

Welcome to the Forth DOME 4.0 Newsletter!



DOME 4.0

DOME 4.0
Newsletter N°4

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We are pleased to announce the publication of the forth issue of the DOME 4.0 newsletter. If you are interested in industrial data and digital marketplaces, you are at the right place!

DOME 4.0 is a 4-year Research and Innovation Action (RIA) from 2020 to 2024 funded under Horizon 2020 focusing on developing a comprehensive industrial data ecosystem aligned with the Open Science and Open Innovation objectives to enable sharing of business-to-business (B2B) data for the purpose of value generation and creation of new or enhanced products, processes, and services.

DOME 4.0 will be open to all providers and users of data, and aims to facilitate maximum

knowledge extraction with the help of ontology-driven semantic data interoperability and modern data processing technologies adopted from the fields of Machine Learning (ML) and Artificial Intelligence (AI). These features are crucial to scale and advance the proposed ecosystem to any sector of the economy. Given the significant contribution of the materials and manufacturing sectors to the European economy, DOME 4.0 focuses on data-driven knowledge generation within these key sectors.

STAY TUNED

Stay updated on all our latest news, developments, research and general information regarding the DOME 4.0 project.

PROJECT INFORMATION

Digital Open Marketplace Ecosystem (DOME) 4.0
Grant Agreement ID: 953163
Start Date: December 1st, 2020
End Date: November 30th, 2024
Coordinator: COMPUTATIONAL MODELLING CAMBRIDGE LIMITED (CMCL)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 953163.

Visit our website: www.dome40.eu

How WP8 keeps DOMÉ 4.0 on track and on quality

The WP8 (“Technical Coordination, Project and Risk Management”) is the backbone of the DOMÉ 4.0 in the DOMÉ 4.0 project. WP8 oversees all the aspects of project management, coordination and reporting, ensuring that the project runs smoothly and meets its goals. DOMÉ 4.0 is a complex project, and all the interrelated activities make the project management crucial for the success of the project. Overall technical coordination of the project along with the project management, risk

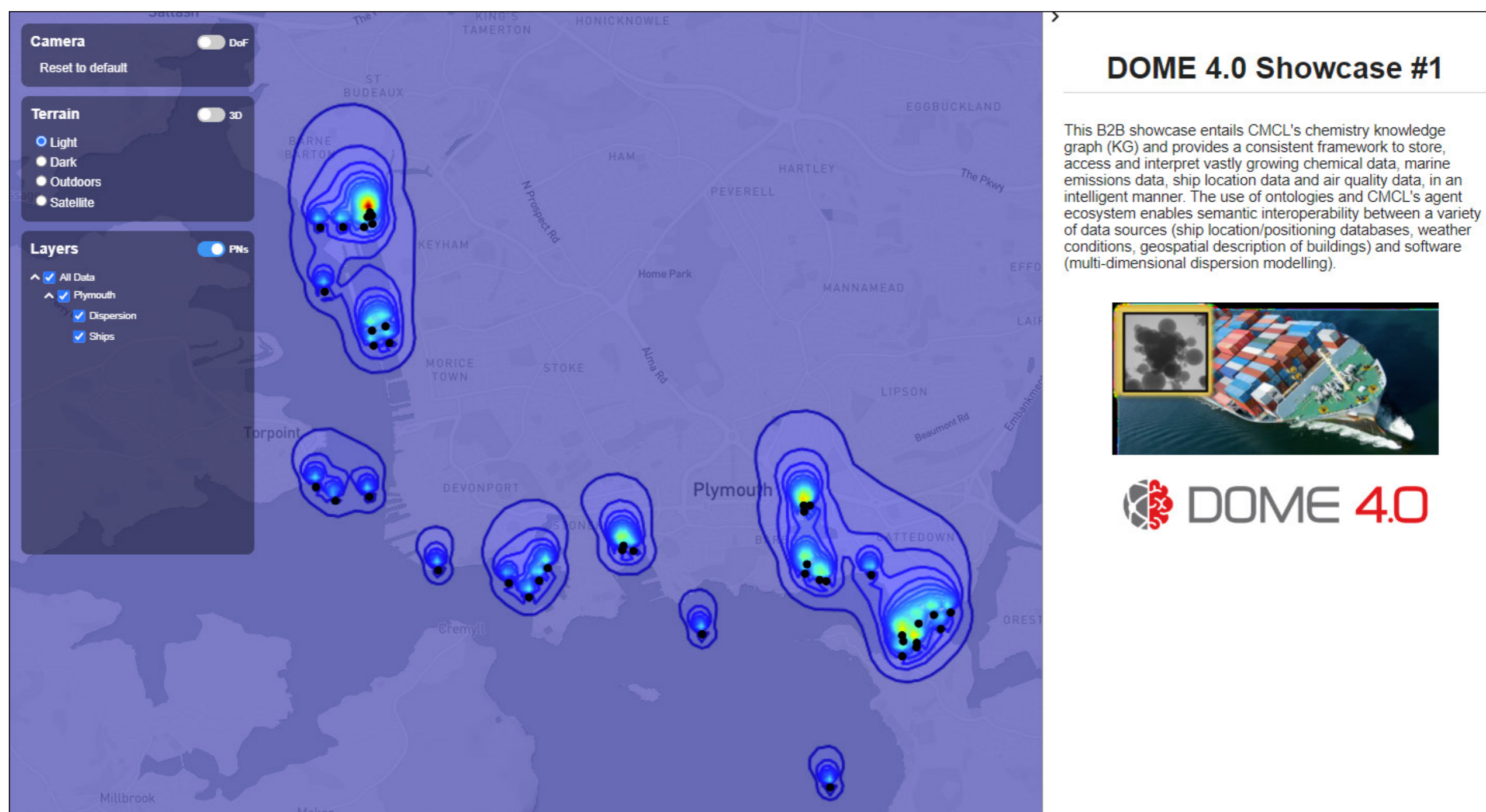
management, and quality assurance constitute different activities required in this matter and are introduced as tasks within the project. Being a data marketplace, there is a special emphasis on data management, for which there is a dedicated activity covered in this WP as well. WP8 ensures that the technical work in the project adheres to the upper-level requirements from European Commission as well as best practices in running and delivering this highly innovative work efficiently and effectively.

SHOWCASE: Chemistry Knowledge Graph - Marine, Air Quality And Nanoparticles

The CMCL showcase focuses on addressing intricate air quality challenges prevalent in port cities, primarily influenced by emissions from shipping activities. Leveraging CMCL's The World Avatar™ (TWA) technology, the showcase emphasizes semantic data integration across diverse sources and software to enable interoperability and decision support across domains.

This showcase aligns with DOME 4.0's core objectives, exemplifying real-world cross-domain

data sharing in the maritime air quality context. Integrated into the DOME 4.0 ecosystem, it unifies databases encompassing weather, ship data, port-area characteristics, and more, alongside sophisticated software estimating emissions dispersion. It illustrates the Marketplace ecosystem's versatility by showcasing CMCL as both a data consumer and provider. DOME 4.0 empowers entities like CMCL to offer digital virtual sensors for air quality, enhancing service provision to clients like local authorities and city councils.



News



DOME 4.0 Project at The NanoMECommons Open Day Workshop

The DOME 4.0 Project Coordinator, Dr. Amit Bhawe from the CMCL, represented the project at the nanoMECommons 1st Open Day Workshop, hosted by the project partner Ansys, in Cambridge, UK, on 3-4 July 2023. as a hybrid meeting.

[Read more](#)

DOME 4.0: 6th GA Meeting in London

From 4th to 6th June 2023, the 6th General Assembly Meeting of DOME 4.0 took place in London. This physical meeting provided an opportunity for the consortium members to meet face-to-face at the premises of University College London (UCL) since the last GA Meeting in Galway, Ireland.

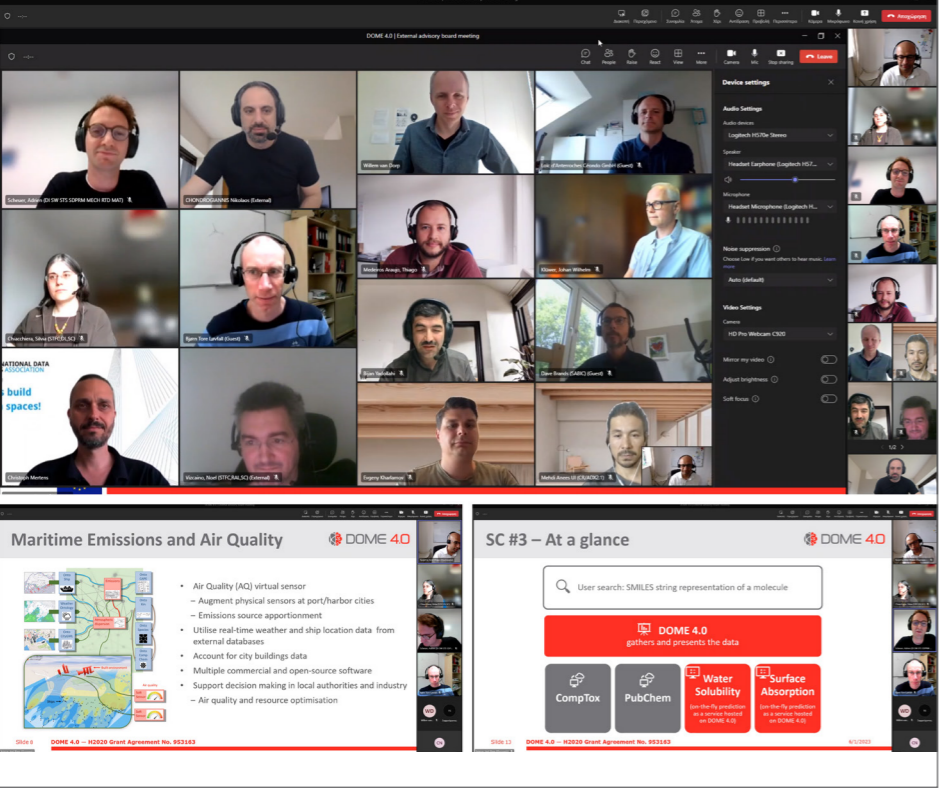
[Read more](#)



DOME 4.0: Meeting With the External Advisory Board (EAB)

DOME 4.0 Consortium had the opportunity to share the latest updates on the project's development in today's meeting with the External Advisory Board (EAB).

[Read more](#)



Events

DOME 4.0: Second Industrial Engagement Open Day and Hackathon

In the heart of Leuven, Belgium, the stage was set to a groundbreaking event organized by the **DOME 4.0** project and brought together visionaries, innovators, and industry leaders at the **SIEMENS**

premises, from October 10th to 12th, 2023. The **Industrial Engagement Open Day and Hackathon** was an exciting platform for showcasing the latest advancements in technology and innovation.



Events



The event kicked off with a warm welcome from Laszlo Farkas (Senior Research Manager, Siemens, host and organizer), Amit Bhave (CEO of the **CMCL** and DOME 4.0 Coordinator), Ian McGann (Director of Innovation at Siemens), and Bojan Boskovic (CEO of the **CNT Ltd.** and organizer). Their enthusiastic opening set the stage for a remarkable experience over the following days.

The event featured numerous presentations and discussions from our exceptional guests, who showcased their technologies, projects, and the

state-of-the-art technology they are using or developing.

During the Industrial Engagement Open Day, a captivating discussion panel was set and moderated by Bojan Boskovic, achieving to identify gaps and challenges that the industry faces as well as encouraged diverse insights, fostering cross-domain exchanges.

This fostered meaningful exchanges of ideas and insights, not only within the framework of

Events



the DOME 4.0 project but also across various domains. These insights fired up the discussions during the second Hackathon which resulted in a core component, that spotlighted open science's significance within the DOME 4.0 marketplace. Moreover, one of the highlights of the event was that UCL's MSc in Advanced Materials Science students attended the event remotely.

A notable milestone was the successful collaboration with Alexei Lapkin, the director of **iDMTcambridge**, marking a significant achievement in onboarding a chemistry domain data provider.

Meeting

03:48:45

Take control

Pop out

Chat

People

Raise

React

View

Notes

More

Camera

Mic

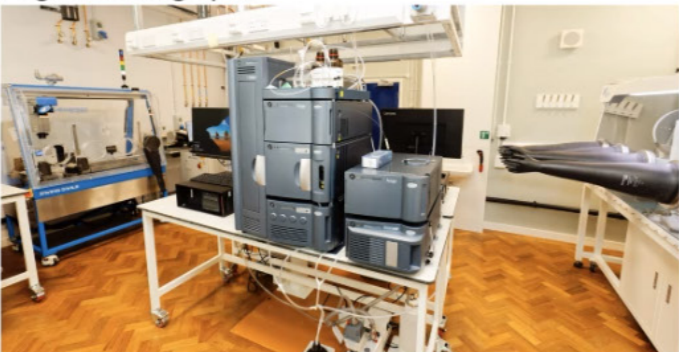
Share

Leave


Introduction to iDMT

Facilities and equipment

High Throughput




Robotics




Equipment

- Solid handling robotic system (Chemspeed)
- Hyperspectral system
- Liquid handler (Mosquito)
- Liquid handler (Opentrons)
- UPLC + complementary components
- Genovac
- Benchtop NMR
- 3D Printer + Computer workstation
- 2x Gloveboxes
- 2x Mass spectrometers

Office





Scheuer, Adrien (DI SW STS SDPRM ...)

Alexei Lapkin

SD

...

Donders, St...

View all

CN

Events



Tereesa Rose’s live demonstration of the DOME 4.0 platform was a standout moment, showcasing the project’s progress and capabilities of how an external data repository is connected to the DOME 4.0 platform, making work together seamlessly.

[Read more](#)

DOME 4.0 On OntoCommons Workshop



As coordinator of the DOME 4.0 project, **CMCL** is invited to present on Data Ecosystem at the workshop, “Towards Materials and Manufacturing Commons - the Enablers Digital Marketplaces, FAIR Principles, and Ontologies”, organized by the Industry Commons project OntoCommons in Berlin (Germany) over 4-6 April 2023.

[Read more](#)

Blog Posts

DOME 4.0 blog: How we are making a difference with our project

We invite you to read the blog posts that our project partners have written about their experiences and insights from working on DOME 4.0. The blog posts cover various topics, relevant to the project and they will give you a glimpse into the DOME 4.0 project.

- [Developing A Data Marketplace: Discovering Data In Distributed Databases](#)
- [Improved Products By Enhanced Data Bases For Material Simulation Using DOME 4.0](#)
- [Digitalizing Knowledge For Industry 5.0: The Role Of Ontologies In DOME 4.0](#)

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