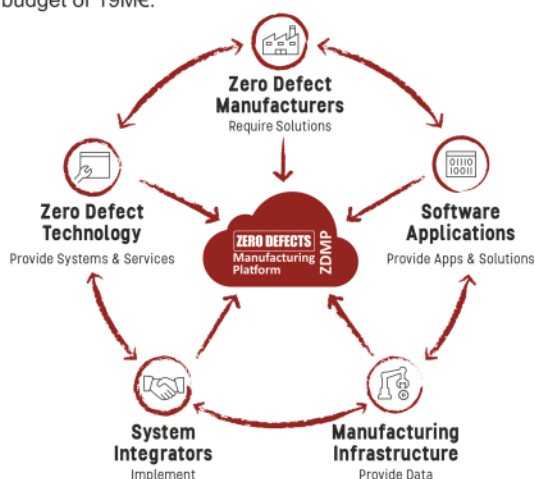




ZDMP

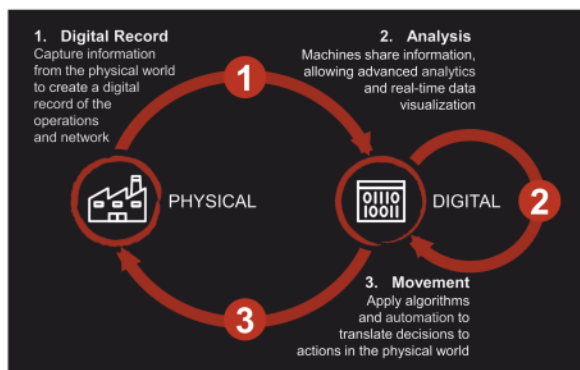
ZDMP – Zero Defects Manufacturing Platform – is a multi-partner project that aims at providing an open platform to support factories to reach a zero defects goal. In this context, ZDMP will allow end-users to interconnect their systems (eg shop floor and ERP Systems) through ZDMP Applications (zApps), to improve product and process quality assurance. ZDMP is funded by its 30 partners as well as the European Commission and runs from January 2019 until December 2022. It engages Users, Technology Providers, Consultants and Research Institutes from 11 countries with a total budget of 19M€.



ZDMP Objectives

The main goal of ZDMP is to develop a Smart, SME Friendly, Open, Zero-Defect Manufacturing Reference Platform, Apps, SDK, and Marketplace for Product and Process Quality in any factory. All these components intend to target the following technical objectives:

- To provide an Industry 4.0 Platform along with reference architecture and specification suite
- To deliver core Industrial IoT regarding data acquisition, interoperability, and analytics; supported by orchestration, monitoring, and autonomous computing
- To provide developers a runtime platform including environment, marketplace, and service framework
- To ensure outstanding process quality, through equipment, resource, and energy efficiency, by deploying novel AI based solutions
- To ensure the quality of a product along the value chain of the manufacturing process by deploying advanced modelling, detection, inspection, and predictive techniques



ZDMP Ecosystem - Open Call Funding

The initial ecosystem includes stakeholders from the automotive, electronics, machine tools, and construction sectors. This ecosystem will be extended through a 3.2M€ outreach investment programme. Both users and technology companies can join the initiative through two open calls to engage those working in the area of zero defects manufacturing.

The open calls will allow SMEs and start-ups to produce, or adapt, technical solutions and conduct pilots using the ZDMP platform, services, and applications. This will enable them and ZDMP to gain insight into the platform's performance, acceptance, and viability, whilst seeding initial commercial relationships for the ZDMP business model. The benefits for the various users' groups are:

- Manufacturing users can ask for new applications and algorithms or find existing ones from the marketplace to solve their own zero-defect manufacturing problems
- Software developers can both respond to specific manufacturing user demands and self-innovate to design, build, and publish new applications and algorithms
- Service providers will interact offering infrastructure for communications, storage, and processing
- Consulting companies can interact as prescriber of the ZDMP solutions giving support to their customers
- Zero-defect technology companies can provide the marketplace with drivers and APIs to access their technical equipment

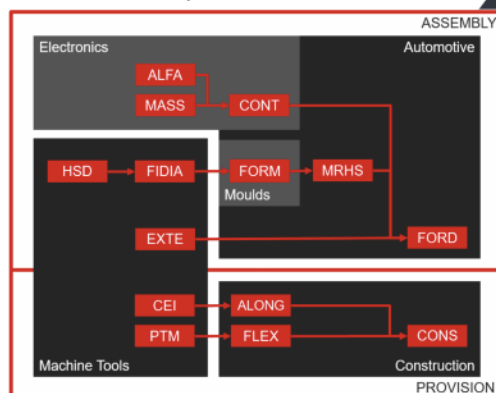
Call Total Budget	3,200K€
Number of Calls	>=2
Call Promotion	July 2020 to August 2021
Call Open/Close	Jan-Mar 2021, June-Aug 2021
Expected Funding	50K€ - 150K€
Duration of Sub-projects	6-12 (maximum) months
Sub Projects Running	June 2021 to Oct 2022

If you are interested in applying for Open Call funding, please register at www.zdmp.eu/register to receive communications about the Calls. **Are you a user company who has a zero-defect problem to solve, and who could set a challenge for others to solve using European funding – contact us now on info@zdmp.eu.**

Technologies

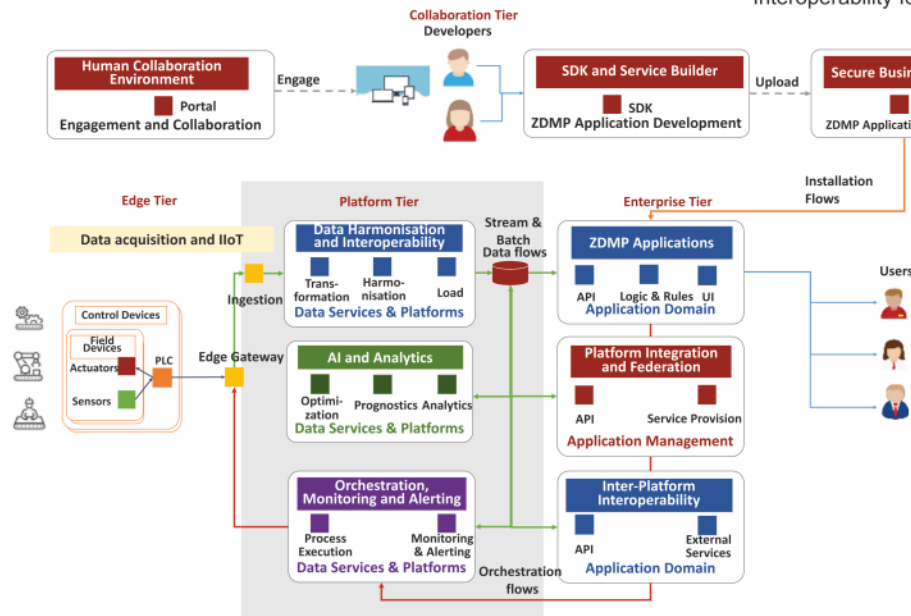
The results of ZDMP will allow developers to build ZDMP applications, zApps, by using the ZDMP SDK (Software Development Kit) and take advantage of other technology within the project. ZDMP aims at supporting both process and product quality assurance. In addition, ZDMP will focus on the integration activities and develop suitable kick-start applications identified from multiple industrial scenarios from 4 industrial domains:

Construction; Automotive; Electronic; and Machine Tools. The figure in the right identifies the workflow of 2 supply chains where different use cases involving 14 companies will be evaluated.



Platform

The ZDMP Platform architecture is based around a Service Oriented Architecture (SOA) and microservices approach. ZDMP components are accessed as services through RESTful APIs or through a Service and Message Bus.



The ZDMP architecture has four tiers, each composed of several components: Collaboration Tier (design-time); Enterprise Tier (use-time); Platform Tier (run-time); and an Edge Tier (distributed run-time). All tiers except the Collaboration Tier, are based on the RAMI4.0 (Reference Architectural Model Industrie 4.0) architectural model:

- Enterprise Tier is the platform itself including the Marketplace where manufacturing users can access and purchase zero defects manufacturing services. It also contributes to platform interoperability, implementing internal logic and end-user interfaces.
- Collaboration Tier provides the necessary abstraction layer supporting the ZDMP SDK for zero defect applications development, Marketplace for distribution, and the portal for stakeholder collaboration. Target users of this tier are the Application Developers and Manufacturing Companies.
- Platform Tier implements the core functionality of the platform for the run-time activity. Core functionalities include: Data analytics, data transformation, monitoring, alerting and high-level orchestration. The Platform Tier is of interest for both users and service providers offering required infrastructure.
- Edge Tier is responsible for data gathering from heterogeneous sources, including edge devices and system components. Manufacturing partners are important users of this tier that provides the mechanisms to connect their edge devices, as well as shop floor / ERP systems, to the platform.

4DMP Cluster

ZDMP is a leading project of the 4DMP cluster, which is a H2020 project cluster established with the objective of fostering the collaboration between the "Digital Manufacturing Platforms for Connected Smart Factories". Enhanced collaboration will further enrich the expected impact by each project on specific collaborative areas – eg standards, platform KPIs. 4DMP initiated with the following projects and expects to expand with others very soon.

ZERO DEFECTS
Manufacturing Platform



QUALITY

Events

As a part of validation and collaboration activities several events will be organised which may interest you:

Workshops at I-ESA 2020 – The 10th International Conference on Interoperability for Enterprise Systems and Applications, March 2020 in Tarbes (France):

- Zero Defects Manufacturing Platform - this workshop will have 7 papers related to each of the main technical areas of the project. The objective is to discuss and validate with the participants the main characteristics of the various components of the ZDMP architecture.

- Digital Platform Ecosystems: From Interoperability to Federation (IFED 2020), this workshop will be the first collaborative workshop related to 4DMP cluster establishment.

Later this year, ZDMP will have a **stand** at the Hannover Messe 2020 to present some the results achieved so far – so if you are visiting take time to stop by.

Finally, ZDMP will establish an international **advisory board** to get valuable feedback for the project on the current developed features and which will be held in April at PROFACOR (Austria).

For further information please check out our website.

Partners



Thank you very much for
your interest in ZDMP
Project
(H2020-825631)

www.zdmp.eu
info@zdmp.eu



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