

# Additive Manufacturing European Platform:

## Overview, structure, activities

Atelier 3D-Paris 10<sup>th</sup> December 2015



**The European Collaboration on Additive Manufacturing**

<http://www.am-platform.com>

twitter:@AM\_EUplatform

[https://twitter.com/AM\\_EUplatform](https://twitter.com/AM_EUplatform)

# INTRODUCTION: AM current scenario in Europe

**AM has received EC funding** since the 1st Framework Programme (FP). The following FPs ensured continuous support. In FP7 (2007-2013) >60 successful projects on AM technologies were funded (160 M€ in EC funding and a total budget of around 225 M€)

**AM spans many industries**, including automotive, medical, aeronautics, defense, capital and consumer goods and do-it-yourself concept, energy, etc

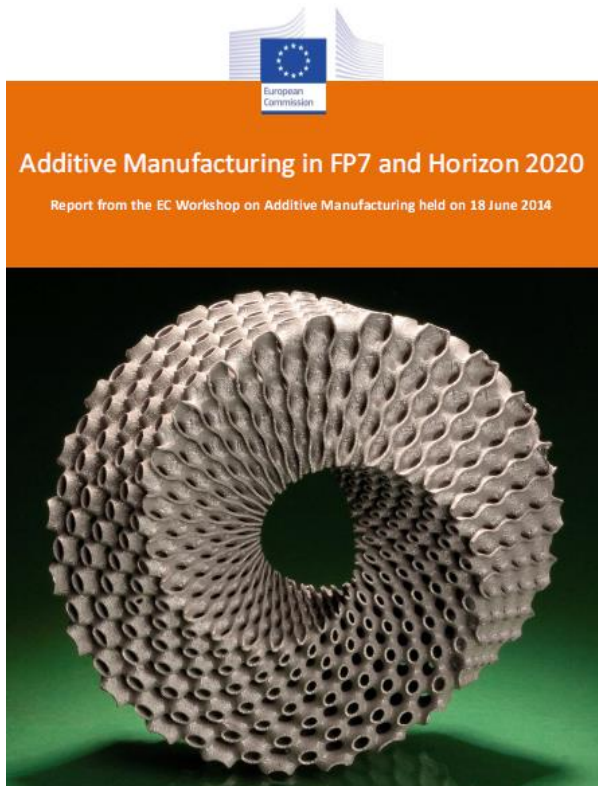


AM has demonstrated to possess the capability to **generate future revenues**, to develop **novel disruptive business models**, that could help to keep manufacturing in Europe competing with emergent countries.

AM has been highlighted as a key technology with potential for creating **sustainable high value European based employment**, addressing **societal issues** and supporting **environmental sustainability**

# INTRODUCTION:

## AM current scenario in Europe

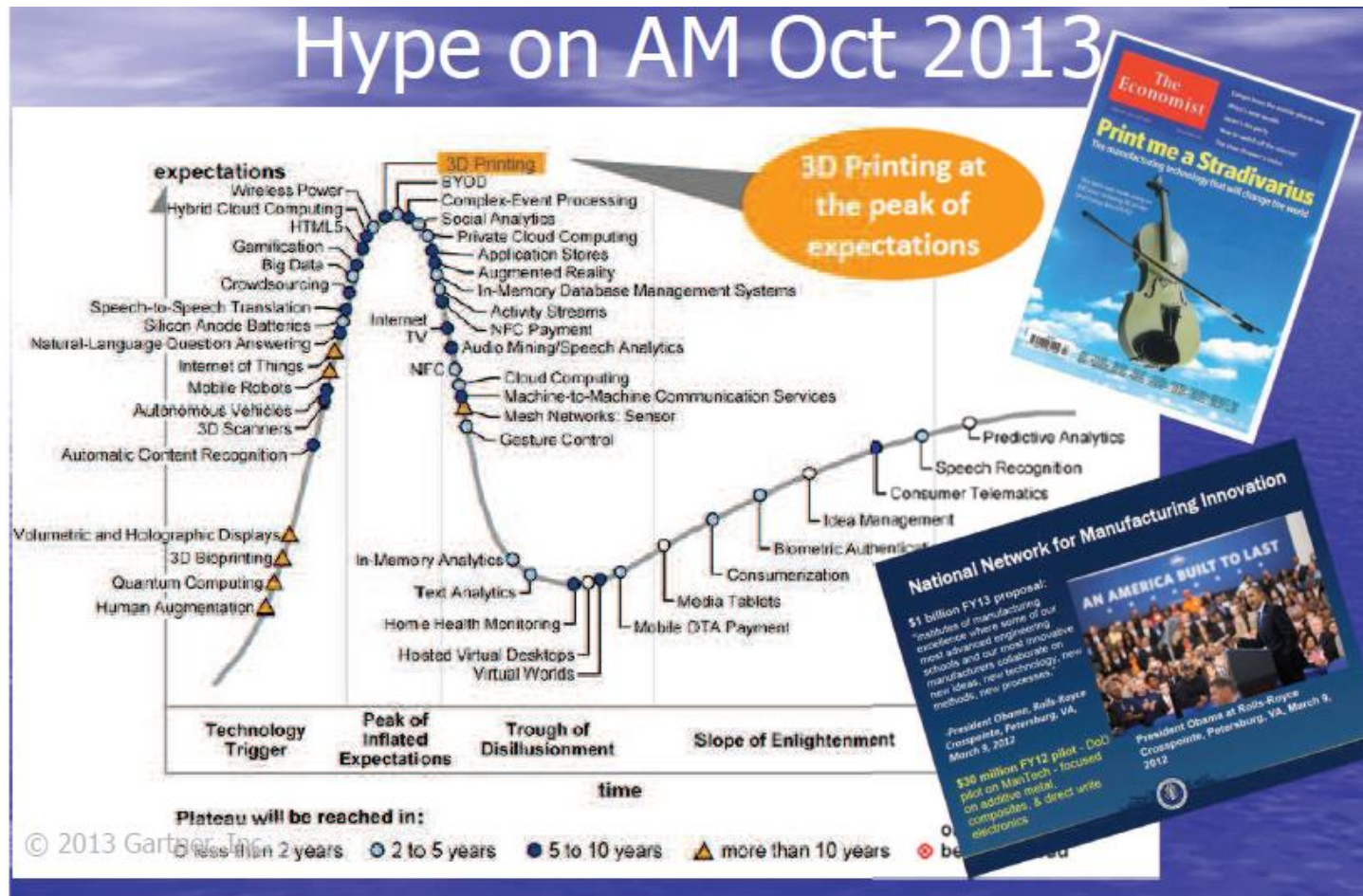


European AM stakeholders and EU Member States act in a **fragmented manner**, with **gaps and inefficiencies in linking the wide range of applications, disciplines, manufacturing sectors and countries concerned.**

**Europe needs a strategic approach and a common vision for AM**

# INTRODUCTION: AM current scenario

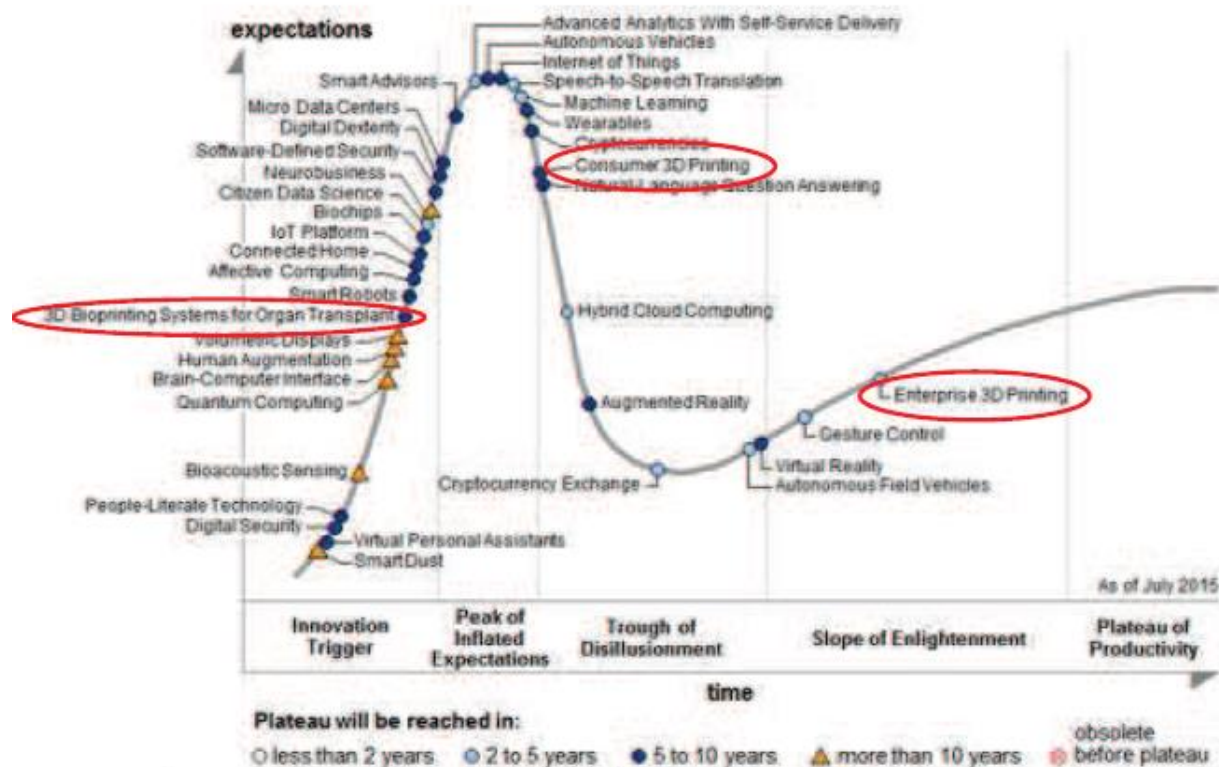
There is a clear interest in 3D Printing: In 2013 it was on the hype in .....in 2015...





# INTRODUCTION: AM current scenario

## Hype 2015



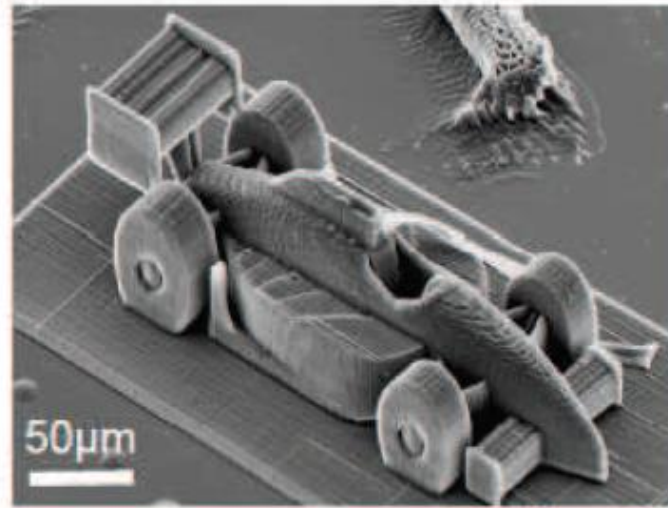
Source: Gartner (August 2015)

Covering all dimensions.....

### The dimensional range of Additive Manufacturing Technologies



Plaster-based 3D printing (PP)  
for architecture



2 Photon polymerization (2PP)  
for sub-micron structures

# INTRODUCTION:

## The platform



## A community of European stakeholders of Additive Manufacturing

A **point of reference and coordination**: AM is fragmented. Lots of entities are working or doing research in this area but a coherent strategy and a coherent interpretation is needed. A place to ask questions, to start a discussion, to find expertise, or to up- or download an interesting paper or article.

Its **objective** is to achieve EU industrial growth & sustainability by a coherent strategy, understanding, development, dissemination and exploitation of AM.

Active since: 2007 (formerly as the RM-platform), created as a sub-platform of MANUFUTURE ETP. Started with 42 Stakeholders

## Management Board

Chairman – Martin Schäfer (Siemens)

Coordinator – Frits Feenstra (TNO)

Members:

Oliver Jay (DTI); Rob Scudamore (TWI);

David González (Prodintec)

**Interface to the EC:**

**Germán ESTEBAN MUÑIZ**

## Standardisation Group

Klas Boivie (Sandvik);

Martin Schäfer (Siemens);

Eric Baustert (VOLUME-E)

Frits Feenstra (TNO)

## Scientific Technology Development Group

Oliver Jay (DTI);

Rob Scudamore, Amanda Allison (TWI) Marco

Cavallaro (Brunel University)

## Industrial Applications Group

Axel Demmer (FhG-IPT); Karel Brans (Materialise);

Paulo Calefati (Primalaser)

## National & Regional Working Group; Public Relations

David González, Paula Rodríguez (Prodintec);

Paulo Bartolo (Univ. Leiria)



- Total stakeholders: 405
- IND: 299 74%
- RTD: 69 17%
- Other 37 9%
- European countries: 29

*+ links to US and Worldwide GARPA (Global Alliance of Rapid Prototyping Associations)*

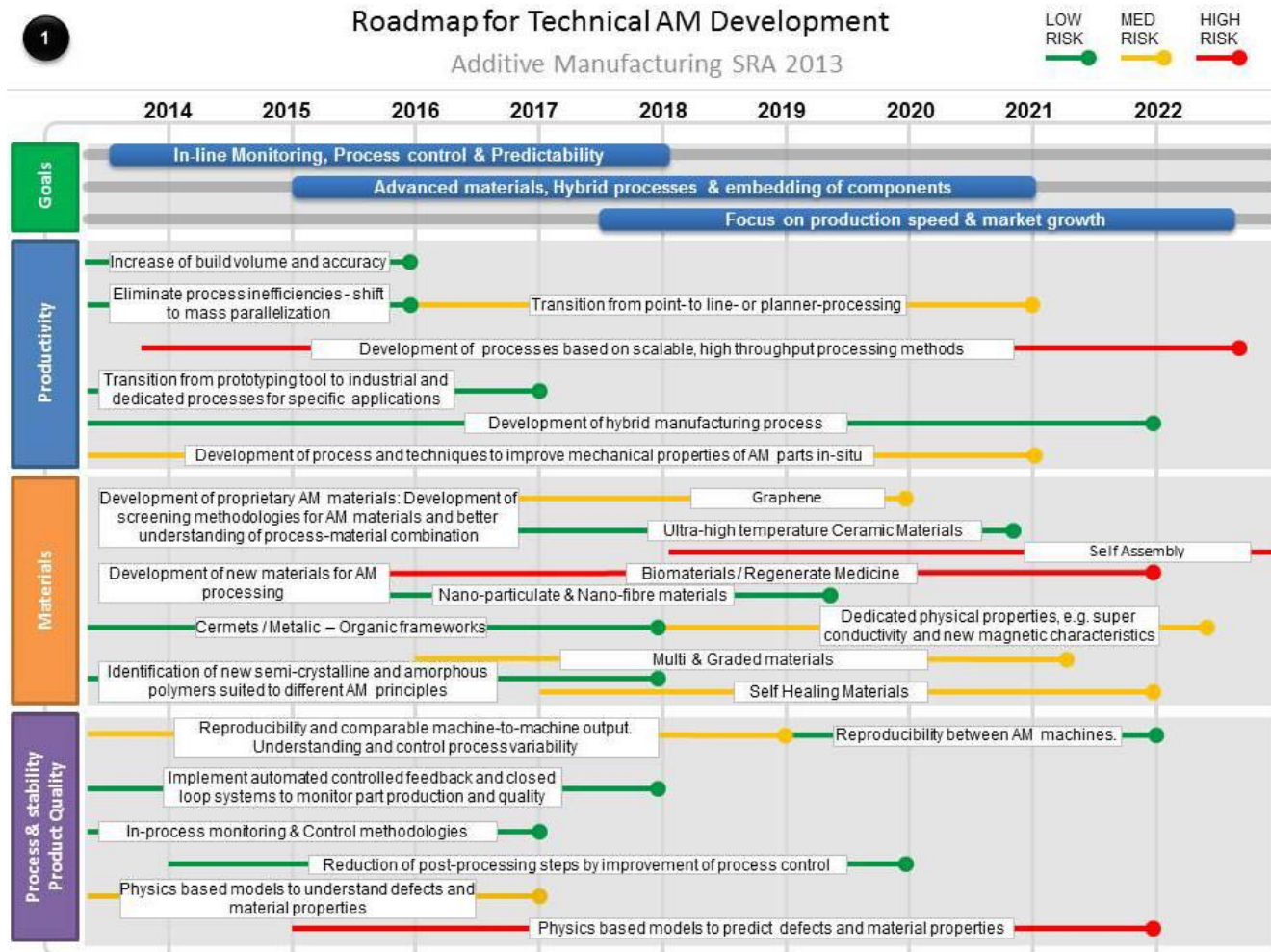
## STRATEGIC RESEARCH AGENDA



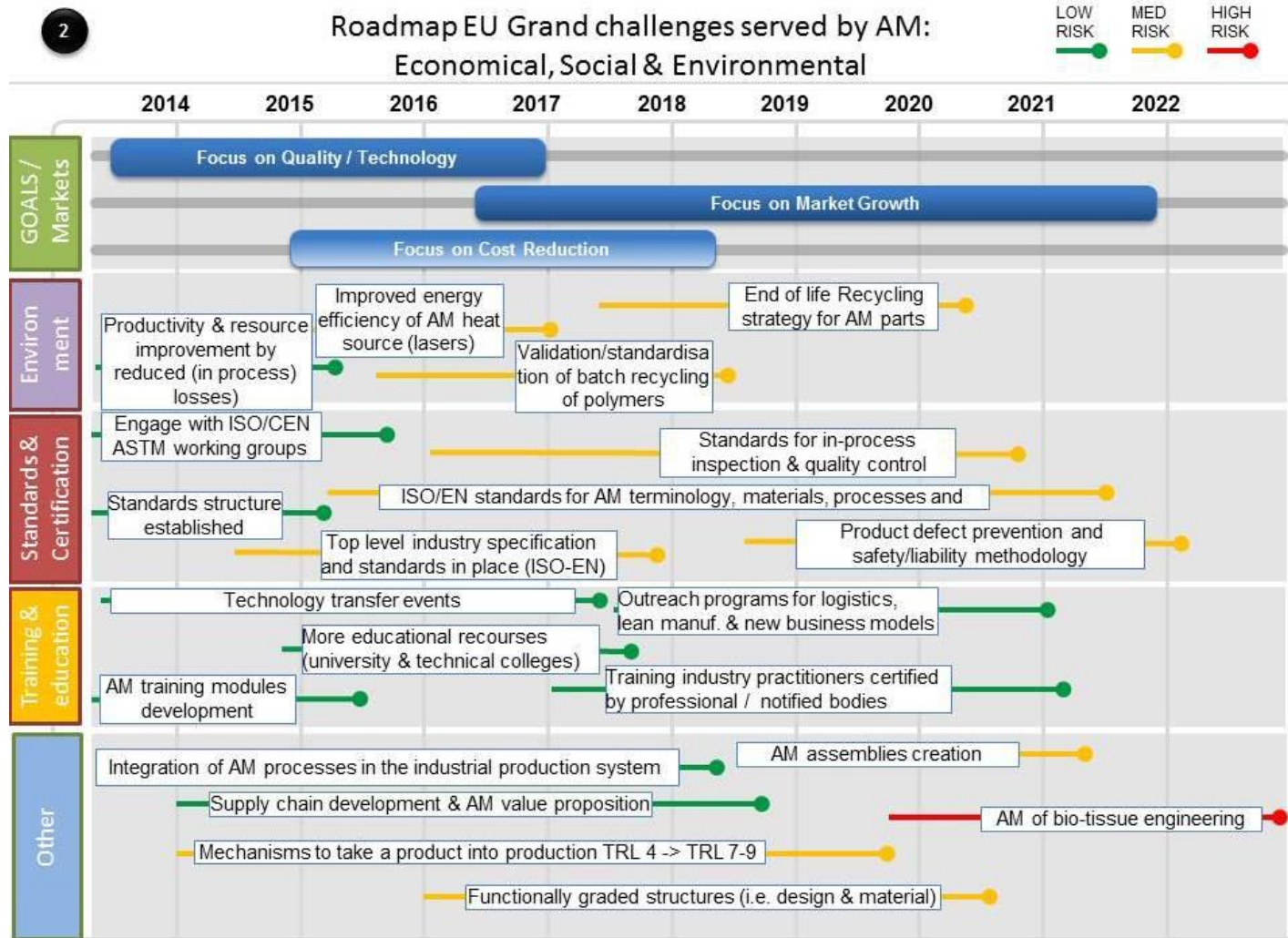
Available  
on Platform  
web site!  
**FREE**

- Promote AM/3D Printing on the European Stage
- Highlight the advantages of AM
- Set out recommendations for future development to enable mass exploitation
  - Time scaling
- Ensure that AM on EC's agenda
- **INDUSTRY FOCUS:** *Aerospace, Automotive, consumer, electronics and Medical*

## STRATEGIC RESEARCH AGENDA: *Technical roadmapping directions*



## STRATEGIC RESEARCH AGENDA: *Roadmap indications regarding non-tech. issues*

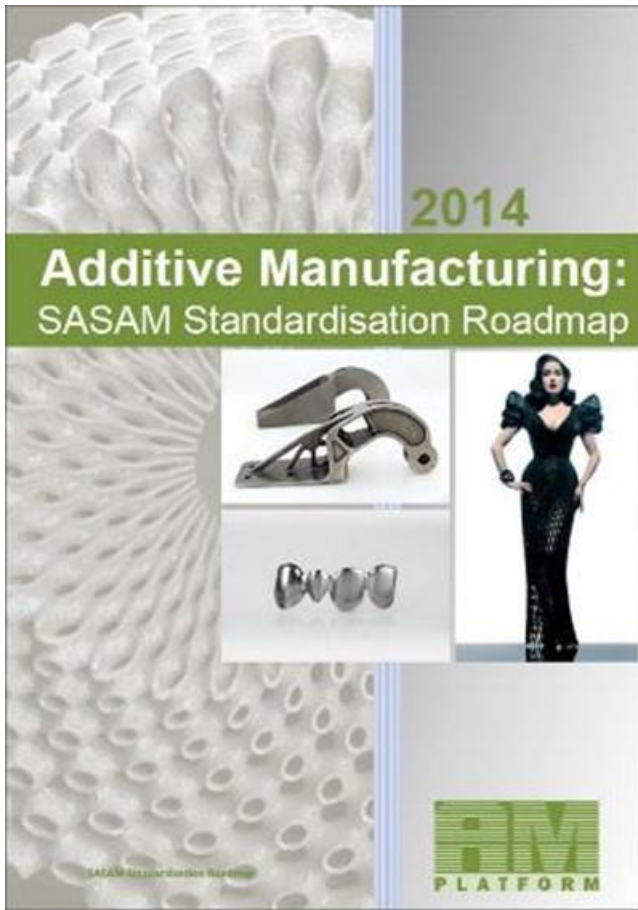




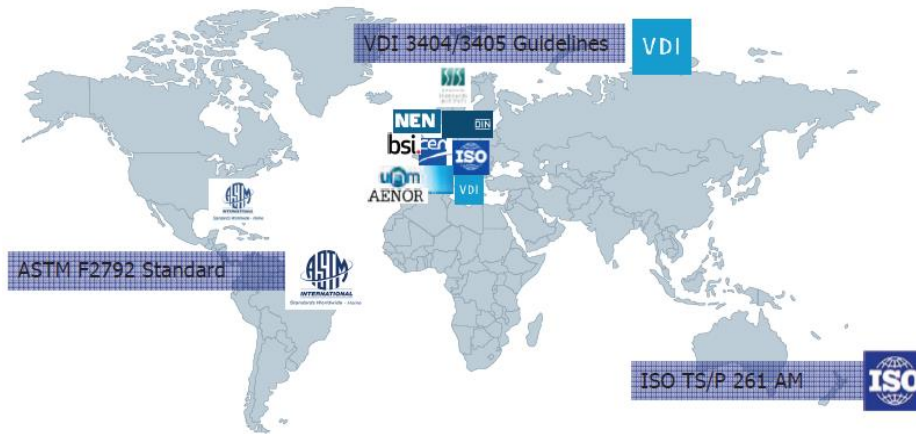
## STANDARISATION ROADMAP

Available on SASAM  
Project web and  
Platform web site!  
**FREE**

- Developed within SASAM FP7 Project
- efficient and sustainable industrial AM processes: integration and coordination of Standardisation activities for Europe
  - List of existing standards
    - Updated in 2015



## Standardisation landscape in 2013



Collaboration at global level is required and pursued to advance in this matter

## Standardisation landscape in 2015





[www.fofamproject.eu](http://www.fofamproject.eu)



- Takes up the **challenge of reviewing the AM ecosystem and organize it around several value chains on relevant industrial sectors**. The final aim is to design an **effective implementation map and to facilitate interaction of players**.
- **For a complete success strategy not only technology stakeholders but also policy makers** at European level but more importantly at local level should also be involved. In this sense, the project includes the involvement of **European regions**. Effective cross-sectorial and cross-national interactions will be pursued by promoting alliances in alignment with the research and innovation strategies for smart specialisation of European regions (RIS3).

CSA-H2020

Duration: 01/01/2015-  
31/12-2016

Topic: FoF-07-2014

Coordinator: PRODINTEC



## MAIN OUTCOMES:

### AM DATABASE

projects regions players

- Competences; expertise; results on each of the sectors/Value chains (VCs) tackled
- Networking/ Alliances: facilitating the stakeholder's relationships.

### AM ROADMAP

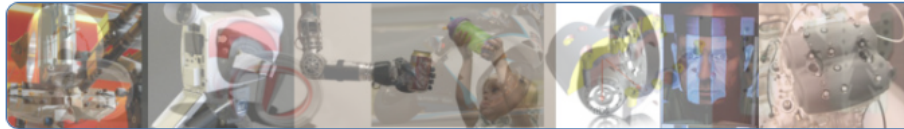
Market sectors Value chains Specific actions

- Identification of challenges around VCs
- Specific T & NT actions for AM implementation (market focus)



## www.AM-platform.com

Once you logged in.....



twitter: @AM\_EUplatform  
Strategic Research Agenda download

From  
FofAM  
project

European technology Sub-platform in Additive manufacturing: be aware of the latest advances on AM and 3D printing technologies and network with key stakeholders.

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## AM DATABASE

The AM DATABASE is a tool produced under the framework of FoF H2020 project "FoFAM"\* ([www.fofamproject.eu](http://www.fofamproject.eu)) in order to have an overview of the AM landscape and existing knowledge and capabilities and to facilitate networking. In this sense, it contains information on projects, regional strategies and main stakeholders around this set of technologies.

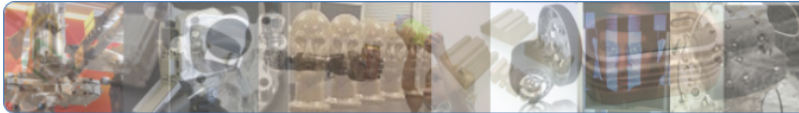
[Print](#) [Email](#)

It is placed on the AM platform web site allowing its expansion, dissemination and continuation after the end of the project.

The database follows the sectorial value chain approach established in the project, being possible to group the information around key sectors for the AM deployment in Europe. Initial sectors are: Medical and dental, Aerospace, Automotive, and consumer/electronics. More will be added.

The database is open to all entities and initiatives that play a role around AM, from technology developers, projects.... to end users, clusters, policy makers.... If you wish to be included on the database, please send an email to: [info\(at\)rm-platform.com](mailto:info(at)rm-platform.com) and we will provide you with specific templates to be fill in. Also please contact us in case you have any other inquiry or find incorrect information.

## www.AM-platform.com



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European technology Sub-platform in Additive manufacturing: be aware of the latest advances on AM and 3D printing technologies and network with key stakeholders.

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## Home

### 16th AM Platform stakeholders meeting 23 September 2015 well visited

The 16th AM-platform stakeholders meeting (September 23rd, kindly hosted by the Commission) was very well visited with 200 attendees.

 Print  Email

Discussions on:

- Do we need a America Makes for Europe? And how?
- European Research Infrastructure?
- Will materials design opportunities unlock Additive Manufacturing?
- Is Hybrid manufacturing part of the future of AM?
- Is multimaterial AM being hyped too much?
- How do we get the best impact from AM?

Further topics:

Becoming a member is free of charge.

Just sent an email to:

[info@am-platform.com](mailto:info@am-platform.com)

- Pan European support for R&D & Industry
- AM has gained momentum last decade
- Lots of Industrial interest and attention
- Industrial relevance for AM AM meets EC Societal Challenges very well
- FoF impact:  
AM applied in non AM topics/projects
- Industrial relevance; AM can be considered as a KET

# THANK YOU!

## Contacts:

Frits Feenstra (TNO) [Frits.feenstra@tno.nl](mailto:Frits.feenstra@tno.nl)

Paula Queipo (PRODINTEC) [pqr@prodintec.com](mailto:pqr@prodintec.com)

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