

CHANGE2TWIN:
Digital Twin for every manufacturing SME!

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Digital Twin for every manufacturing SME!

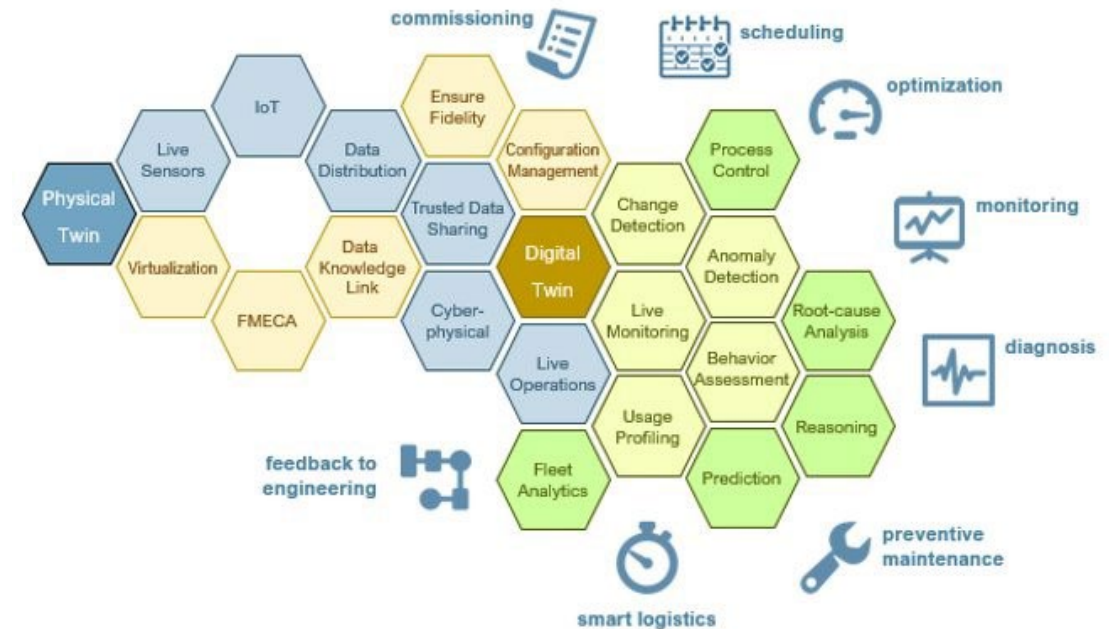
Change2Twin is a European project which supports manufacturing SMEs in their digitalization process by providing Digital Twin solutions. The concept of Digital Twin is one of the big game-changers in manufacturing and allows companies to significantly increase their global competitiveness.



What is a Digital Twin?

A digital twin is a digital replica of an **artefact** (product, machine..), **process** or **service**, which is so accurate that it can be used as **basis for taking decisions**.

The digital replica and the physical world are often **connected by streams of data**.




Contractual numbers

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- Duration: June 1, 2020 – November 30, 2024 (54 months)
- Funding: ~ 8 M€
 - ~ 2.38 M€ will be used for open call experiments (Cascading funding)
- Partners:
 - 11 core partners
 - 8 partners for pilot experiments two first year, some with continued role
 - ~ 61 Linked Third Parties through Open Call Experiments (FSTP)



Partners

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Core partners

- SINTEF, Norway
- TTTech, Austria
- FundingBox, Poland, Spain
- TNO, The Netherlands
- University of Bologna, Italy
- CloudBroker, Switzerland
- Association Images and Reseaux, France
- Poznan Supercomputing and Networking Center, Poland
- clesgo, Germany*

Pilot partners

- SPS, Germany
- Cordis, The Netherlands
- UNIT040**, The Netherlands
- Author**, The Netherlands
- Additive Industries, The Netherlands*
- CT-Ingenieros**, Spain
- AETNA, Italy
- Graphenstone, Spain

CHANGE2TWIN funding scheme

- The goal has been to ensure that manufacturing SMEs have easy access to technologies needed to deploy a digital twin
- Has offered an end-to-end funding scheme targeting manufacturing SMEs, technology providers, DIHs*
- Main target group manufacturing SMEs, technology providers, DIHs
- Digital twin maturity assessment vouchers (10 K€) (Original target 49x)
 - 1st Call closed 30/08-21 (19x finished)
 - 2nd Call closed 30/09-22 (15x finished)
- Digital twin deployment vouchers (≤ 90 K€) (Original target 21x)
 - 1st call closed 30/09-21, (11x finished)
 - 2nd call closed 30/04-23 (15x started September 2023).
- Funding directly to end-users

Success story videos*

Pilot experiment

- [Space structures](#)
- [AETNA/Robopac](#)
- [Additive industries](#)

Deployment experiments

- [PressiousArvantidis](#)
- [Salvagnini Maschinenbau](#)
- [Neutroplast](#)
- [DNAPhone](#)
- [Croom Precision](#)
- [MAROVIT](#)
- [Legumbres Tierrina Vaqueira](#)
- [Juntas Industriales](#)

Innovation made by CHANGE2TWIN

- easy access to digital twin – funding, guidance, testing, deployment, -
- 4x open calls - Assessment and Deployment Vouchers for manufacturing SMEs, - **Calls completed, last round of Deployment Experiments started**
- Change2Twin **MARKETPLACE** – one stop shop for digital twinning
 - Transition from project to permanent marketplace started
- 4x **pilot experiments** with diverse manufacturers upfront - **Completed**
- Change2Twin **COMMUNITY** – virtual space for digital twinning enthusiasts



Benefits provided to manufacturing SMEs :

1. Assessment and twinning recipe performed by a Digital Innovation Hub
2. Deployment of digital twin with technology provider funded
3. Experiments and optimisation of the digital twin funded
4. No prior knowledge was required
5. **Sustainable digital twinning marketplace**



CHANGE2TWIN 4 technology providers:

1. Publish your technology in Change2Twin sustainable marketplace
2. Digital Innovation Hubs have/will create twinning recipe for SMEs using your technology
3. Work with SMEs and turn their twinning recipe into reality
4. Create and test the digital twin
5. Acquire new customers and discover new markets



CHANGE2TWIN 4 Digital Innovation Hubs:

1. Change2Twin training and certification for digital twinning. (54 DIHs certified)
 - Plan to approach selected EDIHs
2. Assessment of SME potential to deploy a digital twin
3. Creation of ready-to-use twinning recipes for local SMEs
4. Free use of Change2Twin marketplace containing twinning technologies
5. Broker between SME and technology provider

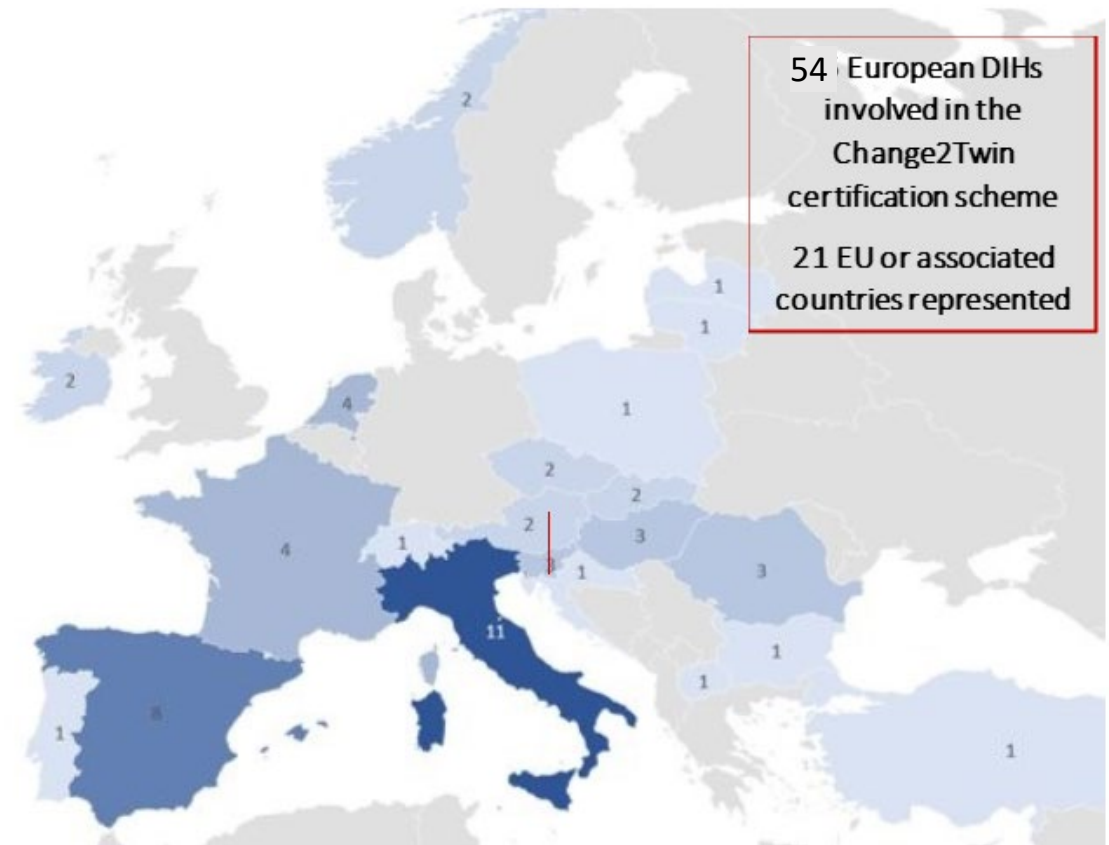


CHANGE2TWIN Certification Programme:

DIHs training topics:

1. A common understanding of Digital Twins in Manufacturing
2. Digital Twin pilot case demonstration
3. Guidelines for Assessment process
4. Barriers to Digital Twin adoption
5. Digital Twin enabling technologies
6. Interoperability – main driver for standards
7. Change2Twin.eu Marketplace

Change2Twin DIHs network



CHANGE2TWIN IN Pilot cases

- Proof of concept
- 4 diverse manufacturers
- Finalised Spring 2022
- Documentation available online



Change2Twin Marketplace

Project marketplace

- Available from June 2021 (M12)
- ≥ 71 offers as of Sept. 2023
- The second round of Deployment Experiments awarded extra point for using marketplace offers

Permanent marketplace

- The permanent marketplace to be built on clesgo's Agora
 - Same marketplace infrastructure as I4MS-projects Pulsate and DigitBrain
 - Potential consolidation of marketplaces and communities/networks



Difficulties encountered?

- Due to Covid-19 in-person dissemination were replaced by digital dissemination and outreach. Consequences:
 - # of DIHs certified much higher than targeted
 - Wider and more democratic outreach
- # of applications and eligible experiments for second round of Assessment Experiments lower than expect
 - Possible due to the focus of DIHs to become EDIHs
 - This allowed us to increase the funding for the second round of Deployment Experiments, from 21 to 27.
- Covid-19 delayed experiment start and execution
 - Change2Twin Extended by 6 months to allow all experiments to start



Any questions? Comments?

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Thank you for your attention!



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