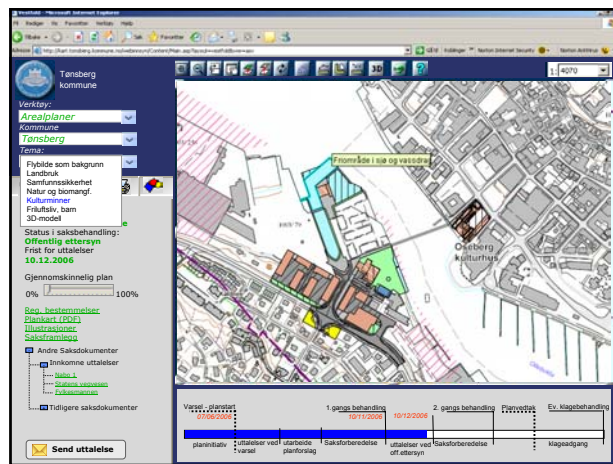
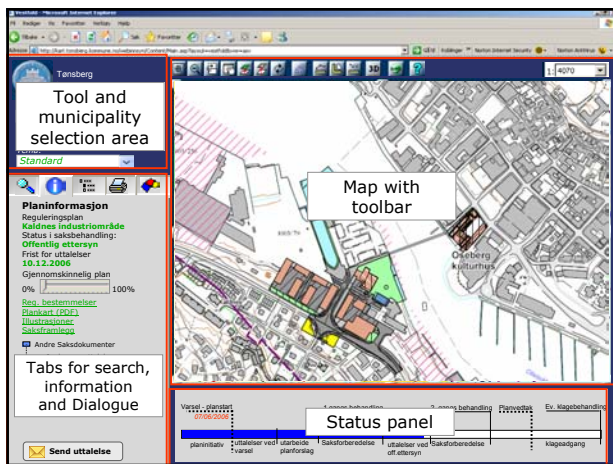
NORWEGIAN MAPPING AND CADASTRE AUTHORITY

Digital Planning Dialogue

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NORWEGIAN MAPPING AND CADASTRE AUTHORITY





Gains


- More efficient executive work
 - Faster processes in case handling of plans and building applications
 - Better action data
 - Strengthened information services
- Transparency in the planning process (e-democracy)
 - Increased contact and more predictable processes for Land owners and other business
 - Increased citizen influence on municipal planning.
 - Increased accessibility of information from municipal planning
- Realise gains from ICT- investments
 - Web-based handling and filing system
 - Geodata cooperation on Geodata
 - Web-based GIS tools

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NORWEGIAN MAPPING AND CADASTRE AUTHORITY

"eNorway2009 – the digital leap"


In Norway all citizens have their own personal web page



My house

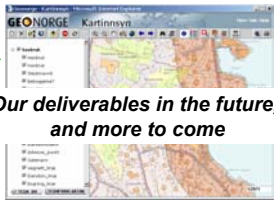



My cabin(s)




My application

Our deliverables in the future, and more to come





My children



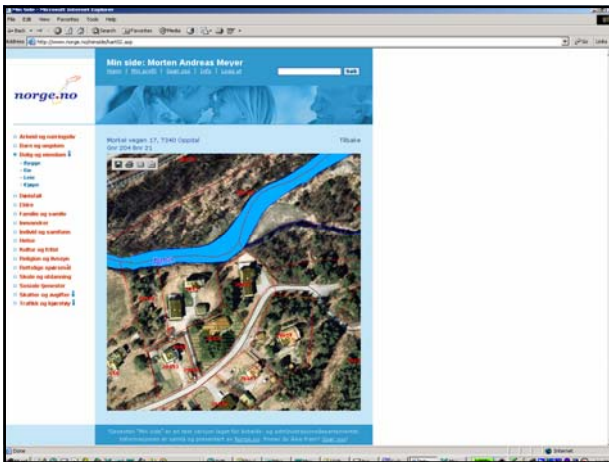
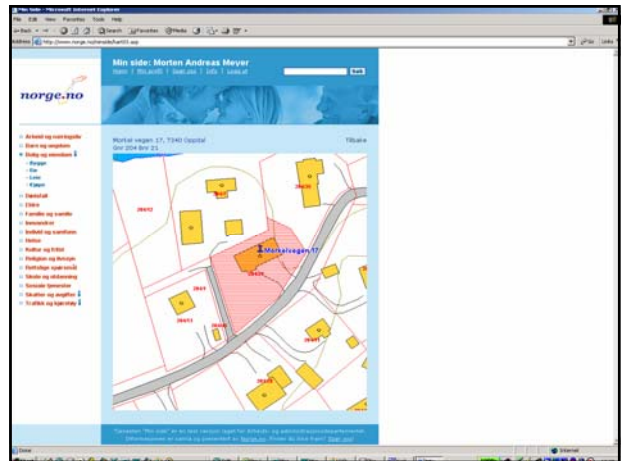
My travel

DEMOCRACY – to guarantee the data quality, data access for everybody (also to the less privileged) – a challenging task !

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NORWEGIAN MAPPING AND CADASTRE AUTHORITY

MyPage – initiative from MOD



- and "My page" won the eGovernment Awards 2007 !



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NORWEGIAN MAPPING AND CADASTRE AUTHORITY

A National Area Resource Management Program as part of Norway Digital (AREALIS)

Thematic geographic info

- Shores
- Marin biology
- Geology
- Botany
- Zoology
- Cultural heritage
- Landscape
- Soil types
- Agriculture
- etc.

Better area resource planning

NMCA as the driving force

Basic geographic info

- Base map data:
 - Ortophoto
 - Digital map data
 - Road data, etc
- INPIS :
 - Properties
 - Addresses
 - Buildings
 - Dig. property maps
 - Deed information
- Location based data

Area plans and preservation measures

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NORWEGIAN MAPPING AND CADASTRE AUTHORITY

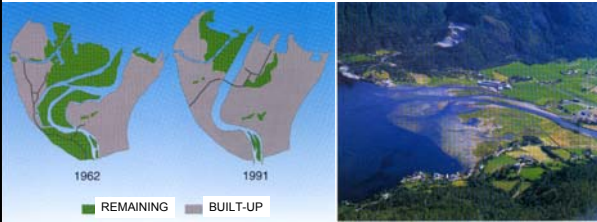
Environmental databases in all Norwegian Counties

- Supply relevant datasets to be used in local and regional planning
- Simplify existing detailed data and classification systems
- Mapping of new topics and land use assessment
- Identify valuable areas
- Ranking of areas according to biodiversity and other environmental values
- More sustainable land use - better management
- Affect communication between different sectors
- Reduce number and seriousness of land use conflicts

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NORWEGIAN MAPPING AND CADASTRE AUTHORITY

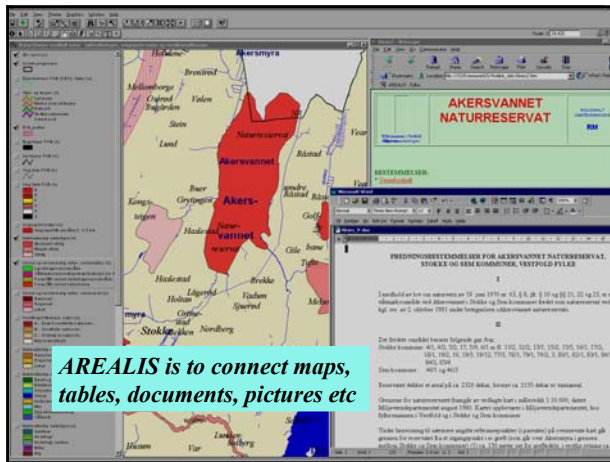
Data for monitoring land use changes



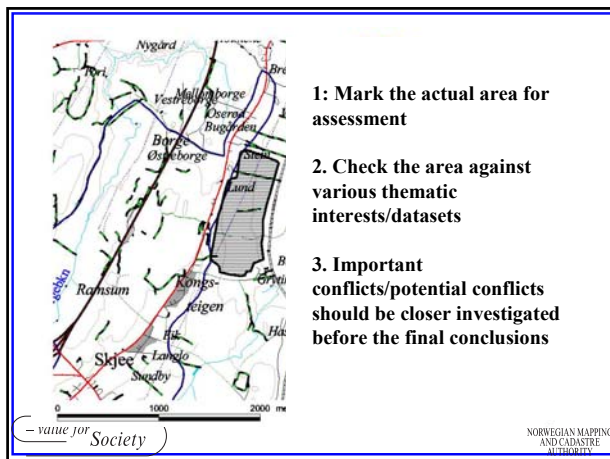
Coastal values - fish breeding



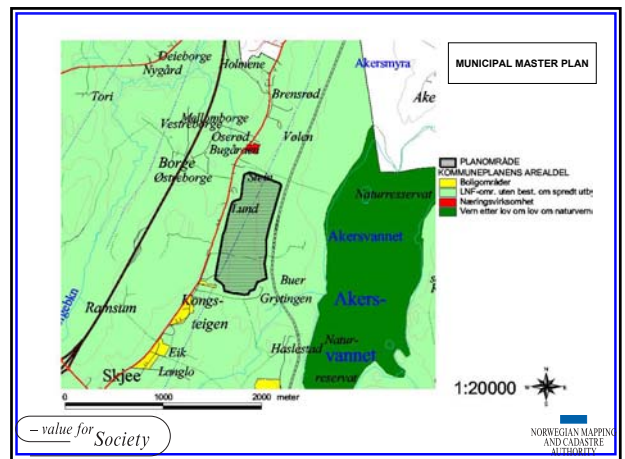
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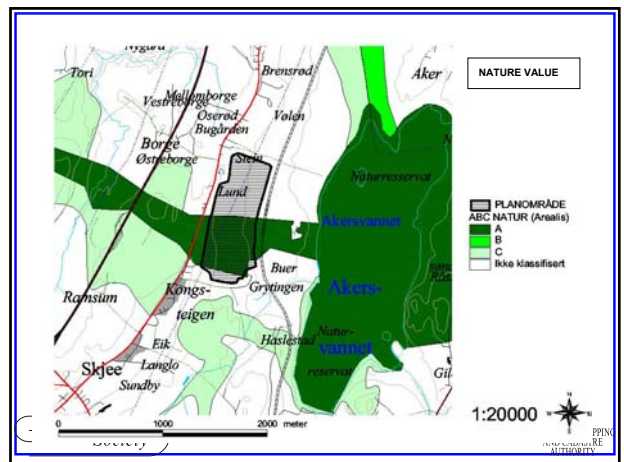
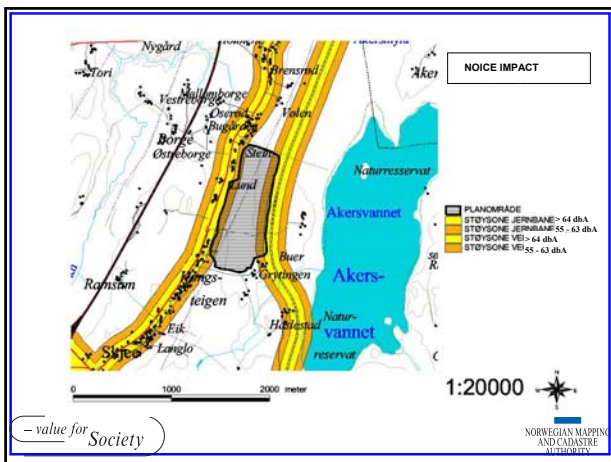
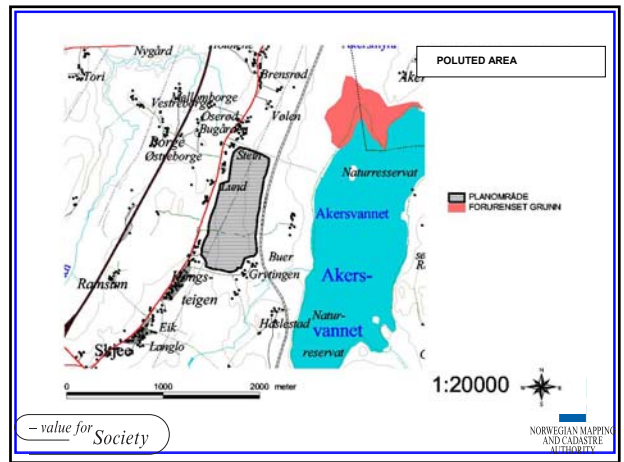
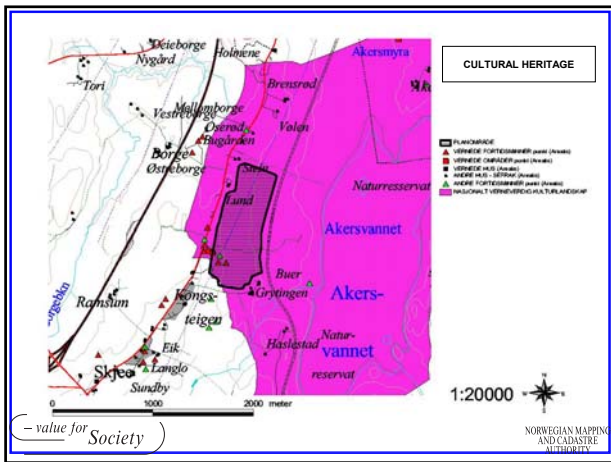
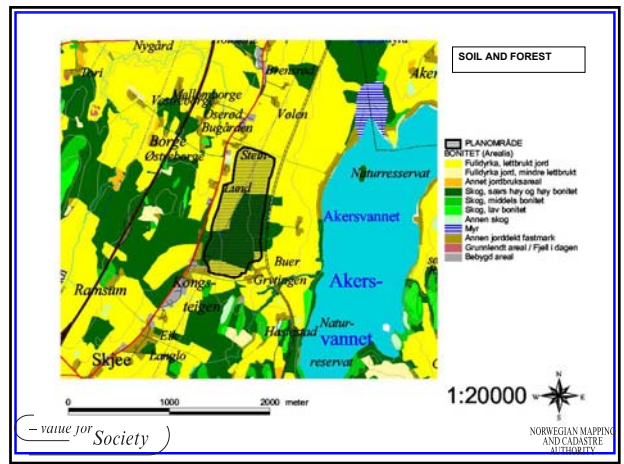
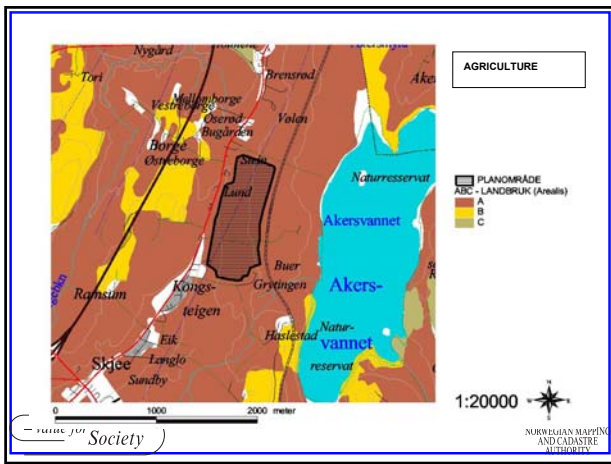
The data dissemination for local and regional use planners and decision-makers

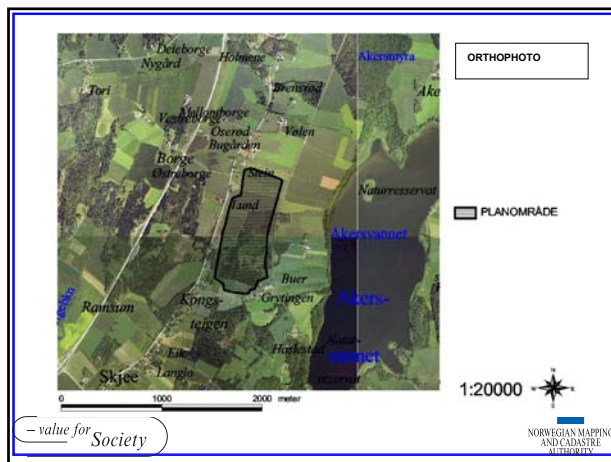
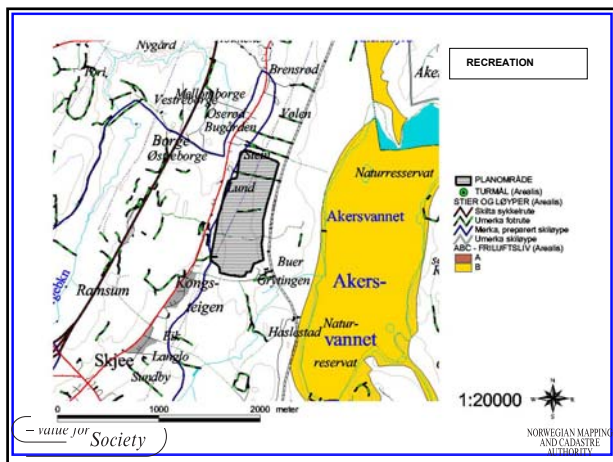
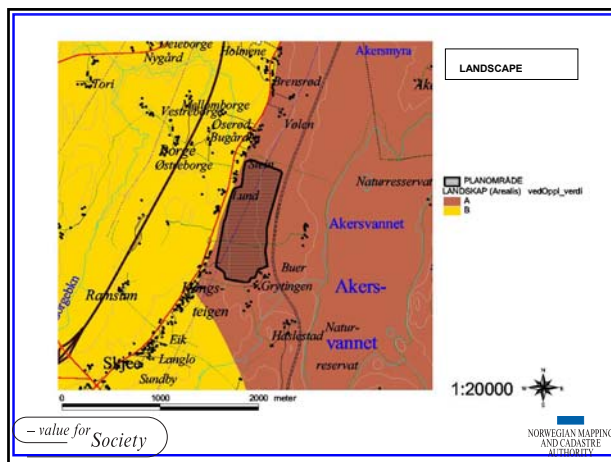
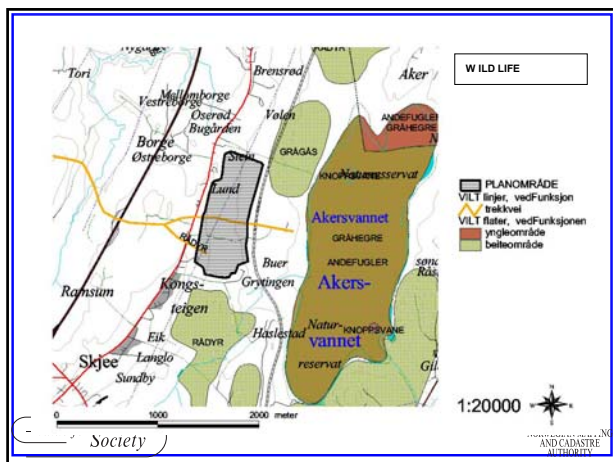


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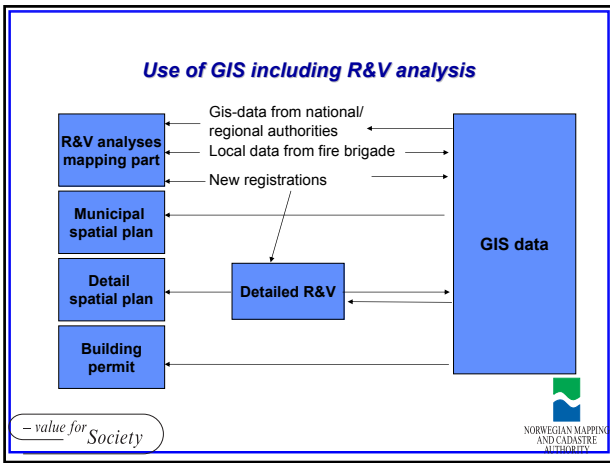


Risk management

- Norway is exposed for natural disasters like landslide, stoneslide, snowslide, underwater slide and slide as a cause of flood or tsunami
- 2000 killed by natural disasters the last 150 years
- It is expected 10 bigger slides in the coming 50 – 100 years, each with 10 – 100 persons dead

Can we reduce the risk

- There is little to do to prevent the natural hazards
- However, we can be prepared for situations
- Modelling potential scenarios, and risk assesment for localisation of high exposed risk areas
- Riskreducing actions, including warning systems
- Decisions made today will influence the future vulnerability of the society



Society security – slide risk

Municipalities – responsibility in build up areas

Risk management and actions
Planning/construction
Actions
Watch, warning, preparedness

Knowhow and actors

Risk-knowledge

Vulnerability and Risk mapping

Relevant data geology, geotechnical historical data

Slide-research

Basic data

- NMCA, Norway Digital
- NGU, rock and soil
- Road Authority, Railroad Authority and others.
- Geotechnical information

Overview map of potential slide exposed areas

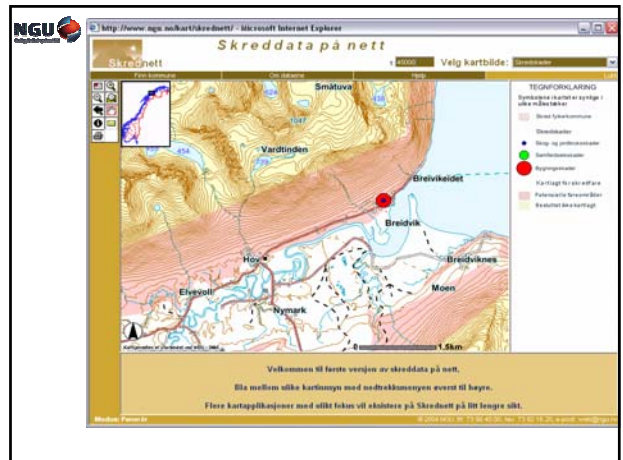
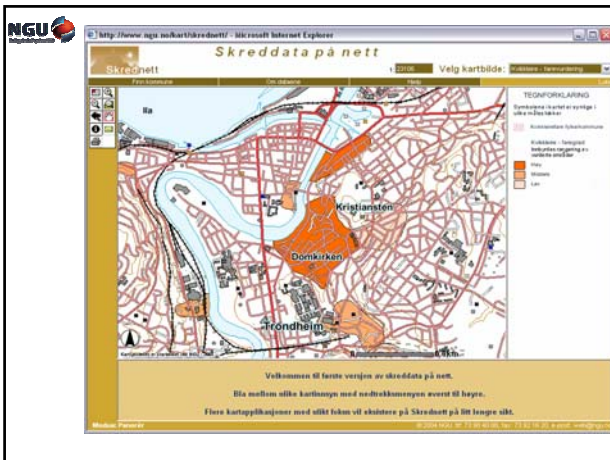
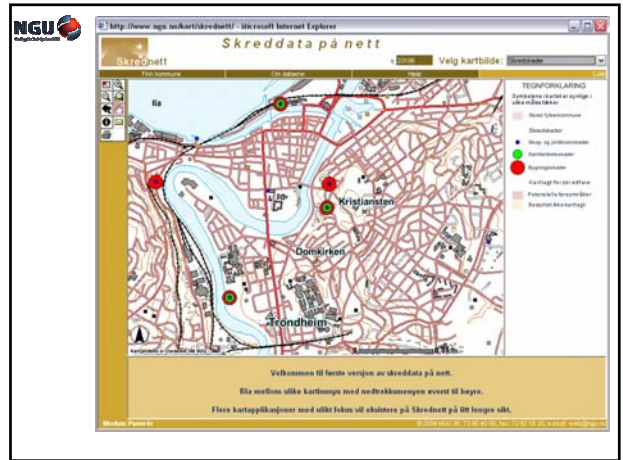
- NGI
- Defence
- NGU

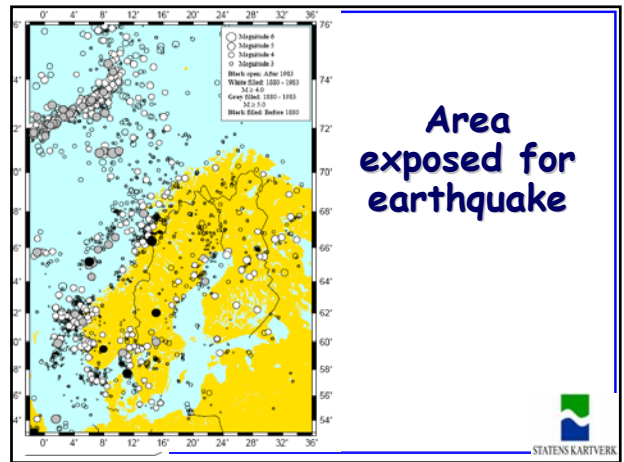
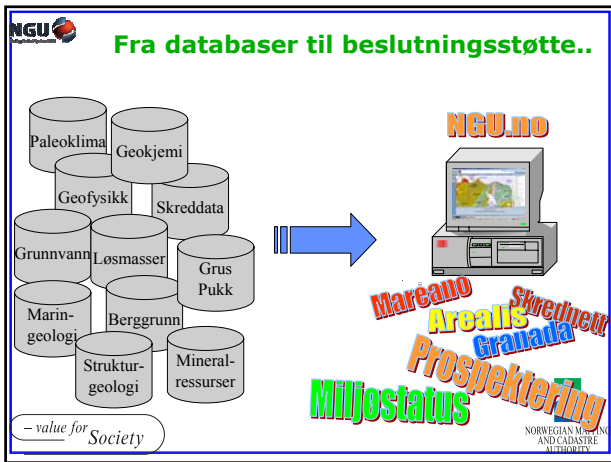
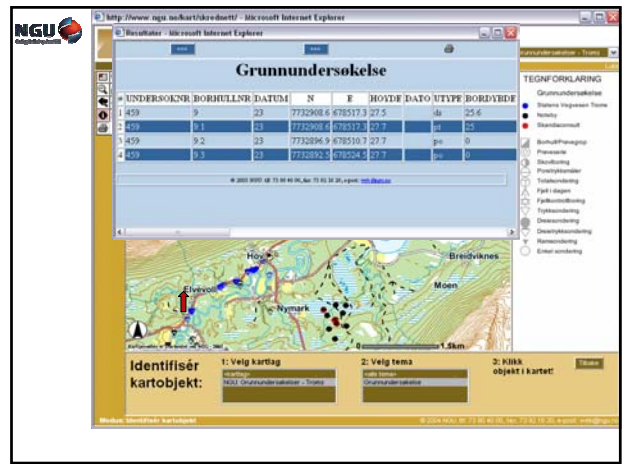
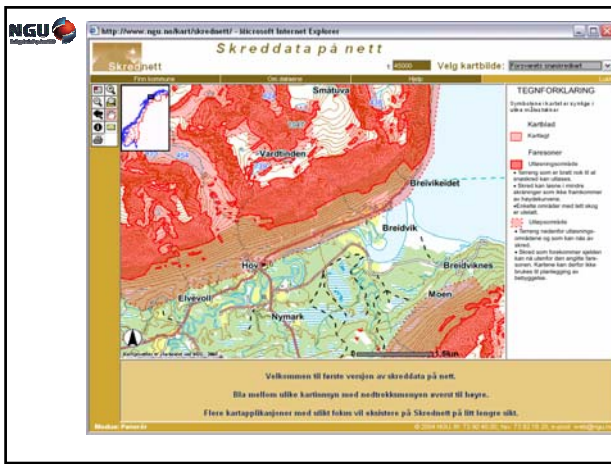
Slide occurrences

Slide by road and railroad (VV og JV)
 Slide accidents, historical archives (NGU)

Detailed risk assessments

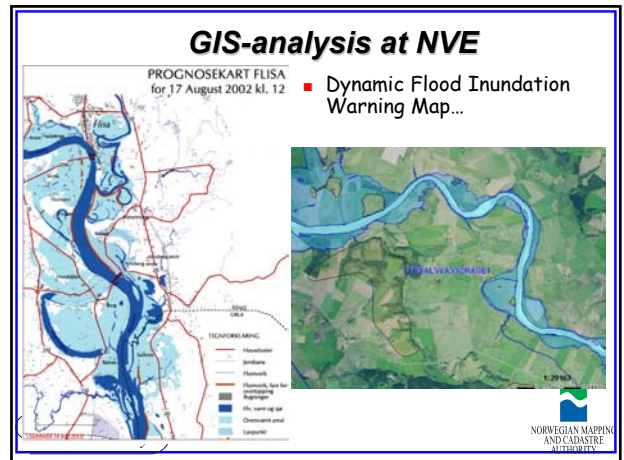
NGI – NVE
 Consultants
 NGU





NVE Data Bases

- Catchments DB (REGINE)
- Lake DB
- River Network DB (ELVIS)
- Water Power Production DB
- Hydrological Gauging Stations
- Annual Water Runoff
- Protected River Systems
- Flood Inundation Map
- Bathymetric Maps of Lakes
- Wind Power Plants
- Mini/Micro Water Power Stations
- Thematic Maps

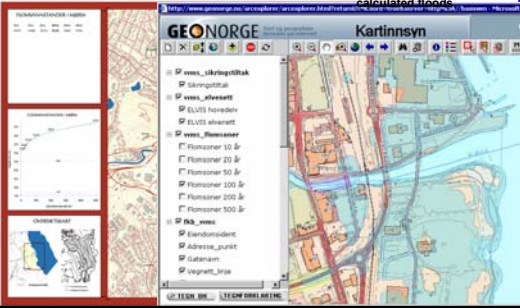


Flood Inundation Map

Flooded/ Inundated areas made available at NVE Atlas – and as Web Map Service (WMS) for Authorities & Public

- Flood estimation
- Hydraulic simulation
- GIS-analysis - identifying inundated areas
- Flood inundation map

map presentation
report
digital data for all
calculated floods



– value for

- new industrial developments

- From oil and gas to exploiting the coastal zone

Example

- Present
 - ✓ Fishing areas
 - ✓ Fish farming
 - ✓ Seaweed areas
 - ✓ Protected areas
 - ✓ Sea cables
 - ✓ Oil and gas pipelines
 - ✓ Sea transport, etc.
- Area resource management
- Conflict management
- Improved administration



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Better municipal planning and awareness

by using the properties, addresses and buildings register together with digital property maps

School planning



Fire emergency



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More efficient ambulance services

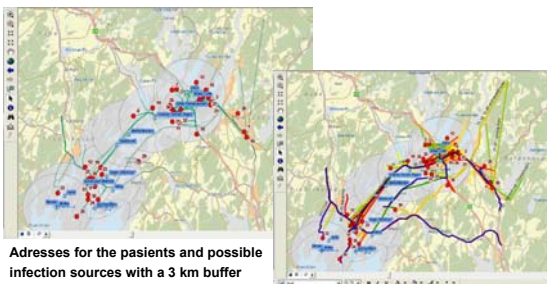


- Position of all ambulances are displayed
- Position of adresse to patient is displayed
- Navigation system in ambulance
- Fastest route presented on screen
- Lives are saved

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Locating infection source

Legionella-epidemic 2005

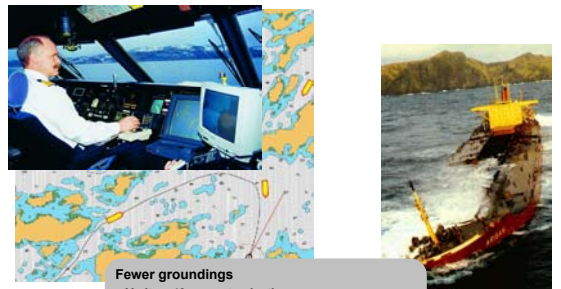


Adresses for the pasients and possible infection sources with a 3 km buffer

Movements of the pasients

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Increased safety at sea by use of ENC's



Fewer groundings

- Veritas: 40 percent reduction
- Canadian Coast Guard: 75 percent reduction
- Less pollution
- Lives are saved

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Better security for small aircraft



- The positions of the aircraft and aviation obstacles are shown on the digital map
- The pilot gets warnings
- Lives are saved

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Land slide disposed areas



- Documentation to predict future slides
- Quick overview of the situation
- Preventive actions
- Lives and properties saved

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The Emergency Placard

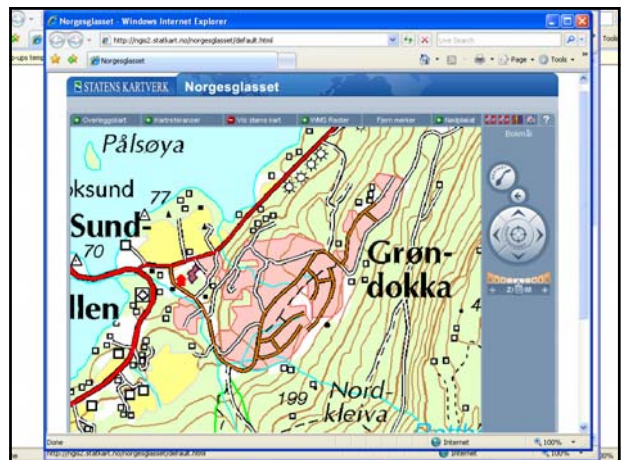
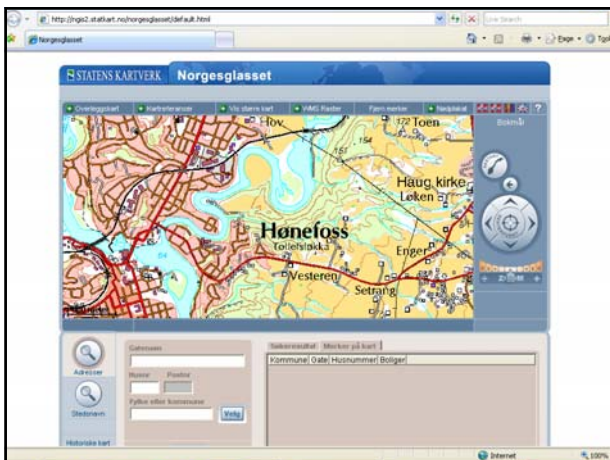
- Rescue Services do frequently experience that people in emergency can't give an exact explanation of where they are
- This is mostly related to people in cabins or places without address
- The Emergency Placard will contribute to rescue people and reduce damage

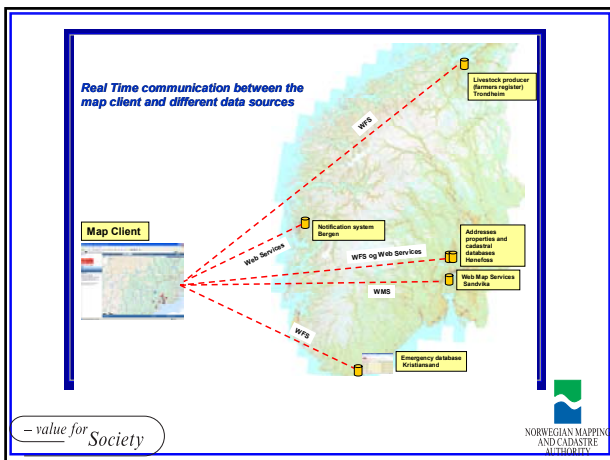
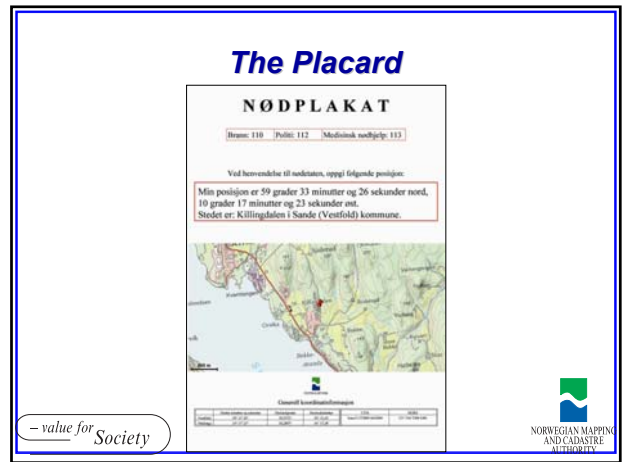
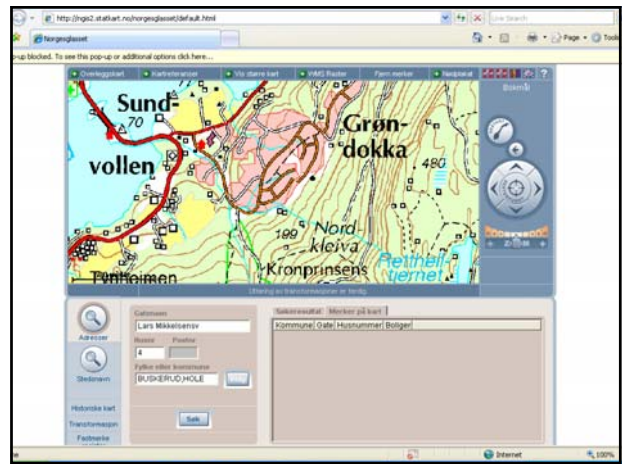
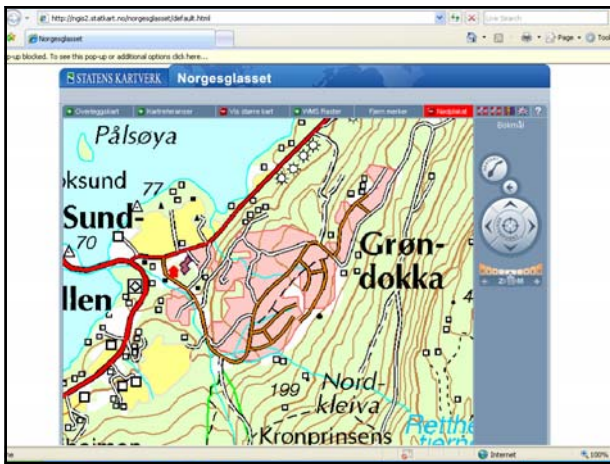
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Link

- The Placard should be made and printed in advance of Emergency
- <http://ngis2.statkart.no/norgesglasset/default.html>

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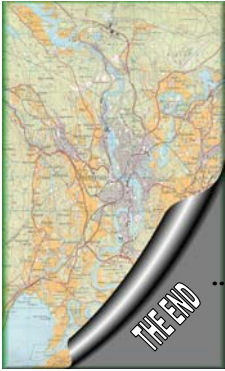
geoNorge award from EU

With this message we would like to inform you that your case geoNorge has been integrated in the ePractice.eu database, and that you have been awarded the **ePractice.eu Good Practice label for 2007**, based on the recommendation from the 2007 European eGovernment Awards consortium.

Please note that this label is linked to the EU-funded good practice exchange portal [www.ePractice.eu](http://www.epractice.eu).

Attached you will find an electronic version of the label which you are entitled to use throughout 2007. Your case has now been published on ePractice.eu together with the Good Practice label.

The **ePractice.eu Good Practice label** will only be given to 10% of the cases published in the portal and will be assigned to the highest ranked ones, rated with more than 80 points by the ePractice.eu experts or given more than four stars by the ePractice.eu community. Cases from external best practice projects with a proven credibility, grade of excellence and scope of research also qualify for the Good Practice label. The label rules are available here: <http://www.epractice.eu/faq>.



Thank you for
your attention!



... from ... to



- value for Society

