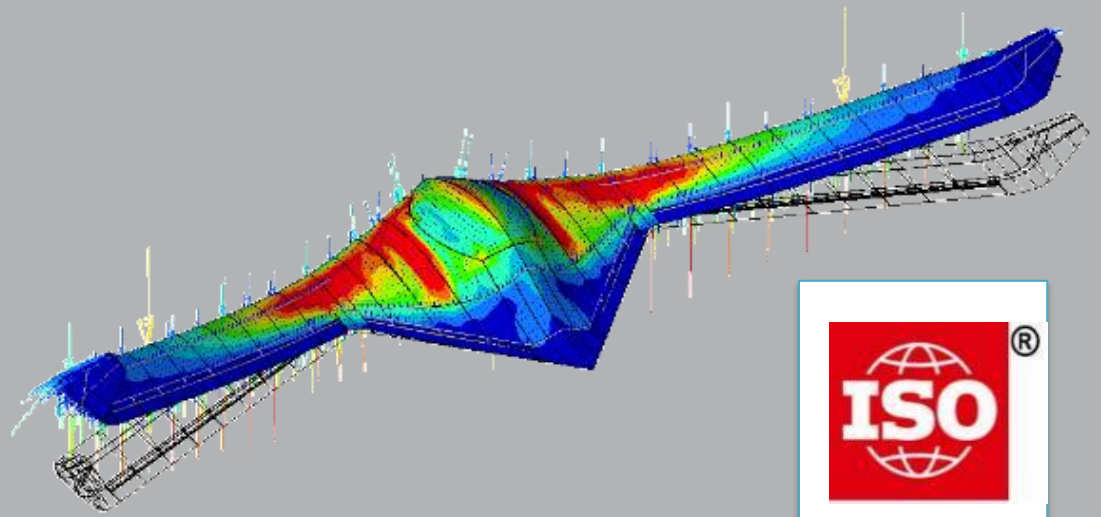
Presentasjon av en norsk bedrift som søker EU-midler og er engasjert i standardisering.



Standard Morgen

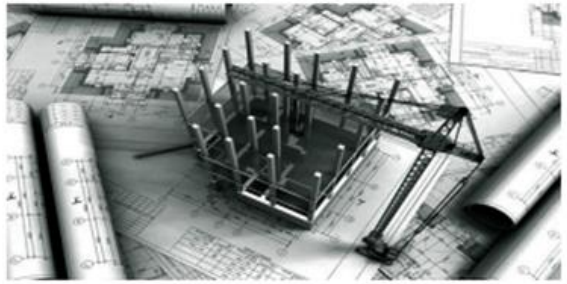
Forskningsrådet og Standard Norge inviterer til frokostmøte 14. juni

Kjell.Bengtsson@jotne.com
http://www.jotneit.no

This is the world of Industrial data
ISO/TC 184/SC 4 – ISO 10303 (video)

Business verticals

Built Environment



Defence

Aeronautics

Space

ABOUT JOTNE IT

The leader in product data exchange and sharing Jotne EPM Technology data products have successfully reduced development and product lifecycle costs through the use of intelligent data management in the areas of Defense, Aeronautics, Oil & Gas, Built Environment and Aerospace.

EXPRESS Data Manager™

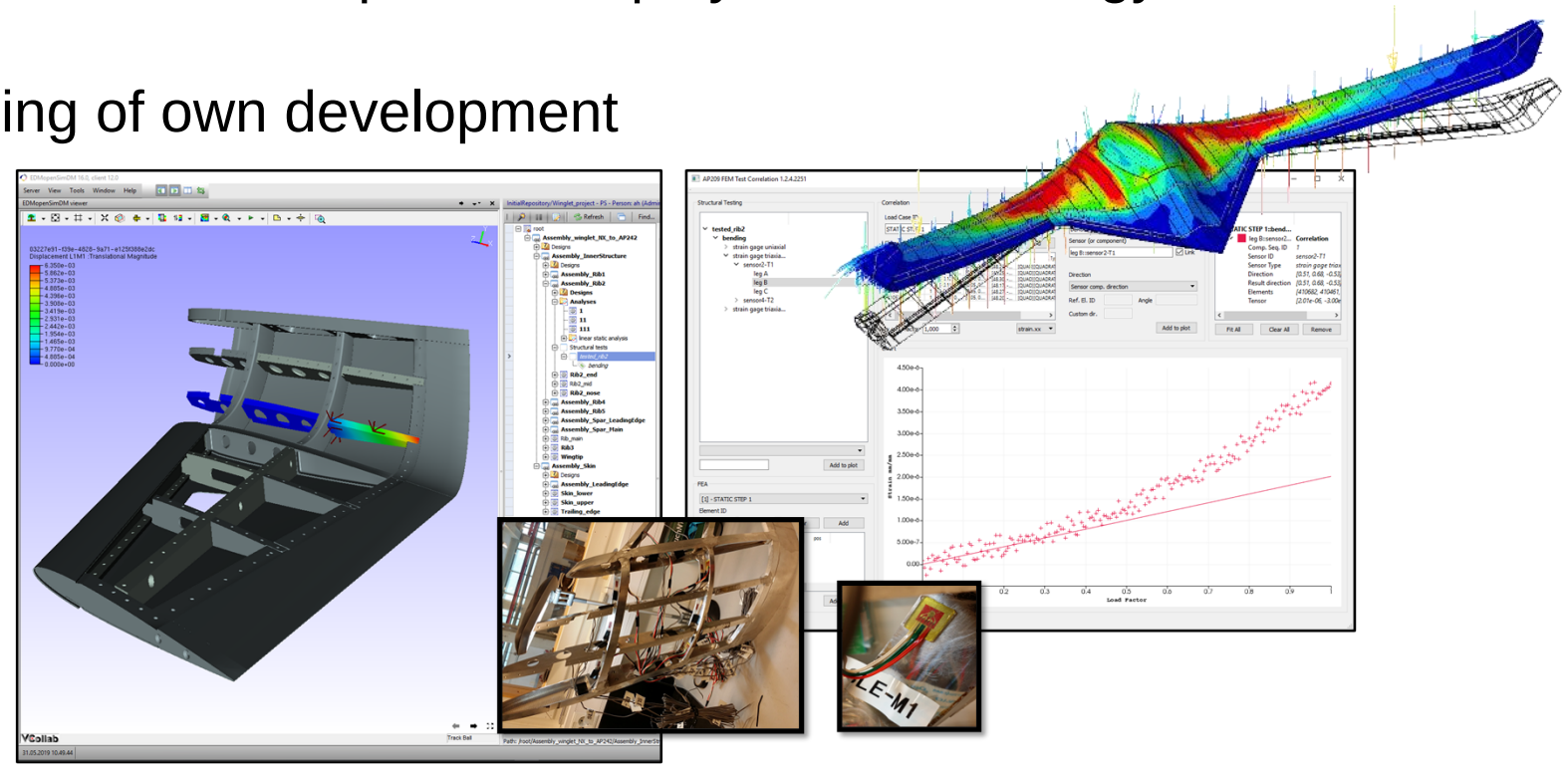
Background

All started with an idea back in 1991 and resulted in an EU project “PRODEX”, based on ISO Standards, which ran from July 1992 through June 1995. Partner with SINTEF and supported by Norwegian Research Council.

EU projects has proven to be a good vehicle for joint R&D efforts and to create new business opportunitles.

Why attending an EU R&D Project ?

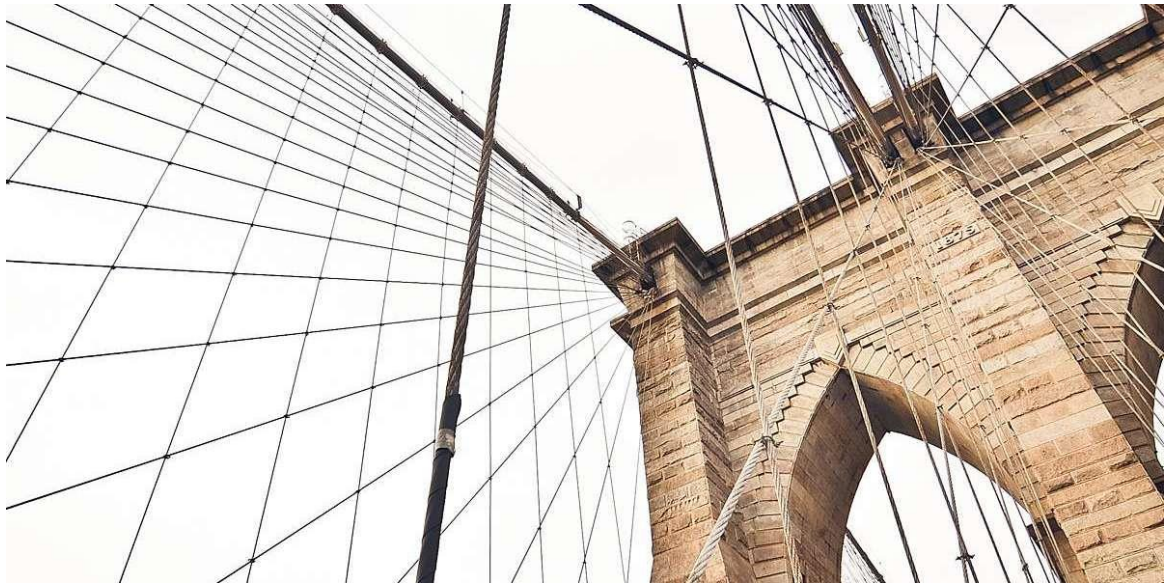
- To get in contact with user and their request to develop new solutions
- Contributions from the leading European research institutes
- To test out new concepts and deploy new technology
- Co-funding of own development



Why considering standards?

- *In one of the EU programs workplan, the word “Standard” is used 293 times, equivalent number for the word “Twin” is 69.*

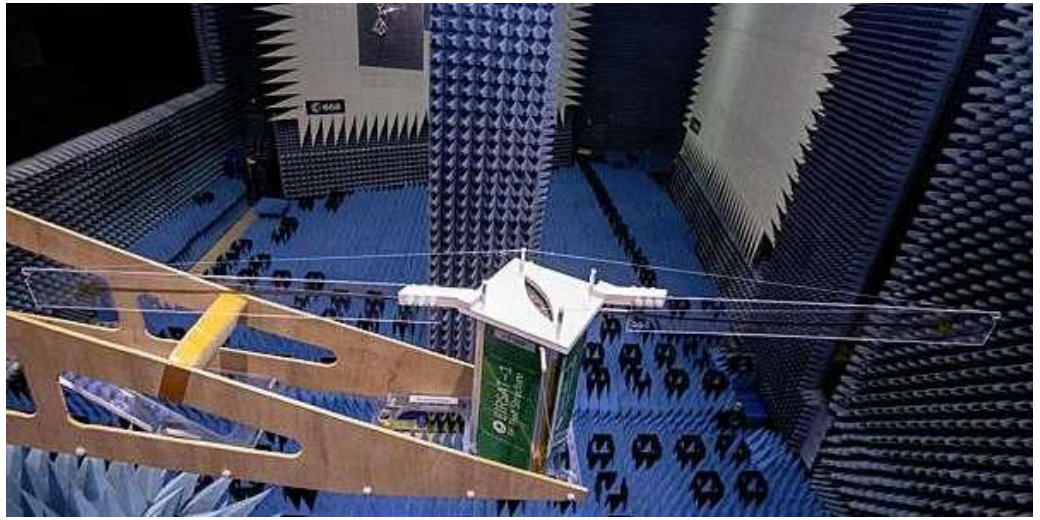
- *Research must build on existing standards or contribute to standardisation. Interoperability for data sharing should be addressed, leveraging on existing ontologies and metadata and though the implementation of the FAIR data principles.*



Why considering standards?

• *Actions should facilitate the market uptake of solutions developed through industrially- and user-driven multidisciplinary consortia covering the relevant value chain and should consider standardisation aspects when relevant.*

• *Interoperability for data sharing should be addressed, for example in relation to product databases and cross-border collaboration.*



Include standards

How to include standardization in projects

Screen existing standards 	Standards are state of the art for industrial and societal practices
Join an existing standardisation community 	You can join the Technical Committee works by participating as an expert through your NSB. You can ask for a **Project Liaison**, your project will be then represented and can fully contribute but without voting rights.
Revise an existing European Standard or develop a new one 	Review ongoing standardization works relevant for your activity and to integrate some of your results in them. Works can be for new standards or for the modification of existing ones.
Fast track to new standardisation 	If you plan to develop new standards a CEN Workshop Agreement (**CWA**) is a fast-track to new standardization

Include standards

CEN-CENELEC Research Helpdesk

- Advise projects on how to address standardization
- Help consortia finding a standardization partner
- Screen calls for proposal and inform of relevant standardization opportunities

Research@cencenelec.eu

What is important ?

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

- Be prepared to travel (and Teams) and spend some hours on a bid
    - Get proposal grants from Norwegian Research Council.

- Must be part of your own product development plan.

- Define IPR prior to contract

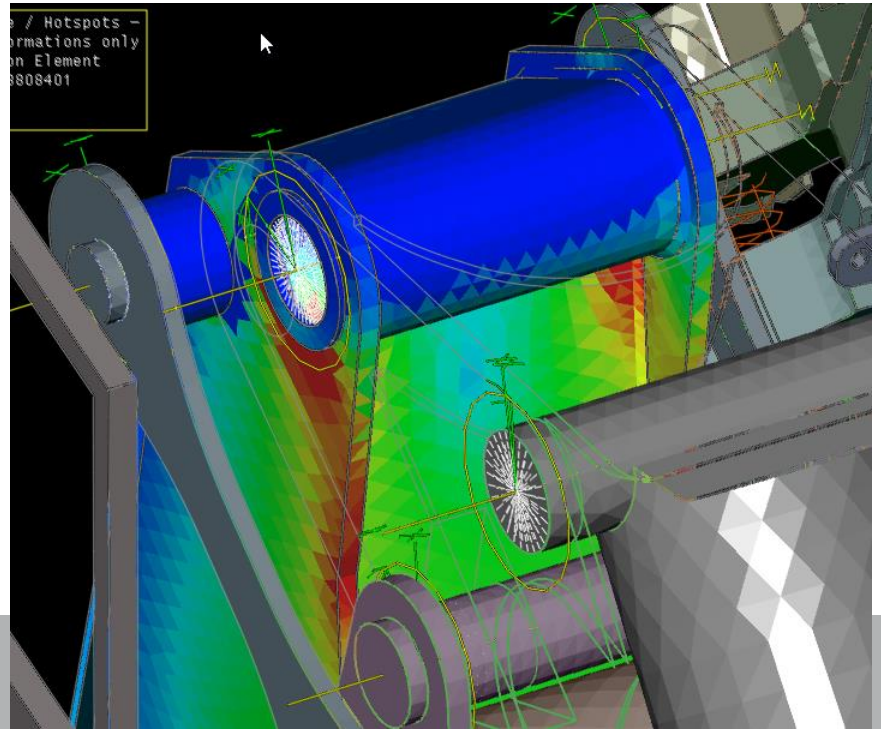
- Consider to include other Norwegian partners

How can Norway increase competiveness?

- Consider national projects that connects the EU initiatives
    - Combine R&D and SME to create innovation

- Governmental bodies and part owned governmental companies should support SME’s developing new technologies

- A stronger connection to the European SME Bodies, SBS and CEN-CENELEC SME initiatives and of course Standard Norway and NRC.



Is it possible to standardize EU proposals?

• Jotne is very careful while considering new proposals and only accept invitations where standards are a vital part of the project objectives

•Jotne has developed a set of standardized templates for all our EU proposals to save time and cost in the proposal writing phase.

• Jotne has a strategic ownership to Work packages and Task related to;
    - Inventory list of hardware, software, standards and use case data
    - Realization of the Open Standard Based Digital Twin
    - Standardization

where these actions are adopted to the industrial domain specifics.

NORWEGIAN SUCCESS RATE 27% IN CLUSTER 4

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Kjell Bengtsson

Vice President - Jotne

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Look to Norway now. The first report from the Horizon Europe Cluster 4 Industry part indicates that Norwegian organizations has a success rate on their submissions in the range of 27%, which is almost the double of average for other applications. Therefore, in the case you are consider new applications in the European programs, HE, EDF, DEP and more, you should aim to include a Norwegian partner, that deliver high-quality results. All credits to the Norwegian Research Council and their support.

Jotne

Why standards matters in EU research programs

ALREADY USED IN VARIOUS H2020 PROJECTS

ARROWHEAD TOOLS · KYKLOS 4.0 · CHANGE2TWIN · Supported by advanced EU H2020 projects · DAIS · DRYADS

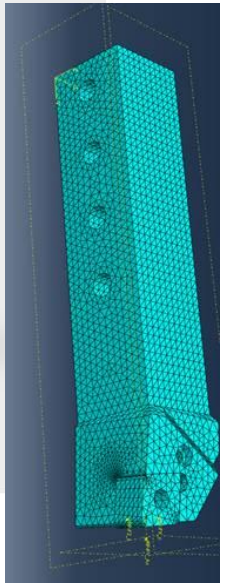
JOTNE AWARDED 3 HORIZON EUROPE PROPOSALS FROM THE 1ST CALL

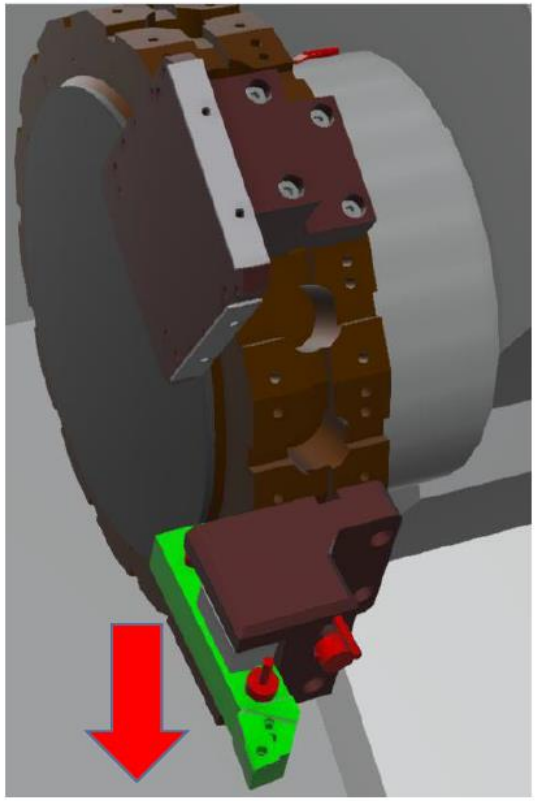
SUBMITTED 7 NEW HORIZON EUROPE PROPOSALS

SUBMITTED 3 NEW EU EDF PROPOSALS

INGESTED IN COMMERCIAL PROJECTS

Digital Twin: Manufacturing process



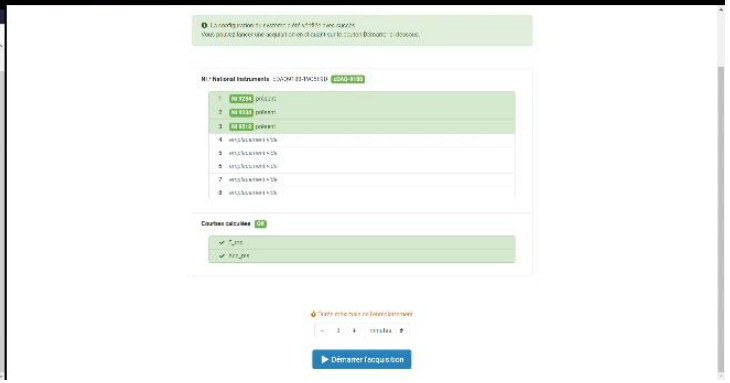


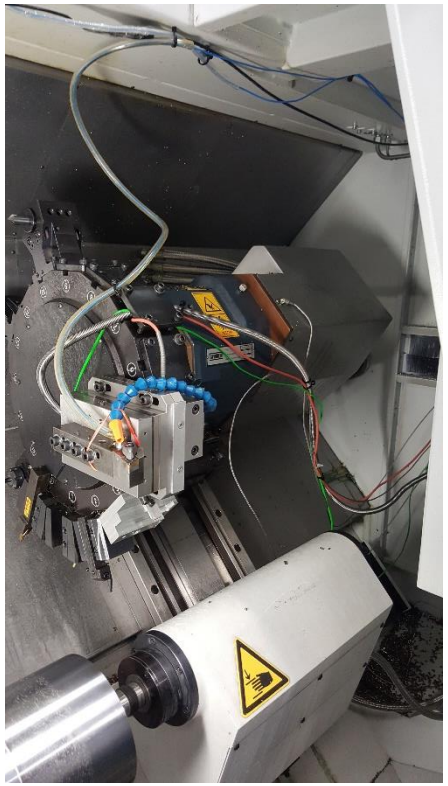
Force / Time

Paper @ NAFEMS World 2021 Congress:
PhD Student Mariane Prado Motta

Real Sensor data in ISO 10303

KYKLOS





The KYKLOS 4.0 project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 872570.
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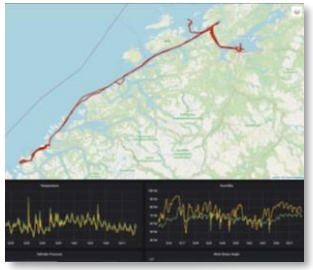


SENSORS

GATEWAY

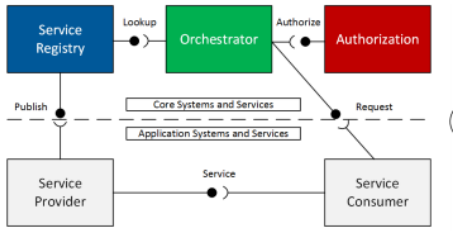
CLOUD

THE SOLUTION
FINAL OUTCOME

AHT IoT FRAMEWORK

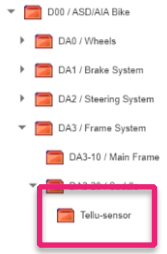
REST SERVICS

PLM STANDARDS



Read: GET

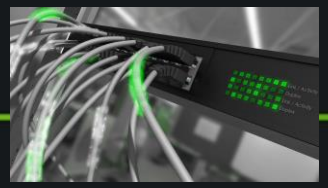
Read: GET
Create: POST
Update: PUT
Delete: DELETE



ISO®

ARROWHEAD
TOOLS

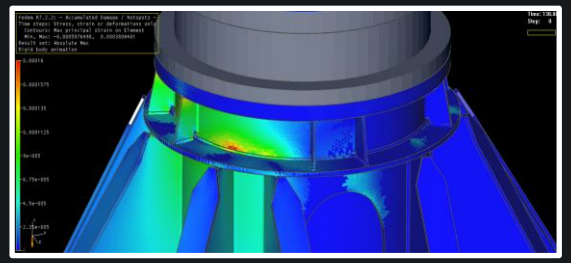
Crane Digital Twin Validation

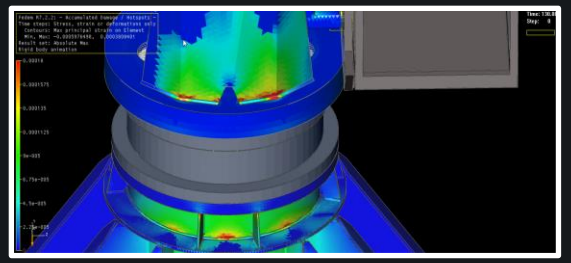


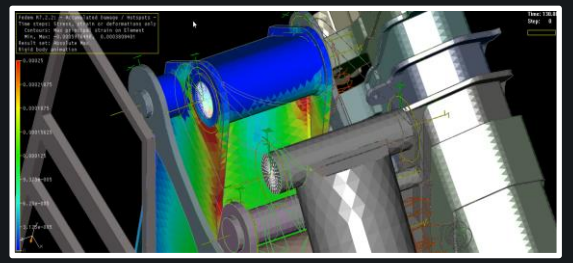
ARROWHEAD TOOLS

Crane deployment takes 130 seconds:

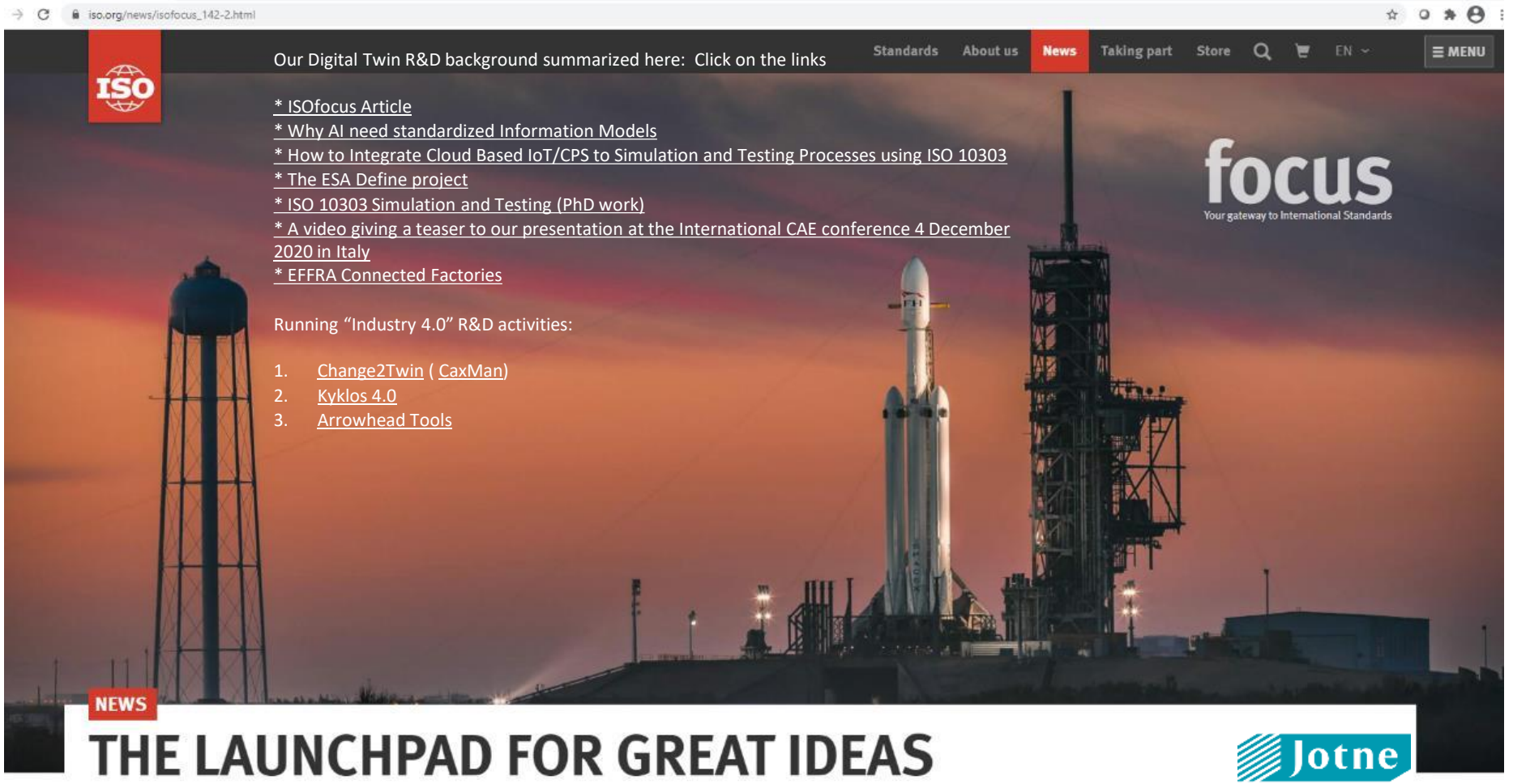
Simulation takes 75 seconds:







© Video from NTNU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Our Digital Twin R&D background summarized here: Click on the links
* ISOfocus Article
* Why AI need standardized Information Models
* How to Integrate Cloud Based IoT/CPS to Simulation and Testing Processes using ISO 10303
* The ESA Define project
* ISO 10303 Simulation and Testing (PhD work)
* A video giving a teaser to our presentation at the International CAE conference 4 December 2020 in Italy
* EFFRA Connected Factories
Running "Industry 4.0" R&D activities:
1. Change2Twin (CaxMan)
2. Kyklos 4.0
3. Arrowhead Tools
focus
Your gateway to International Standards
NEWS
THE LAUNCHPAD FOR GREAT IDEAS
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