



# Challenges of AM in Footwear Industry

Footwear PEP ETP

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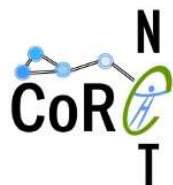
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AM Platform Member*



## European Projects

European projects in FP7 addressing the Footwear and the Consumer Goods sectors:



[WWW.EU-FOOTWEAR.EU](http://WWW.EU-FOOTWEAR.EU)

## EU Footwear Product and Processes Technology Platform

- 17 ETP Meetings, in 11 different EU locations
- Over 250 active members, of which over 200 from Industry
- 6 Manufuture Conferences and Workshops
- 6 IMS Conferences & Workshops
- 8 Joint Initiatives with other ETPs
- 18 European Projects in FP7
- 2 IMS MTPs launched
- 1 Roadmapping CSA running with 5 ETPs involved



**Support Group (SG)** (Secretarial support + Executive)

8 Working Groups:

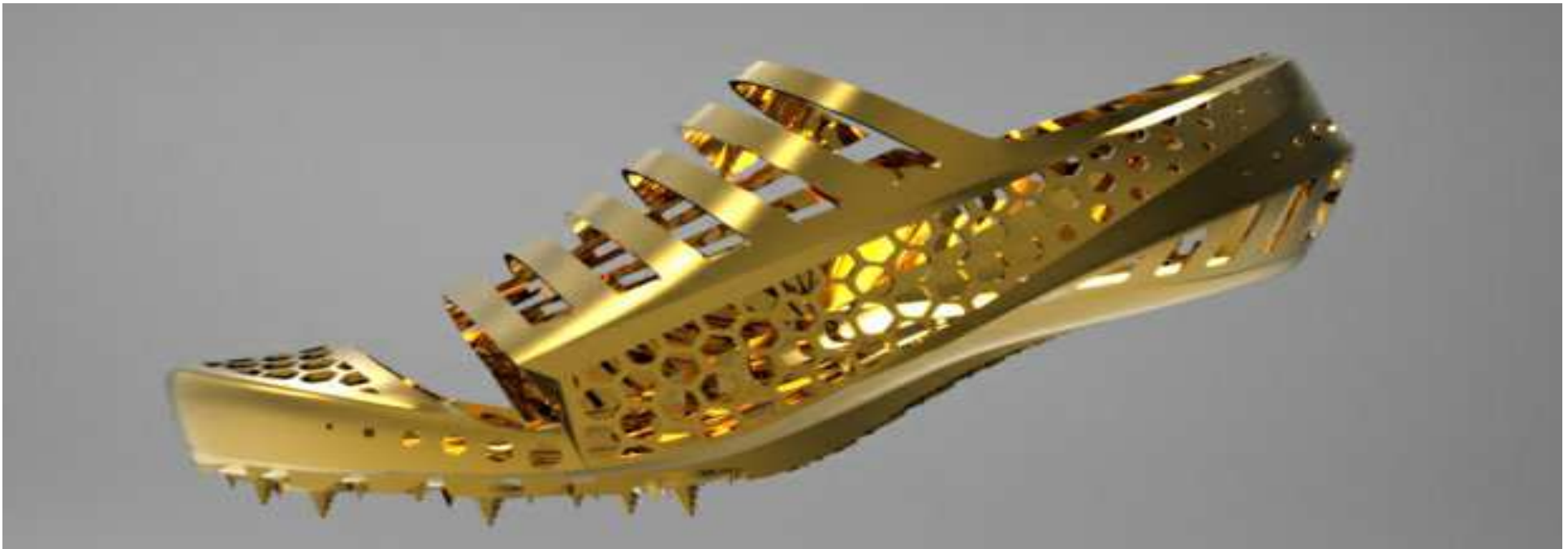
- Market Opportunities, Social Needs, Business Strategies
- Technology Challenges (TC) for Product Innovation
- TC for Process Innovation
- TC for ICT and Networking Innovation
- Education
- Pre-standardization
- Cooperation between Footwear ETP and EPSI
- Technology Transfer

# Challenges of AM in Footwear Industry

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## Outline

- Product and materials
- Mfg Technologies & systems
- Services



# Product

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## Complex shape design – beyond personalization

- Structural components with longer lifecycle
- Improved performance with less material
- Sustainable design
- Human function monitoring with micro organic sensors
- AM standard to support CAx

## Joint initiatives with SC 1

- *health, healthy ageing and disease*
- *pharmaceutical innovation*





# Materials

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## Multi functional materials - beyond efficiency

- Task oriented smart micro- and nano-materials
- Usage of multiple materials
- Organic materials with specific electrical and chemical properties
- Programmable degradable

## Joint initiatives with SC 5

- *resource efficient manufacturing*
- *natural and biodegradable resources*
- *sustainable use of raw materials*



# Technologies and Systems

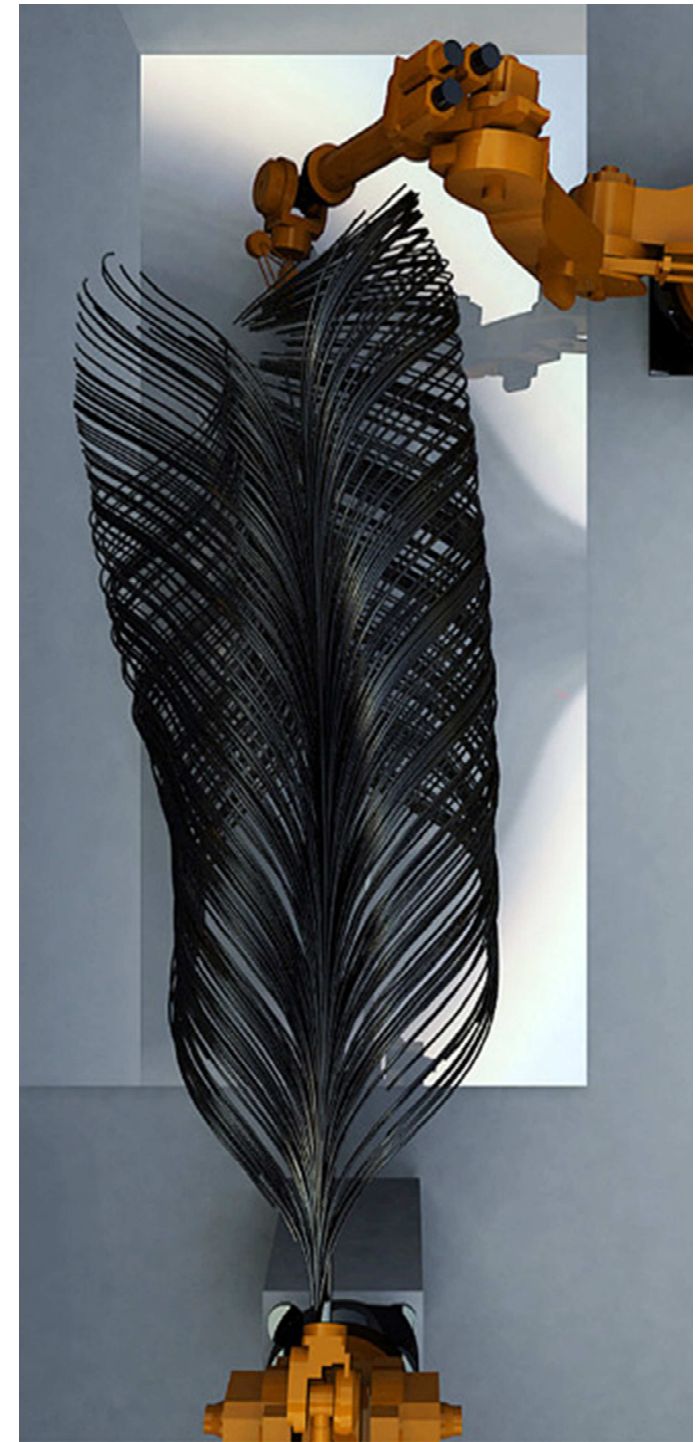
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## Technologies and processes

- Integration and fusion of multiple technologies  
*Hot-cold, additive-subtractive, nano-meso*
- Under micron accuracy

## Production equipment and systems

- High throughput
- Low energy consumption
- Extreme reconfigurability for low costs
- Zero post-processing



# Services

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## Large scale production

- Manufacturing and retail all together
- Decentralized network

## Design & engineering platforms

- Design shoes from concept to CAD
- From the design to Part Program

## User oriented platforms

- Build your shoes close to home with libraries and apps
- Towards new shoes everyday





# Thank you

Footwear PEP ETP

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