

Research Activities in San Diego: A Few Themes

MAPS-LED First Mid-term Meeting

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1) Universities as anchor institutions of regional cluster policy

2) The role of universities in sustainable/equitable neighborhood development

3) Maker Spaces/Fab Labs as???

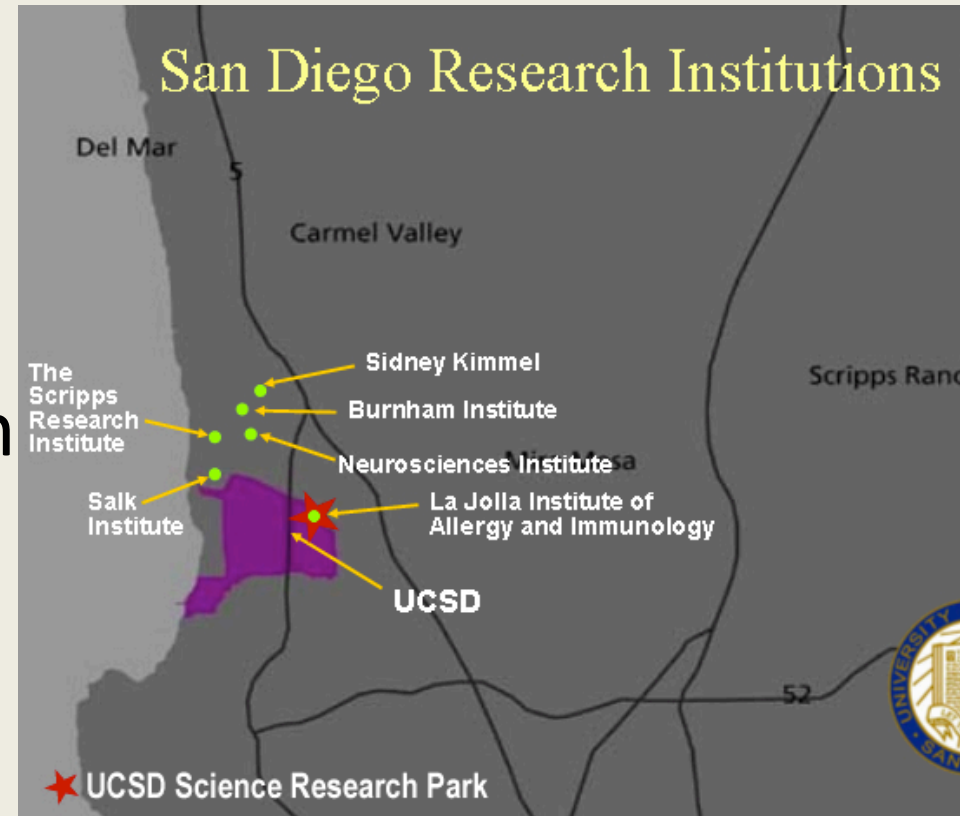
1) Universities - Possible outline

- A changing role for universities
- The role of research universities in regional/local economic development
- Case studies: University of California San Diego, SDSU and UC San Diego

University of California, San Diego

History & Context

1912 Scripps Institution
for Biological Research
(Scripps Institution of
Oceanography) later
incorporated by UCSD



Salk Institute, founded by Jonas Salk, developer of the Polio Vaccine, in 1960





Louis Kahn



STRATEGIC LOCATION

In 1963 city transfers 456 city acres (Pueblo land)
Scientists flock to the University

Faculty in the late 1980s:

- 64 members of National Academy of Science
- 8 Nobel laureates
- winners of 6 National Medals of Science
- 2 Field medals in mathematics
- 6 McArthur Foundation fellowships
- 100 Guggenheim fellowships

In 1988 UCSD opens **Technology Transfer Office** –
to link labs and private industry to
develop new products and the UCSD Extension
Connect program – to commercialize research



Great success story of a research-oriented university

Factors

Federal support- Research funding & Bayh-Dole Act of 1980

State support: University of California system (research universities)

Local support: Provision of land, public infrastructure, regulatory

Business: Chamber of commerce, etc.

Research and Technology culture

2) The role of universities in sustainable/**equitable** development



University of
Pittsburgh

A “University of
the Community”

University of Pittsburgh

- 35,000 students
- Located a few miles east of downtown
- In the Oakland neighborhood
- Ranked “best neighbor” among the public colleges and universities in the US
- Forty years of work with the Oakland neighborhood
- In 200 and 2004, Pitt received “Community Outreach Partnership Centers (COPC)” grants from the Federal Department of Housing and Urban Development

San Diego State University

City Heights Educational Collaborative

- City Heights is a neighborhood of immigrants where more than 30 different languages are spoken
- Partnership between the San Diego Unified School District, Price Charities, the San Diego Education Association and SDSU
- The principal goals of the collaborative are to significantly enhance the academic achievement, health and social development of students in three schools

Finally: maker-movement; peer production; fab-labs, etc.

- Makers are pushing against the outsourcing of manufacturing, the desire for locally produced and authentic goods, the division between design and manufacturing
- Semi-organized and multi-sector
- Collaborative workspaces that aim to create community and mentoring
- Commons-based and oriented production

Maker-spaces and fab-labs-What are they?

- An entrepreneurial practice that can catalyze local job growth?
- A human-scale, localist alternative to global capitalism?
- An opportunity to engage younger generations around science and technology skills?

How and where?

Portland Made

Collective (PMC)

2014- 126 Members

2015- 342 Members



Products and Services:

Table 1 depicts the wide array of unique goods and services PMC members provide. PMC's makers produce everything from dog bowties to robots to handmade paper. Additionally, PMC members include a range of businesses: makers, retailers, designers, fine artists, and gift box curators are all members. In other words, PMC members are most likely a good representation, of Portland's broader maker ecosystem.

Table 1: Primary Product or Service

Fermented hot sauce, made from organic ingredients	Manufacturing, mostly industrial lean goods	Paper Goods (Cards & Prints)
Handmade Aprons	Design, print	Retailer of handmade goods
Engraved drinking cups	Handmade paper	Architectural hardware
Custom bicycle design and fabrication	Phone, iPad, Apple Watch accessories	Fine furniture
Art and craft supplies	Industrial/interior design services & fabrication	Local gift boxes
Manufacturing	Culinary incubator / Bagel bakery	Sale of local handcrafted goods
Design	Jewelry	Architecture and Design
Furniture Design and build	Handmade Jewelry	Cloth menstrual pads
Apparel made in house	Clothing Production / Retail	Ceramic tile
Women's Apparel Manufacturing	Leather and wood gadget covers	Handcrafted leather Mackenzie Walker golf bags and golf accessories
Consulting	Blown glass lighting, decor, table top	Magazines
Art	Athletic clothing	Bath & Body
T-shirts	Robots	Baby apparel
Hand Forged Knives	Lighting	Knives
Women's jeans	Straight Razor Manufacturing (Other Men's Grooming Products)	Fine art photography
Custom Boots Openers	Rescued Material Dog Bow Ties	Drumstick bags and other instrument accessories
Military	Sharpening service	Design consulting, 3D printing
Foundry production	Bags	Wine
Military and garments	Leather goods	Action Mount and Grip Stand
Makerspace	Microphones	Specialty Preserves
Cocktail Bitters	Leather products and Soft Goods Manufacturing	Bags
Consulting services	Handmade Jewelry	Ceramic art and pottery
Freelance illustration	Custom Flags and Banners	Books
Retail of Portland made goods	Laser cut goods	Clothing
Art	Skis & Snowboards	Furniture and furnishings
Hand drawn coloring pages	Organic ketchup	Leather Goods
Natural soap	Jewelry	Women's plastic fabric
Artisan body care	Rebuilding outdoor vehicles	Kombucha starter kits

PMC and Clusters

...products within the Portland region. This affirmation of the local
indicates that "Portland Made" has real meaning for members of the Collective.

Makers Love the Central City: Using an enhanced database with 476 unique street addresses, we created a *Makerverse* heatmap (left) that illustrates the intense clustering of makers and maker-enablers in the West End/Downtown/Pearl District, the Tillamook/Interstate Corridor including Mississippi Avenue, the Alberta Arts District, and especially the Central Eastside.



Makers Benefit from Clustering: The clustering of maker enterprises is a valuable asset for makers and maker-enablers as well as those who seek their products. In interviews, makers identified proximate access to the maker ecosystem as important for inspiration, problem solving, resource exchange, marketing opportunities, and a way to benefit from the collectively created Portland Made identity.

Portland Benefits from Maker Clustering: For locals and travelers who want to participate in the Portland Made scene, Portland's reputation for a vibrant street life and small scale accessible venues where artisan wares are produced and sold is an attraction and amenity that must be preserved.

Work Space Affordability Threatens the Makerverse: As anyone involved in the maker ecosystem knows the Makerverse is under severe pressure from real estate development and urban growth. Sixty-four percent (64%) of respondents anticipate that workspace affordability will be an important or the most important challenge in the future, up from 51% who currently think it is an important/most important challenge.