OCAD UNIVERSITY

OCAD University Open Research Repository

2018

The early stage analysis of a systemic innovation lab

Zivkovic, Sharon

Suggested citation:

Zivkovic, Sharon (2018) The early stage analysis of a systemic innovation lab. In: Proceedings of RSD7, Relating Systems Thinking and Design 7, 23-26 Oct 2018, Turin, Italy. Available at http://openresearch.ocadu.ca/id/eprint/2765/

Open Research is a publicly accessible, curated repository for the preservation and dissemination of scholarly and creative output of the OCAD University community. Material in Open Research is open access and made available via the consent of the author and/or rights holder on a non-exclusive basis.

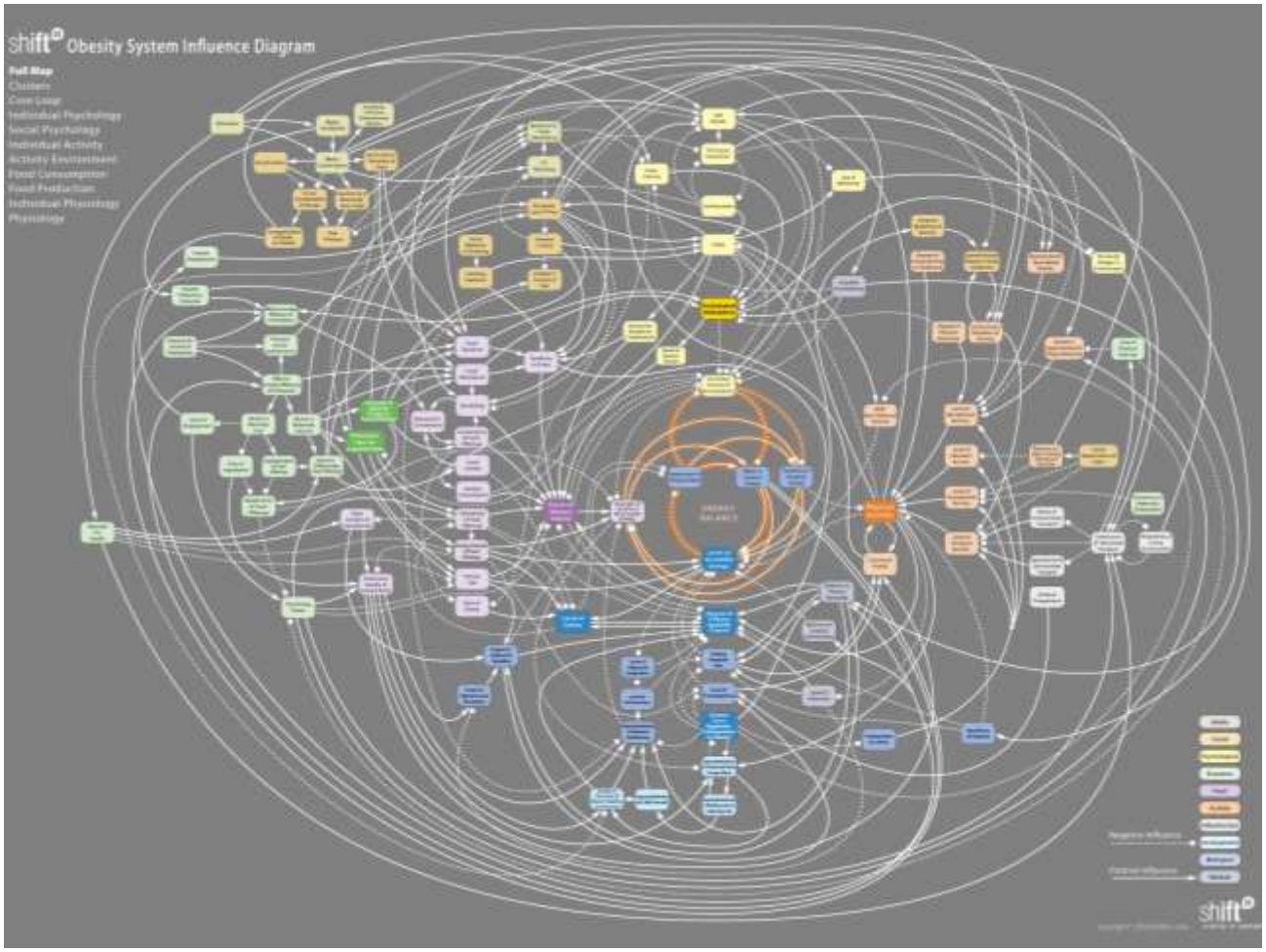
The OCAD University Library is committed to accessibility as outlined in the Ontario Human Rights Code and the Accessibility for Ontarians with Disabilities Act (AODA) and is working to improve accessibility of the Open Research Repository collection. If you require an accessible version of a repository item contact us at repository@ocadu.ca.

The Early Stage Analysis of a Systemic Innovation Lab

Dr Sharon Zivkovic

University of South Australia

Characteristics of Wicked Problems



http://www.shiftn.com/obesity/Full-Map.html

- There are not clear relationships between cause and effect: they are multi-causal
- They have many interdependent elements/parts
- The parts change each other – they adapt
- The problem is constantly changing
- They do not have a right answer

Australian Public Service Commission, 2007

University of South Australia

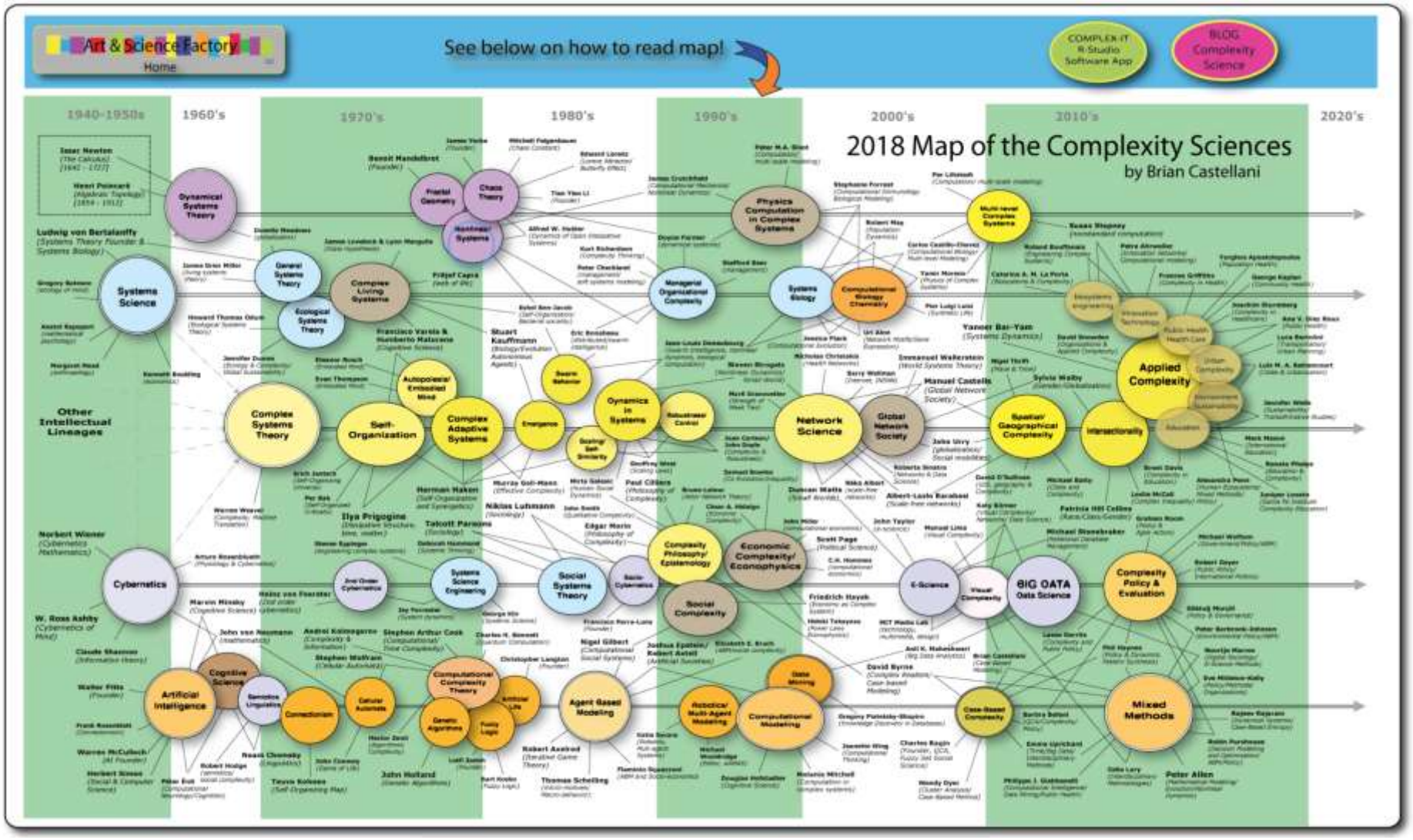
Types of Design

- Include:
  - Service Design
  - Systemic Design

Buchanan, 1992; Jones, 2014

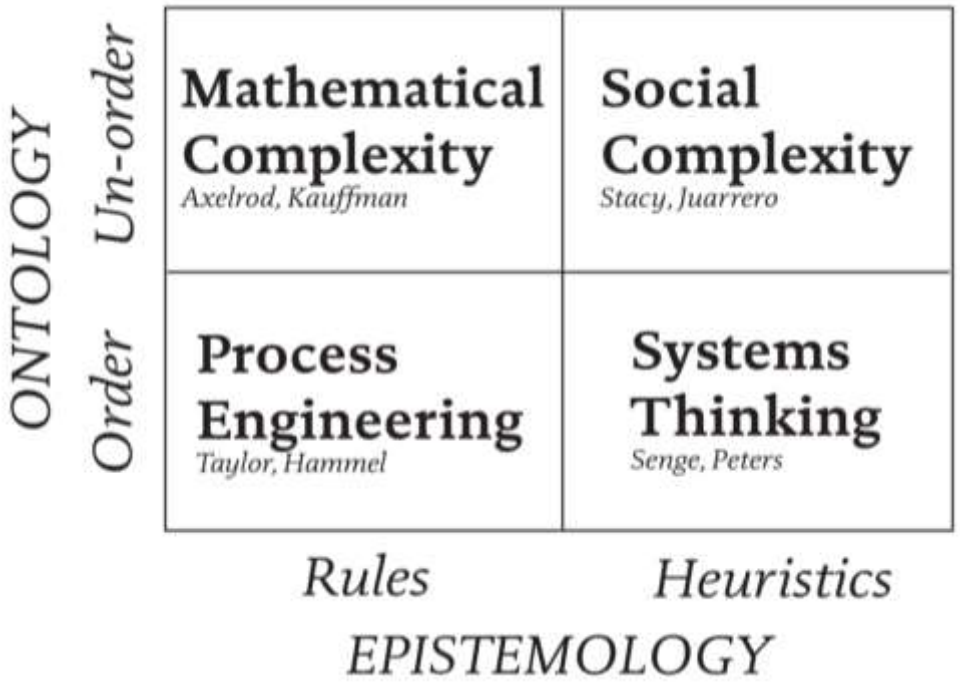
- Systemic Design:
  - Systems Thinking
    - Reduce complexity
  - Applied Complexity Approach
    - Embrace complexity

University of South Australia



http://www.art-sciencefactory.com/complexity-map_feb09.html

University of South Australia



Snowden and Stanbridge, 2004

University of South Australia

Argued: Systems Thinking Not Appropriate

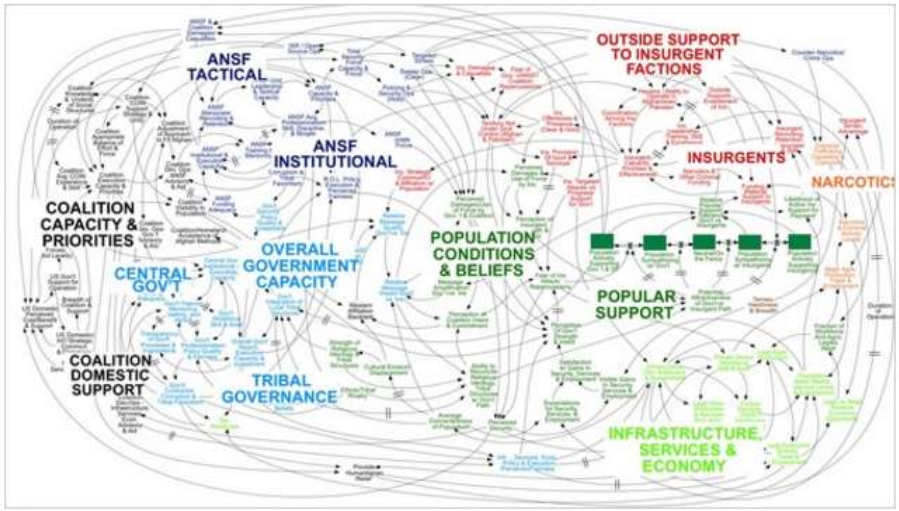
www.nytimes.com/2010/04/27/world/27powerpoint.html

WORLD | We Have Met the Enemy and He Is PowerPoint

WORLD

We Have Met the Enemy and He Is PowerPoint

By ELISABETH BUMILLER APRIL 26, 2010



A PowerPoint diagram meant to portray the complexity of American strategy in Afghanistan certainly succeeded in that aim.

University of South Australia

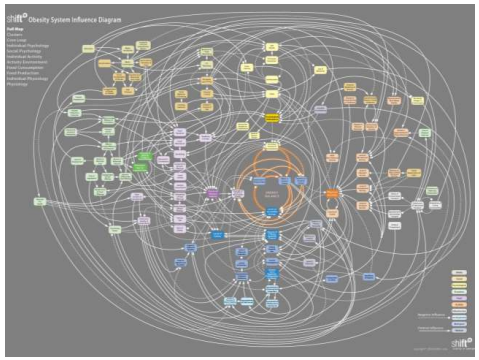
Argued: Systems Thinking Not Appropriate

- risk that the wicked problem could be exacerbated due to
  - undesirable consequences, and

Camillus, 2008, p. 100; Westley et al., 2007, p. 10

  - other problems

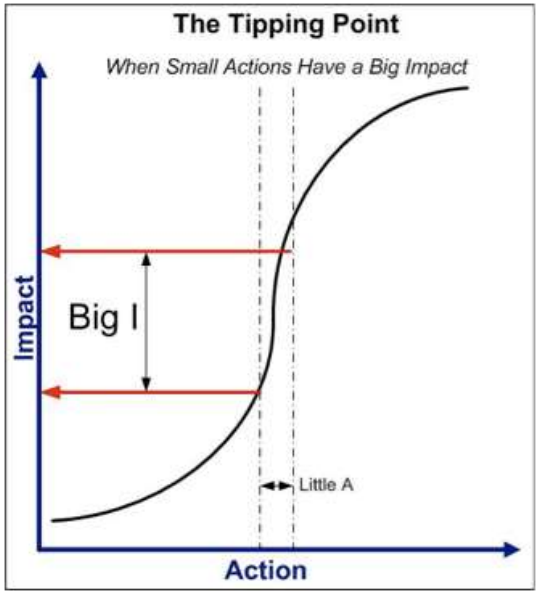
Grint, 2005, p. 1473



University of South Australia

Argued: Systems Thinking Not Appropriate

- Small causal factor could have a big impact



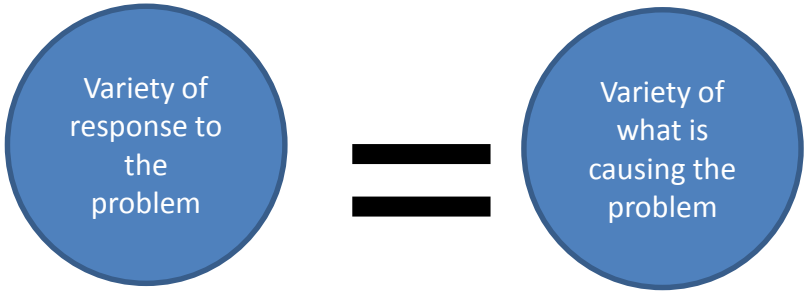
http://louadlergroup.com/two-challenges-you-must-tackle-to-hire-the-best-passive-candidates/

University of South Australia

Choosing Correct Approach

Law of Requisite Variety

Ashby, 1956



Law of Requisite Variety

- ‘In theory, this means that to control such a system [wicked problem], we need as many elements in the control as there are states the system can take on.’

Batty, M. (2010)

University of South Australia

Complex Adaptive Systems

University of South Australia

Design Initiatives to Assist Positive Emergence

- empirical research has shown large complex systems, such as communities, require enabling conditions to be created in order to maintain the coordination required for emergent self-organisation and adaptive capability

McKelvey and Lichtenstein, 2007

Design Initiatives to Assist Positive Emergence

- ‘Emergence follows a now well-understood route .....In other words, a new order appears if forces at play exert tension on the system; a small change, if amplified, leads to a transformative process which, fuelled with the new imported resources and positively reinforcing forces, leads to a new equilibrium’

Thietart, R. And Forgues, B (2011), ‘Complexity Science and Organisation’, in the SAGE Handbook of Complexity and Management.

University of South Australia

Log in Register Help Cart Admin Blog

emeraldinsight

HOME JOURNALS & BOOKS CASE STUDIES OPEN ACCESS

Resource areas: Emerald Resources

This Journal

Advanced Search

HOME / BROWSE JOURNALS & BOOKS / SOCIAL ENTERPRISE JOURNAL / VOLUME 14, ISSUE 3 / SYSTEMIC INNOVATION LABS: A LAB FOR WICKED PROBLEMS

Systemic innovation labs: a lab for wicked problems

Author(s): Sharon Zivkovic , (University of South Australia, Mawson Lakes, Australia)

Abstract:

Purpose

The purpose of this paper is to question the appropriateness of current lab types for addressing wicked problems. A new lab type, a Systemic Innovation Lab, is proposed which combines the features of existing labs that are suited to addressing wicked problems.

Design/methodology/approach

Characteristics of initiatives that are considered appropriate for addressing wicked problems and existing lab types that contain any of these characteristics are identified. These lab types are Social Innovation Labs, Living Labs, Urban Living Labs, Urban Transition Labs and Public Sector Innovation Labs. The proposed new lab type is reasoned by combining the features of existing labs that are suited to addressing wicked problems. How the new lab would work in practice is illustrated with a case study.

Select Language

Powered by Google Translate

Article Options and Tools

PDF Full text

Citation and Reference More

Favourites

Reprints & Permissions

Journal Information

Social Enterprise Journal

ISSN: 1750-8614

University of South Australia

Systemic Design Principles

- Idealization
- appreciating complexity
- purpose finding
- boundary framing
- feedback coordination
- system ordering
- generative emergence
- continuous adaptation
- self-organizing
- requisite variety

Jones, 2014

- Align with Applied Complexity Approach to Systemic Design

Zivkovic, 2018

University of South Australia

Systemic Innovation Lab

- Supports systemic design, solution ecosystem and systemic innovation approaches.

- Contains key features recommended for addressing wicked problems.

Zivkovic, 2018

University of South Australia

Labs with Features as Defining Features

	Social Innovation Lab	Living Lab	Urban Living Lab	Urban Transition Lab	Public Sector Innovation Lab
Focuses on addressing complex problems	✓			✓	
Takes a place-based approach				✓	
Takes a transition management approach				✓	
Enables coherent action by diverse actors	✓	✓	✓	✓	
Involves users as co-creators		✓	✓	✓	
Supports networked governance approach			✓	✓	
Focuses on government as enabler of change					✓

Zivkovic, 2018

University of South Australia

Systemic Innovation Lab

- Macro Level
  - Collaboration of diverse stakeholders including users and government.
    - Take a transition management, systemic innovation and networked governance approach that is enabled by government.
- Meso Level
  - Solution ecosystem of initiatives and the organisations that are collaborating on these initiatives.
    - Each initiative addresses one or more of the numerous causal factors that underpin the targeted wicked problem.
- Micro Level
  - Specific methodology used by a Systemic Innovation Lab
    - Based on systemic design: a core set of principles that are a crossover between design and complexity theory.

Case Study: FEMLAS Methodology

University of South Australia

Wicked Lab

Leading in complexity

Emily Humphreys - CEO and Cofounder

As an entrepreneur Emily has worked across a number of industries in a variety of different roles. She has over 15 years experience leading teams across software development, marketing and sales in new and existing businesses to deliver niche software solutions that solve problems. Her experience spans a number of industry sectors including social innovation, education, fashion, retail, automotive, defence and eLearning.

Emily was one of 40 winners represented in South Australia's 2018 40 under 40 awards. She holds a Masters of Science and Technology Commercialisation (University of Adelaide), Graduate Certificate in Entrepreneurship (University of Adelaide) and a Bachelor of Social Science (University of Adelaide).

Dr Sharon Zivkovic - CIO and Cofounder

Sharon is a social entrepreneur and has worked with diverse community stakeholders on community capacity building projects for over 20 years.

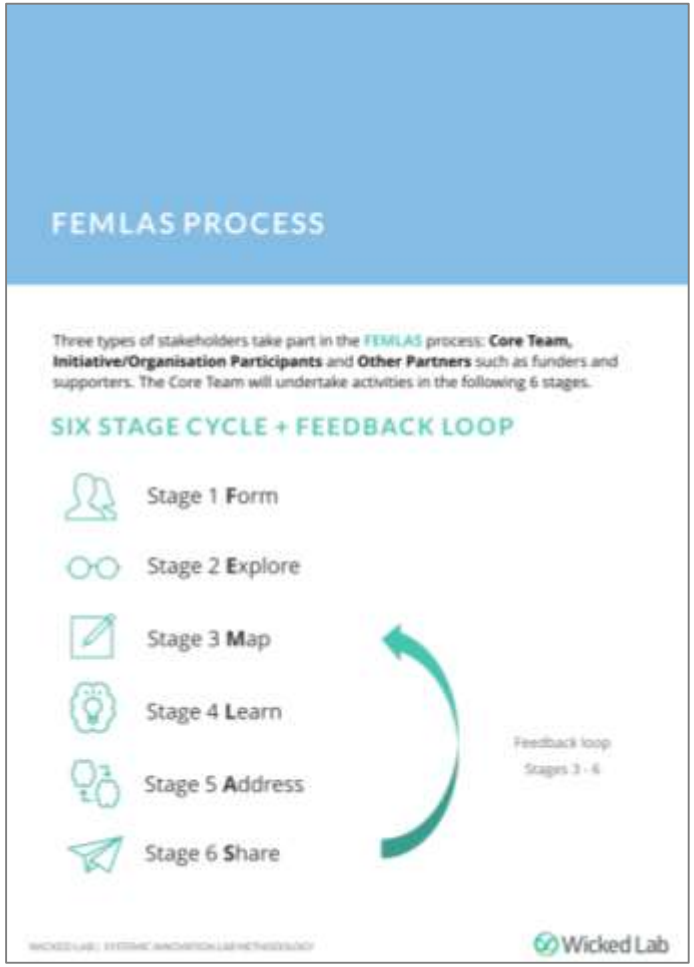
Wicked Lab's model which underpins the Tool for Systemic Change was developed as part of Sharon's PhD thesis. In 2012 Sharon received the Award for Best Overall Paper at the International Social Innovation Research Conference for a paper describing this model and in 2016 she received a Fresh Scientist award for her work in addressing wicked problems using complexity science. She also Co-Chairs the complexity stream at the International Social Innovation Research Conference.

Sharon holds a PhD (University of South Australia), Vocational Graduate Certificate Education and Training for Sustainability (Swinburne University), Graduate Certificate in Research Commercialisation (University of South Australia), Master of Entrepreneurship (University of Adelaide), Graduate Diploma of Education (University of South Australia) and Bachelor of Accountancy (University of South Australia).

WICKED LAB

FEMLAS PROCESS

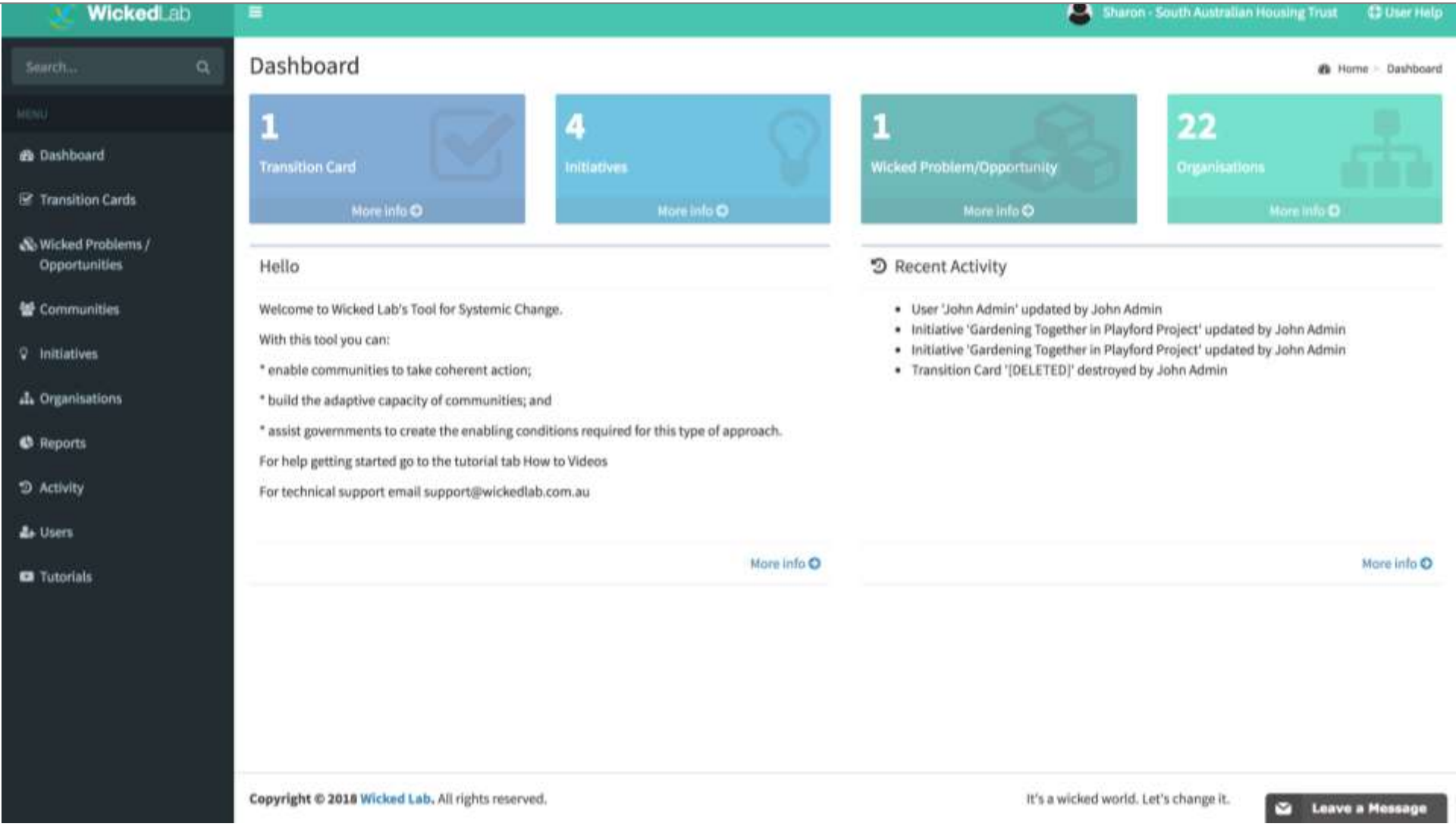
WICKED LAB'S
SYSTEMIC INNOVATION LAB
METHODOLOGY



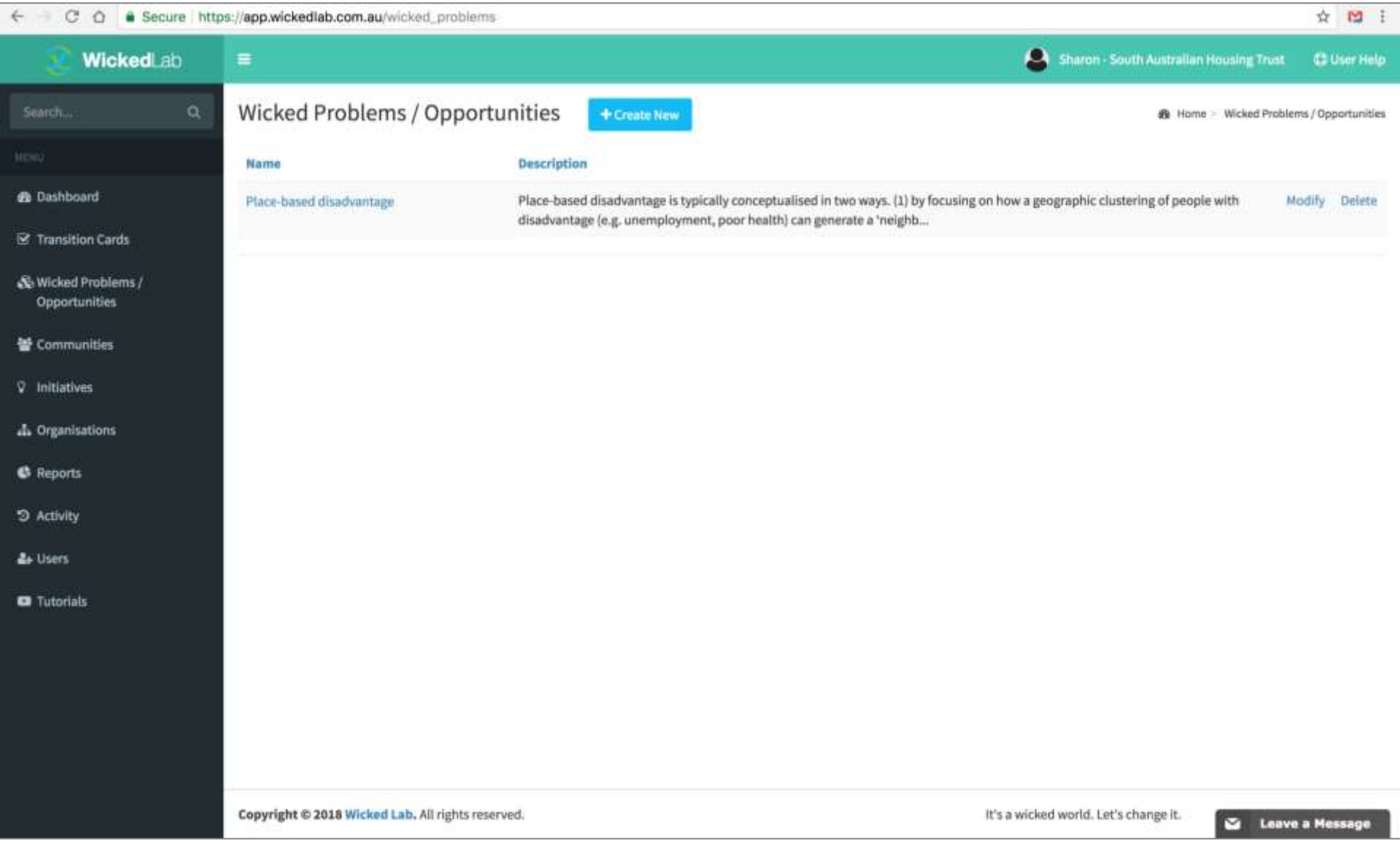
University of South Australia

FEMLAS: Form Stage

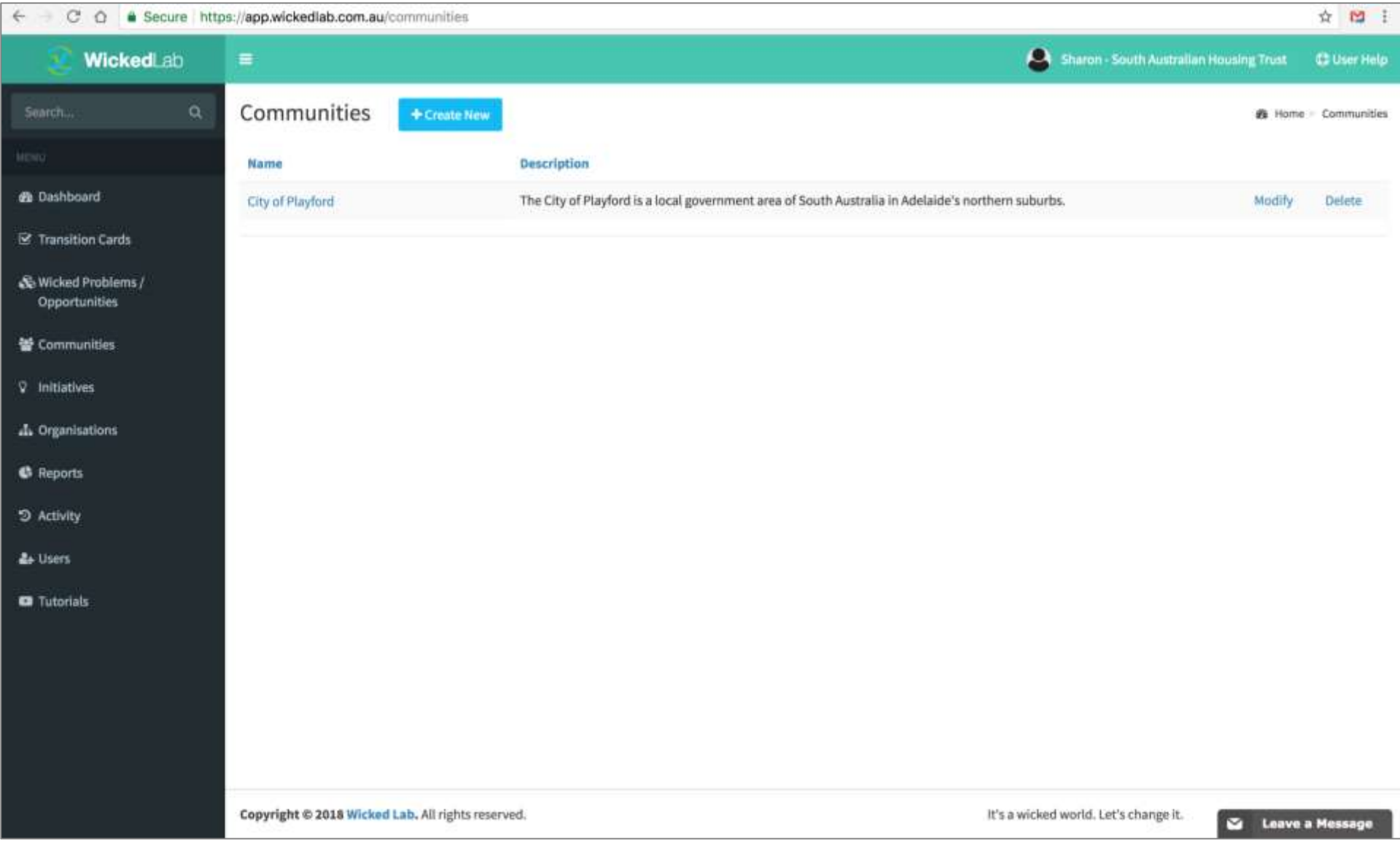
- Form core team
- Build core team capability
  - Commence Elective: Systemic Innovation Labs
  - Unit 1 Complex Systems Leadership Program
- Define solution ecosystem boundary
- Frame solution ecosystem
- Undertake initial mapping of solution ecosystem initiatives and organisations
  - Based on the core teams' knowledge and experience
  - Using Tool for Systemic Change



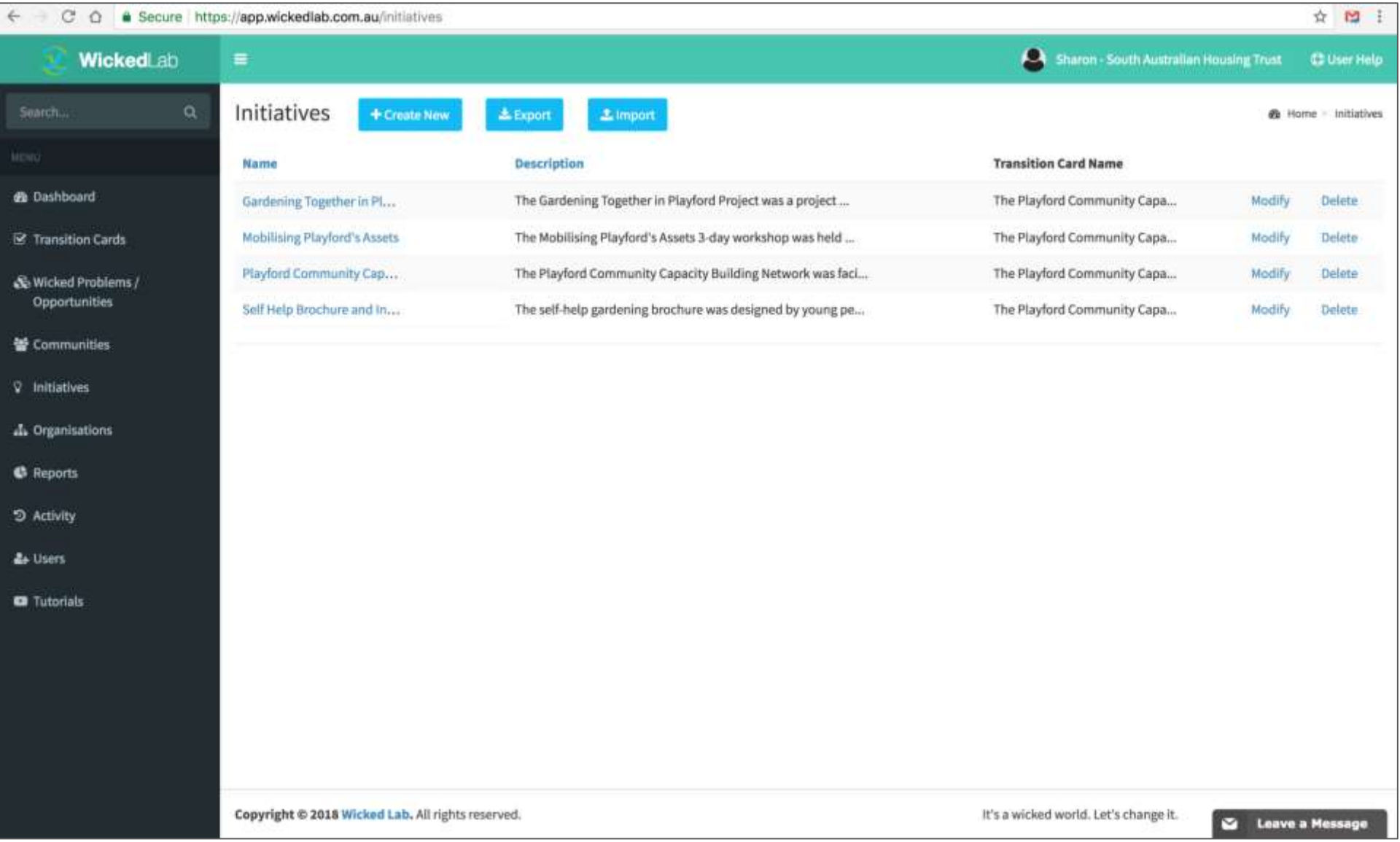
University of South Australia



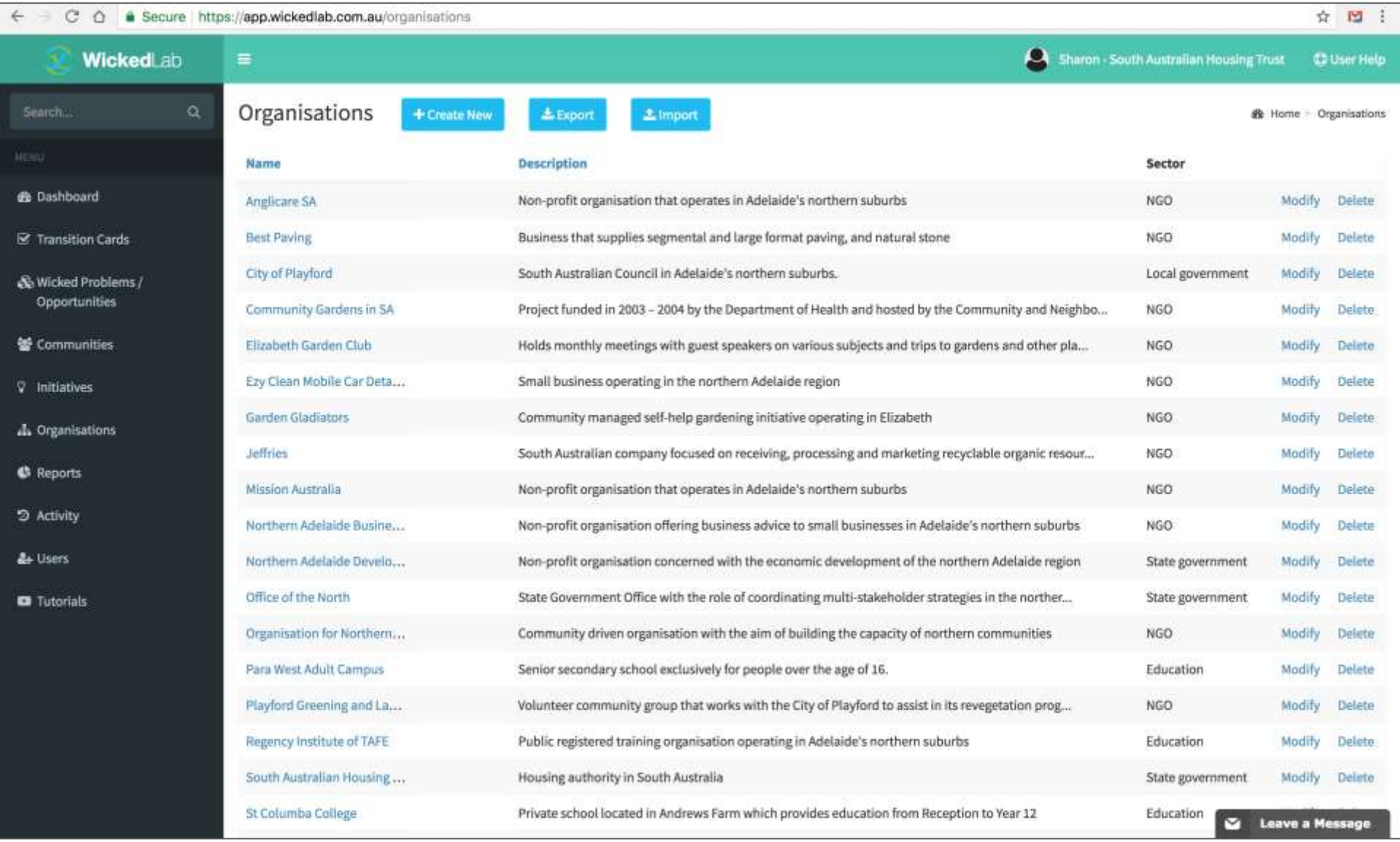
University of South Australia



University of South Australia



University of South Australia



University of South Australia

FEMLAS: Explore Stage

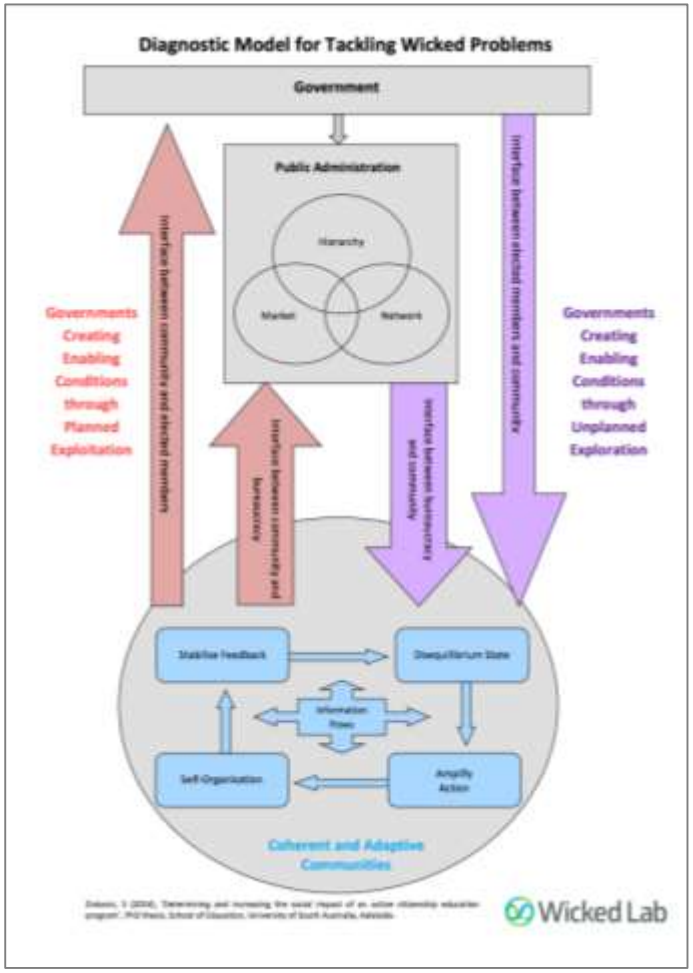
- Further build core team capability
  - Complete Units 2 & 3 Complex Systems Leadership Program
- Core team engages with users
  - Users: the initiatives and the organisations in the solution ecosystem that are collaborating on these initiatives
- Detailed mapping of the solution ecosystem undertaken by core team
  - Key informant interviews
  - Sub-system focus groups

FEMLAS: Map Stage

- Enter into the online tool the mapping data that was collected during the Explore stage
- Use tool to create a transition card for the solution ecosystem

University of South Australia

Model



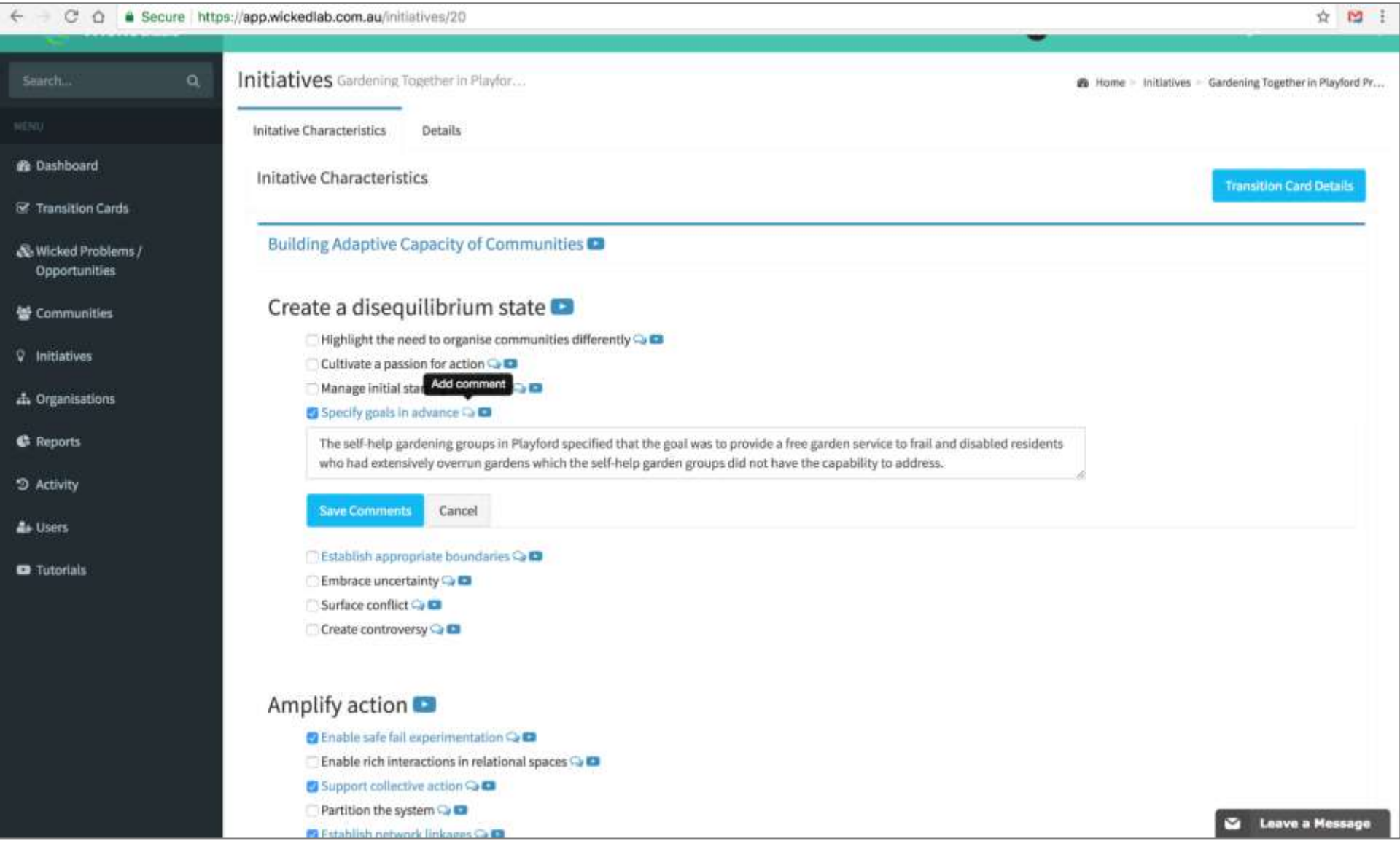
Building the Adaptive Capacity of Communities	
Focus Area	**Initiative Characteristics**
1. Create a disequilibrium state	1.1 highlight the need to organise communities differently 1.2 cultivate a passion for action 1.3 manage initial starting conditions 1.4 specify goals in advance 1.5 establish appropriate boundaries 1.6 embrace uncertainty 1.7 surface conflict 1.8 create controversy
2. Amplify action	2.1 enable safe fail experimentation 2.2 enable rich interactions in relational spaces 2.3 support collective action 2.4 partition the system 2.5 establish network linkages 2.6 frame issues to match diverse perspectives
3. Encourage self-organisation	3.1 create correlation through language and symbols 3.2 encourage individuals to accept positions as role models for the change effort 3.3 enable periodic information exchanges between partitioned subsystems 3.4 enable resources and capabilities to recombine
4. Stabilise feedback	4.1 integrate local constraints 4.2 provide a multiple perspective context and system structure 4.3 enable problem representations to anchor in the community 4.4 enable emergent outcomes to be monitored
5. Enable information flows	5.1 assist system members to keep informed and knowledgeable of forces influencing their community system 5.2 assist in the connection, dissemination and processing of information 5.3 enable connectivity between people who have different perspectives on community issues 5.4 retain and reuse knowledge and ideas generated through interactions

Unplanned Exploration of Solutions with Communities	
Focus Area	**Initiative Characteristics**
6. Public administration – adaptive community interface	6.1 assist public administrators to frame policies in a manner which enables community adaptation of policies 6.2 remove information differences to enable the ideas and views of citizens to align to the challenges being addressed by governments 6.3 encourage and assist street level workers to take into account the ideas and views of citizens
7. Elected government – adaptive community interface	7.1 assist elected members to frame policies in a manner which enables community adaptation of policies 7.2 assist elected members to take into account the ideas and views of citizens

Planned Exploitation of Community Knowledge, Ideas and Innovations	
Focus Area	**Initiative Characteristics**
8. Community innovation – public administration interface	8.1 encourage and assist street level workers to exploit the knowledge, ideas and innovations of citizens 8.2 bridge community-led activities and projects to the strategic plans of governments gather, retain and reuse community knowledge and ideas in other contexts
9. Community innovation – elected government interface	9.1 encourage and assist elected members to exploit the knowledge, ideas and innovations of citizens 9.2 collect, analyse, synthesise, reconfigure, manage and represent community information that is relevant to the electorate or area of portfolio responsibility of elected members

Wicked Lab

University of South Australia



University of South Australia

Secure https://app.wickedlab.com.au/scorecards/17

WickedLab

Sharon - South Australian Housing Trust | User Help

Search...

MENU

- Dashboard
- Transition Cards
- Wicked Problems / Opportunities
- Communities
- Initiatives
- Organisations
- Reports
- Activity
- Users
- Tutorials

Transition Cards The Playford Community Cap...

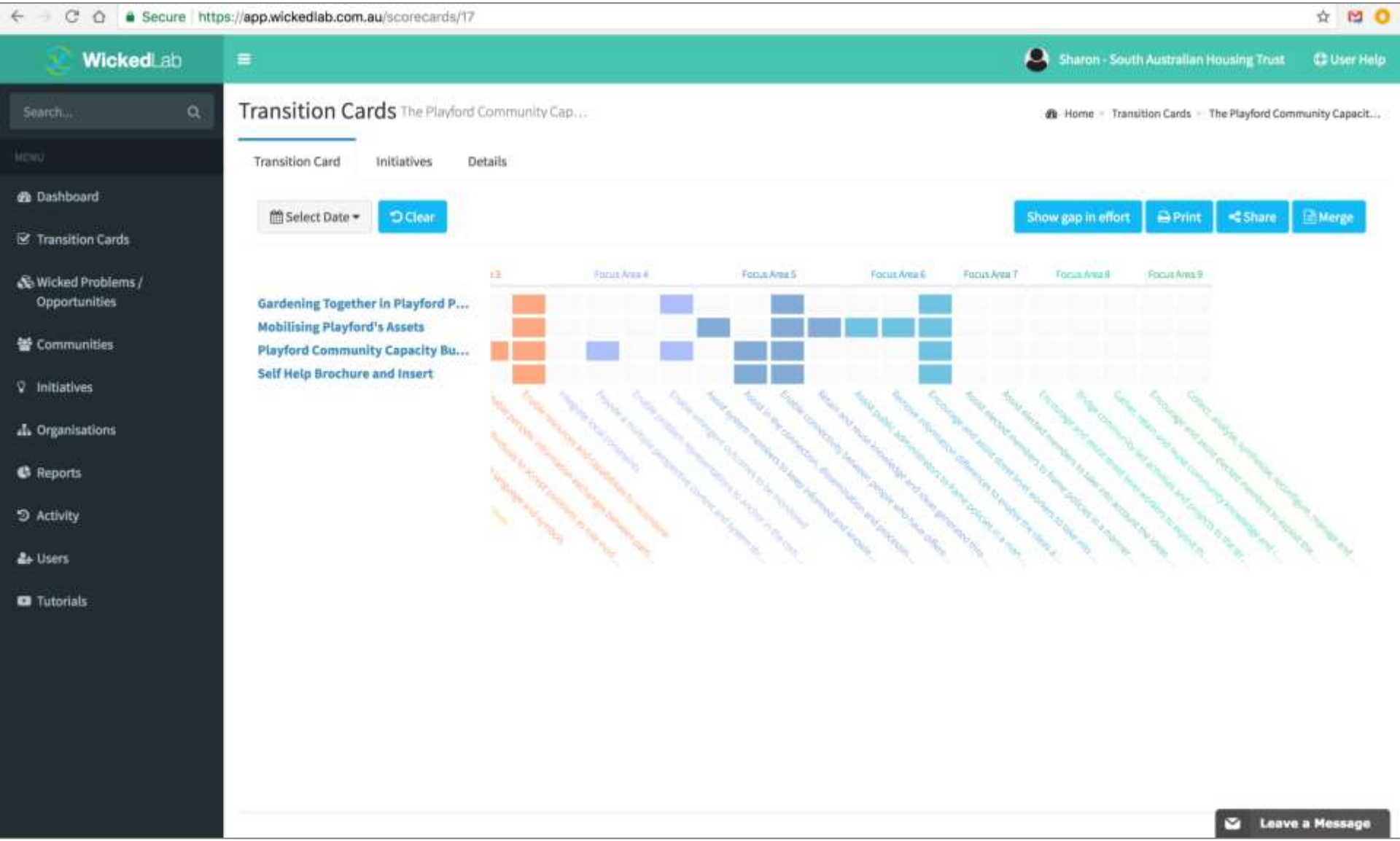
Home > Transition Cards > The Playford Community Capacit...

Transition Card | Initiatives | Details

Select Date | Clear | Show gap in effort | Print | Share | Merge

Leave a Message

University of South Australia

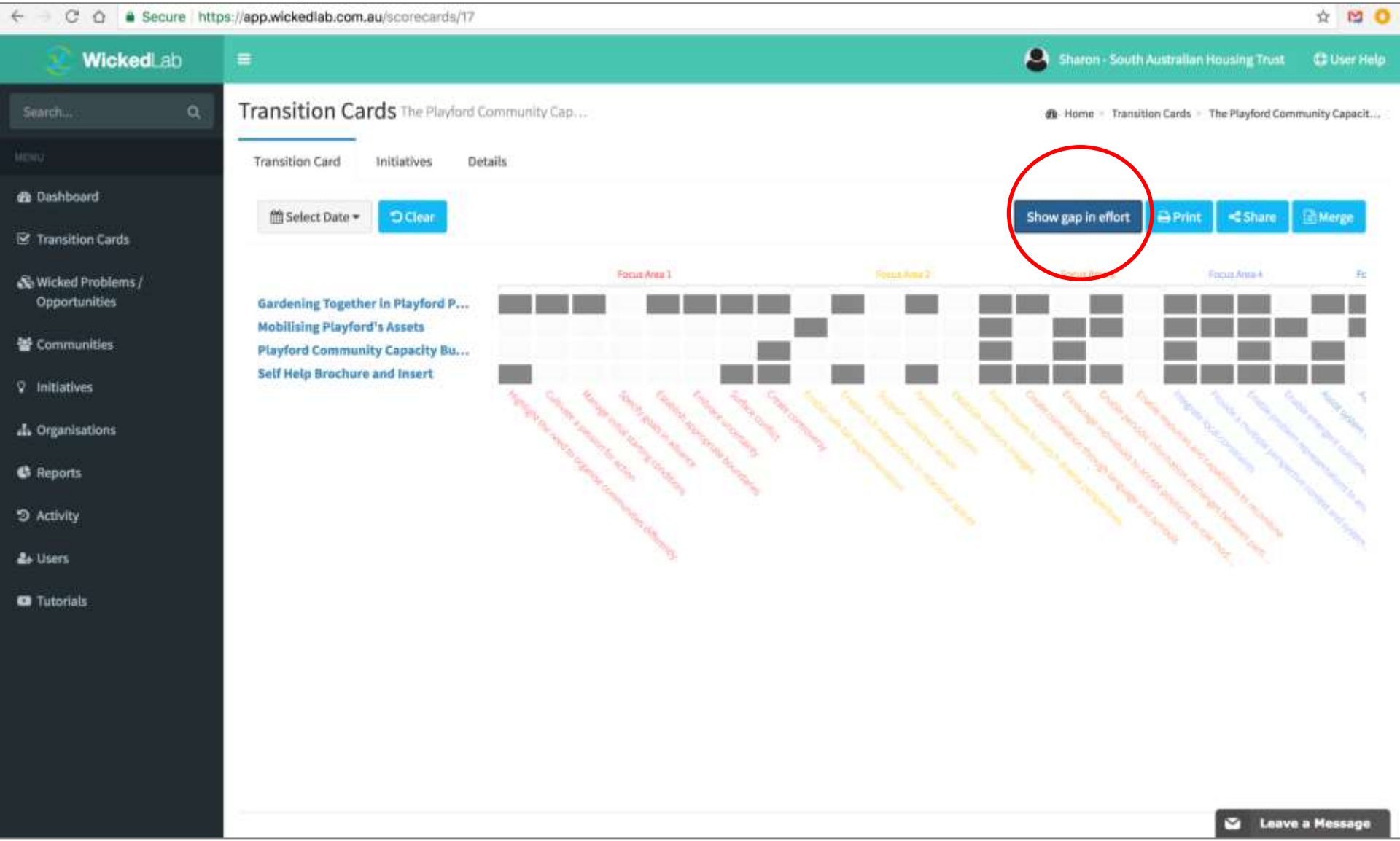


University of South Australia

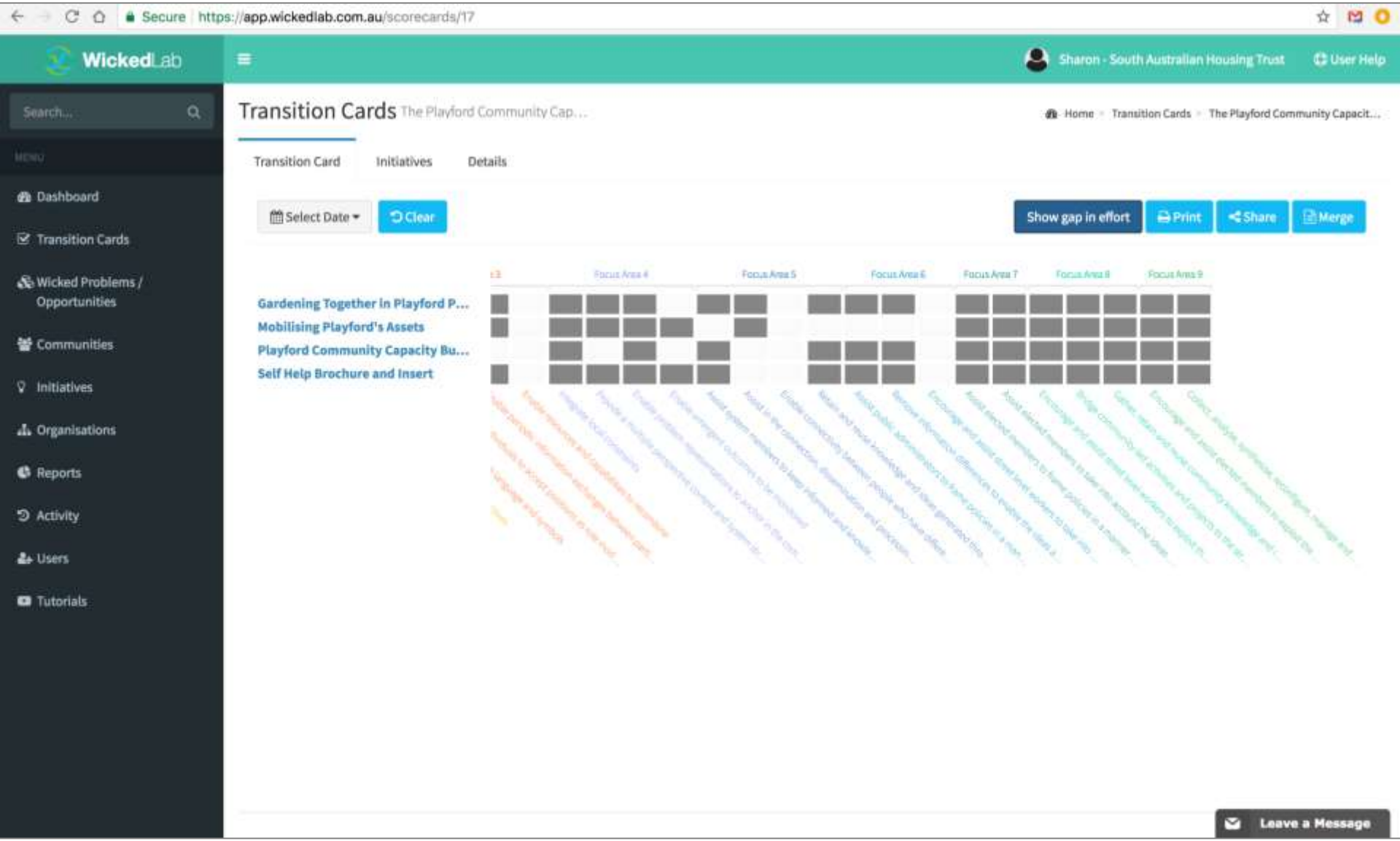
FEMLAS: Learn Stage

- Analyse transition card to determine gaps in effort for achieving systems change

University of South Australia



University of South Australia



University of South Australia

FEMLAS: Address Stage

- Distribute second briefing paper that informs users of the results of the mapping process
- Invite all users to participate in a large group intervention process to co-create initiatives that address identified gaps
  - Users identify if their organisations and initiatives can address the identified gaps in effort by amending their existing initiatives or creating new initiatives
  - Users are encouraged to co-create new initiatives with other users

University of South Australia

FEMLAS: Share Stage

- Transition card updated to incorporate amended and new initiatives from the Address Stage
- Transition card embedded on Lab's website
  - Can then be viewed, discussed and shared by users
- FEMLAS Cycle Completion Report prepared and disseminated to stakeholders

University of South Australia

Post FEMLAS Cycle

- Users complete an online form on the Lab's website to inform the core team of any further changes
- Core team updates the transition card
- Periodically the FEMLAS iterative loop is repeated to re-engage users

« All Events

This event has passed.

South West Food Community

June 28 @ 9:00 am - 10:30 am

Join Edith Cowan University, Public Health Advocacy Institute of WA and Wicked Lab for the launch of *South West Food Community*, a new project that aims to identify the initiatives supporting health food availability, access and use across the South West region.

RSVP at Eventbrite 'South West Food Community Launch'.

Are you interested in supporting access to healthy, affordable food for all community members?

Introducing...South West Food Community

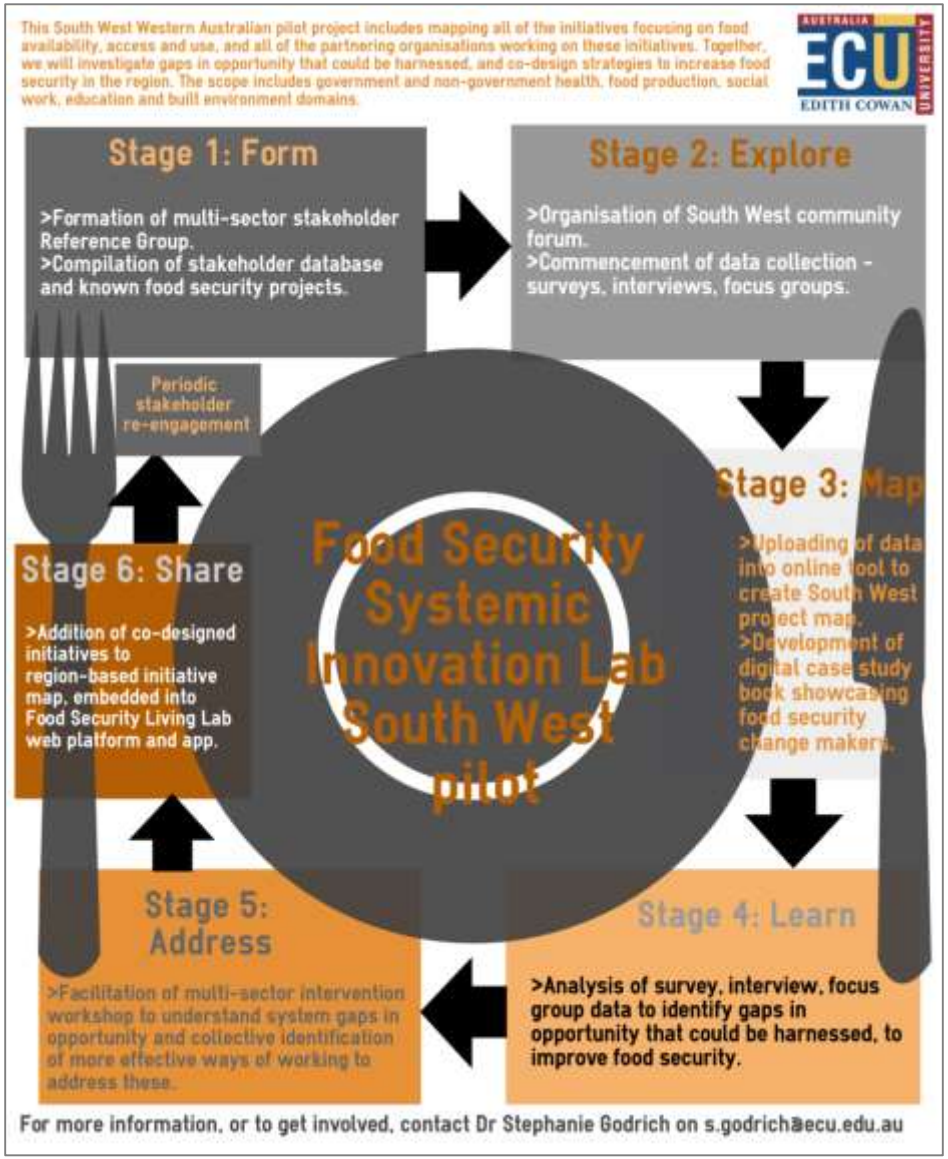
Join us as we launch South West Food Community, a new project that aims to identify the initiatives supporting healthy food availability, access and use in the region, and how these initiatives function as a system. Regardless of whether you are working in food production, health, social work, education, community development, town planning, or just have an interest in food, come along to find out more and how you can get involved!

Where: Maker and Co, 75B Victoria Street, Bunbury
When: Thursday 28th June 2018, 9:00am - 10:30am
RSVP: at Eventbrite 'South West Food Community Launch'

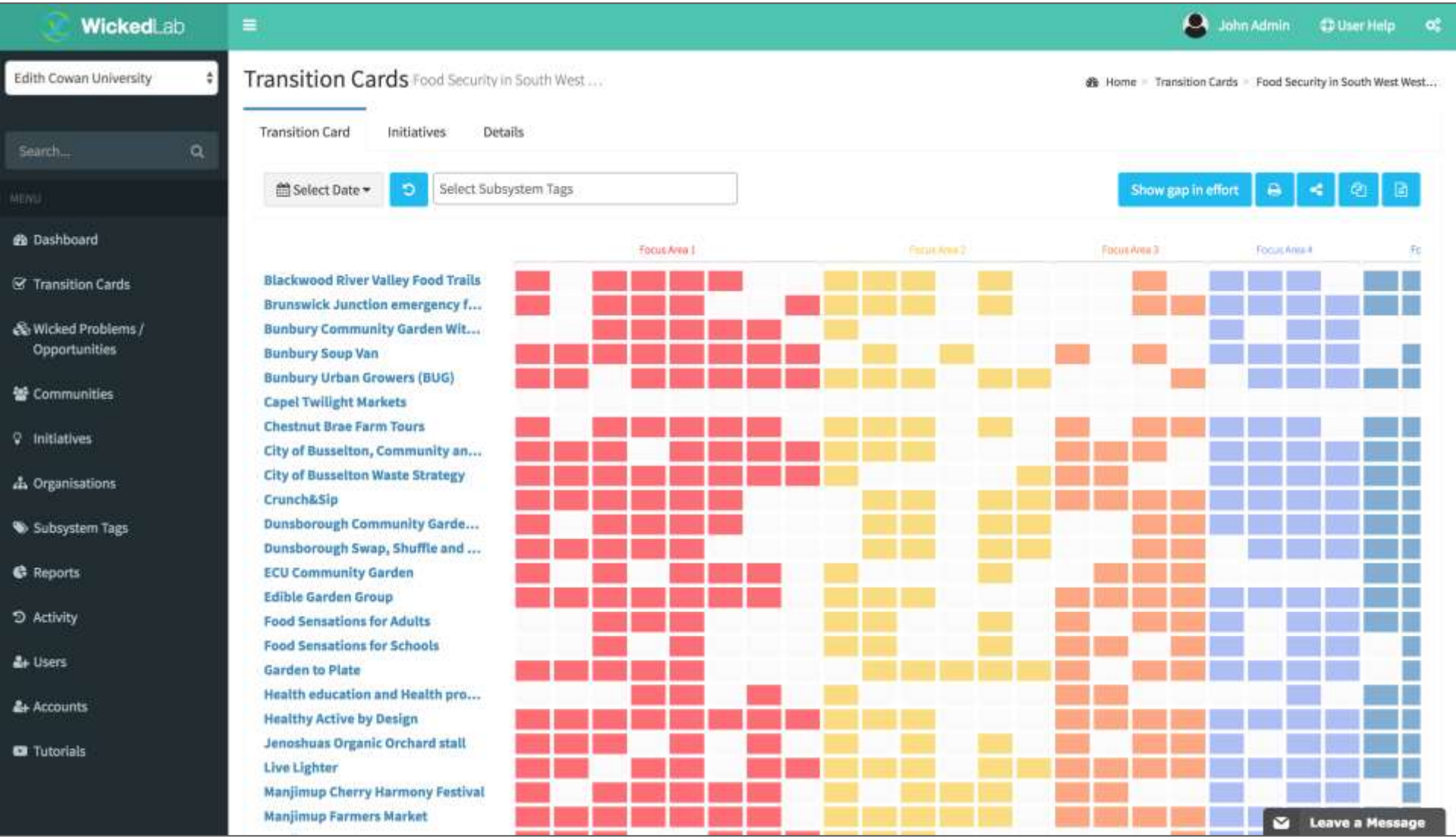
Please RSVP for catering purposes; light refreshments provided. This is a free event.

Project partners:
ECU Edith Cowan University
Public Health Advocacy Institute of Western Australia
Wicked Lab

+ GOOGLE CALENDAR + ICAL EXPORT

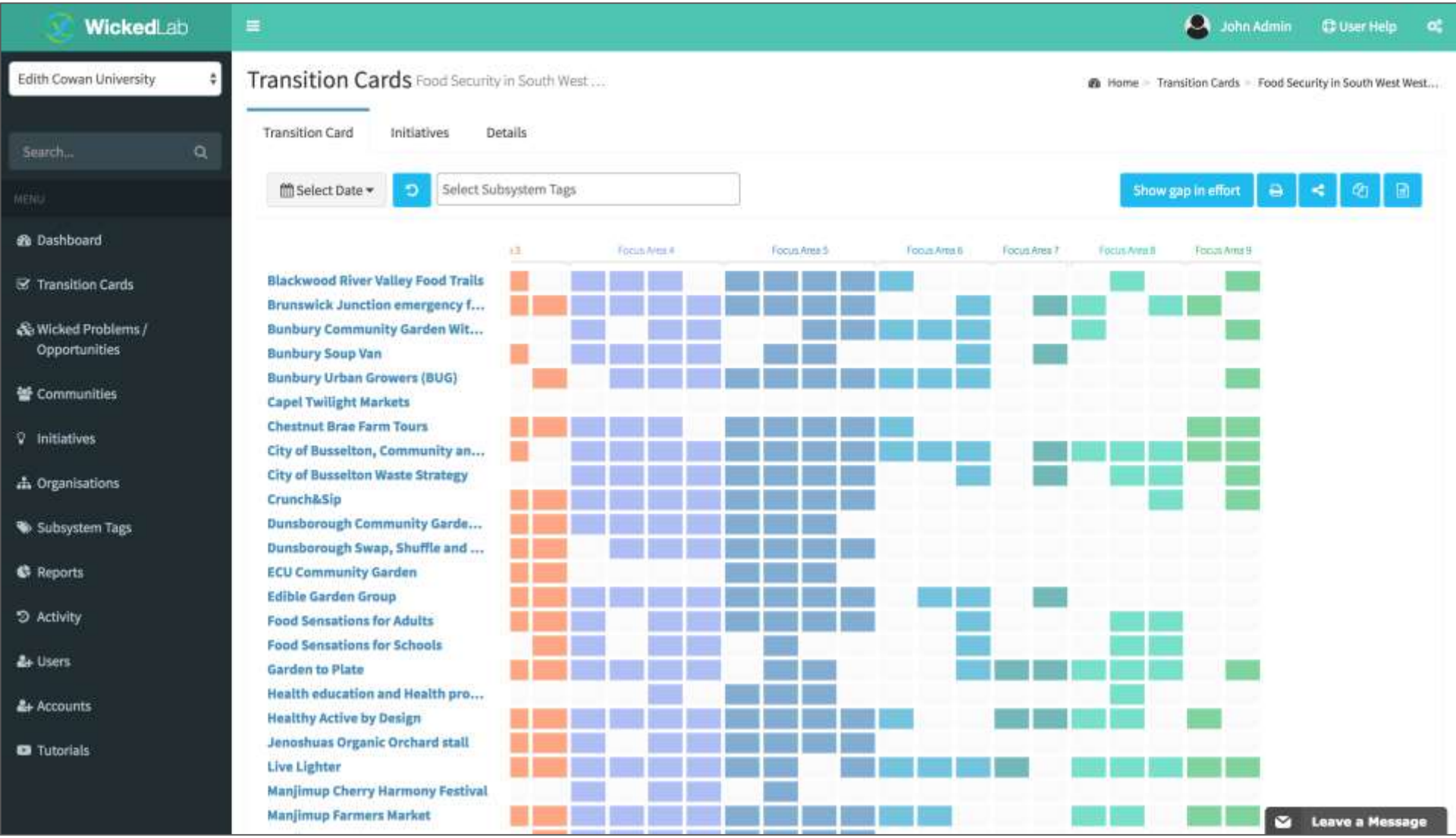


University of South Australia

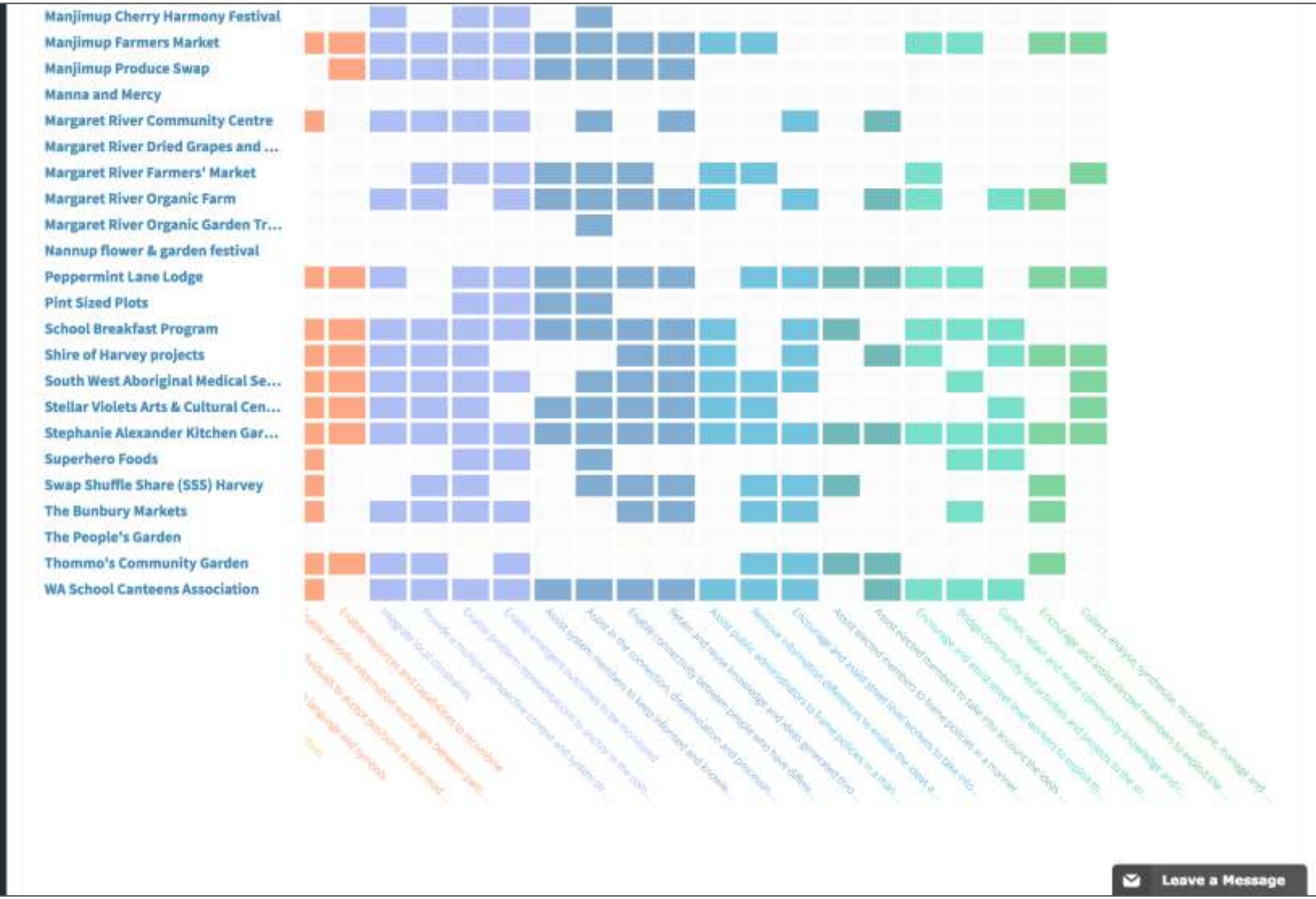


University of South Australia

University of South Australia



University of South Australia



Leave a Message

University of South Australia

University of South Australia