

Mikel Artola

International Director, AFM



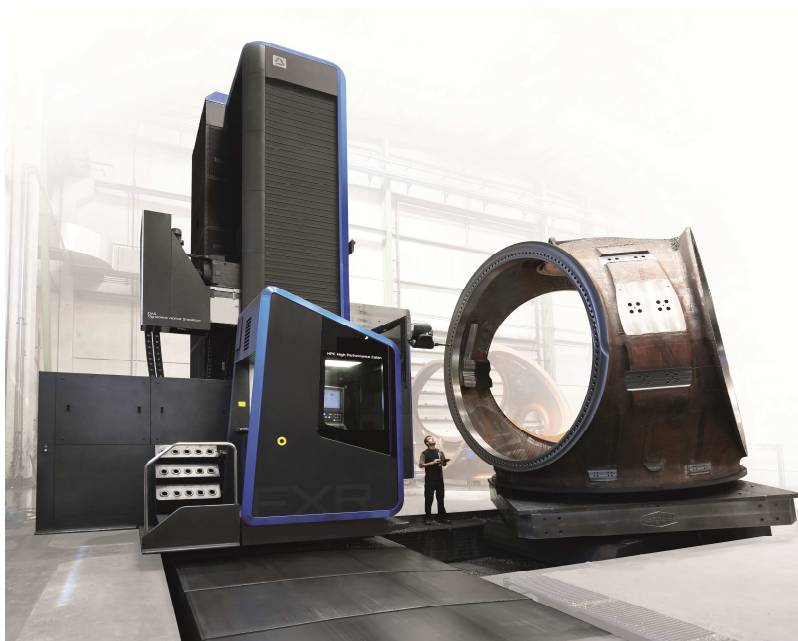




How is the Basque Advanced Technologies Cluster?



- Machine Tool Builders and Advanced Manufacturing Technologies Association of Spain (machines, parts and tools)
- Founded in 1946, first industrial association in the country
- Huge geographical concentration: around 75% of production in Basque Country
- Advanced Manufacturing Technologies Cluster of the Basque Country



# How is the Basque Advanced Technologies Cluster?

Metal cutting



Metal forming



Other tecnologies:  
Automatization, assembly, metrology...



Components



Tools



Accesories





- Turnover: 1.496 million euros
- Employment: 7.300 direct + 7.300 indirect
- Export: 79% (89% in machines). Main markets: Germany, China, Mexico, Portugal, Italy, USA.
- 3rd biggest producer in EU (just behind Germany and Italy), and 9th in the world.
- Ability to adapt ourselves to specific needs, and to personalize for each sector and application.
- Specialists in big dimension machines, high performance and precision.
- Highly skilled personnel, giving top priority to formation.





- 23 people
- Services in Internationalization, Technology, Marketing and Communication, People, Lobby/Institutionals Relations
- Office in Tianjin-China since 2003
- Presidency of the Machine-Tool Institute
- Members of CECIMO , ECTA y CEO
- Co-organizers of BIEMH since 1961 con BEC - Bilbao Exhibition Centre
- Organizers of the Advanced Manufacturing and Machine Tool Congress since 1976





ELKAR IKUSIKO DUGU - NOS VEMOS EN - SEE YOU

**30 BIEMH**

**28-5 / 1-6 - 2018**

Co-organizers of BIEMH since 1961 con BEC - Bilbao Exhibition Centre  
Bilbao, 28 May - 1 June 2018



3D printer listing with details and a photo of a person.

### Desktop (<\$5K) 3D printers



Source: Wohlers Report 2015

WOHLERS ASSOCIATES

patino babesleak | patrocinadores platino

AVIA, FAGOR, FESTO, IK4, spri

urre babesleak | patrocinadores oro

IGUS, FAGOR, SCHAEFFLER, FAD

zilar babesleak | patrocinadores plata

IGUS, Fagus, BENISHAW, rofin, URKUNDE

babesarekin | con el apoyo de

erakundeak | expositores

ARRAM, Enfoque, Geminvi, mizar, ope, JOXEL SISTEMAS, TUMOR

laguntzarekin | con la colaboración de

AIMHE, Jiferempres, MOLT, TOOLMAKER

Organizers of the Advanced Manufacturing and Machine-Tools Congress since 1976  
San Sebastián, 25 - 27 October 2017



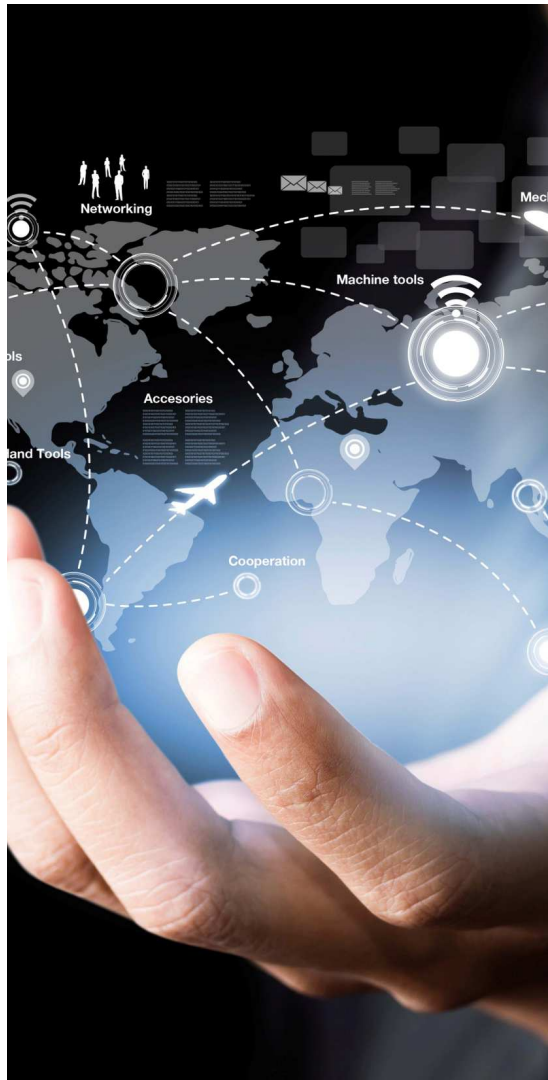


**AFM**  
**cluster**  
FOR ADVANCED MANUFACTURING

Service areas



# INTERNATIONALIZATION



- Long experience
- To reach to all the associated base and to move along the international management
- Tools:
  - Worldwide promotional activities
  - Competitive Intelligence
  - Standard vs. Personalized



# MARKETING & COMMUNICATION



- Not high but developing brand environment
- To increase industry, association and companies' notoriety
- Tools:
  - Own catalogues and publications
  - Advertising and Press
  - Advice and Events Organization



# TECHNOLOGY

- Strong background and high requirement
- To boost cooperation
- Tools:
  - Expertise in R&D&i projects leadership
  - Technology promotion
  - Industrial management





# HUMAN CAPITAL

- Knowledge sector
- Attract, train and keep talent
- Tools:
  - Sector-based training
  - Coordination between entities
  - Young people





**AFM**  
cluster  
FOR ADVANCED MANUFACTURING

Union makes the strenght



**AFM** Advanced  
Manufacturing  
Technologies

Asociación Española de Fabricantes  
de Maquinaria, Herramientas,  
Componentes y Herramientas

**AFM**

**cluster**  
FOR ADVANCED MANUFACTURING

**ADIMAJ**

Asociación Española de Tecnologías  
de Fabricación Aditiva y 3D

operated by **AFM**

**eskuin**

Cluster de la Ferrería y el  
Suministro Industrial

operated by **AFM**

**AFMEC**

Asociación Española del Mecanizado  
y la Transformación Mecánica

operated by **AFM**



# A<sub>FM</sub> Advanced Manufacturing Technologies

Machine Tool, Accessories, Component Parts and Tools Manufacturers' Association of Spain

operated by **A<sub>FM</sub>**

# ADDIMAT

Additive & 3D Manufacturing Technologies Association of Spain

# eskuin

Hardware and Industrial Supply Cluster

operated by **A<sub>FM</sub>**

# A<sub>FM</sub> MEC

Mechanical Engineering Association of Spain

operated by **A<sub>FM</sub>**



# AFM

Advanced  
Manufacturing  
Technologies

FOUNDED IN 1946, 70 YEARS

122 ASSOCIATES

7.700 EMPLOYEES | 1,500 M€ TURNOVER

3ER PRODUCER AND EXPORTER IN EU, 9TH IN THE WORLD

WE EXPORT 80% FROM OUR PRODUCTION

[www.afm.es](http://www.afm.es)

# ADDIMAT

operated by  
AFM

FOUNDED IN 2014

59 ASSOCIATES

60 M€ TURNOVER (estimated)

ASSOCIATES PROFILE: FABRICANTS, USERS, DISTRIBUTORS  
AND IMPORTERS, CCTTS, UNIVERSITIES AND EDUCATIONAL  
CENTERS

[www.addimat.es](http://www.addimat.es)

# eskuin

operated by  
AFM

FOUNDED IN 1977, 40 YEARS

23 ASSOCIATES

2.000 EMPLOYEES

329 M€ TURNOVER

WE EXPORT 50% FROM OUR PRODUCTION

[www.eskuin.com](http://www.eskuin.com)

# AFMEC

operated by  
AFM

FOUNDED IN JUNE 2016

180 ASSOCIATES

[www.afmec.es](http://www.afmec.es)





AFM  
cluster  
FOR ADVANCED MANUFACTURING

384 associates

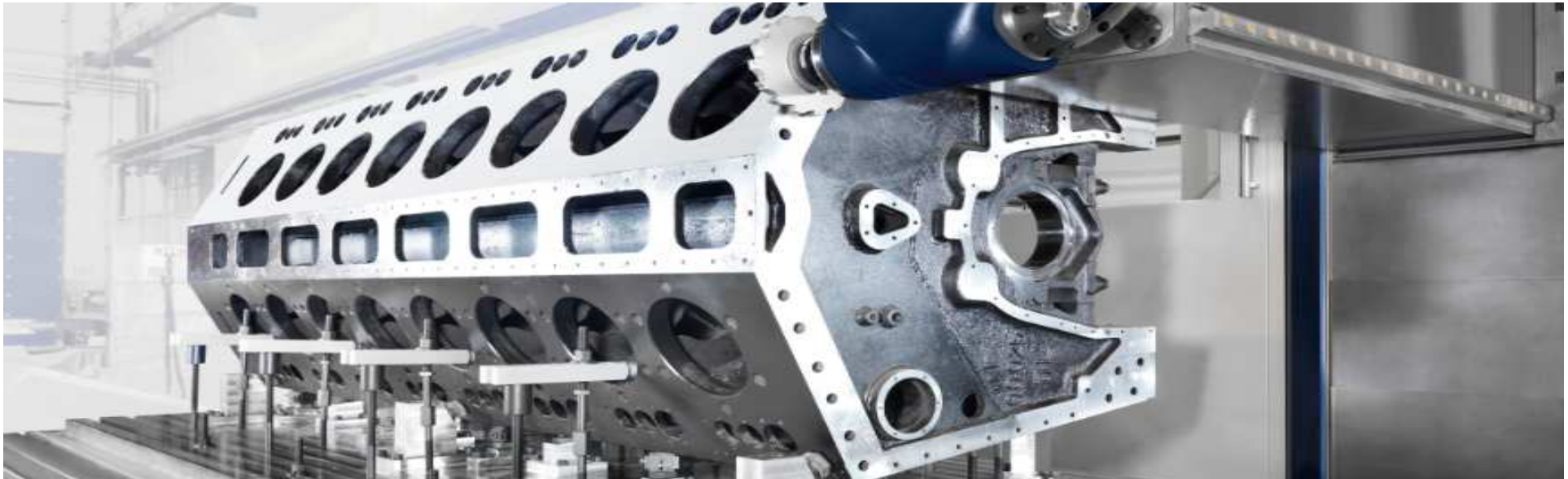
45 collaborating partners

11,000 employees

2,100 m€ turnover

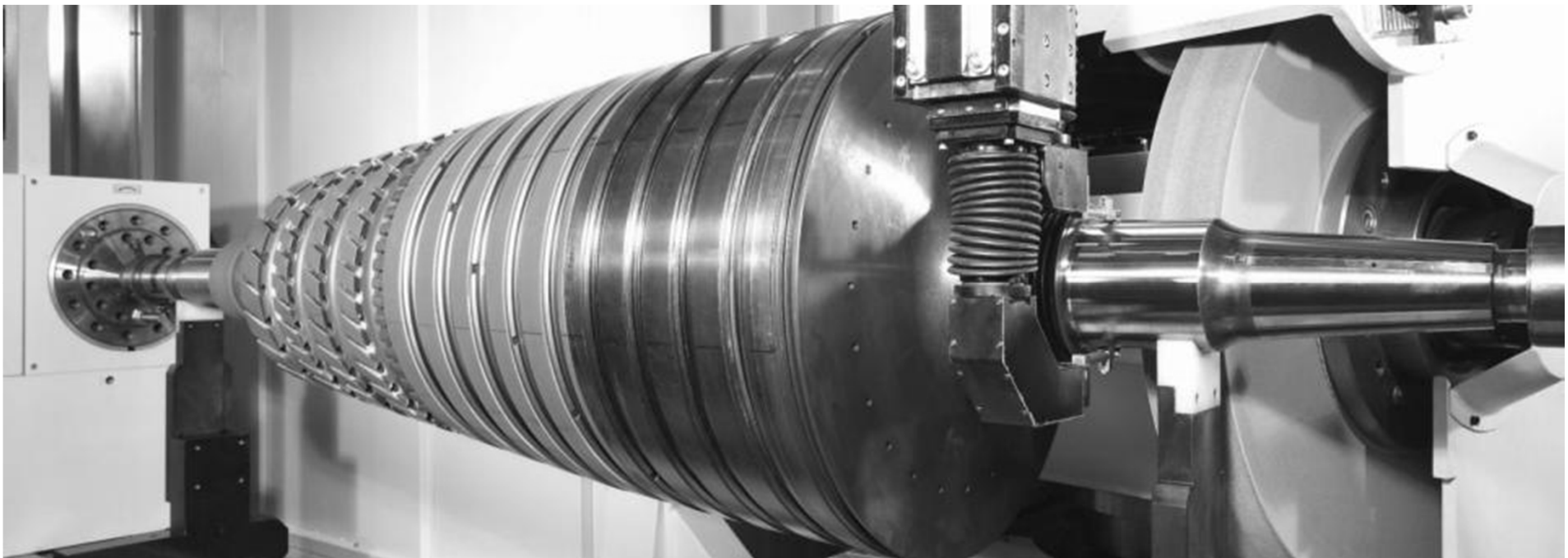


- Manufacturing related organizations (Core Business)
- Research Institutes (IK-4, Tecnalia...)
- Academia – University related departments are working close to our members
- Training Institutes (IMH, Asmaola...)
- Service related organizations: consultancy, engineering, banking, suppliers...



## AFM Main Interests:

- Build new R&d projects involving Industry and cooperating among them and with Research Organisations
- Promote Technology Foresight Activities
- Promote involvement of Young-learners into industry; training activities from School towards Manufacturing Industry
- Promote innovation in High TRL Levels
- AFM is promoting a New Eureka Cluster arround Manufacturing







# Advanced Manufacturing Cluster Roadmap



## Mission

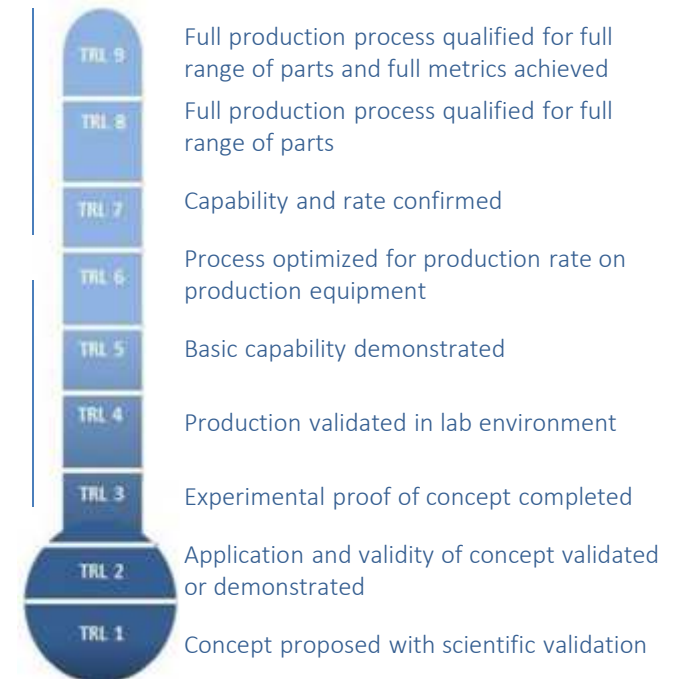
To propose, develop and implement a strategy based on Research and Innovation, capable of speeding up the rate of industrial transformation to high-added-value products, processes and services, securing high-skills employment and winning a major share of world Manufacturing output in the future knowledge-driven economy.

## Objectives

- Competitiveness in manufacturing industries
- Leadership in manufacturing technologies
- Eco-efficient products and manufacturing
- Leadership in products and processes, as well as in cultural, ethical and social values

AFM Cluster

MANUFUTURE





# Advanced Manufacturing Cluster

## Roadmap

### MISSION

Upgrading and sustaining the competitiveness of the European Manufacturing Industry with close to market innovation projects to provide new products, services or processes, making European Industry world leader in Manufacturing.

### STRATEGY

1. Promote the fulfilment of ambitious R&D projects focusing on chosen enabling technologies
2. Promote effective cooperation among Manufacturing companies
3. Emphasis on Demonstration Projects close to market with real solutions for the end user including technology based Advanced Manufacturing start-ups and pilot-scale plants.
4. Involving big companies who actively bring SMEs to this ecosystem.
5. Stronger inter-Cluster initiatives
6. Reinforced external cooperation: within ERA R&D programmes and initiatives





# Advanced Manufacturing Cluster Roadmap

AS GUIDANCE

## Scope of action

Advanced Manufacturing Processes

Smart Manufacturing Systems

Person-Machine Collaboration

Sustainable Manufacturing



## Sectors

Automotive

Aeronautics

Energy generation

Railway

Capital goods

THANK YOU!

