



# MEETING 2018 **MATERIALS**

11 december

# Welcome!

## ORGANISING PARTIES



# Organizing parties



Bond voor Materialenkennis

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\* Meeting Materials is co-funded by the MIT-funding for Network-activities of the TKI HTSM.

# Keynote speakers 11 Dec

## Morning



Paul Breedveld  
TU Delft



Theo Salet  
TU/e

## Evening



Ton van den Boogaard  
UT

# 11 December



## 2018 Topics

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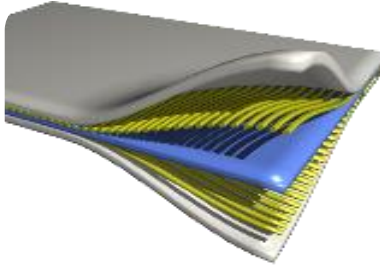
- Additive Manufacturing
- Composites
- Advanced Characterization
- Sustainability and circular economy

# Additive manufacturing

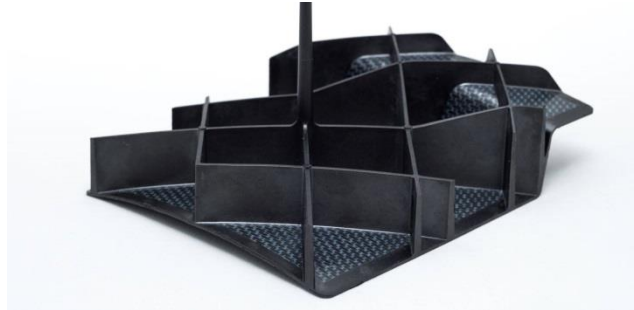
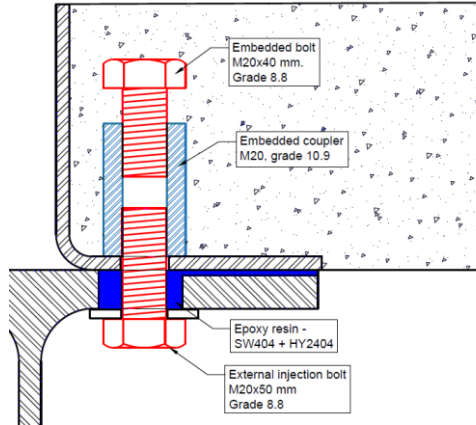
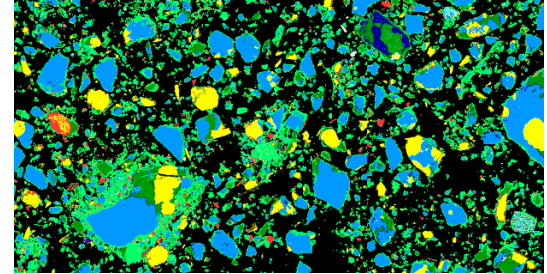




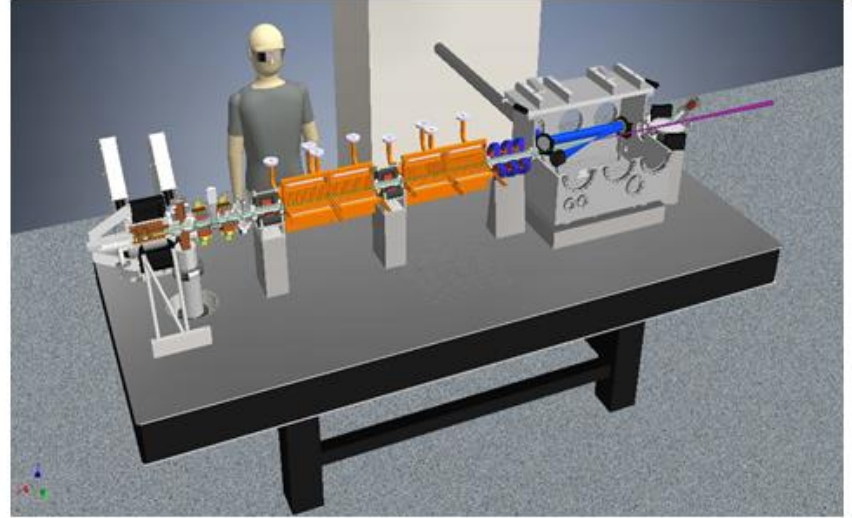
# Composites



Component



# Advanced Characterization



# Sustainability and circular economy

## WORKING TOWARDS THE NEXT GENERATION OF SUSTAINABLE BUILDING MATERIALS FOR FUTURE SMART CITIES IN A CIRCULAR ECONOMY

### THE HOLISTIC MODEL

#### INTERCONNECTED ON 3 LEVELS

#### MATERIAL LEVEL - DESIGN, RESEARCH & MANUFACTURING

Fundamental research on sustainable materials, circular steel, circular building techniques, green, sustainable composite solutions, smart materials for zero emission with energy harvesting qualities, integrated on smart windows, self healing materials etc.

- TECHNICAL SOLUTIONS FOR RECOVERING MATERIAL WASTE RESIDUES
- DESIGN & RESEARCH OF SUSTAINABLE AND CIRCULAR MATERIALS
- DEVELOPING THE MATERIALS OF THE FUTURE
- INNOVATIVE MANUFACTURING TECHNIQUES FOR SMARTER APPLICATION PROFILES
- MAPPING MATERIAL INFORMATION FOR FUTURE USAGE

#### DESIGN & MAINTENANCE LEVEL - DESIGN, RESEARCH & MANUFACTURING

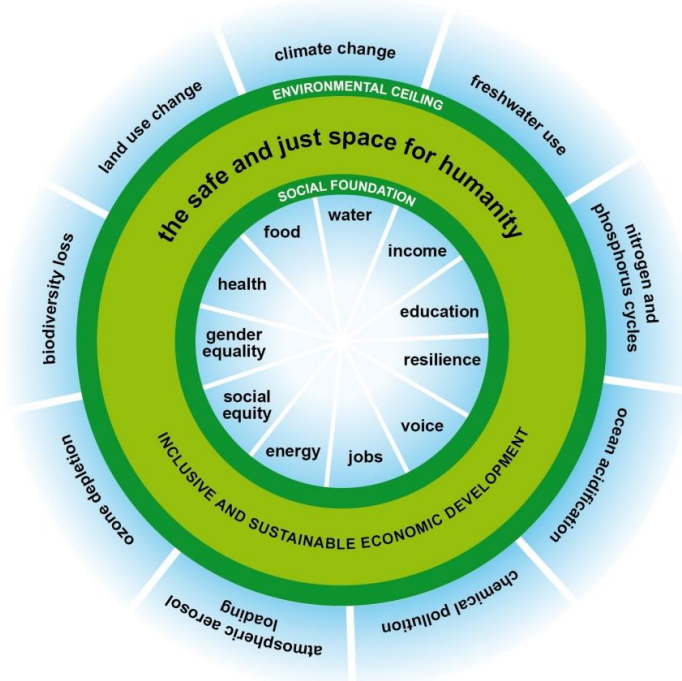
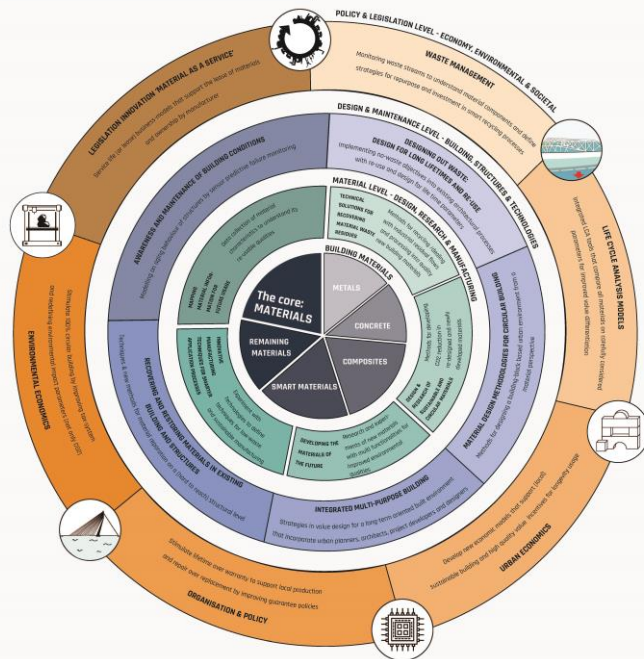
Design methodologies on circular building techniques, building applications with new manufacturing techniques, integration of new sustainable building materials in multi-purpose building designs, research and application of conservation techniques for structures & cultural heritage with monitoring, diagnostics and integrated modelling.

- DESIGNING OUT WASTE DESIGN FOR LONG LIFETIMES AND REUSE
- MATERIAL DESIGN METHODOLOGIES FOR CIRCULAR BUILDING
- INTEGRATED MULTI-PURPOSE BUILDING
- RECOVERING AND RESTORING MATERIALS IN EXISTING BUILDINGS AND STRUCTURES
- AWARENESS AND MAINTENANCE OF BUILDING CONDITIONS

#### POLICY & LEGISLATION LEVEL - ECONOMY, ENVIRONMENTAL & SOCIAL

With the support from policy makers and new legislation for widespread reuse of materials and higher resource productivity to become commonplace, access to new financing policies, management, regulatory structures, environmental studies, and business models can be created and embedded in a circular built environment for the existing smart cities.

- WASTE MANAGEMENT
- LIFE CYCLE ANALYSIS MODELS
- URBAN ECONOMICS
- ORGANISATION & POLICY
- ENVIRONMENTAL ECONOMICS
- LEGISLATION INNOVATION MATERIAL AS A SERVICE





# Thank you

