eGovernment for eCitizens
NSDI as tools in good governance
Examples from Norway and Norway Digital

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TS 2B NSDI and eGovernment, Stockholm, June 2008

WG 3.1: e-Government for e-Citizens
Interactive information flow and communication between providers, partners and customers Public Private Partnerships (PPP).

Services and workflows for decision makers and citizens in participatory democracy

Integration and cooperation in a distributed environment
Projects and outputs from WG 3.1

Facilitate experience exchange through workshops and papers
Links to information and minutes of workshops
Examples with local, regional, national and international experiences
Preliminary reports through proceedings, cfr Budapest 2006
Summarise lessons learned
   – success criteria and impact on administration and citizens
Recommendations for facilitating participatory eGovernment society
Facilitate network and encourage for R&D participation
Reporting 2009

EXPERIENCES AND EXAMPLES

UN- Survey on eGovernment http://www.unpan.org/egovernment.asp
Developments in Europe http://www.epractice.eu
Global examples
   Disaster interactive portals
   Integrated Land Information System in Northern Territory, Australia
   Web-Castle linking to more examples
SUCCESS CRITERIA

Political support
Inclusion and interaction
data sharing and distribution
equal opportunities
broad and inclusive participation
enthusiastic organisation
clear strategy
easy access to internet
open, standard based technology
distributed sources

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

value for Society
**EXAMPLES FROM NORWAY**

Value for society - participation - infrastructure  
eGovernment - eNorway 2009  
NSDI - Norway Digital and geoportals  
My Page  
Municipal Initiatives and examples  
  Spatial Planning, Risk and Environment management

**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
eNorway 2009

By 2007
- All Geodata authorities shall be part of Norway Digital
- Management standards for data and document exchange
- 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

"eNorway2009 – the digital leap"
In Norway all citizens have their own personal web page

Our deliverables in the future, and more to come

DEMOCRACY – to guarantee the data quality, data access for everybody
a challenging task!
MyPage – initiative from MOD
Services on MyPage

The illustration below presents the different types of services available on MyPage.

- **Register services** provide citizens with personal data stored in public registers.
- **Notification services** allow SPs to correspond with citizens.
- **Transaction services** allow citizens to interact digitally with public sector agencies.
- **Calendar services** help citizens keep track of important dates and events.
- and "My page" won the eGovernment Awards 2007!

Norway digital - a common fundament for value adding

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
Who can be "Norway digital" partner?

- Government authorities
- Municipalities and counties
  - the partner rights is valid for all authorised tasks, also commercial activities as long as not separated to own legal body, also tasks outsourced as long as they are enforced by law
- Companies with national interests producing data of interest to the infrastructure
Partner status - 2008

- 40 national agencies
- 17 (out of 17) county administrations
- 430 (out of 430) municipalities
- approx. 100 energy companies
- a few others

Partner benefits

- Access to a broad variety of geographic information - data sets and services
  - downloadable datasets
  - web based services:
    - Map services, registers, addresses, placenames
  - quality control software
  - tools for developing product specifications
- access to the portal and all its services
- participation in the organisational structure
- participation in a variety of networks, e.g. technical and thematic
Partner contracts

- Principal agreement
- Specific partner contract
- Annex 1 - Organization and governance
- Annex 2 - The partner list (dynamic list)
- Annex 3 - Data content (datasets and services)
- Annex 4 - Requirements (data and services, incl. SLA - service level agreement)
- Annex 5 - Economy and funding
Technology framework

The "Norway digital" "Implementing Rules"
Based upon the ISO 191xx-series of standards and OGC specifications

• ISO 6709:1983 Standard representation of latitude, longitude and altitude for geographic point locations
• ISO 19101:2002 Geographic information - Reference model
• ISO/TS 19103:2005 Geographic information - Conceptual schema language
• ISO 19105:2000 Geographic information - Conformance and testing
• ISO 19106:2004 Geographic information - Profiles
• ISO 19107:2003 Geographic information - Spatial schema
• ISO 19108:2002 Geographic information - Temporal schema
• ISO 19109:2005 Geographic information - Rules for application schema
• ISO 19110:2005 Geographic information - Methodology for feature cataloguing
• ISO 19111:2003 Geographic information - Spatial referencing by coordinates
• ISO 19112:2003 Geographic information - Spatial referencing by geographic identifiers
• ISO 19113:2002 Geographic information - Quality principles
• ISO 19114:2003 Geographic information - Quality evaluation procedures
• ISO 19115:2003 Geographic information - Metadata
• ISO 19116:2004 Geographic information - Positioning services
• ISO 19117:2005 Geographic information - Portrayal
• ISO 19118:2005 Geographic information - Encoding
• ISO 19119:2005 Geographic information - Services

An infrastructure support

the development addresses all and any potential application field for geospatial information!!

a rich set of functionality - services

a variety of content, reference and thematic data

Service A with interface
Service B with interface
Service C with interface
Service Z with interface

a variety of applications
geoportal architecture

national components
  WMS, WFS, WCS, ..., web services
regional and local components

used to build:

national portal
regional and local portals
organisation specific portals

The portals:

General view
Thematic applications
Internet services (WMS, WFS, ++)

Users
Upload data to thick client
Download abstracts
Geodata portal- geonorge.no

The general portal - map viewer ...

Overview
1:50 000 scale
1:5 000 scale
Detail
Integrating land and sea ...

http://www.geonorge.no - geonorge kartverslyn (Projection: UTM33N WGS84) - Mozilla Firefox

Integrating land and sea ...

http://www.geonorge.no - geonorge kartverslyn (Projection: UTM33N WGS84) - Mozilla Firefox
Nature and biodiversity
Species
Nature and biodiversity
Species+Habitats

Nature and biodiversity
Species+Habitats+
Protected sites
Orthoimagery – full national coverage

Situation in geoNorge

(a) discovery services – several metadata catalogues
(b) view services - >200 wms services with national coverage
(c) download services – 210,000 datasets with reference data, more than 50,000 datasets with thematic data
(d) transformation services – available as web services
Some statistics ...

Typical *daily* usage

- map service requests \(150\,000\)
- register services requests \(20\,000\)
- Download’s \(15\,000\) datasets

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eKommune 2009

- strategies for surveying and spatial data
- cross border cooperation
- infrastructure and standardisation
- integration and interoperability
- ICT in local democracy
- participation from citizens
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

Better municipal planning and awareness
by using the properties, addresses and buildings register together with digital property maps

School planning

Fire emergency

— value for Society
A National Area Resource Management Program as part of Norway Digital (AREALIS)

Thematic geographic info
- Shores
- Marine biology
- Geology
- Botany
- Zoology
- Cultural heritage
- Landscape
- Soil types
- Agriculture
- etc.

Better area resource planning

Area plans and preservation measures

Basic geographic info
- Base map data:
  - Orthophoto
  - Digital map data
  - Road data, etc

INPIS:
- Properties
- Addresses
- Buildings
- Dig. property maps
- Deed information

Location based data

NMCA as the driving force

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

— value for Society
AREALIS is to connect maps, tables, documents, pictures etc

Scenario – planning for a new main road

Examples

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!!
Tønsberg kommunens planinformasjon

**Reguleringsplan**

Kaldnes industriområde

Status i saksbehandling:

Offentlig ettersyn

Frist for uttalelser: 10.12.2006

Send uttalelse

Reg. bestemmelser

Plankart (PDF)

Illustrasjoner

Saksframlegg

Andre saksdokumenter

Innkomne uttalelser

Nabo 1

Statens vegvesen

Vestfold fylkeskommune

Tidligere saksdokumenter

Planinitiativ uttalelser ved varsler

Utarbeide planforslag

Uttalelser ved off. ettersyn

Planvedtak

Ev. klagebehandling

Saksforberedelse

Varsel - planstart

1. gangs behandling

2. gangs behandling

Planvedtak

Ev. klagebehandling

Saksforberedelse

07/06/2006 10/12/2006

klageadgang

Verktøy:

Arealplaner

Kommune

Tønsberg

Standard

Tema:

Kulturminner

Gjennomskinnelig plan

Verktøy:

Arealplaner

Kommune

Tønsberg

Standard

Tema:

Kulturminner

0%                             100%

Forslaget vil komme i konflikt med vernede bygninger ved Kaldnesstubben

Vedlegg:

Kopi til:

Ola Nordmann

Olastien 4, 3100 Tønsberg

Ola.nordmann@hotmail.com

E-postadresse:

Postadresse:

Kopi til:

Bla...

Send til kommunen

Planinitiativ uttalelser ved varsler

Utarbeide planforslag

Uttalelser ved off. ettersyn

Planvedtak

Ev. klagebehandling

Saksforberedelse

Saksforberedelse

07/06/2006 10/12/2006

klageadgang

Verktøy:

Arealplaner

Kommune

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0%                             100%

Forslaget vil komme i konflikt med vernede bygninger ved Kaldnesstubben

Vedlegg:

Kopi til:

Ola Nordmann

Olastien 4, 3100 Tønsberg

Ola.nordmann@hotmail.com

E-postadresse:

Postadresse:

Kopi til:

Bla...

Send til kommunen
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

Risk management

Norway is exposed for natural disasters like landslide, stoneslide, snowslide, underwaterslide 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 assessment for localisation of high exposed risk areas

Risk reducing 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
Land slide disposed areas

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

Value for Society
Area exposed for earthquake
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
Zones with different probabilities

- Hoydekurver
- Bygninger
- Terræne
- Veg
- Iby

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
More efficient ambulance services

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

— value for Society

Locating infection source
Legionella-epidemic 2005

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

— value for Society

Movements of the patients
We have to integrate with eGovernment activities

the geospatial sector must try to become as mainstream as information technology itself

Farm with crop classification
Application for the farmer – agricultural funding support

web based application overlaying land inventory with cadastral parcels
Trust and confidence - to make the SDI work in an eGovernment environment ...

we must be able to trust the information updated, accurate, best available
we need to have confidence in the services available, capacity, service level agreements

Conclusions ...

political support is essential
  the Ministry of the Environment
  the Ministry of Government Administration and Reform
based on support and involvement from the user community
  national agencies
  regional authorities
  local authorities
  the geospatial industry
conclusions, ...

The technology must be based on standards, but a framework for implementation is necessary. Technology and standards are available today to build infrastructures and portals. Basic technical interoperability is not a major obstacle.

Thank you for your attention!
Building distributed systems for use in case of emergency, such as natural or man-made disasters

SmartRap
A pilot program developed by the

National Food Security Agency
NMCA
Gecko
NorKart
Main Objective

- To design and build a system where all information is collected in real time by different Web Services and Geospatial Services directly from official databases.

- To design and build a system with the capability to produce notification lists with names and addresses inside a defined buffer zone and send warnings by SMS and voice mail directly to the people, companies or farmers inside this buffer (notification zone)

- To design and build distributed components that communicate with commercial GIS

- To work with services chaining technology and model driven architecture.

Building distributed Systems for Use in case of Emergency

This system consist of three different modules, that communicate with each other and with several Web Services in real time.

- Registration module
- Map client
- Notification module
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
NØDPLAKAT

Brann: 110  Politi: 112  Medisinsk nødhjelp: 113

Ved henvendelse til nødetaten, oppgi følgende posisjon:

Min posisjon er 59 grader 33 minutter og 25 sekunder nord, 10 grader 17 minutter og 22 sekunder øst. Stedet er: Killingdalen i Sande (Vestfold) kommune.
NØDPLAKAT

Når konvolutten inneholder en nødplakat, er den fylt ut av spesiell tjenesteforvaltning.

- Placard

Øvrig informasjon og kartinformasjon finnes i tilknytning til nødplakaten.

NORWEGIAN MAPPING
AND CADASTRAL
AUTHORITY

— value for Society