Standardisering, forskning og innovasjon

Standard Norge
12 August, 2014.
Agenda

• Who we are and what we do

• Background on EU projects and ISO standards

• How can Norway increase competitiveness
World leaders in Industrial Data Management using ISO standards

**Data modeling**
Create your own data models, or use for viewing and documentation (ISO)

**Database management**
The ideal tool for data integration and application development projects

**Rule engine**
Validate your data sets, using your own business, knowledge rules or any other sets of rules

**Web services**
For use in web server applications (thin clients)

Universal Solutions for Interoperability and Sharing of Product Data
General on what we do – TruePLM

True Product Lifecycle Management

• **Scope**
  – General solution for life-cycle data sharing and long-term archiving targeted for adoption by the manufacturing Industry

• **Main requirements**
  – Basic project / system management
  – System lifecycle support
  – Project data sharing / supply chain management
  – Team collaboration
  – Version and configuration control
  – Document and data management
  – Concurrent engineering/ document dependencies
  – Long-term archiving / re-use

• **Enabling technology**
  – International standards for product data
Use cases – Summary

• Product breakdown structure oriented engineering

• Document and data management
  – E-mails as documents
  – Search
  – History tracking
  – Configuration control
  – Dependencies / sticky notes

• Concurrent engineering
  – Project cooperation
  – Supply chain management
  – Notifications
  – Review capability

• Lifecycle support
  – Record data along the life cycle

• Interoperability
  – Communicate with external formats
  – Import/export using ISO 10303

• Archival
  – Retention over long periods of time
  – Retrieval application independent
Space brings savings to offshore oil and gas

18 November 2013 Software for building ESA spacecraft is helping to improve safety and drive down costs for engineers operating deep sea oil and gas installations.

The expense of extracting energy from under the sea and the potential for fire or oil spills should things go wrong mean that companies are always looking for better ways to operate offshore installations.

Now, the EDMTruePLM™ (TruePLM) product lifecycle management tool, developed for ESA spacecraft programmes is improving efficiency for oil and gas industries.

Having spent years working with ESA on their Cassini–Huygens and Envisat satellites, Sverre Samdal from Jotne Industrier, a Norwegian company primarily involved in energy exploration, saw how TruePLM could also work for offshore industry because, “spacecraft and underwater machines present similar technical challenges.”

“Every project, whether it's a satellite or an oil rig, generates piles of documentation from designs, calculations and testing to contracts and emails,” says Sverre.
It started with an idea back in 1991 and resulted in a EU project “PRODEX” which ran from July 1992 through June 1995. Partner with SINTEF and supported by Forskningsrådet.

EU projects has proven to be a good vehicle for joint R&D efforts and to create new business opportunitles.
Other EU Background, 20+ yrs

Esprit: VEGA, WIT, VePrim

EU/FP5: Merci, Globeman, eConstruct, Vivace

EU/FP7: Active EU Project in 3D, FEM, PLM, BIM and BIG DATA:

TERRIFIC : http://www.terrific-project.eu
VELASSCO : http://www.velassco.eu/
CLOUDFLOW : http://eu-cloudflow.eu/
eeEmbedded: http://141.30.165.10/

We will search for H2020 opportunities
Currently 6 opportunities

Jotne has also provided technology to other EU programs, ESA and also US based DARPA and UTRS initiatives.
CloudFlow Open Call - Experiments

CLOUDFLOW, CALL 1 now open for proposals
http://www.eu-cloudflow.eu/open-calls/first-call

- 6 experiments in 1st wave
  - CAD on the Cloud
  - CAM on the Cloud
  - CFD on the Cloud
  - PLM on the Cloud
  - Systems simulation on the Cloud
  - Point clouds vs CAD comparison on the Cloud
Why attending an EU R&D Project?

• To get in contact with users and their request to develop new solutions.

• Contributions from the leading European research institutes.

• To test out new concepts and deploy new technology

• Co-funding of own development
What is important?

- Consider teams that have strong relations to business federations like ASD, e.g. big brand names. (Airbus, Dassault, MTU, BAE Systems etc) and lobbying in Brussels is secured. Find your own industry major organizations.

- Be prepared to travel and spend many hours on a bid.

- Has to be part of your own product development plan.

- Define IPR prior to contract

- Consider to include other Norwegian partners
Norwegian success in IT standards

• In the early ‘60’s Nygaard and Dahl pioneered the principles with object-oriented programming, SIMULA, which today are the most important implementation methods in software development

• Another joint development is exemplified by transaction solutions for postal- and banking systems that the successful BBS-organisation (now NETS) developed

• A later development that in fact all of you are using today, and virtually can not live without, is the GSM-standards for mobile telephone systems, which was partly developed by the Norwegian research Institute SINTEF

• Over the last years this is also shown by acquisitions in Norway by companies like Microsoft, Texas Instruments etc
Horizon 2020 is a game changer

Some initial results. Expect hard competition. SME and Standards is key, **first contract award on 19 August**

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**OVERALL**

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How can Norway increase competitiveness?

- Consider national projects that connects the EU initiatives
  - Ear marked funding from NFD to Standard Norway
  - Special programs from Norwegian Research Council
    - Combine R&D, SME and standards to create innovation
- Support SME Industry Experts by funding travel and hours for standardizations as in the past
- NFD to provide additional funding to implement Prop. 82 S.
How can Norway increase competitiveness?

- Governmental bodies and part owned governmental companies should support SME’s developing new technologies, exemplified by:
  - The Norwegian Petroleum Directorate (NPD) and STATOIL could demand use of new standards
  - Statsbygg and Forsvarsbygg may accelerate projects in the BIM area.
  - Luftartstilsynet may require new standards
  - Riksarkivet could be a strategic partner
  - Miljødirektoratet would probably have strong influence
  - NDLO (FLO) on ISO 10303 PLCS
  - Mandate SME involvement on major governmental projects like in the US (Avinor, Kongsberg etc)

- A stronger connection to the CEN-CENELEC SME initiatives
• Jotne EPM Technology is a SME

• Jotne is based in Norway

• Jotne uses EU R&D projects strategically to develop contacts with possible customers and partnerships with the leading research organizations.

• Jotne is very selective on partners and project proposals

• We have success in the EU/R&D programs

• National public support is required for future success