

# Project Partners



# Contact

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Join us at:



OActiveProject



Advanced personalised,  
multi-scale computer  
models preventing  
OsteoArthritis

SC1-PM-17-2017

Personalised computer models  
and in-silico systems for well-being

## Project Details

Start date: 01/11/2017

Duration: 3 Years

EU Contribution: EUR 4,984,033.75



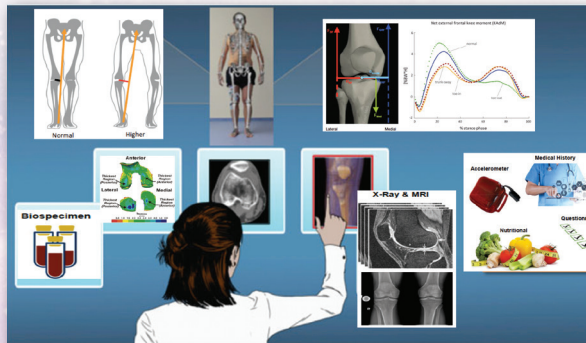
This project receives funding from the European Union's Horizon 2020 Framework Programme for research and innovation under grant agreement no 777159.

Visit OActive website  
[www.oactive.eu](http://www.oactive.eu)

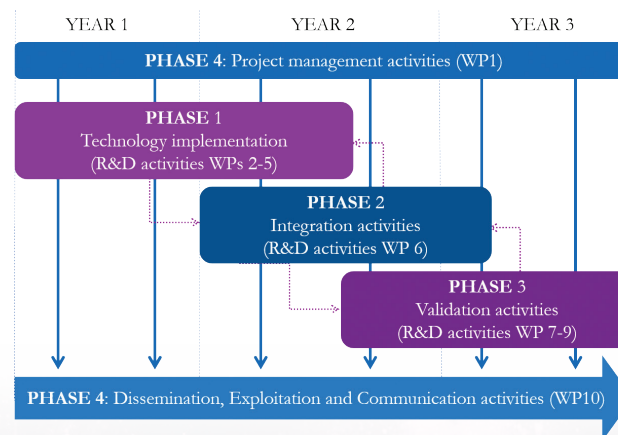
# Project Description

Through OActive project a multi-scale holistic analysis will be adopted, where patient-specific information from various levels, including molecular (e.g. biochemical/ inflammatory biomarkers), cell, tissue and whole body, will be integrated and combined with information from other sources such as, environmental, behavioural and social risk factors to generate robust predictors for new personalised interventions for delaying onset and/ or slowing down progression of Osteoarthritis (OA). OActive targets patient-specific OA prediction and interventions by using a combination of mechanistic computational models, simulations and big data analytics. Augmented Reality (AR) empowered interventions will be developed in a personalised framework allowing patients to experience the treatment as more enjoyable, resulting in greater motivation, engagement, and training adherence.

0Active's mission is to improve healthcare  
by transforming and accelerating  
the OA diagnosis and prediction



## 0Active Work Plan



## Objectives

- 
- Mechanistic modelling framework  
of the musculoskeletal system
- Systemic health and inflammation  
modelling framework
- Hypermodelling framework  
empowered by big data
- Behavioural, social, environmental  
modelling framework
- Ontology-based framework for  
data/models reusability and sharing
- Personalised interventions using  
Augmented Reality (AR)
- In vivo and in vitro studies and  
validation in large data registries

## Impacts

Benefit for health and well-being:  
Prediction, Treatment & personalized interventions

Predictive and preventive methods focusing on the integrated diagnosis, treatment and prevention of disease

Uncover how  
medical, biological  
and environmental  
factors interact

Employing knowledge discovery techniques capable of extracting interpretable rule-based knowledge from clinical time series

Direct savings for the Health system

Societal benefits  
related to research  
and job creation