

# Twinning to excel materials engineering for medical devices ExcellMater

Coordination and Support Action – H2020-WIDESPREAD-2020-5 – ExcellMater

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University of Belgrade**

**Twinning Project Days, March 24-25, 2021**



## **Project objective:**

to advance the research and innovation capacity of the **Faculty of Technology and Metallurgy (FTM)**, University of Belgrade, in the area of **biomaterials engineering** by collaboration with leading international institutions:

- **AALTO** - Aalto University Foundation, Finland
- **UPO** - University of Eastern Piedmont “A. Avogadro”, Italy
- **ARI** - AO Research Institute Davos, Switzerland

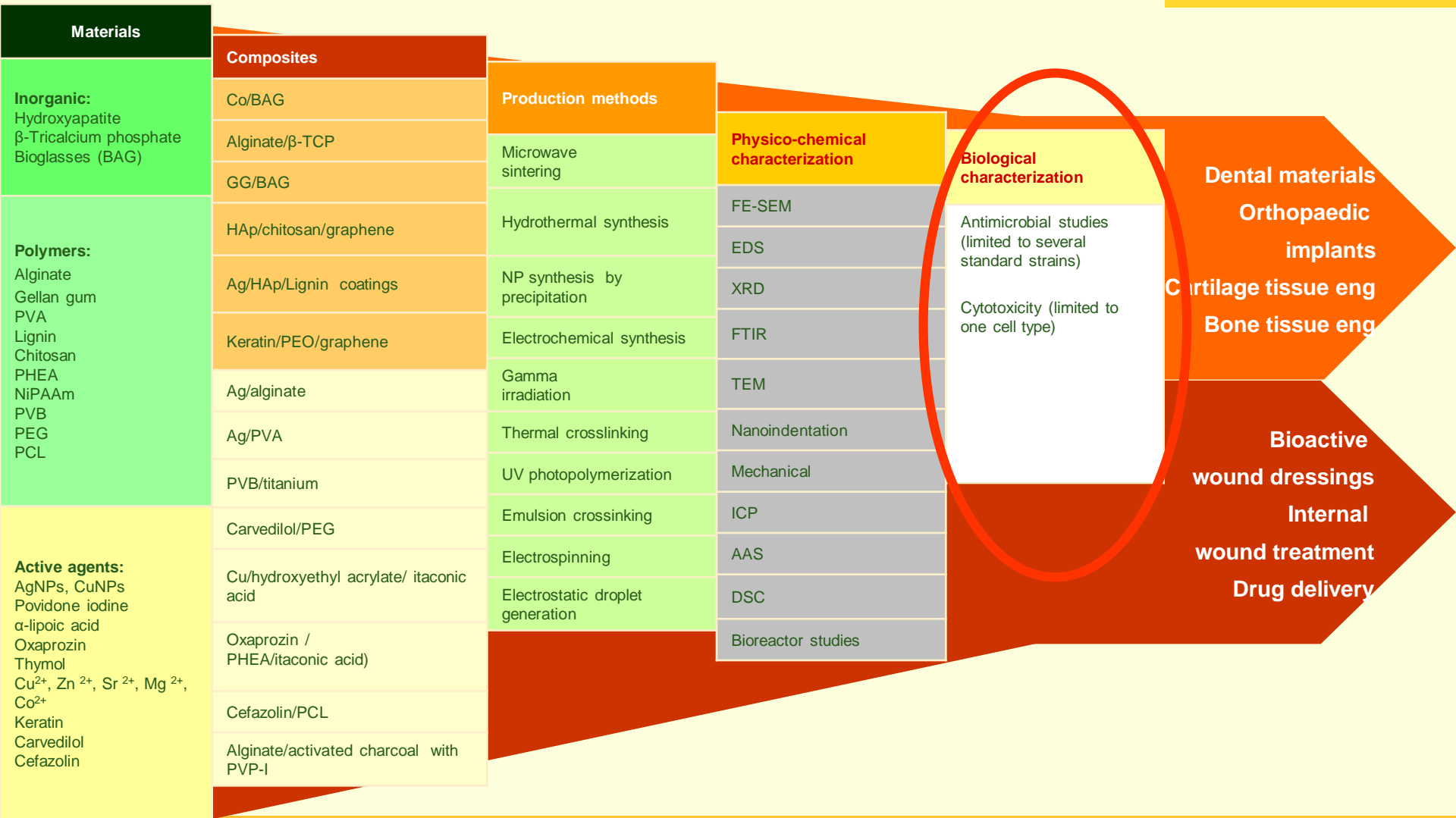
**Start date: November 1, 2020**

**Duration: 36 months**

**Budget: € ~880 K**

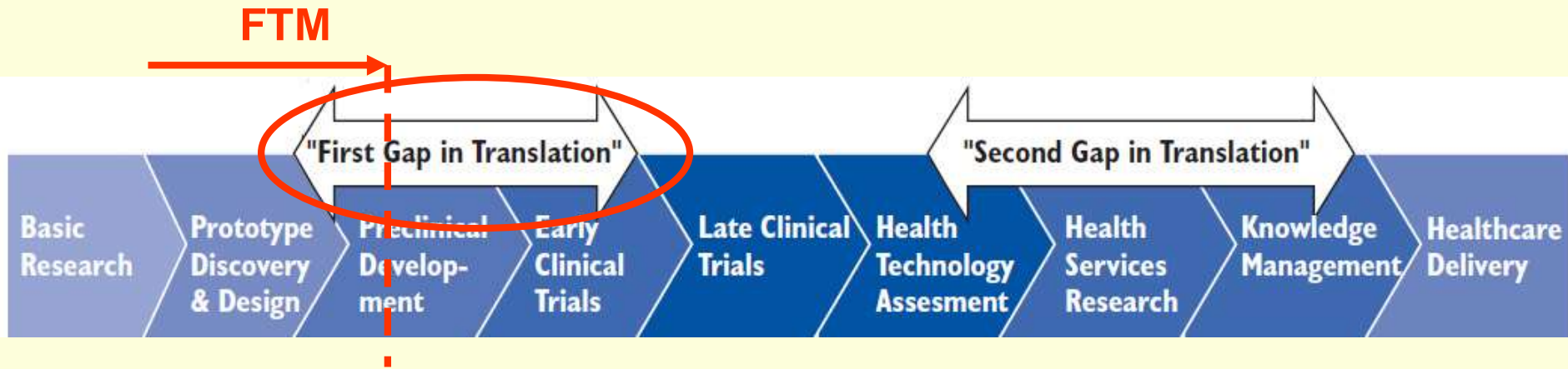


# Biomaterials research at FTM towards specific biomedical applications





# Path to utilization of novel biomaterials



*Pathway for translation of biomedical research to healthcare:  
the first gap - translation of basic and clinical research into products  
the second gap - introducing those products into clinical practice*

FTM has ~37 patents and patent applications in different fields, **none of them has been licensed or sold to industry**

*Cooksey D., A review of UK health research funding. 2006*



- Institute for Biological Research “Siniša Stanković”
- Institute for Molecular Genetics and Genetic Engineering
- Faculty of Pharmacy
- School of Medicine
- INEP
  
- Innovation Center of the Faculty of Technology and Metallurgy
- Business Technology Incubator
- Science Technology Park Belgrade

## **Lack of relevant knowledge and expertise**





# ExcellMater Knowledge twinning to FTM

- **biological evaluation of biomaterials** - immunology, bacteriology, genetics, etc., systems biology, biosignals (UPO)
- **tissue engineering, biomaterials, biomechanics, support systems, implants** (ARI)
- **prosthetics, medical devices - design, certification** (AALTO, ARI)
- **IPR** – protection, licensing, start ups, technology innovation strategies (AALTO)
- **health technology assessment/evaluation** (UPO, AALTO, ARI)
- **project proposal preparation, project management and administration** (AALTO, ARI, UPO)



- **FTM:**

- Advanced Biocomposite Materials Group
- Bioceramic Materials Group
- Bioencapsulation Research Group
- Biomedical Engineering Group
- Electrochemical Materials Group
- Polymer Research Laboratory

- **AALTO:**

- Materials Processing Lab

- **UPO:**

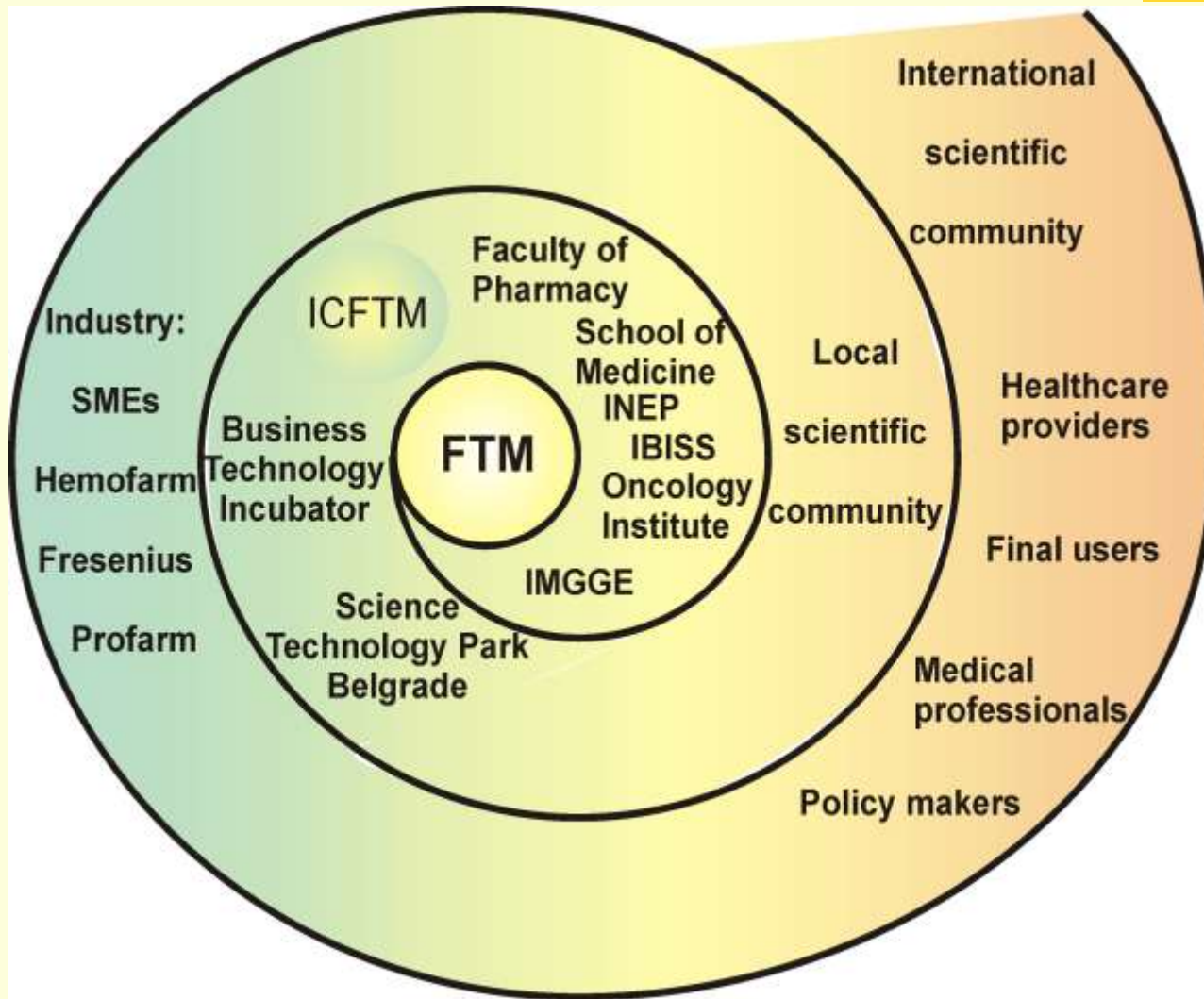
- Applied Medical Technologies
- Applied Biology
- Immunology
- Virology and Intrinsic Immunity
- Biological Mass Spectrometry

- **ARI:**

- Sound Guided Tissue Regeneration Group
- Cartilage and Intervertebral Disc Group



# FTM as the focal point spreading the knowledge to its local partners and then to the wider community





- **Dedicated focus on early stage researchers**

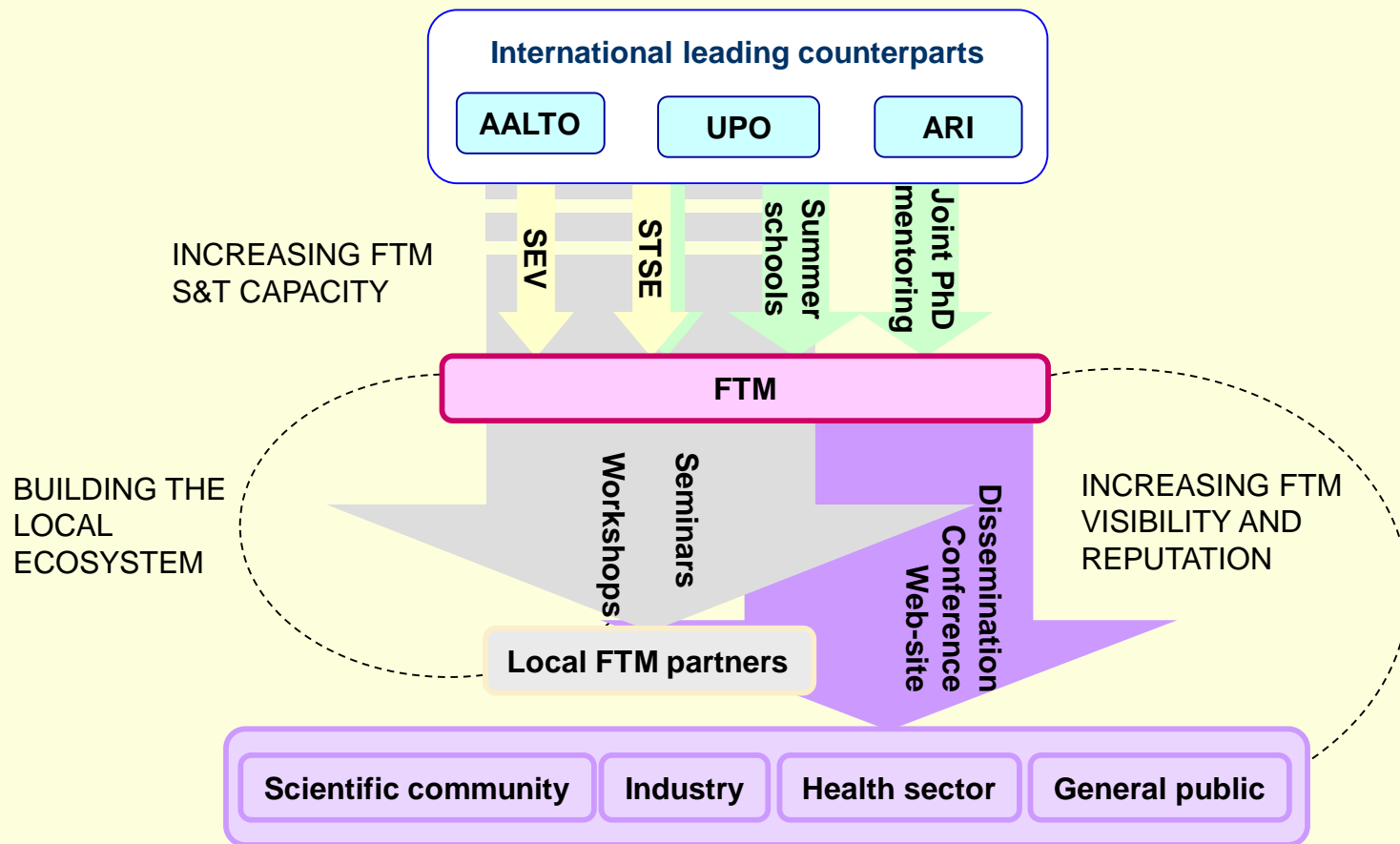
**Dedicated focus on strengthening the research management and administration skills**

**formation of an internal expert group at**

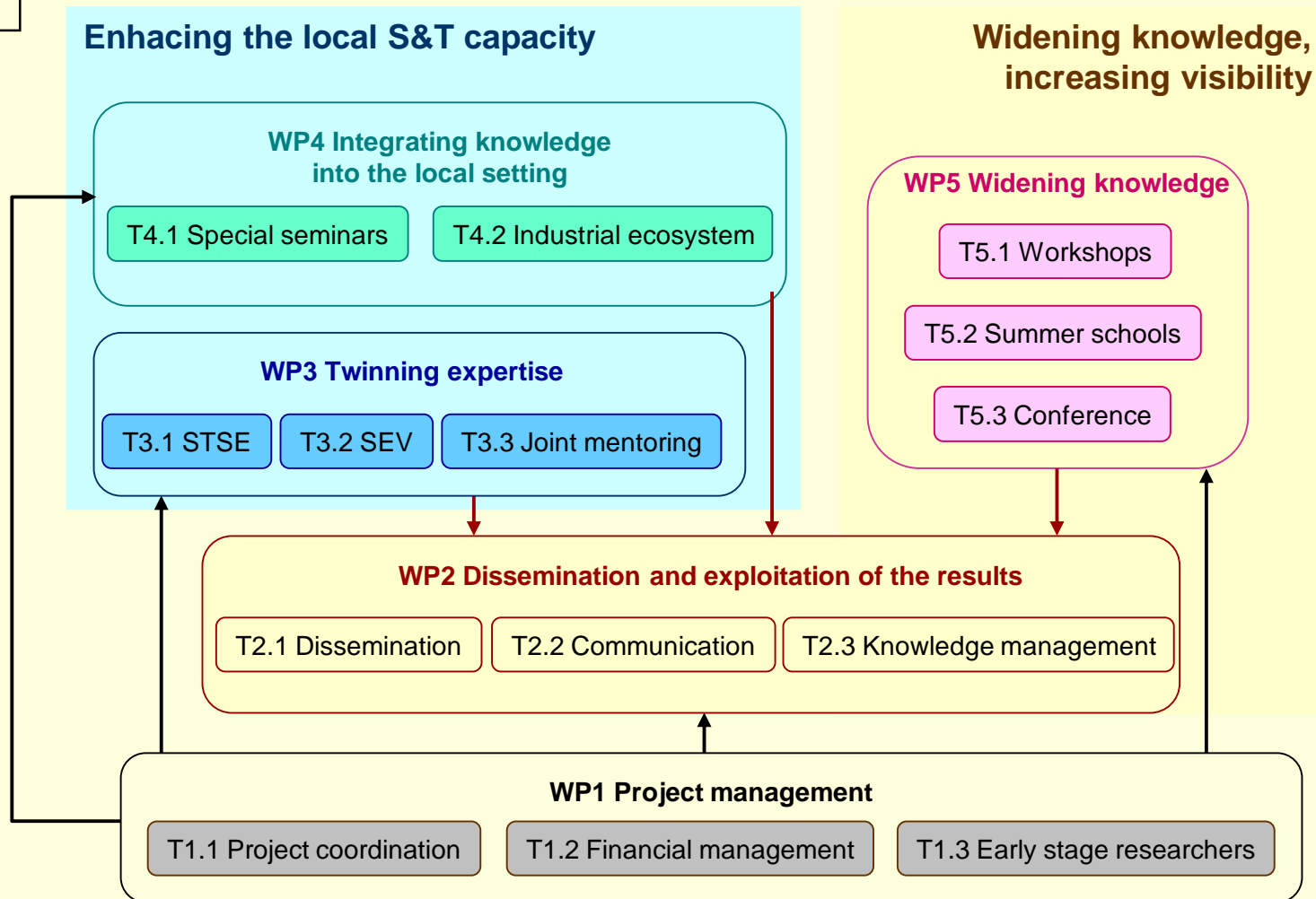
**FTM**



# Project activities and outcomes



WP6 Ethics



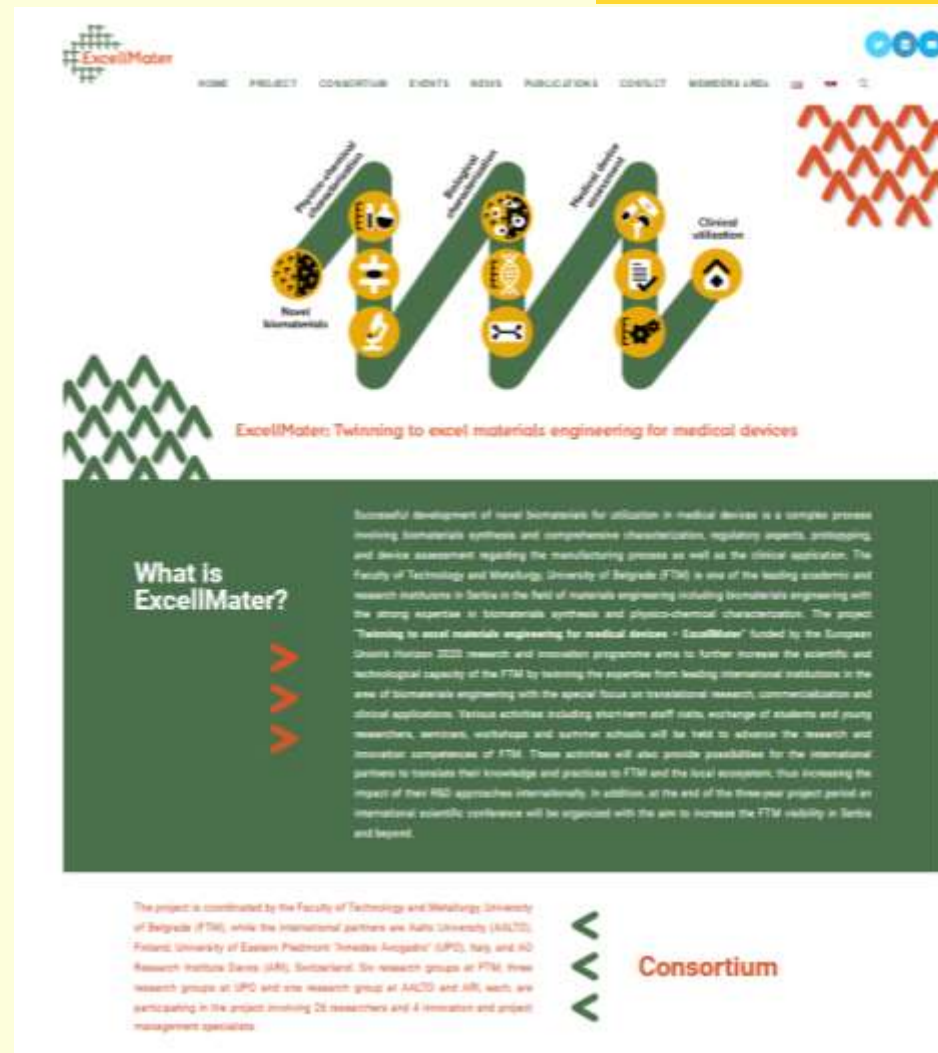
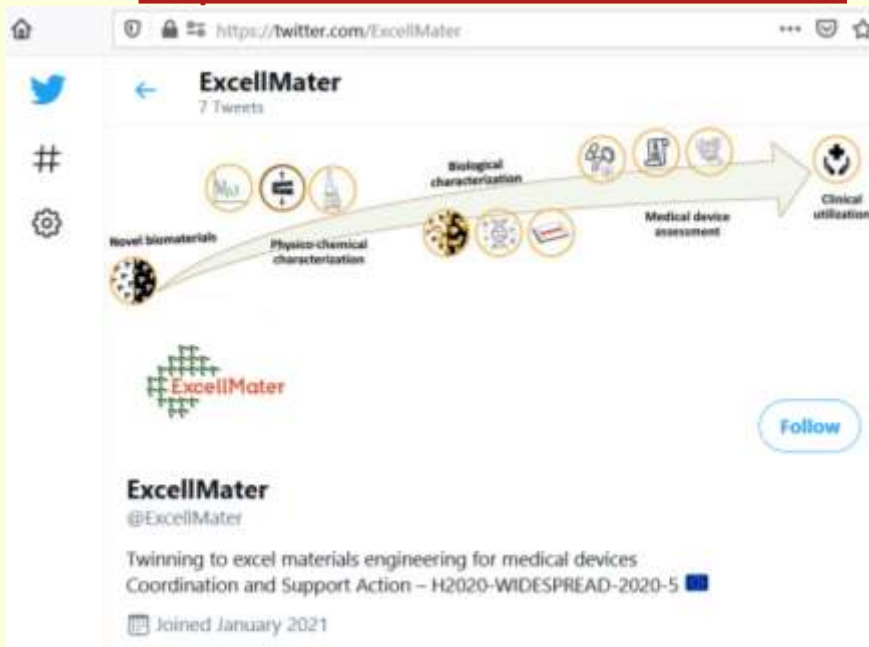
# ExcellMater Work done so far

- **Kick off meeting:**  
November 12, 2020, online



# ExcellMater Work done so far

- 3 PSC meetings
- ExcellMater website  
<https://excellmater.tmf.bg.ac.rs/>
- Twitter account  
<https://twitter.com/ExcellMater>



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# Work done so far

- **Scheduling STSE, SEV and events: ongoing**  
**all activities moved to end of 2021, 2022 and 2023**
- **Communication activities: ongoing (flyers, videos, with the help of the student organization at FTM)**
- **Planned joint participation in several conferences (YUCOMAT2021, TERMIS2021 (joint symposium accepted), EORS2021, ESB2021)**
- **Plan for some joint experiments (currently mostly exchange of samples for characterization)**
- **Additional online events?**



**Thank you for your attention!**

