

Value-based Software Engineering Lessons Learnt from Sustainable Food Systems

30 September 2020

SEAD

Software Engineering
and Design

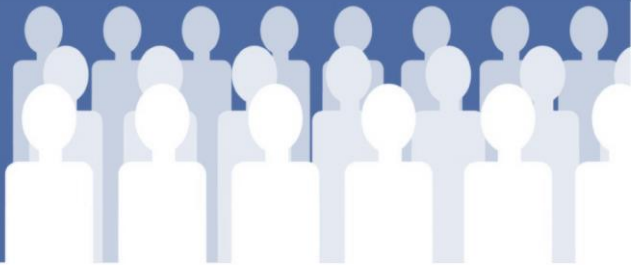


The Open
University

THE OPEN UNIVERSITY

The UK's Largest University

173,927
formal students



34%

enter with two
A Levels or less



88%

of the FTSE 100
have sponsored
staff with the OU



3 in 4

students are
already in work



61,000

STEM
students



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Empower our students, industry and wider society, to leverage digital technologies to solve the problems of the future.

Our Vision:

Be the world leader in **open, innovative distance teaching of computing and communications**, founded on **excellent research and scholarship**.

We offer a range of undergraduate and postgraduate qualifications to >11,000 students.



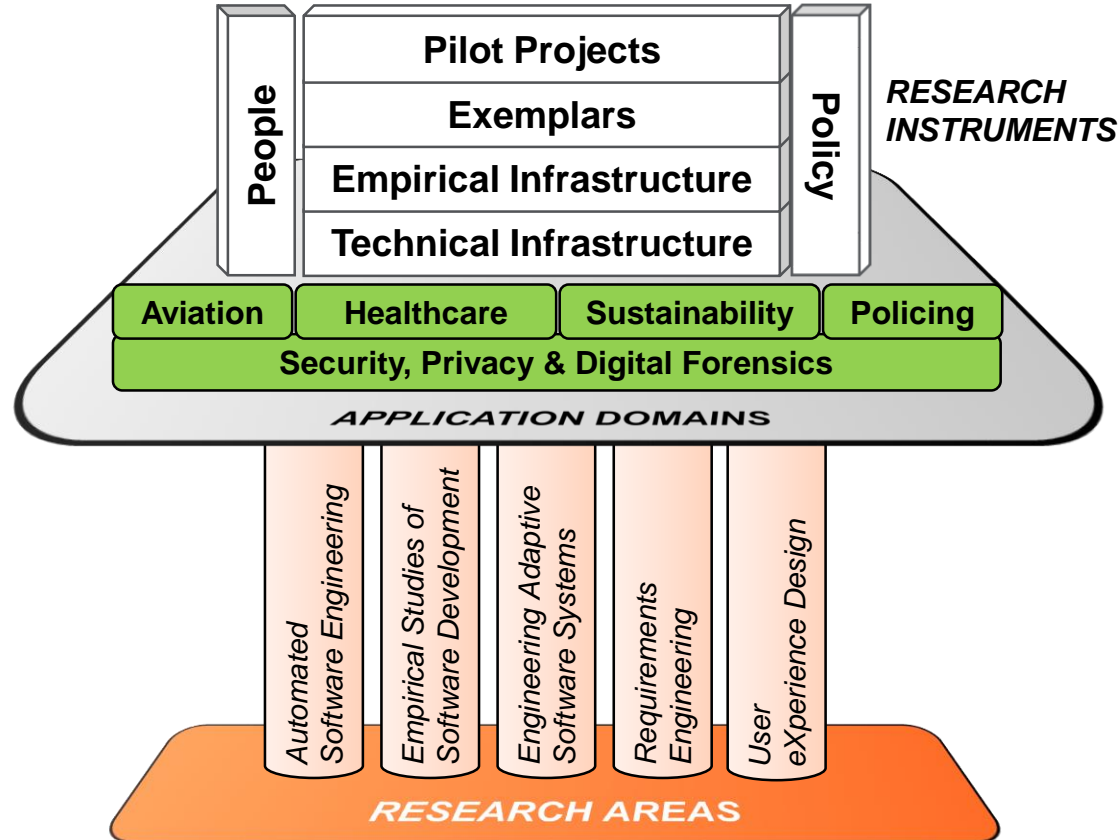
Software in The World

We investigate and develop systematic approaches for engineering secure, adaptive and usable software systems in a complex and changing socio-technical World

HOW WE LIVE



SOFTWARE WITHOUT BOUNDARIES



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Research Areas

- Engineering Adaptive Software Systems
- Automated Software Engineering

Application Domains

- Collaborative Security
- Resilient autonomous systems
- Sustainability (Food Security)

Key Research Challenge:

- Defining methods and techniques that ensures interoperability and security in highly dynamic computing systems such as the Internet of Things

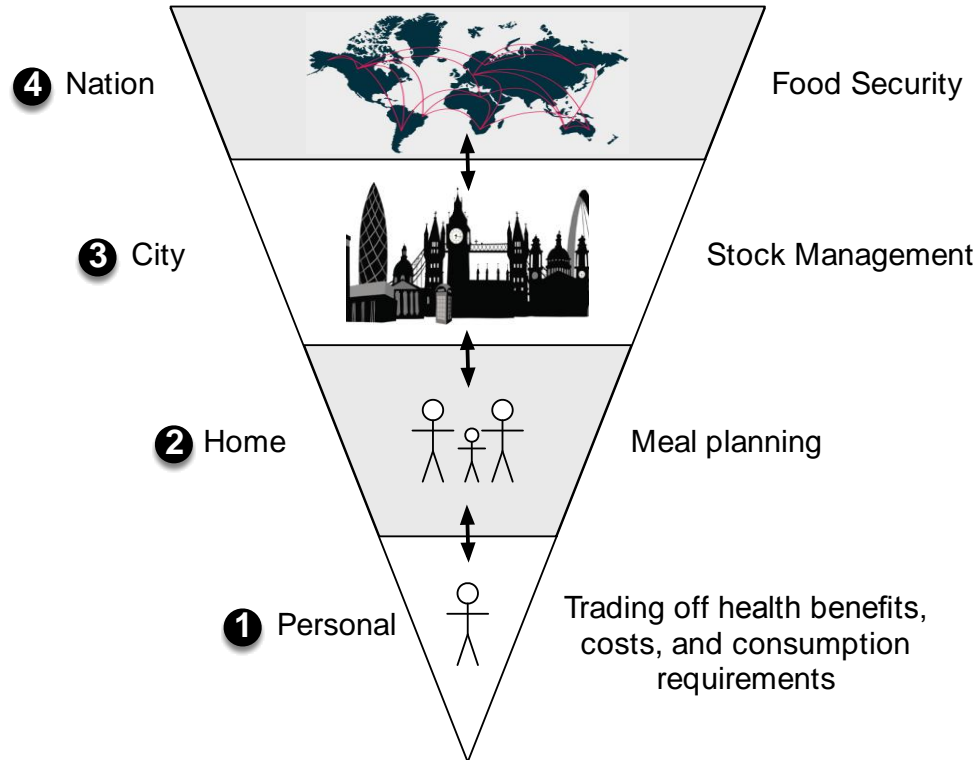
Why Responsible Software Engineering

- Why should we care?



- How can we/Software Engineers help?

An Exemplar for Engineering Adaptive Software



What properties does our systems need to have?



- Explores users' reactions to futuristic or controversial technology
- Positive (utopian) and negative (dystopian) versions of the same story
- Elicit a wide spectrum of requirements

- *Eliciting and modelling* ethical values of individuals and groups (social and business) in managing ICT resources
- *Matchmaking* ethical values between stakeholders' as well as between their actions and desires
- Provide *recommendations* based on the ethical consequences of certain decisions and choices

THANK YOU