
Building Communities of Interest for Re-Distributed Manufacturing

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Cardiff University



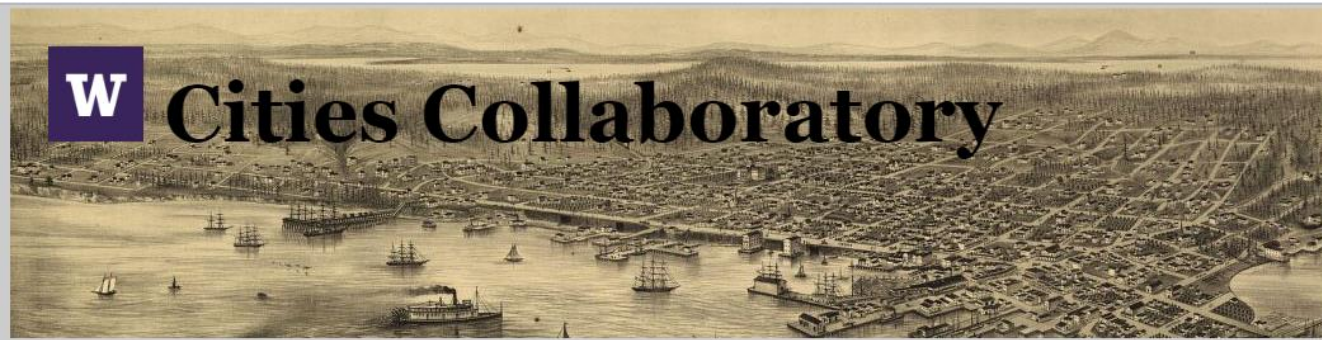
Research Questions

- How can communities of interest be built around the theme of Redistributed Manufacturing (RDM)?
- Who would benefit from being part of these communities and how?
- What form of community engagement platform would best suit the theme of RDM and the different types of stakeholders interested (current and potential)?
- Are those in the RDM network likely to remain engaged after RDM funding has run out?

Collaboratory Definition

- A collection of informational and communication technologies (N.B. many collaboratories are only on-line)
- *'A new networked organizational form that also includes social processes; collaboration techniques; formal and informal communication; and agreement on norms, principles, values, and rules'* (Cogburn 2003)
- Engagement can include any or all of the social processes identified by Cogburn, which can be carried out on-line and/or in-person
- For RDM|RSC we would like it to mean: a series of both in-person meetings and on-line engagement activities which support each other

Example Research Collaboratory



Collaborators

Core Leaders:

Kim England, Geography
Susan Kemp, Social Work
Margaret O'Mara, History
Thaasa Way, Landscape Architecture

Graduate Students:

Odessa Benson, Social Work
Megan Brown, Geography
Eleanor Mahoney, History
James Thompson, Built Environments
Roneva Keel, History
Mary Ann Henderson, History
Patrick Purtle, Landscape Architecture
Jennifer Porter, Geography
Tera Hatfield, Landscape Architecture
Mackenzie Waller, Built Environments
Michael Reagan, History
Kristine Mroczek, Communication

Participants:

Marina Alberti, Urban Design & Planning
Richard Karpen, School of Music
Bruce Nelson, Earth and Space Sciences
Devin Naar, History
James Claus, Classics, Honors Program
Anne Vernez Moudon, Urban Design & Planning
Ken Yocom, Landscape Architecture
Tad Hirsch, Design Arts
Ken Oshima, Architecture

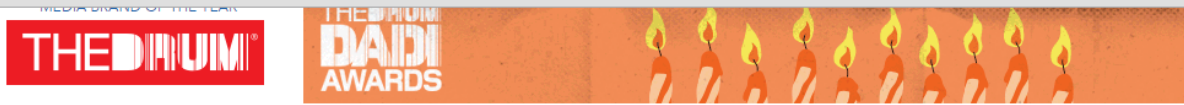
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The Cities Collaboratory is a transdisciplinary research and teaching laboratory for the study of multiple dimensions of cities and urban processes. Based at the University of Washington, the Cities Collab seeks to challenge the way that cities are understood and reimagined as they meet twenty-first century challenges. Cities have long served as sites and agents of economic expansion, social innovation, political development, and cultural and intellectual incubation. As we become a majority-urban planet facing escalating environmental, economic, and social equity challenges, cities are increasingly important to our future.

Located in Seattle, a leading center for environmental, global health, and technology research, the Cities Collab is a research space, a place, and a teaching resource to encourage new discoveries about urbanization past, present, and future. The Cities Collaboratory emerged from the Andrew W. Mellon funded 2010-2012 John E. Sawyer Seminar "Now Urbanism: City Building in the 21st Century and Beyond." Over a hundred faculty and staff engage in urban and cities research at the University of Washington. Connecting these scholars, the Cities Collab offers a place of intersection for those interested in urbanism from multiple disciplinary and professional perspectives, providing a laboratory for the exploration of urbanism across the region and around the globe.

The Cities Collab draws on three frameworks for researching and teaching cities: the historic, the sociospatial, and the digital. To engage the urban present and envision the future, we must understand the historic coevolution of nature and society through time. A sociospatial perspective positions urban research within changing geographic arrangements, networks of connectivity between places, and the lived experience of place. Offering the potential of a shared visual language, the digital suggests an inherently multidisciplinary approach to knowledge. Bringing these frameworks together, we seek to build the foundations of more responsive and resilient future.

Example Commercial Collaboratory



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Latest Bristol Marketing & Media News

Pinterest, Airbnb and Microsoft join speaker line-up for Online Influence (Oi) West conference in Bristol

THE DRUM NETWORK



Pinterest's UK marketing manager Lizzie Sibley, Airbnb's EMEA marketing manager Holly Clarke and Thane Ryland, global lead social analytics and insights at Microsoft have been added to the speaker line-up for Online Influence West,...

[Read more](#)

BRISTOL - 12/10/2015 | Digital

Twitter's Paul McCrudden and Salesforce's Jeremy Waite join the speaker line-up for Oi West event

THE DRUM NETWORK



The upcoming Online Influence (Oi) West event, to be staged at Bristol's Mercure Hotel on 16th October, has announced a strong line-up of speakers, including Paul McCrudden, Twitter's head of content Europe, Guy Parker, chief executive...

[Read more](#)

BRISTOL - 21/07/2015 | Digital

Bristol cars back from the brink with luxury 'Project Pinnacle' hybrid car

Bristol Cars, which went bankrupt four years ago, has returned to the fray, revealing a luxury hybrid GT model car which will retail for £200,000 on release in 2015. ...



Most Popular

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- 15/05/2016 'Don't use Facebook Reactions if you want privacy,' warn police
- 15/05/2016 Campaign against Sir Philip Green sees protesters target Topshop's Oxford Street store
- 15/05/2016 Leicester City FC owner readies football talent show
- 15/05/2016 Eurovision Song Contest 2016 smashes record with more than 7m tweets
- 15/05/2016 Why the Eurovision Song Contest just can't stop that political feeling
- 15/05/2016 McDonald's ties with Trinity Mirror for Olympics push
- 15/05/2016 The Cambridge Satchel Company on keeping its 'cool' factor as it eyes £100m in global sales
- 15/05/2016 Women are still outnumbered by men on news and current affairs shows for TV and radio, claims study

Quick Links

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Innovation in Collaboratories

- Innovation is a driver for collaboratories
- For example:
 - Health: The National Cancer Informatics Program Hub's conversation is around innovations in understanding, diagnosing and treating cancer
 - Geographical Science: The Collaboratory for the Study of Earthquake Prevention is about testing innovative models for earthquake prediction
 - Physics: The Laser Interferometer Gravitational-Wave Observatory (LIGO) hinges on innovation - the interferometer, and improvements being made over time

Living Lab Definition

- *‘An eco-system where users are subjected to a combination of research methodologies while they test new technologies’*
(Schuurman et al. 2011)
- Living labs can make use of both qualitative and quantitative research methods
- For RDM|RSC we mean: short-term experiments or real-world research actions which arise from and are embedded within the project collaboratory
- Experiments could be about business models for RDM companies, RDM technology applied to a sector, etc...
- No LLs have been done so far in the project

Example Living Lab



Community workshop with the themes of nature, humanity and sustainability.

Based in a *Kampung* (village in Malay), we organize ourselves as a social enterprise linked to volunteer non-profit organization)

Making a Makerspace

This is the first in a series of articles covering Makerspaces and similar spaces in Singapore. We hope to take readers through some of the fundamental considerations and operational considerations that we had in founding and running Singapore's first Makerspace.

What are Makerspaces?

Makerspaces are really places where people who love making things with their hands get together and share resources such as space and tools. The basic idea is about democratizing access to equipment and machines which would be out of reach of individual makers who may not be part of an educational institution or a corporation.



A couple of other names float around in this space as well. Names such as Fab Lab, Hackerspaces and TechShops are also used to describe similar creative spaces where resources are shared. There are some differences however and Gui Cavalcanti from Artisan's Asylum has given a pretty good treatment of the different terminology in an article he wrote for *Make Magazine*.

Example Living Lab



Tweet: Great to see #BristolApproach & work tackling damp homes in Easton featured in this issue <https://t.co/epmxNR6cQ1>



HOME ABOUT PROJECTS EVENTS TRAINING MEDIA STUDIO HIRE GET INVOLVED

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Projects > [Eagle House Pop-Up Furniture Factory](#)



EAGLE HOUSE POP-UP FURNITURE FACTORY

This six-month pilot project offered training and employment for Knowle West residents – and produced nearly 500 pieces of new furniture.

In November 2014 Knowle West Media Centre launched a six-month programme of design, digital manufacture and construction: the Eagle House Pop-Up Furniture Factory. The factory was located on Newquay Road, within the former Eagle House Youth Centre which closed in 2014. It was leased and operated by KWMC, working in partnership with local social enterprise [re:work](#).

The pilot programme grew out of research and experiences in our [Green & Digital Business Programme](#), which supported local people to set up their own small enterprises and make a living by doing what they love.

PROJECT LEAD



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THE TEAM



Innovation in Living Labs

- Living labs seek innovation via open and social innovation methods – finding innovative solutions by consulting the people directly affected; testing technologies (mobile device, home heating control system) in situ
- Maker labs can be seen as living labs – a physical space that supports
 - makers experimenting with materials, designs, technologies
 - cross-fertilisation of ideas between makers
- Some collaboratories include on-line living lab experiments that are also educational. E.g. Climate Challenge Game

Climate challenge
test your climate knowledge · predict the future state of our world

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Welcome to the Climate Challenge

Is there climate wisdom in the crowd? To find out, invite your friends and come play the Climate Challenge – a new online competition in the tradition of “games with a purpose” that pits your predictive powers against experts opinions, and compares them with real-world observations. Have fun, win prizes, and learn about climate.

The game combines practical steps to reduce your carbon footprint with questions about future climate-related conditions that we cannot answer today, but will be able to answer in the future. Can you outguess the experts? Play to find out.

[Climate Challenge Features](#)

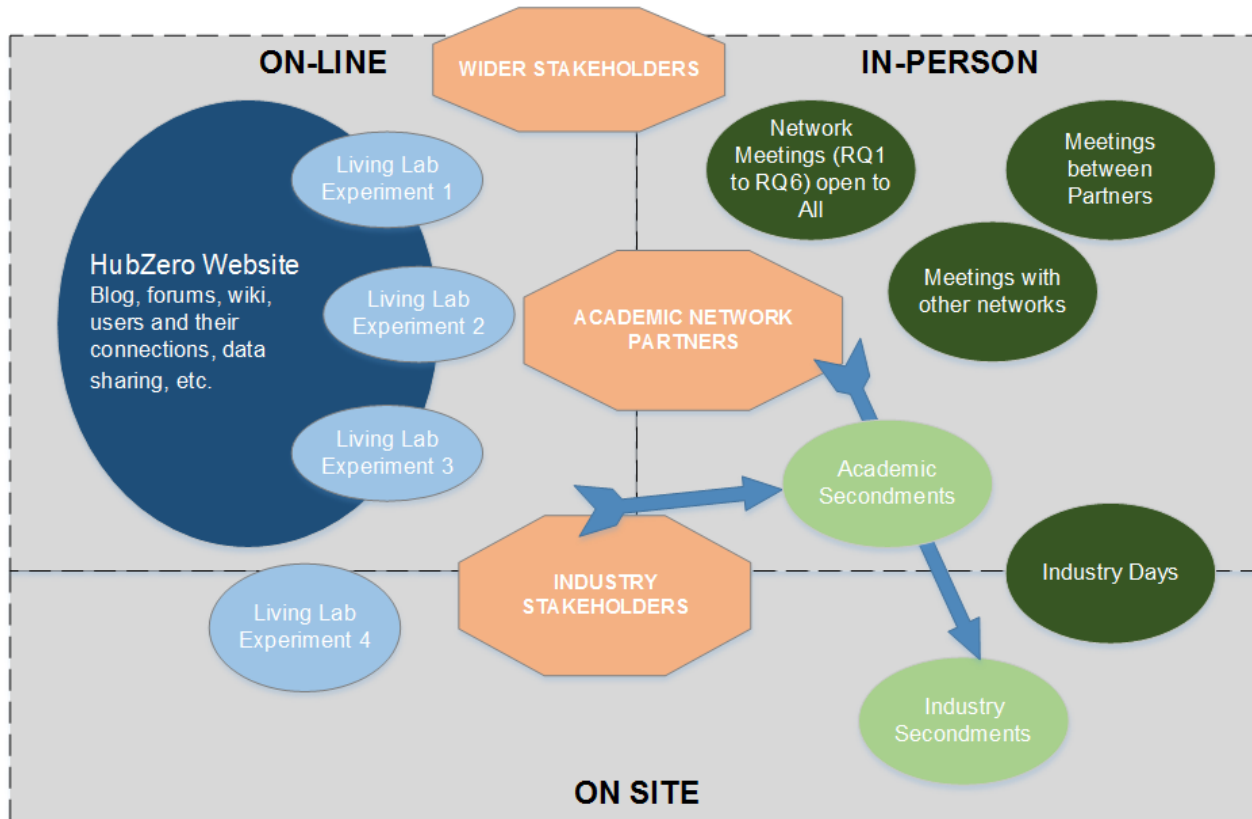
Dimensions of Engagement

- **Geographical spread:** where data comes from, where users live, institutions involved
- **Purposes:** spreading information to the public, gathering information from users (public and registered users), space for connecting, repository of information
- **Technology Orientation:** highly specialised (e.g. particle physics), commercial goods (e.g. clothing), social innovation – or some combination of these
- **Pluralism:** only registered experts, open to anyone, moderated; expectations of competence
- **Purpose:** user reasons for wanting to be participate; creators' reasons for setting things up
- **Compunction:** some researchers must use collaboratories as part of a project; sometimes voluntary use websites don't take off

RDM|RSC Engagement Architecture

- City-level
- Engagement on-line and in-person through network meetings, on-line forums and data sharing, interviews with manufacturers, visits to industrial estates, etc.
- Different types of engagements can feed into each other
 - Workshop/LL outputs can be made available on-line and then be used as seeds for forum discussions
 - Other types of engagement (e.g. Jude's maker walks) lead to a more diverse range of stakeholder representation, including those who are not on line at all
 - Ideally, participants would represent the city (highly pluralist in terms of skills, interests, needs)

Planned Engagement Architecture



Why Participate?

- Companies/individuals:
 - Learn about the potential of RDM technologies
 - Be part of an RDM community – exchange ideas and create new partnerships
 - Become more aware of risk from technology disruption
 - Get ideas for new business models
 - Find research funding for RDM
- RDM|RSC team:
 - Identify key themes for a range of actors interested in or already doing RDM in the community – challenges, motivations, knowledge
 - Understand city-wide issues on the manufacturing theme in relation to sustainability and resilience

Planned versus Actual


- In-person
 - Network meetings, workshops, maker walk
 - Generally good participation
 - Dissemination events planned towards end of the year (e.g. breakfast meetings targeted to specific sectors)
- On-line
 - Wordpress website put into place quickly but limited participation/functionality
 - HubZero platform chosen for full on-line engagement – more functionality, designed for academic collaboration; freeware but requires developer time
 - Administrative delays in arranging professional developer but HubZero site now in beta version

HubZero Platform Features

Interactive Simulation Tools	Interactive, graphical simulation tools
Mechanism for Uploading Resources:	Users share tools, presentations, data, documents
Tool Development Area:	Each tool has a project area, ticketing system and documentation
Ratings and Citations:	Community feedback on posted resources including ratings, comments
Content Tagging:	Resources categorised by tags; tags have a page with meaning and resources
Wikis and Blogs:	"Topic" pages with a standard wiki syntax; lightweight articles that describe resources and coherently pull them together
User Groups for Private Collaboration:	Users create and manage their own groups of users; resources associated with a group can be kept private
Usage Metrics:	User statistics, web hits, simulation jobs, demographics of users, etc.
News and Events:	Calendar, mechanism for users to post events; news area for posting short stories from hub users

RDM|RSC HubZero Site

Re-distributed Manufacturing for the Resilient, Sustainable City
Implications of new manufacturing technologies for small-scale, distributed manufacturing in Bristol



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Our work will have implications for business and manufacturing industry, infrastructure planning, and other cities

Introduction

The RDM|RSC network is one of six networks funded by the EPSRC which are performing research on redistributed manufacturing. Our focus is on the move to smaller-scale and local manufacturing for Bristol.

[MORE ABOUT THE NETWORK](#)

The research team

The research team are based at the Universities of Bristol, Bath, Cardiff, Exeter and UWE.

[MEET THE TEAM](#)

Resources

Documents, meeting notes and links will be made available as the project progresses.

[VIEW RESOURCES](#)

Latest News

RDM|RSC Enabling New Value Streams in Community Based Manufacturing

The idea of re-distributed remanufacturing has become increasingly popular, yet there is no real understanding of size and shape of it within different city regions, the infrastructure that is necessary to support and nurture it, and new value streams it creates. This workshop aims to develop an understanding of community-based / re-distributed manufacturing, how it can enhance resilience within a city region, and the e-infrastructure required to support it. This workshop will...

3 June 2015, RECODE Network Launch Event, IDEALondon
Background: The RECODE network is a...

Tweets by @RDMRSC

RDM RSC Network Retweeted


MakerWalk @maker_walk
We've been using @OpenCatalit to collect data on our #MakerWalk. Its been great to track our walk & record who is #manufacturing in #Bristol


RDM RSC Network Retweeted

Lee Hutchinson @leehutchinson
Another busy day in Bristol B53 for the #MakerWalk team with @sussherry @tam_coomor and Prof. Chris McMahon.


RDM RSC Network @RDMRSC
The next RDM|RSC workshop May 19th Cardiff Uni 'Enabling New Value Streams in Community Based Manufacturing' register eventbrite.co.uk/rdm-rsc-2015-05-19

Re-distributed Manufacturing for the Resilient, Sustainable City
Implications of new manufacturing technologies for small-scale, distributed manufacturing in Bristol



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Dashboard

- Dashboard
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- Courses
- Groups
- Messages
- Points
- Projects
- Usage

Rachel Freeman ▶ Dashboard [Add Modules](#)

Dashboard Introduction

Welcome to your customizable dashboard page!

To get started, click the "Personalize" button towards the top of this page. You will then be presented with a list of modules you may add to your page. You may also, at that time, remove any

My Groups

All Groups New Group

You are not a member of any groups at this time.

My Tickets

All My Tickets New Ticket

Tickets I Submitted

You have no active tickets at this time.

Tickets Assigned To Me

You have no active tickets at this time.

Tickets On My Contributions

My Wishes

New Wish

Submitted Wishes

You have no open wishes at this time.

Assigned Wishes

You have no open wishes at this time.

My Projects

All Projects New Project

You have no projects at this time.

My Drafts

Start a new contribution

No contributions found.

Closing Thoughts

1. In-person participation has been good
2. On-line development has been slow; not certain how much different stakeholders will want to participate e.g. in forums
3. Wide heterogeneity in potential users across the city – successful collaboratories often have a clearer purpose/ user group
4. May need to have interesting content on the site for it to be of interest to a wider audience
5. Content: Jude's maker walks, links, articles, blog, results of feasibility studies, information for a range of RDM actors
6. Relationship between academic and non-academic (theorists and practitioners)
7. Relationship with the City, their interest in resilience theme, BCC generally disinterested in manufacturing