

The PETRAS Data Sharing Foundation: Building a Trustworthy Data Sharing Ecology for IoT Data Assets (PETRAS-DSF)



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INTRODUCTION

The sharing of IoT data has the potential to yield a range of economic and social benefits, but there are several challenges that confront data sharing efforts. Some of these challenges relate to the technical issues of discovering, accessing, integrating, and exploiting data assets that are collected by functionally diverse devices and managed by distinct organisations. Other challenges concern the social, ethical, and legal constraints associated with data sharing—including data protection and acceptability of such data sharing activities.

THE DATA FOUNDATIONS APPROACH

By serving as trustworthy third-party intermediaries for data sharing activities, data foundations have been proposed as a means to address these challenges and support the beneficial and safe exchange of data assets across organisational and device specific boundaries. At a practical level, a data foundation consists of a set of interrelated governance and technical mechanisms that are intended to support data sharing activities as part of trusted research environments (TREs). TREs are safe and secure platforms supporting workspaces for approved research that can be remotely accessed by approved researchers.

PROJECT AIMS

- To advance the TRE concept specifically-targeting evolving IoT systems and the requirements of related research communities over the next five years.
- To establish a roadmap for a PETRAS-DSF (based on the data foundations approach) in order to provide for greater opportunities to exploit PETRAS data assets in a safe and secure manner via an advanced TRE; and, increase prospects of collaborative research activities that cross-cut individual projects for both established and evolving areas of IoT research and innovation.



Figure 1



Figure 2

PROJECT TIMELINE

Start date: April 2021
Finish date: September 2022

INSTITUTIONAL TRUST

The project will also advance our understanding of some of the issues that influence the extent to which data foundations are perceived as trustworthy institutions, as well as the various forces and factors that can limit user participation and engagement with a data foundation.

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PROJECT PARTNERS

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