



Final Boost 4.0 Conference

Large Scale Trials for
Manufacturing Data Spaces
and Big Data-Driven Smart
Digital Factories

10th December | ONLINE

In collaboration with:





Digital Transformation in the Factory 4.0

Digital Transformation is at the core of current and future manufacturing transformation and is gaining momentum as an enabler for increased growth, profitability, flexibility, efficiency, quality and time to market.

With the impact of COVID-19 on business continuity and operations, industry is witnessing an acceleration in the adoption of digital technologies. We face both a critical milestone and a unique opportunity that could define the future capabilities and competitiveness of our manufacturing industry. Manufacturing industry should be presented with the opportunity to integrate the digital technologies that will fulfil their most

immediate needs without sacrificing or compromising their future digital growth and sustainability. Moreover, in current turbulent times we need, more than ever, to do so with tight and well dimensioned budgets.

Manufacturing is becoming increasingly connected, so digital transformation strategies are not only set in terms of individual factory performance improvement or optimisation. Digital transformation strategies are also set in terms of the ability to cost-effectively engage in collaboration with other factories, exploiting synergies, complementarities and emerging platforms and company ecosystems.



Boost 4.0 Big Data Achievements

Boost 4.0 is the biggest European initiative in Big Data for Industry 4.0, with a **20M€ budget** that will leverage over **290M€ of private investment**. For the last three years, the **53 partners** of the consortium have set the foundations of a sovereign manufacturing European data space in a realistic, measurable and replicable way; aligning with the International Data Space (IDSA) reference architecture. Through **11 lighthouse factory trials and 2 replication ones**, Boost 4.0 has leveraged 2 open source (OSS) reference implementations of sovereign data connectors, 1 certification model and 1 integration camp facility for open validation and verification of manufacturing data space software components.

Across the 11 trials, Boost 4.0 has demonstrated over **40 digital manufacturing processes**, connecting data from very diverse manufacturing assets (industrial sensors, injection moulding machines metal casting, robotics cells, machines, machine tools, AGVs, stamping presses, 3D scanners, coordinate and measurement machines (CMMs)) with **more than 10 digital manufacturing platforms** (CAx, ERP, CRM, DSS, MES, BI) from leading digital providers under 1 highly standardized data-driven Factory 4.0 model for trusted digital thread continuity.

Boost 4.0 has leveraged **new industry data commons initiatives** and **2 standards** such as the Industry Ontologies Foundry, DIN SPEC 27070 or ISO 23952:2020 for integrated model for manufacturing quality information. Through this open approach, Boost 4.0 has demonstrated how European Industry can build **unique strategies and competitive advantages** with Big Data across the 5 phases of

the product and process lifecycle – Engineering 4.0, Planning & Commissioning 4.0, Production 4.0, Manufacturing & Logistics 4.0 and Customer Service & Maintenance 4.0.

Some of the most competitive European factories from **6 strategic economic sectors** (automotive, manufacturing automation, smart home appliances, high end textile, elevation and home tableware ceramics) have joined forces to demonstrate that **one common big data reference framework** can be shared to build unique data-driven digital factory transformations across the 11 lighthouse factories.

The Boost 4.0 European network of digital factories has achieved very impressive results at scale ; e.g. brownfield shopfloor machine data acquisition automation, high accuracy shopfloor asset tracking, OEE improvements, quality control for massive data sources, stock reduction and demand forecasting, reduced times to market, operation efficiency, full supply chain traceability and visibility. But maybe more importantly, and beyond individual factory achievements, Boost 4.0 big data model has demonstrated its ability for **fast replication and transfer of solutions**.

Over the last 3 years, Boost 4.0 has also contributed to the creation of cooperative big data ecosystems widening the **European network of digital Hubs** and setting up the **Digital Factory Alliance**, an initiative to offer over the next years a community where European Industry, specially SMEs, can find all they need to embrace the big-data transformation of Industry 4.0.

Conference Background

Innovalia, as coordinator of the Boost 4.0 project, is pleased to invite you to its **Final Conference “Large Scale Trials for Manufacturing Data Spaces and Big Data-Driven Smart Digital Factories”** to be celebrated virtually on the **10th December**.

Over the last 3 years, Boost 4.0 has successfully guided the European manufacturing industry in the introduction of Big Data by actively implementing its use and exploitation in different areas of factories (smart engineering, planning & commissioning, digital workplace, operations, connected production, service and maintenance) and across different sectors (automotive, machine tool, white goods, textile, ceramics, elevation/Aero).

In this final conference, some of the **most relevant digital players and factories in the area of Industry 4.0** will present the results of the largest big data trials in the sector. **Key leading experts** on a broad spectrum of areas related to Industry 4.0 will provide their insights, best practices and lessons learned on how big data technologies, AI and digital manufacturing platforms have helped companies such as VW or Whirlpool to revert long periods (25% of the time) and large warehouse overstocks (up to 20%). High-end textile business networks will explain how to track and trace their supply networks for Preferential Certification of Origin (PCO). Machine tool manufacturers such as FILL and +GF+ will share how they have reduced their design time, service costs, quality defects and unplanned downtimes beyond 20% or how companies such as Benteler Automotive or Philips are building industrial data spaces to achieve enhanced operational excellence and augmented workforce decision support.

In addition, Mr. Jordi Llinares Sanjuan (Subdirector General for Industry Digitization and Collaborative Environments - Ministry of Industry), Mr. Kimmo Rossi (Head of Data Research and Innovation Sector, Data Policy and Innovation unit EC) and Mrs. Arantxa Tapia (Minister of Economic Development, Sustainability and Environment of the Basque Government), will also present the **public policies for industry 4.0 data-driven digital transformation**.



10/12/2020

Pillar 1 - Public Policies for Industry 4.0 data-driven Digital Transformation

09:00 - 09:15 CET	Welcome Innovalia Association <i>Silvia de la Maza</i>
09:15 - 09:30 CET	European Data & AI Strategy European Commission, Data Policy and Innovation Unit <i>Kimmo Rossi</i>
09:30 - 09:45 CET	Industrial Data Ecosystem Development: Digital Innovation Hubs in Spain Ministry of Industry, Subdirector General for Industry Digitization and Collaborative Environments <i>Jordi Llinares Sanjuan</i>
09:45 - 10:00 CET	Boost 4.0: Main Achievements Innovalia Association <i>Oscar Lázaro</i>
10:00 - 10:15 CET	Coffee Break

Pillar 2 - Data-driven Industrial Big Data Large Scale Piloting

10:15 - 10:30 CET	Big Data Casting Engineering Nemak Linz GmbH, Institut für Angewandte Systemtechnik Bremen GmbH (ATB), ESI Group <i>Florian Reiterer</i>
10:30 - 10:45 CET	Big Data Machine Tool Cybernetics FILL GmbH, Visual Components Oy, TTECH Computertechnik AG, RISC Software GmbH <i>Harald Sehrschön</i>
10:45 - 11:00 CET	Big Data Sharing Spaces for Predictive Maintenance Benteler Automotive GmbH, Atlantis Engineering, Fraunhofer Gesellschaft zur Förderung der Angewandten Forschung E.V., It's OWL <i>Daniel Köchling, Thanasis Naskos, Sebastian von Enzberg</i>
11:00 - 11:15 CET	Big Data for Spare Part Predictive Warehouse Management Whirlpool EMEA SpA, SAS Institute, Politecnico di Milano, Institut Mines-Télécom <i>Emanuele Sampaolo</i>
11:15 - 11:30 CET	Massive Quality Control for Zero Defect Manufacturing Innovalia Metrology, Eneo Tecnología S.L., FIWARE Foundation EV <i>Toni Ventura</i>
11:30 - 11:45 CET	Big Data-Driven Intralogistics Process Commissioning Volkswagen Autoeuropa, UNINOVA, Visual Components Oy <i>Diogo Graça</i>

11:45 - 12:00

Coffee Break

Pillar 3 - Replication, Scale-up & Ecosystem development

12:00 - 12:15 CET

Shopfloor Performance Optimization & Replication

Philips Consumer Lifestyle B.V., Philips Electronics Nederland, Ria Stone, Interuniversitair Micro-elektronicacentrum, Unparallel Innovation, LDA.

Bas Tijjsma, Paulo Soeiro

12:15 - 12:30 CET

From Sheep to Shop: A blockchain approach to point of origin certification in textile supply chain management

Fratelli Piacenza S.p.A, IBM Israel Science and Technology, Domina S.r.l

Alessandro Canepa, Fabiana Fournier

12:30 - 12:45 CET

Big Data-Driven Zero Defect Factory 4.0

Agie Charmilles New Technologies SA (+GF+), Ecole Polytechnique Federale de Lausanne (EPFL), ESI Group, CAPVIDIA N.V.

Roberto Pérez

12:45 - 13:00 CET

IDSA Launching Coallition & Network of IDSA Hubs

Industrial Data Space E.V.

Lars Nagel

13:00 - 13:15 CET

European Certification Facilities & Intergration Camp for Trusted Data Sharing Space Development

Software Quality Systems S.A.

Begoña Laibarra

13:15 - 13:30 CET

Sustaining industrial data ecosystems and digital chains development beyond Boost 4.0: The Digital Factory Alliance (DFA)

Innovalia Association, AtoS Research and Innovation, Engineering Ingegneria Informatica S.p.A

Carmen Polcaro

13:30 - 13:45 CET

Basque Industry 4.0 Strategy

Basque Government, Economic Development, Sustainability and Environment Department

Arantxa Tapia

13:45 - 14:00 CET

Closing

Innovalia Association | *Silvia de la Maza*



What you will learn from the conference

Attendees will learn how digital technologies in general but big data in particular can be adopted and integrated by industry.

Moreover, factories will learn how platforms and ecosystems will be shaped by digital industries to determine future individual business opportunities, collaboration patterns across industry and the resilience of manufacturing value chains.

Manufacturing industry will learn how next digital data-driven factory innovation will be unfolding.

Register here





Silvia de la Maza
Innovalia Association



Kimmo Rossi
European Commission



Jordi Llinares
Spanish Ministry of Industry



Arantxa Tapia
Basque Government



Oscar Lázaro
Innovalia Association



Florian Reiterer
Nemak Linz



Harald Sehrschrön
Fill



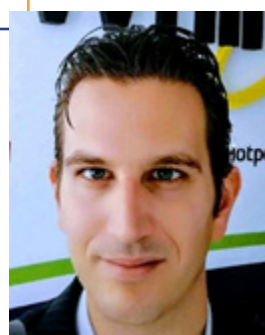
Daniel Koechling
Benteler Automotive



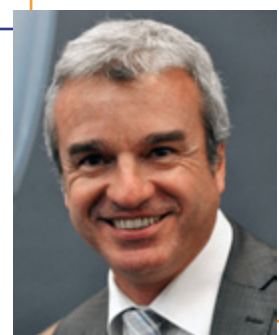
Thanasis Naskos
Atlantis



Sebastian von Enzberg
Fraunhofer



Emanuele Sampaolo
Whirlpool



Toni Ventura
Innovalia Metrology



Diogo Graça

Volkswagen Autoeuropa



Bas Tijmsma

Philips Consumer Lifestyle



Paulo Soeiro

Ria Stone



Alessandro Canepa

Piacenza



Fabiana Fournier

IBM



Roberto Pérez

+GF+



Lars Nagel

Industrial Data Space



Begoña Laibarra

SQS



Carmen Polcaro

Innovalia Association

Boost⁴⁰

BIG DATA FOR FACTORIES

Consortium

Led by:



Coordinated by:



Consortium members:



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