

18/03/2015 – 4ZDM: Cluster on Zero-Defects Manufacturing

Introduction and Framework

Creating clusters of FoF project activities, according to their objectives and addressed themes, is an effective way to enhance the impact of FoF projects. The five participating clusters in FOCUS will share experiences and best-practices to stimulate the take-up of project results and investigate how to best exploit synergies. Not only within these participating clusters now but foremost to define an approach that can also work for future clusters.



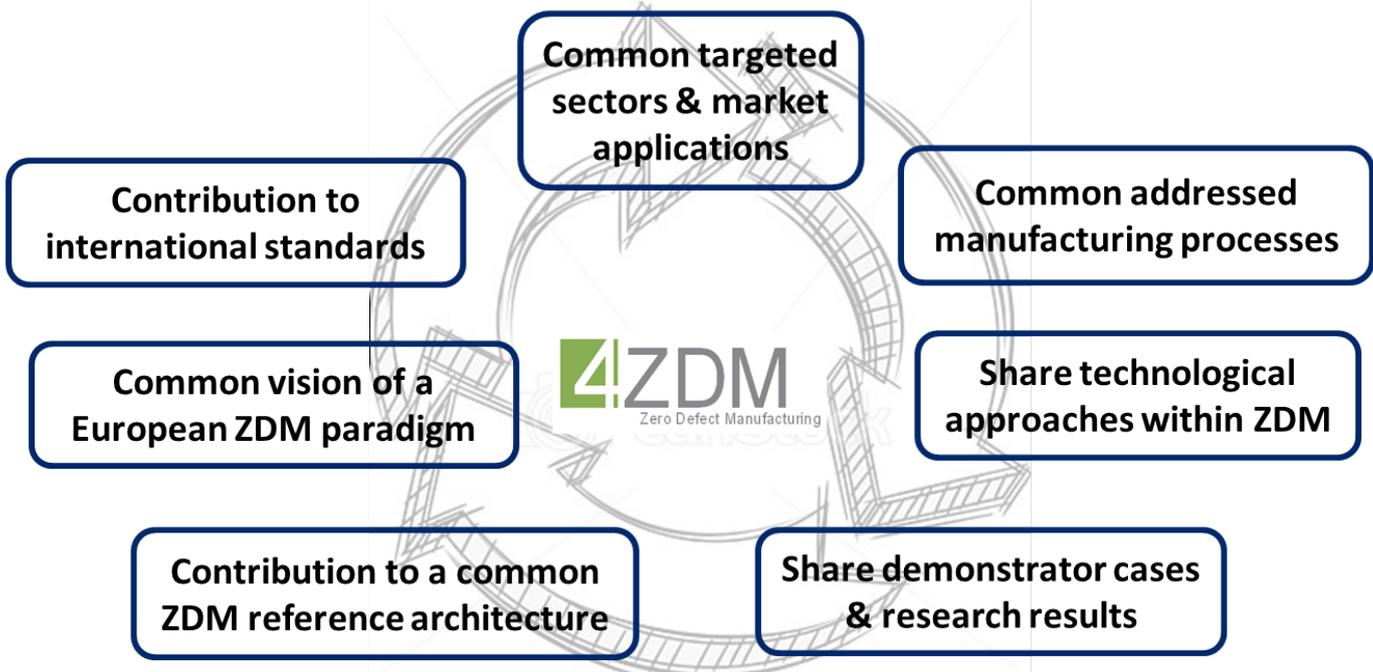
The clusters within FOCUS are: Zero Defect Manufacturing (4ZDM), Clean Factories, Robotics, High Precision Manufacturing (High Micro) and Maintenance and Support; a diverse 'community' but representative of the European manufacturing industry, enabling us to meet our objectives. #Currently, the European Commission is recommending clustering activities within running projects. But, why this and why now? Basically, clustering identifies and takes advantage of commonalities and tries to avoid any overlap. Some benefits and advantages associated with clustering are listed below:

- Speeding up industrial exploitation and take-up of results of FoF PPP projects
- Stimulation of networks and alliances for further RTD and industrial innovation in the addressed technology and application areas
- Added value beyond the original scope of the FoF PPP projects by exploiting synergies and sharing best practices
- Increased industrial presence and awareness of FoF PPP activities
- More effective execution of activities of common interest, such as IPR management and standardisation
- Anticipation of business trends and market prospects
- Joint exploitation, thus paving the way towards a higher industrial impact
- Networking activities that may identify common business & commercial opportunities in the near future, as well as the potential creation of spin-offs and start-ups based on the research results.

Within this context, 4ZDM has been the first in starting the clustering engine, with four EC-funded FP7 projects forming the Zero-Defect Manufacturing concept (www.4zdm.eu). Below, there is further detail about its activities and future plans. Indeed, 4ZDM believes that this is much more than four individual projects together; the cluster aims to share technological approaches and results for common applications and processes, and is planning to contribute to a common ZDM system architecture, to a European ZDM paradigm and even to international standards on ZDM (see chart below).



... it's much more than 4 individual on-going projects!!



TOWARDS A COMPETITIVENESS INCREASE OF EU MANUFACTURING INDUSTRY AND JOB CREATION!!

Objective

4ZDM cluster gathers several related projects, identifies common interests and synergies, and creates collaborative spaces under the zero-defect manufacturing concept. Through the dissemination of research results developed within industrial cases, it identifies commercial & business opportunities around ZDM. The cluster is paving the way towards an efficient transfer that will allow increase industrial impact. Finally, in the longer term, 4ZDM will aim at the definition of a ZDM vision, paradigm and system architecture.

Involved projects & chronology

4ZDM cluster is composed of four FP7 projects under the same topic FoF.NMP.2011-5: **MIDEMMA**: Minimizing Defects in Micro-Manufacturing Applications (*completed on Oct 2014*), **MUPROD**: Innovative proactive Quality Control system for in-process multi-stage defect reduction (*completed on Oct 2014*), **MEGAFIT**: Manufacturing Error-free Goods at First Time (*completed on Nov 2014*), and **IFACOM**: Intelligent Fault Correction and self Optimizing Manufacturing systems (*to be completed on April 2015*).





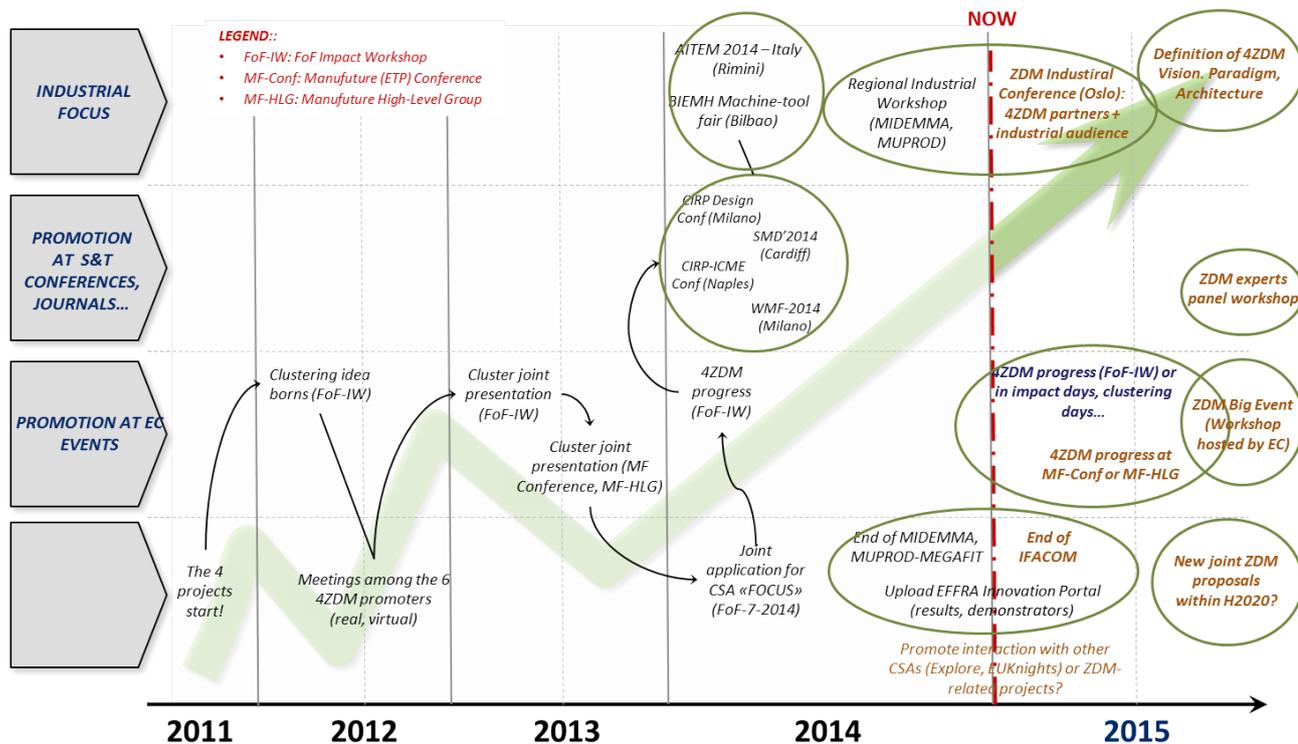
Cluster promoters /countries/sectors

The cluster is promoted by IK4-Ideko, Tecnalia, Politecnico di Milano, Philips and NTNU (leaders of involved projects) and is fully supported by the European Commission. 4ZDM involves 58 partners (16 end-users, 18 technology providers, 24 RTDs/Universities) and 8 countries, as well as critical sectors such as automotive, aeronautics, medical, machinery, energy systems and consumer goods. The industrial impact of 4ZDM may be around 40% of the EU manufacturing sector.

Scientific & Technological background

ZDM is an emerging paradigm aiming at going beyond traditional six-sigma approaches in highly technology intensive and strategic manufacturing sectors through knowledge-based approaches.

Work done and next steps





Events

MIDEMMA and MUPROD arranged a joint ZDM industrial conference on Oct 2014 (see pictures below), synchronising both final review meetings. IFACOM will proceed in a similar way in April 2015. These industry-oriented events aim at an intensive dissemination and promotion of research results, identifying at the same time commercial and business opportunities around the ZDM.



Joint ZDM industrial conference



Juanan Arrieta, of FOCUS partner IK4-IDEKO attending and speaking at the ZDM conference



Attendees at the ZDM conference, networking during a coffee break

“A new Paradigm in Manufacturing” is a Zero Defect Manufacturing Industrial Conference being held in Oslo, Norway on 22nd April 2015. FOCUS project Coordinator, Dr. Odd Myklebust of NTNU is organising the conference due to his role as IFaCOM Coordinator. The conference starts at 9am with a welcome and introduction, before moving on to presentations covering topics such as “European Research in an Academic and Industrial Context” and “Zero Defect Manufacturing in the Factory of the Future”. During the afternoon sessions there will be presentations from demonstrators from the aerospace and machine tool industries, including Rolls Royce and GKN Norway, Alesamonti and GF Agie Charmilles, and also a panel discussion about Zero Defect Manufacturing.

To view the conference program please [click here](#).

To register for this conference please [click here](#).

For more information about the conference please contact:

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For further information please visit:

http://ec.europa.eu/research/industrial_technologies/factories-of-the-future_en.html

Factories of the Future is a EUR 1.2 billion program in which the European Commission and industry are collaborating in research to support the development and innovation of new enabling technologies for the EU manufacturing sector.

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