

ONTO/TRANS NEWSLETTER

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P&G Innovation Case Video

Our industrial partner **Procter & Gamble** presents OntoTrans and the innovation applications "Post-launch analysis of pouch detergents" and "Detergent Pouch Systems" in this video. Ariel Pods are one of the signature products of Procter & Gamble. Through the OntoTrans project, we want to improve their design, performance and sustainability with modelling applications. On the one hand, smart tools enable us to predict the characteristics of new formulations and to choose the most promising one among them. On the other hand, they enable a prediction of the market dynamics based on historical data.



Click on the picture to watch the full video!

OntoTrans

**Ontology driven
Open Translation Environment**

H2020-NMBP-TO-IND-2019

Coordinator

Nadja Adamovic, TU Wien (AT)
nadja.adamovic@tuwien.ac.at

Technical Manager

Gerhard Goldbeck, GCL (UK)
gerhard@goldbeck-consulting.com

Project acronym

OntoTrans

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Web

<https://ontotrans.eu>



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The Third Innovation Case Video is out!

The challenge in post-launch analysis is the rapid analysis of large datasets to assess in-market initiative success. Special focus is laid on the development of appropriate models in the translation process that capture the in-market dynamics across multiple countries, including alternative product forms, e.g., bottled liquid, powder detergents and competitive products. The sought benefit is to rapidly react to the change of market reality, competitive initiatives, economic drivers and distribution, and to offer the best possible product line-up to consumers.

In detergent pouch systems, the challenge lies in enhancing better integrated and digital design, and the development of laundry detergent pouch systems. Current bottlenecks are:

1. The development of appropriate consumer data/models in the translation process describing the country-specific consumer habits and practices and the fast-evolving individual markets reality
2. The integration of models in a unified ontology framework.

Here, the benefits include a faster product development cycle and adaptation of solutions responding to different consumer segments, while continuously improving product and process sustainability.

OntoTrans in the Media

Our partners from SINTEF have been featured in an article in the Norwegian SciTech News!

In the article Philosophers and technologists join forces to develop a common computer language that can crack some unsolved mysteries, Inga Gudem Ringdalen, Francesca Lønstad Bleken and Jesper Friis provide interesting insights on how linguistic logic originating from classical Greek philosophy can contribute to the search for future eco-friendly materials accelerating the green transition. Currently, room for improvement exists in rendering information interoperable between different systems. One solution has been to teach two systems their respective languages to each other but a new ‘language course’ needs to be set up every time a new system comes into play.

To facilitate this undertaking, a ‘formal language’ and ‘definition system’ is being developed jointly by scientists and modern philosophers. The aim is to enable communication between different systems through a newly created lingua franca understandable for humans and machines. This approach also responds to the increased use of machine learning. The common language can be used to describe, communicate and recycle data.



Illustration by Knut Gangåssæter/SINTEF

Ambitious projects within the EU Research and Innovation Programmes, including OntoTrans, work towards constructing an ontology for the natural sciences. This ‘glossary’ is known as [Elementary Multiperspective Material Ontology](#). Find out more and read the full article [here](#).

OntoTrans Project Results

New Ontology Modules developed within the EMMO Framework

In collaboration with a network of H2020 projects, two new ontology modules have been developed within the EMMO framework. They provide means for data provenance documentation and conformity assessment representation and will be used to improve the innovation case application ontologies. The conformity assessment module is a specialisation of the EMMO semiotic approach, an example is shown in Figure 1. For this reason, it needs to be further expanded according to the actual needs of specific applications, and in particular for the OntoTrans applications.

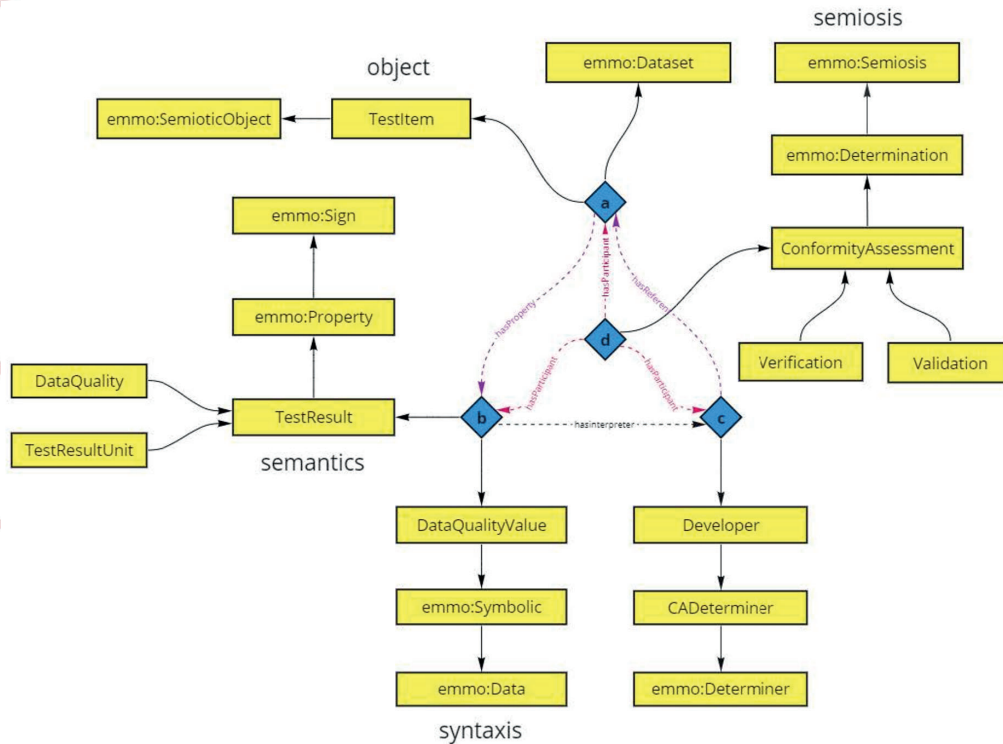


Fig 1 Semantics and syntax for conformity assessment

Furthermore, full interoperability is provided by these modules which are compatible with the results of other H2020 NMBP projects, such as [SimDOME](#) and [OpenModel](#), and also align with the developments made in [DOME 4.0](#) project. As a part of the larger EMMO framework and under the EMMC governance, they will be further developed by the EMMO community. The steps of data documentation and semantic enrichment through EMMO ontology is summarised in Figure 2 below.

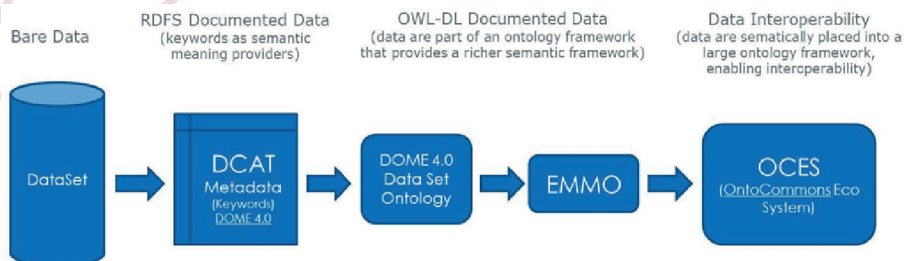


Fig 2 Data Documentation and Semantic Enrichment of a dataset through DCAT RDF Vocabulary, DOME Dataset ontology, EMMO and the OCES were interoperability with other non-EMMO semantic frameworks is enabled

The conformity assessment ontology is publicly available in the EMMO repository, under the 1.0.0-beta4 branch at <https://emmo.info/emmo/1.0.0-beta4/disciplines/conformityassessment>. It can be opened using [Protégé](#) automatically loading the required EMMO dependencies from the EMMO GitHub repository. The EMMO module for Data Provenance developed in collaboration with the DOME 4.0 is available in the project's [GitHub repository](#). The details on the DOME 4.0 dataset ontology are described in the DOME 4.0 D3.1 public deliverable available [here](#).



OntoTrans Event Highlights

OntoTrans M36 Consortium Meeting

The OntoTrans Consortium had the opportunity to meet onsite for the M36 Consortium Meeting from 8-9 March 2023 in Avilés, Spain. The consortium discussed its progress over the last months and future plans. ArcelorMittal organised the meeting and we visited their Gijón Rail Mill and participated in an impressive and educational guided tour through the facility.



Learn more about our industrial partner ArcelorMittal and the ArcelorMittal Innovation case in the [video](#).

OntoTrans @ SUSNANOFAB Closing Event

The OntoTrans project attended the SUSNANOFAB Final Networking Event from 23-24. February 2023 at TU WIEN in Vienna, Austria. The dense programme of the two-day event comprised a keynote panel, brokerage sessions, co-creation and training sessions.

Posters, including the OntoTrans poster, were showcased throughout the event. Our project coordinator and partners from **Helmholtz-Zentrum Hereon** and **Goldbeck Consulting** attended in-person and also connected with other stakeholders and projects.



OntoTrans @ EMMC 2023 International Workshop

The OntoTrans project was present at the [4th EMMC International Workshop](#) from 26-28. April 2023! Several members of our Consortium, including **TU WIEN, Goldbeck Consulting, Fraunhofer, SINTEF, Helmholtz-Zentrum Hereon, CMCL and University of Bologna** attended the in-person workshop which took place at TU WIEN in Vienna, Austria. Emanuele Ghedini (Uni Bologna) presented the EMMO framework and Francesca Lønstad Bleken (SINTEF) presented the technology stack for semantic interoperability. The event provided a valuable opportunity for different stakeholders to come together and discuss cross-cutting issues.

Organised by the **European Materials Modelling Council (EMMC)**, several EU-funded projects discussed their research objectives and results, exchanged insights and sought collaboration with other projects. Our poster was displayed next to our related project OntoCommons. It was a pleasure to attend an onsite event again and to connect with others.



Upcoming OntoTrans Consortium Meeting

M42 Consortium Meeting /Bremen / September 06, 2023

OntoTrans Consortium

