

## CAREGIVERSPRO-MMD: a European platform to support people living with dementia and their caregivers

Rosie Dunn<sup>1,2</sup>, Paraskevi Zafeiridi<sup>1,2</sup>, Emma Wolverson<sup>2</sup>, Kevin Paulson<sup>1</sup>, Caroline White<sup>1,2</sup>

<sup>1</sup>School of Engineering, University of Hull, Hull, United Kingdom

<sup>2</sup>Department of Psychological Health and Wellbeing, University of Hull, Hull, United Kingdom

### Background

Due to the increasing number of people with dementia (PwD) and their care costs, research has explored low cost-effective interventions to improve PwD and caregivers' lives (Blom et al., 2013), including web-based interventions.

Research has shown benefits of technology-based interventions for PwD, such as improvement in quality of life (Buettner et al. 2010) and on caregivers' experienced burden and depression (Beauchamp et al., 2005).

However, current online interventions often aim to support single needs instead of multiple needs (Meiland et al., 2014) and are often developed without the involvement of PwD (Wilkinson, 2002; Bharucha et al., 2009).

### CAREGIVERSPRO-MMD Platform

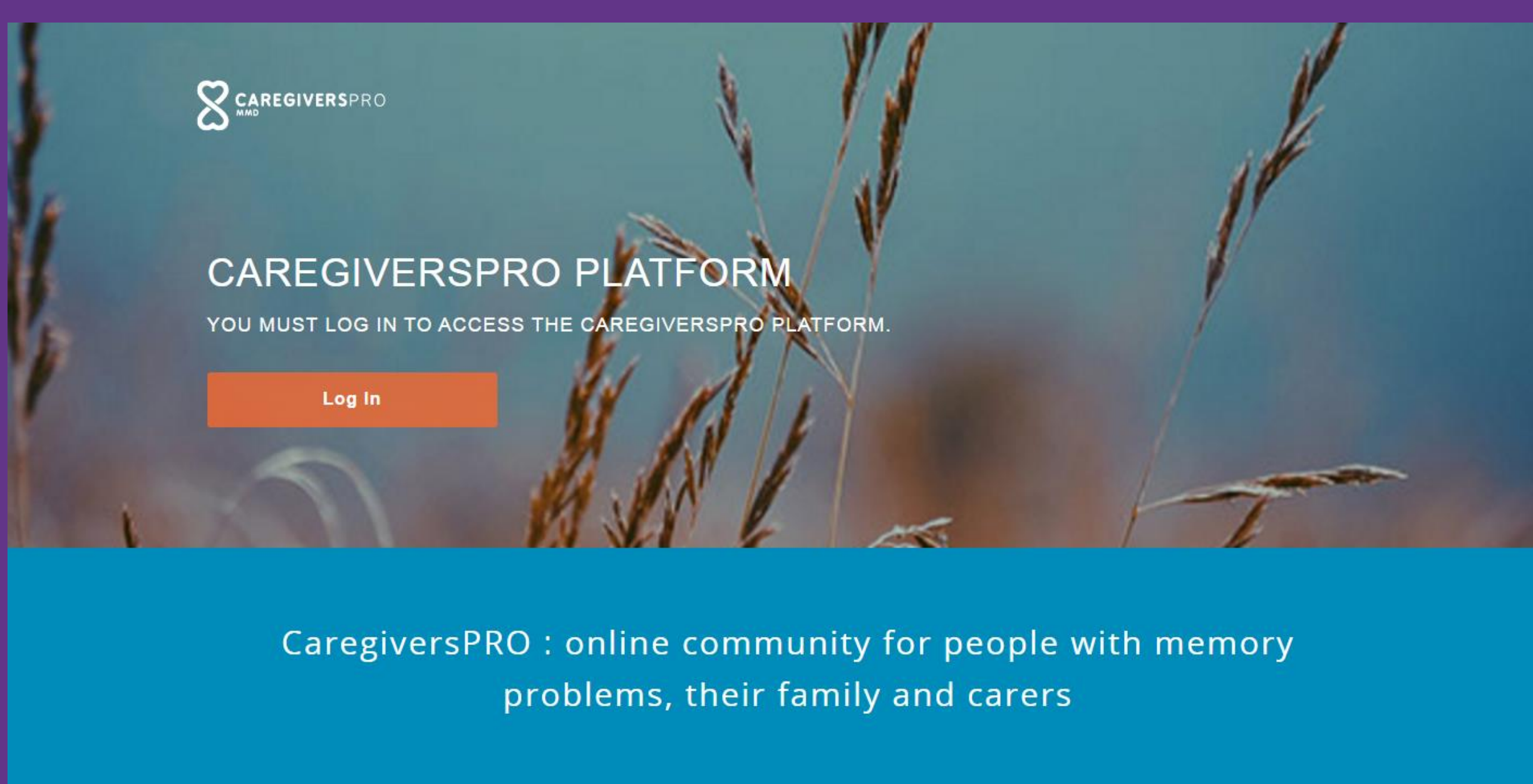
CAREGIVERSPRO-MMD is a European project, aiming to develop a platform for People with Dementia (PwD) or Mild Cognitive Impairment (MCI) and their caregivers. This platform will incorporate a combination of ICT interventions and services, including:

- A **social network**, where users can interact with each other and seek support
- **Educational interventions**, such as advice on caring for someone living with dementia
- **Medication and appointment reminders**, including important information about taking medication
- **Online questionnaires**, where users can self-monitor their health and wellbeing
- Information about **local resources** and support
- **Gamification**, providing users with a fun reward scheme to gain users' interest

A series of focus groups and usability studies are being carried out with PwD/MCI, caregivers and healthcare professionals in order to inform the design and content of the platform.

### Aim

There are two main objectives; improve **quality of life** for PwD and **reduce caregivers' stress**. Other secondary objectives are identified, such as reductions in depression and anxiety, improvements in activities of daily living, treatment adherence and quality of relationships.



### Method

#### Design

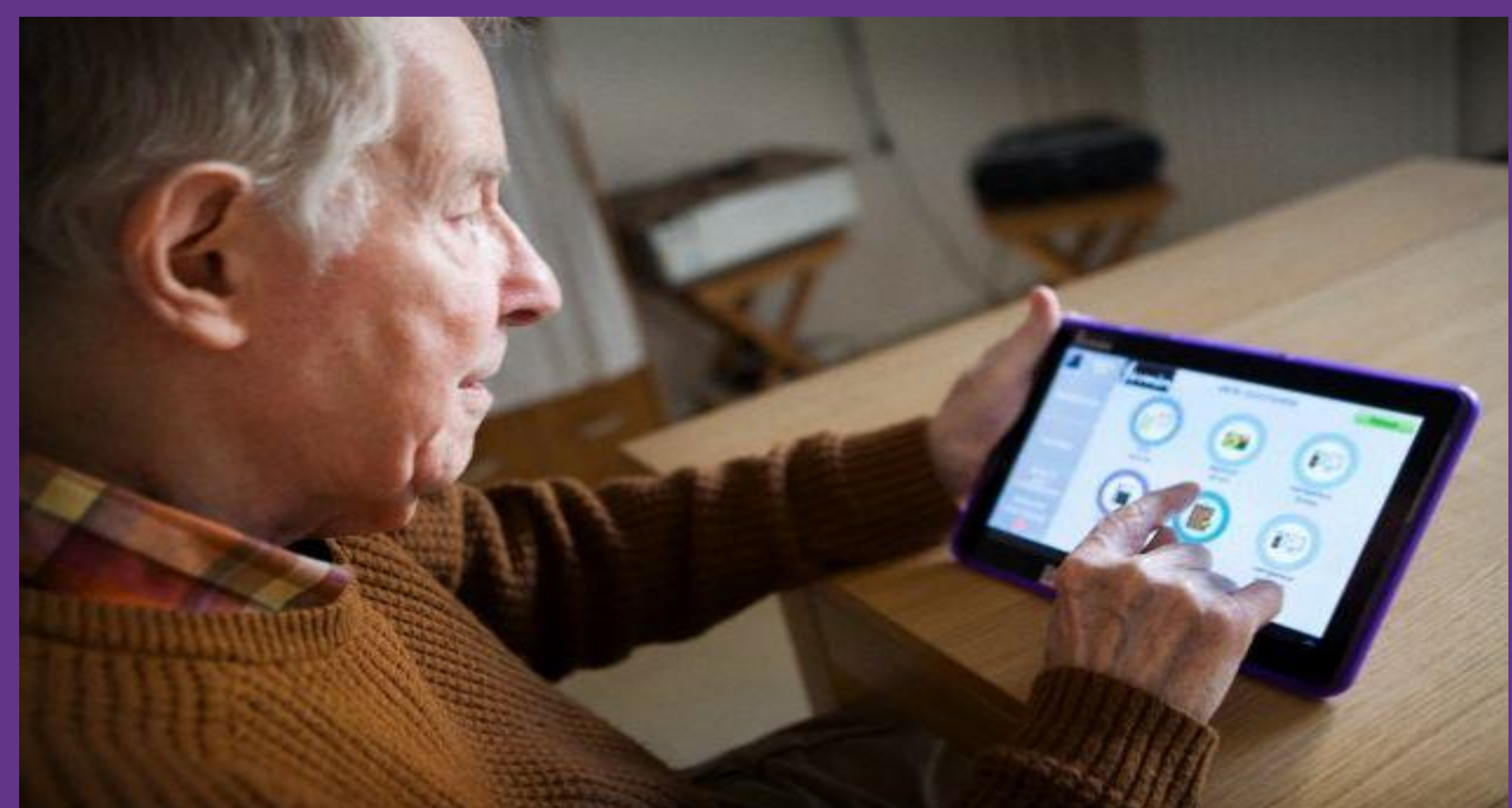
A randomised controlled trial will run from May 2017 for 18 months.

#### Participants

600 dyads (PwD or MCI and their carers) across Europe, who will be allocated to intervention or control group.

#### Procedure

Participants will be given training and access to tablets and the platform. They will use the platform for the duration of the pilot, and will contribute to data collection for the objectives of the study on a six-month basis.



<http://www.promatixbi.com/hubfs/oldmanipad.jpg?r=1476453724852>

### Expected Results

#### PwD

An improvement in quality of life, activities of daily living treatment adherence, neuropsychological functioning and reduction in anxiety and depression.

#### Caregivers

Reduction in caregivers' stress, anxiety and depression. Improvement in quality of life, perceived social support, self-esteem, purpose and optimism.

#### Dyad

Improvements in the quality of the relationship between PwD and caregiver.

#### Healthcare professionals

Improve decision-making for treatment, based on behavioural, medical, psychological and social changes, allowing future improvement in care plan interventions.

#### Healthcare system

Reduce or delay hospitalisations or admission to care homes for PwD/MCI.

### Conclusions

CAREGIVERSPRO-MMD is expected to be a useful tool for supporting PwD or MCI, their caregivers and healthcare professionals.

### References

- Beauchamp N, Irvine AB, Seeley J, et al. 2005. *Worksite-Based Internet Multimedia Program for Family Caregivers of Persons With Dementia*. *The Gerontologist* 45: 793–801.
- Bharucha, A. J. et al. (2009) Intelligent assistive technology applications to dementia care: current capabilities, limitations and future challenges. *American Journal of Geriatric Psychiatry*, 17, 88–104.
- Blom MM, Bosmans JE, Cuijpers P, et al. 2013. *Effectiveness and cost-effectiveness of an internet intervention for family caregivers of people with dementia: design of a randomized controlled trial*. *BMC Psychiatry* 13: 17.
- Buettner, L.L., Yu, F., & Burgener, S.C. (2010). Evidence supporting technology-based interventions for people with early-stage Alzheimer's disease. *Journal of gerontological nursing*, 36(10), 15-19.
- Meiland, F. J. M. et al. (2014) Participation of end users in the design of assistive technology for people with mild to severe cognitive problems; the European Rosetta project. *International Psychogeriatrics*, 26(05), 769-779.
- Wilkinson (2002) *The Perspectives of People with Dementia*. Research Methods and Motivations. Jessica Kingsley Publishers Ltd.



"CAREGIVERSPRO-MMD project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 690211"

### Contact

R.J.Dunn@hull.ac.uk