

Bringing together Smart Cities and Living Labs from around Australasia

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SUMMARY

With many ongoing and planned smart city projects and living labs being built around Australasia a plethora of data are collected with the potential to be shared and used in collaborative e-Research projects.

Smart city projects share common themes that are intrinsically interconnected, e.g., the management of energy and water resources, landscape architecture and the built environment, optimisation of transport modes and routes, liveability of open spaces [1,2,3]. However, a holistic nexus approach is rarely undertaken and the outcomes of the different smart city projects seldom shared.

The concept of a living lab, a user-centered and user-driven test bed and open innovation ecosystem, is becoming an attractive solution to integrate the different aspects of smart cities in one building, precinct or suburb [4,5,6], often involving real-time monitoring of the specific aspects of interest, e.g., energy and water usage, consumer's practices, building performance.

Although they usually have common goals and motives, current smart cities and living labs projects are often disparate and disconnected with each other, thus making it difficult to uncover the data sets they generate and share the lessons learnt. Leveraging one of the recognised potentials of our digitisation era that generates large amounts of real-time data, in this BoF we aim at bridging the gap between the data generated by the many smart cities and living lab projects and the scarce knowledge sharing both within and amongst projects. In particular, we will discuss:

- What e-Researchers are doing in this space – what are the kind of data analysis, visualisations and decision tools they use?
- What data is out there and where to find; what data would be good to have to improve insights, and
- How we can enable the sharing of both data and software and encourage collaboration?

SESSION FORMAT

The proposed session will be 60 minutes long and divided into two parts:

Part I

The BoF session will start with a collection of lightning presentations highlighting some of the key players involved in the Smart Cities and Living Labs research space. Some of the discussed topics will include management and future trends of energy and water resources in smart cities, optimisation of transport routes, carbon neutral residential developments, community participation in smart cities initiatives.

Proposed invitees and topics:

- Dr. Rebecca Lange and Dr. Roberta Fornarelli, Curtin Institute for Computation - The Legacy Living Lab: showcasing renewable energy, water, and circular economy research
- Dr. Michael Rigby, AURIN - The Water and Energy Supply and Consumption (WESC) data hub
- Anthony Kimpton, Queensland Centre for Population Research - GIS modelling

Part II

Facilitated discussion on the challenges faced by researchers and data custodians in this space, lessons learned from previous and current projects and a future look to how data and software sharing can be achieved and enable collaborative research. In particular, the discussion will look at the technological, social, and institutional challenges faced as well as the advantages, and potential disadvantages, if any, to sharing data and software.

WHO SHOULD ATTEND

This BoF will be of interest to researchers, research data curators, data librarians, and government representatives in the field of smart cities who collect and/or maintain data collections and would like to discuss opportunities to enable sharing and collaboration across platforms and institutes.

REFERENCES

- [1] The Australian Government Smart Cities and Suburbs Program: <https://www.infrastructure.gov.au/cities/smart-cities/>
- [2] The Sustainable Built Environment National Research Centre (SBEnc): <https://sbenrc.com.au/>
- [3] iMOVE: Moving People. Moving Goods. Advancing Australia. <https://imovecrc.com/>
- [4] Living Labs: Design and Assessment of Sustainable Living; Keyson, D., O. Guerra-Santin, and D. Lockton.; Springer International Publishing Switzerland, 2017
- [5] CSIRO Urban Living Lab: place based co-innovation for urban resilience
<https://www.csiro.au/en/Research/LWF/Areas/Resilient-cities-21C/Urban-challenges/Urban-Living-Lab>
- [6] The European Network of Living Labs (ENoLL): <https://enoll.org/about-us/>