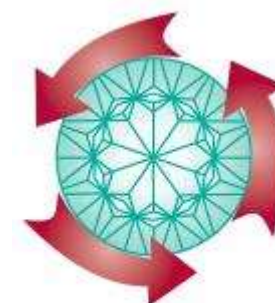


# Learning Spaces Collaboratory Webinar

## *Making the Case* Catalyzing the Creativity of Learners Inventing and Reinventing Maker Spaces

*September 23, 2015*



<http://www.pkallsc.org/>



*March 2015 workshop: VentureWell; Epicenter; Learning Spaces Collaboratory*



Jeanne L. Narum

Learning Spaces  
Collaboratory

# Exploitation

# Exploration



Adopting strategies so far  
proven “best”



Creation of new possibly  
“better” strategies

➤ Based on prior  
implementation, likely  
outcomes are known

➤ Facing challenges that  
even experts cannot clearly  
define, let alone solve

# Learning Outcomes

- How to shape a community of practice with a shared language and mental images about spaces that matter to learning
- How to enable all voices to be heard in the process of planning and assessing spaces for undergraduate learning
- How to keep reinventing, embracing the future.

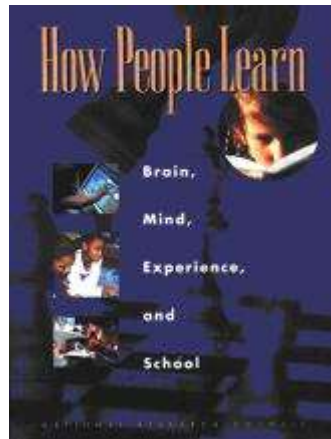


# About the LSC – How Learning Happens



Robust learning happens when students are:

- ❖ actively engaged in evaluating, constructing, and re-evaluating their own knowledge
- ❖ actively engaged in a social and supportive community
- ❖ encouraged to assess, reflect and build on prior knowledge
- ❖ empowered to address problems that are meaningful, of importance to them and to the world beyond the campus.



# About the LSC – Spaces for Robust Learning



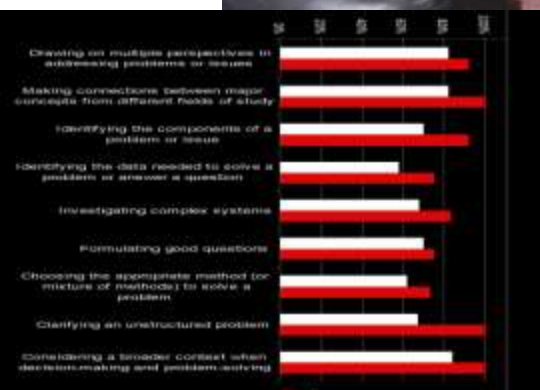
Spaces should enable students to:

- ❖ become actively engaged with peers in shaping their own learning
- ❖ *practice* the skills, competencies, ways of thinking and doing of a professional in the field
- ❖ *practice* communicating and critiquing within a community of colleagues and peers
- ❖ be refreshed and renewed
- ❖ become self-aware, reflecting on what they are learning, what they are becoming.

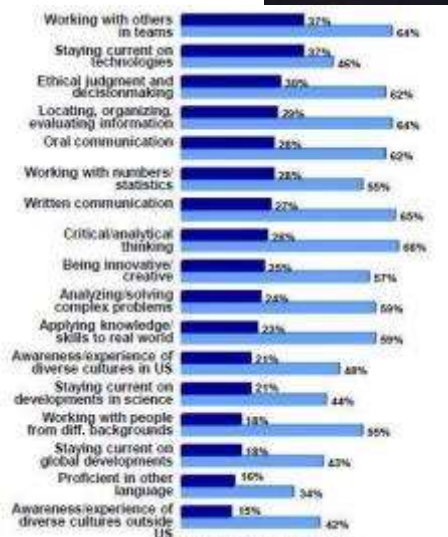
















# March 2015 Workshop: What we experienced

- Exploring a common language
- Challenging personal assumptions, forming teams for collective action
- Making language and mental images visible





## ACT I SETTING THE STAGE 9:00 – 10:20 A.M.

What kind of environment nurtures creativity?  
Freedom, novelty, and a sense of being at the edge.

— Nancy C. Andreasen



### Outcome:

- Exploring language about becoming and mental images of Maker Spaces.

### Why:

- Becoming a community of practice.

### How:

- Articulating personal aspirations for what users of Maker Spaces are to become.
- Sharing personal mental images of Maker Spaces.
- Sharing & appraising individual contributions.

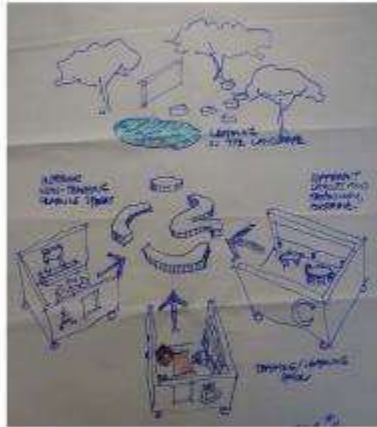


## ACT II TAKING COLLECTIVE ACTION

10:20 A.M. – 12:00 P.M.

*The first step of the technological or social inventor is to visualize by an act of the imagination a thing or state of things which do not yet exist... emphasizing the social dimension of creativity.*

—Dennis Gabor



### Outcome:

- A collective (team) vision of becoming and learning in a Maker Space to present for critique.

### Why:

- Modeling beginning the process of reinventing....

### How:

- Fashioning four/five person working teams.
- Analyzing & synthesizing individual posters.
- Developing a poster displaying a communal language of what learners are to become and the learning experiences in Maker Spaces.

### Maker Spaces Reinvented

VentureWell/Epicenter/Learning Spaces Collaboratory — March 22, 2015





# ACT III EXPLORING AUDACIOUS QUESTIONS 12:00 – 1:30 PM

The analysis of creative people and creative objects has demonstrated that the most innovations emerge from joint thinking, passionate conversations and shared struggles...

— Gerhard Fischer



## OUTCOME:

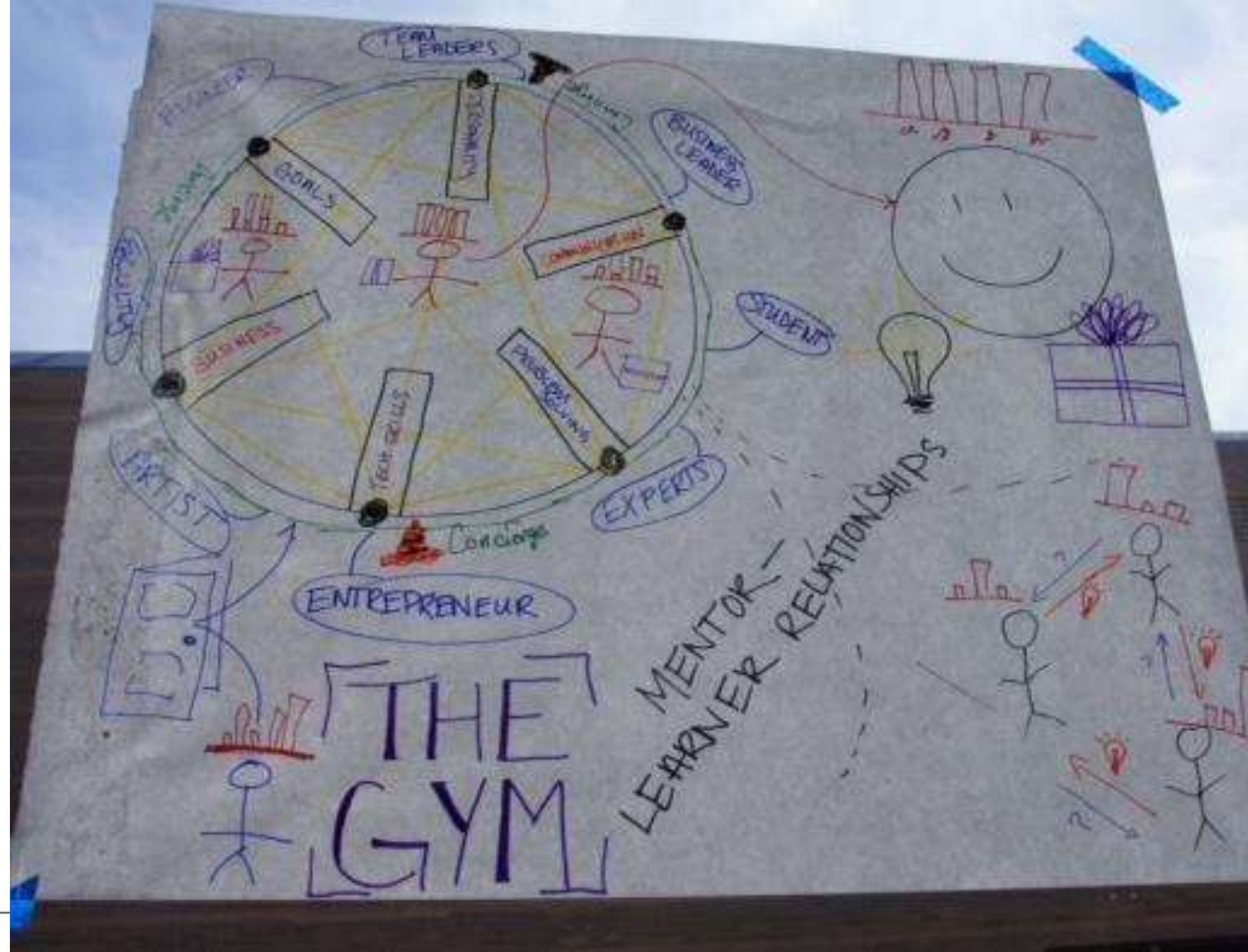
- CROSS-POLLINATING, STEALING, FORMING AUDACIOUS QUESTIONS ABOUT REINVENTING.

## Why:

- Reinforcing the shaping of a community of practice, moving toward a common language, collectively addressing audacious questions...

## How:

- Taking the opportunity to move freely around the space, examining the team posters, gathering some "aha" ideas to bring to the working session following lunch.
- Sharing reflections on the process of reinventing—what should be carried forward.



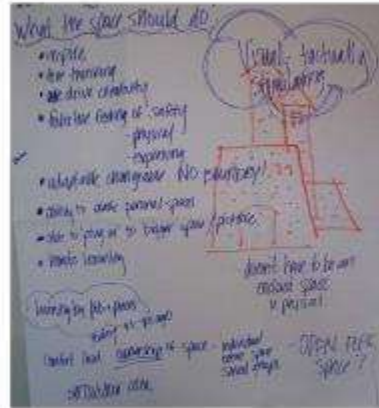


## ACT IV

ADDRESSING AUDACIOUS  
QUESTIONS: WHAT HAPPENED?  
WHAT'S NEXT? WHY NOT?  
1:45 - 3:00 P.M.

Hacking is a form of tinkering with the goal of understanding how something works. In today's hackerspaces, individuals with similar interests gather together to work on projects... share knowledge, and collaborate, which all lead to inventions and innovations.

— Susan Whitmer



Outcome:

- A showing and sharing of an experience as learners in a Maker Space – here and now.

How:

- Teams produce a visual synthesis of their ideas, language, mental images of:
  1. the learning of becoming ...
  2. the journey of the learner within a Maker Space.
  3. the process of planning (reinventing) a Maker Space.
  4. the physical affordances of the reinvented Maker Space.
  5. evidence to document how Maker Spaces transform the experience of learning, becoming.
  6. Your call....

### Maker Spaces Reinvented

VentureWellEpicenter/Learning Spaces Collaboratory — March 22, 2015

THEATER / SET DESIGN - AGILITY  
(LOW PERFORMANCE)

PREFUNCTION / FOYER / GREEN ROOM  
FRONT PORCH

'CLEAR THE DECKS' - SPACE TO  
STORE QUICKLY - PUSH TO WINGS

SPACES TO BE MESSY  
- SENSE OF OWNERSHIP  
- OK TO BE MESSY

SPACE TO PERFORM / DISPLAY

BIG SPACE ADJACENT TO SMALL  
- PROSPECT & REFUGE

SEE IN / SEE OUT - 'SEE & BE SEEN'  
- REAL & VIRTUAL

CONNECT GLOBALLY

UNDERSTAND PLACE  
IN THE WORLD

CONNECT TO A "COMMONS"

# March 2015 Workshop:

## Planning lessons learned

- Spaces that are flexible, easily reconfigured are good venues for planning/reinventing: ... *It can be shown that as buildings and spaces become more solid and permanent, so do their occupants, often with a resulting waning of creativity.*
- Spaces that make it easy to have joint thinking, passionate conversations and to engage in shared struggles are good venues...
- Spaces that allow for the iterative shaping and sharing of mental images are good venues ....





**Tim O'Connell**

HOK





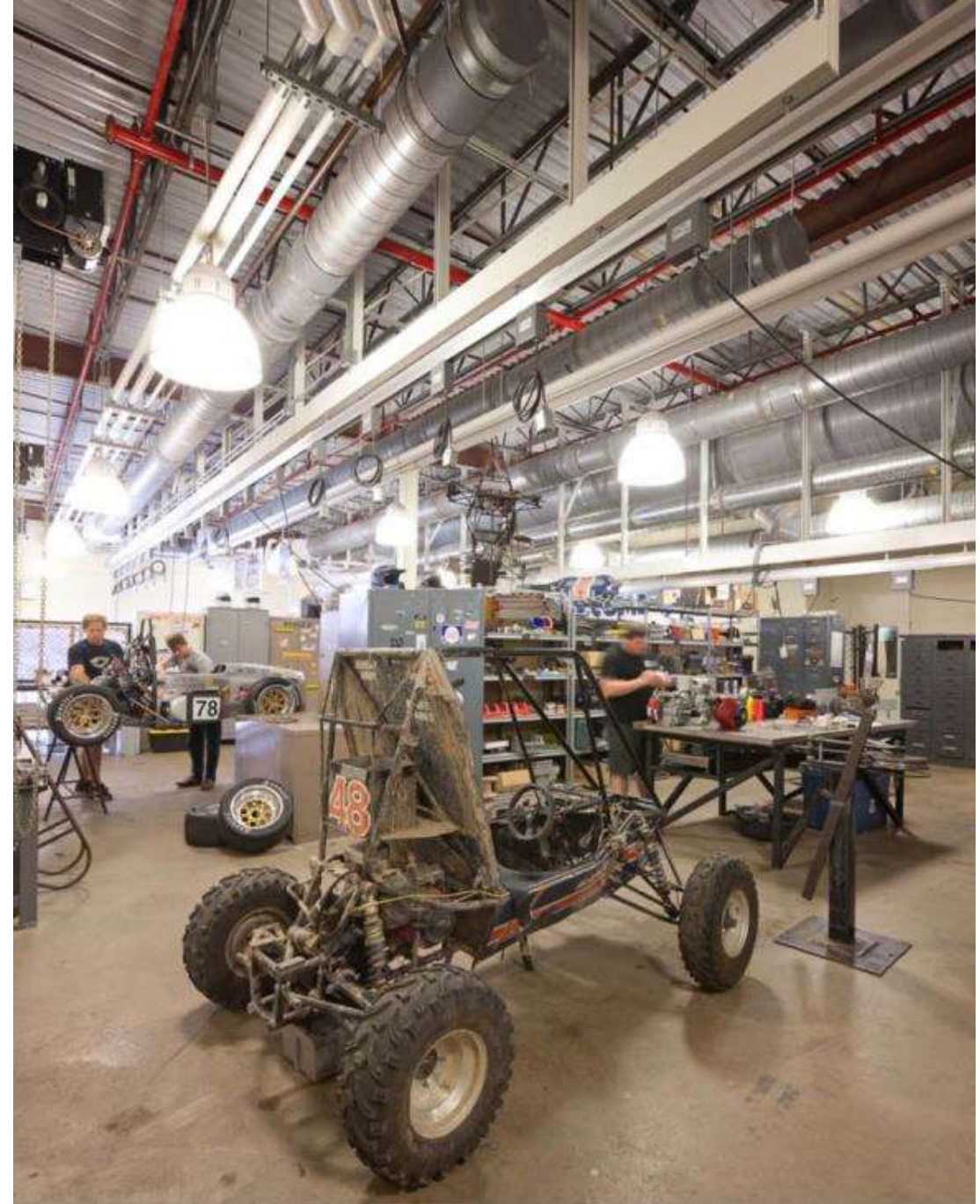
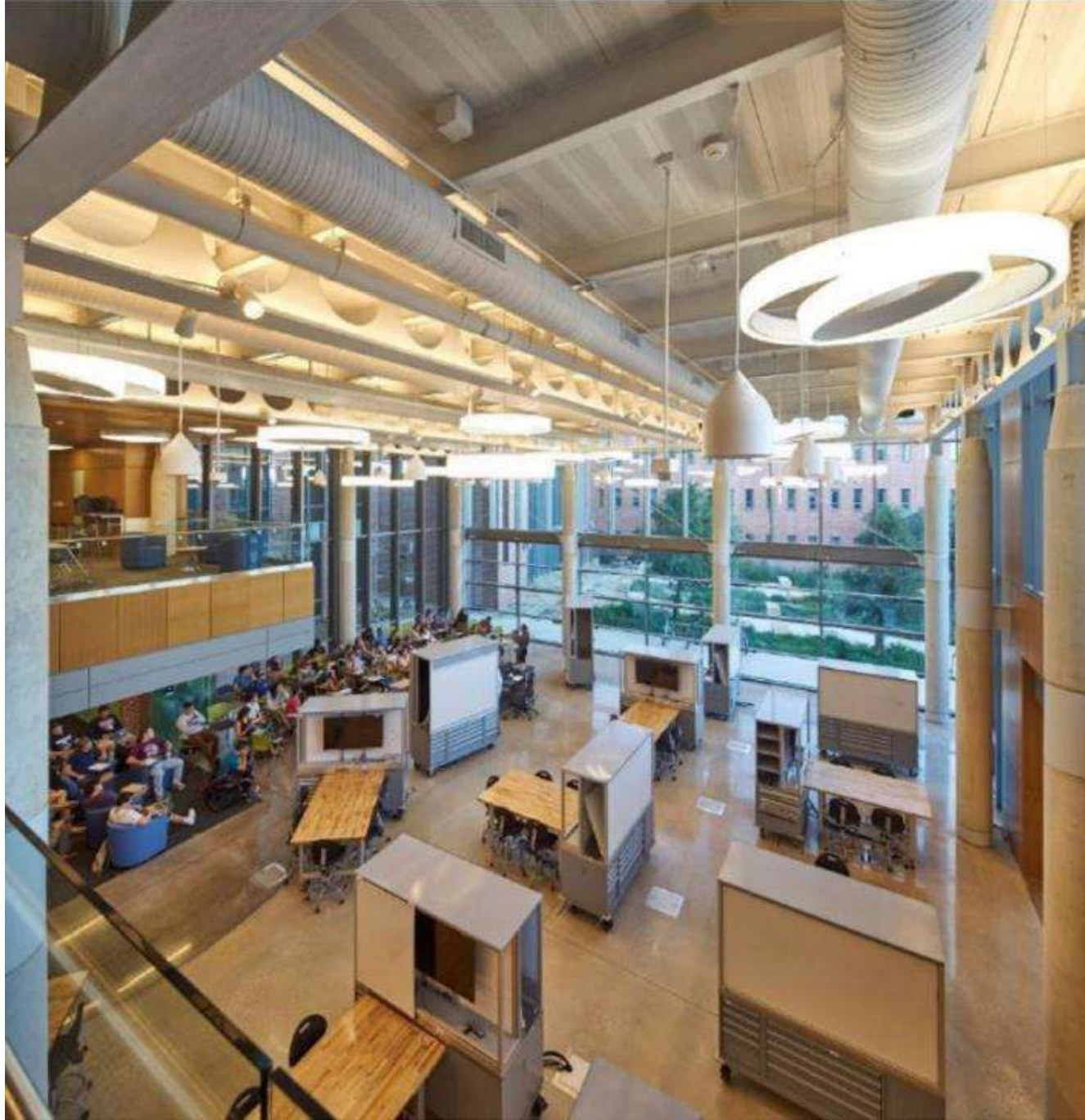




























# Questions & Comments





# Questions & Comments





Image Credit: Maciej Wojnicki, Flickr



**Jacqueline P. Ashby**

Consultant



# WHAT IS CREATIVITY?

**PRODUCTIVITY**

**PROBLEM SOLVING**

**ORIGINALITY**

**PRODUCT**

**TENSION**

**PERSPECTIVE**

**EMERGENCE**

**PROCESS**

**A CHOICE**

# The Learning Paradigm







## Space

- Location
- Safety/Security
- Collaborative
- Virtual

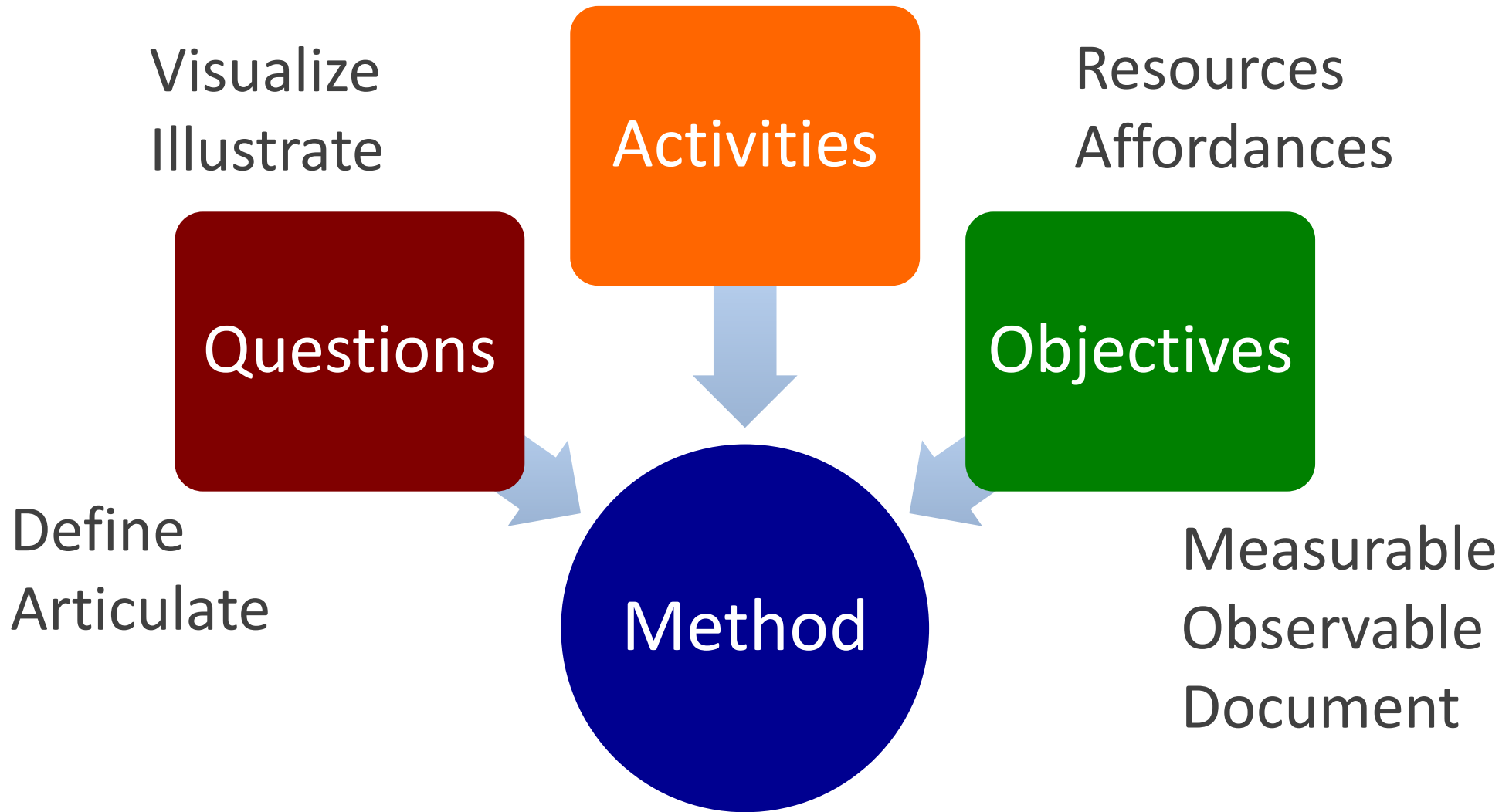
## Resources

- Staffing
- Equipment
- Workshops
- Curriculum

## Time

- Communication
- Community
- Failure/Support
- Accessibility

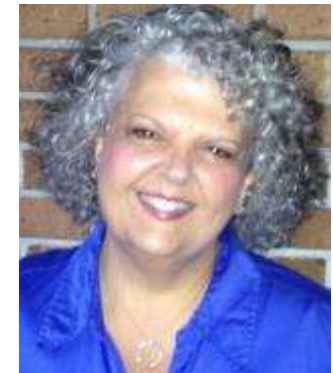
# Methods for Designing Space



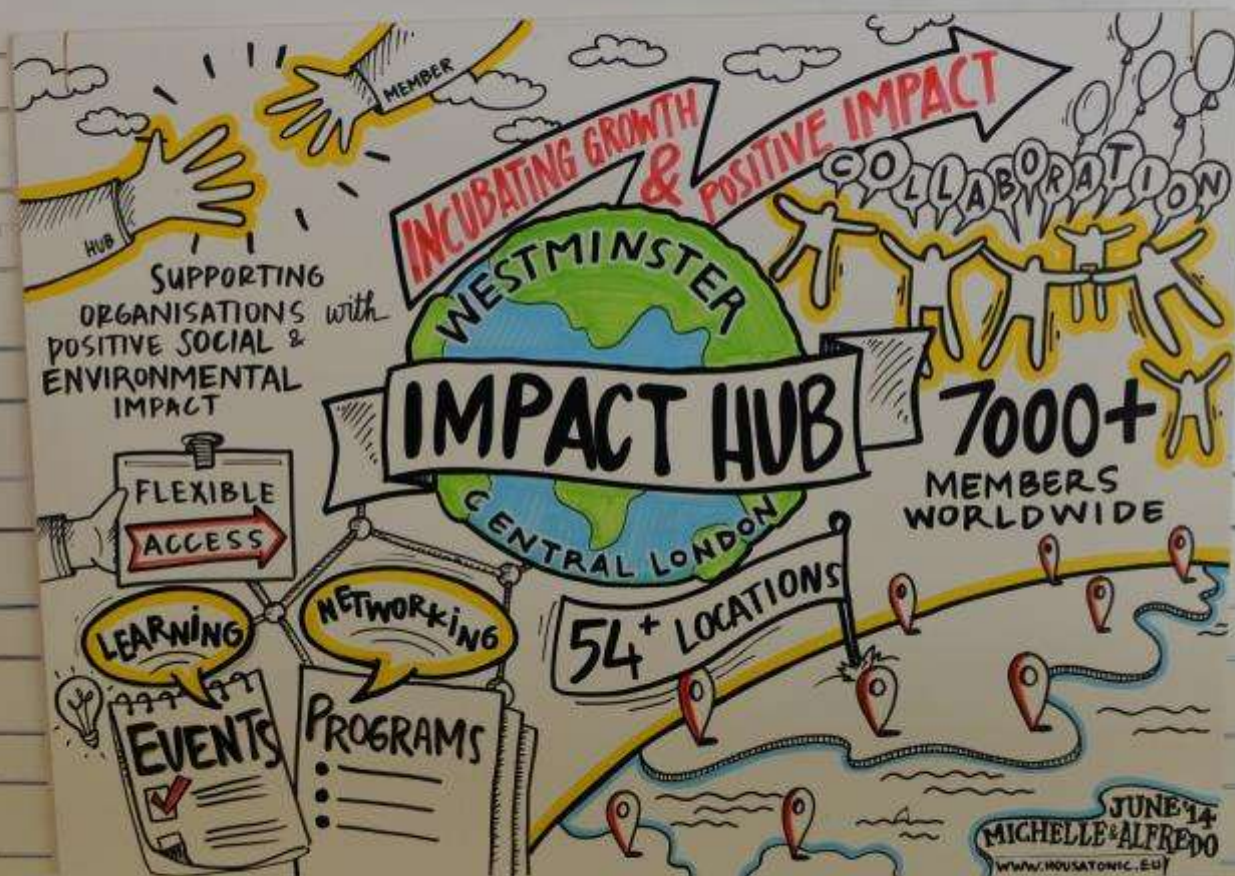
If you don't, someone else will!



# Questions & Comments



# Members



HUB WESTMINSTER



**Bonnie Sanborn**

Stantec

















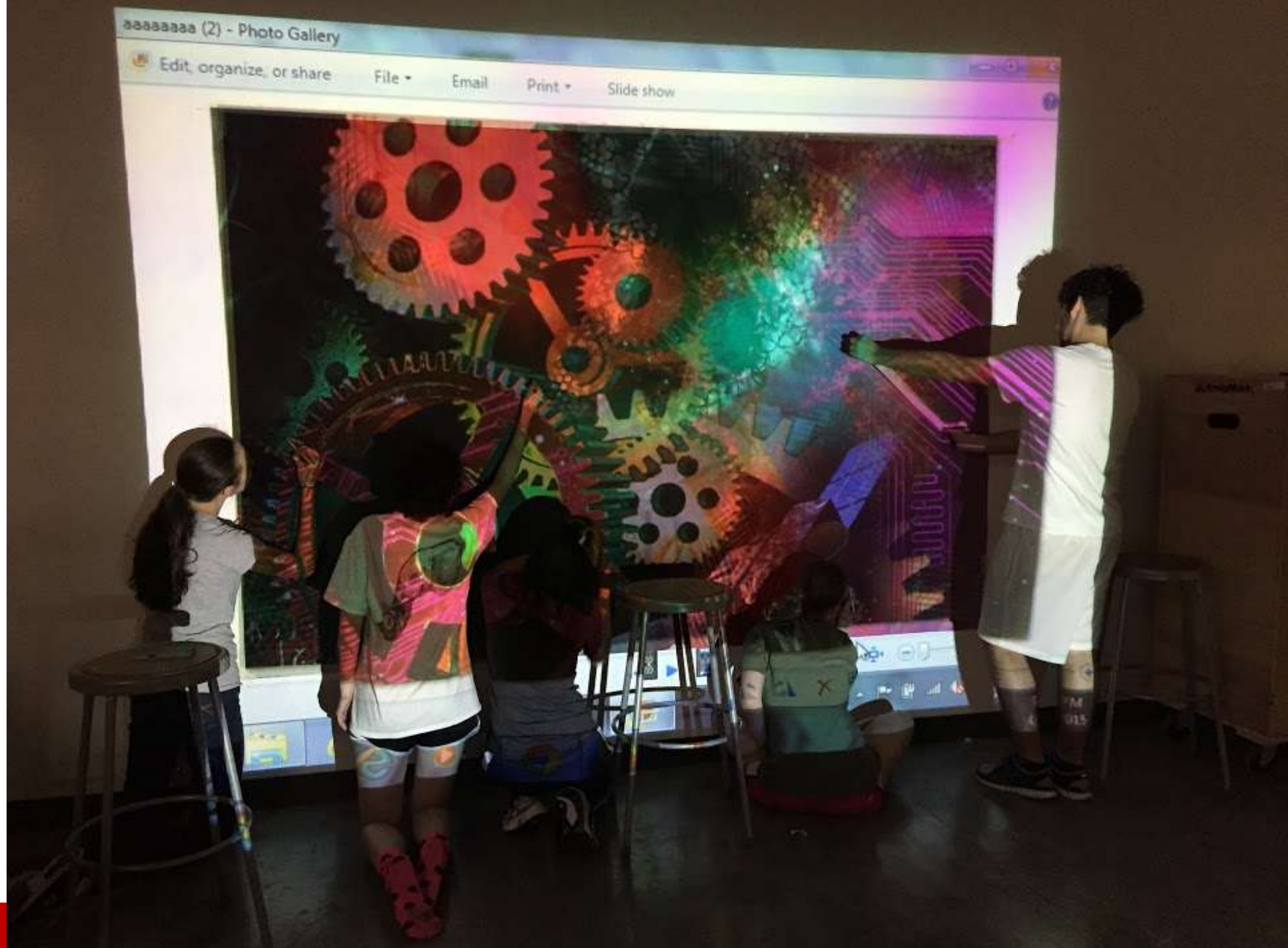




























# Physical Traces *(or, the Archaeology of Environmental Psychology – John Zeisel, "Inquiry by Design")*



## By-Products of Use

- Erosions
- Leftovers
- Missing traces

## Adaptations for Use

- Props
- Separations
- Connections



# Physical Traces *(or, the Archaeology of Environmental Psychology – John Zeisel, "Inquiry by Design")*



## Public Messages

- Official
- Unofficial
- Illegitimate

## Displays of Self

- Personalization
- Identifications
- Group Membership

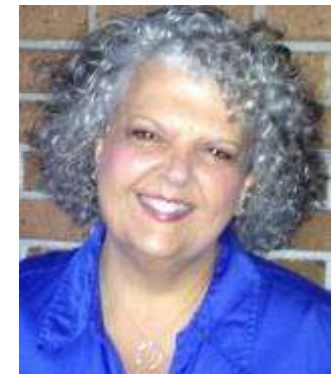


<http://www.uqmarketing.com/wp-content/uploads/2013/02/instagram-12x12-collage.jpg>





# Questions & Comments



# Question & Comments



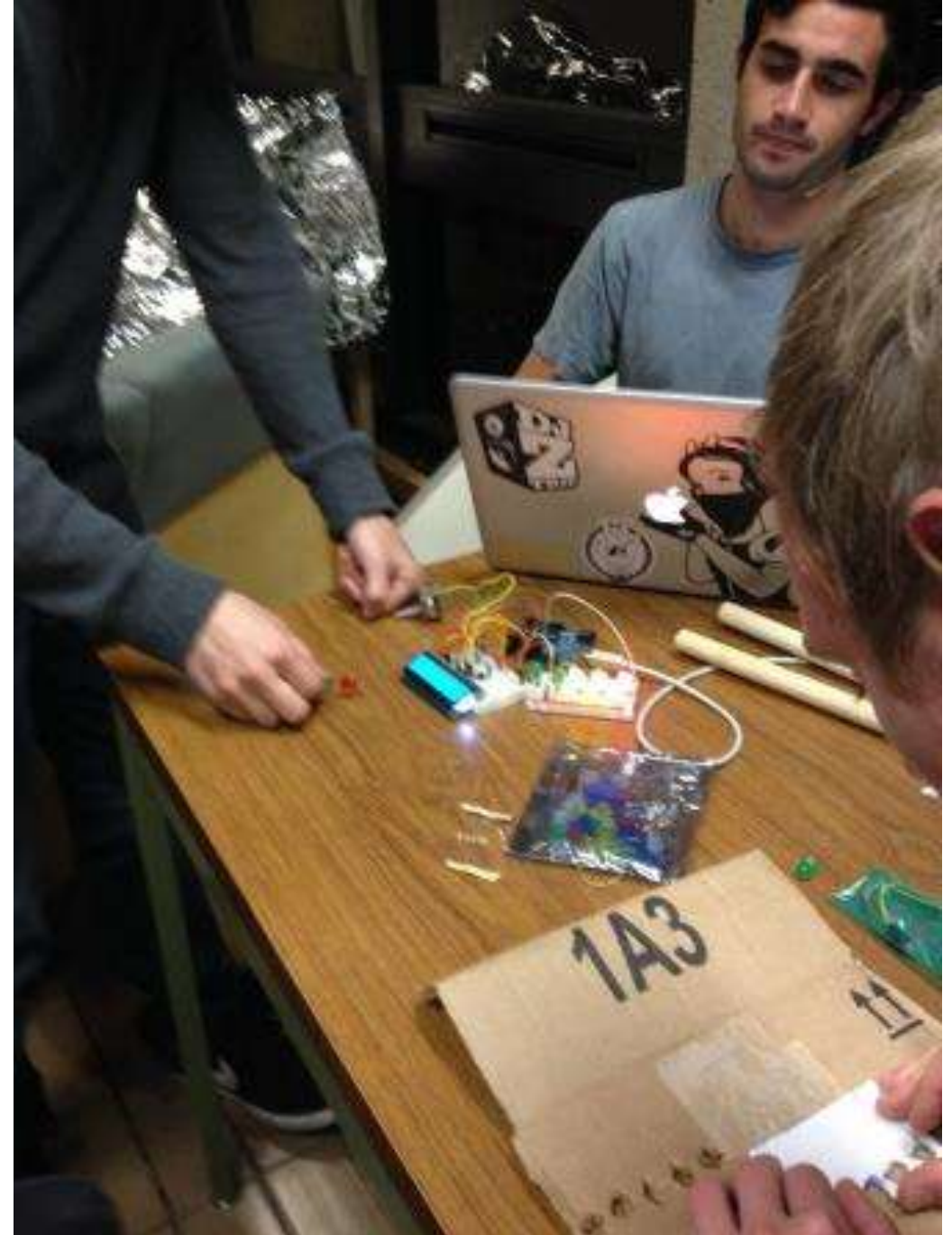




Susan Whitmer

Herman Miller  
Education

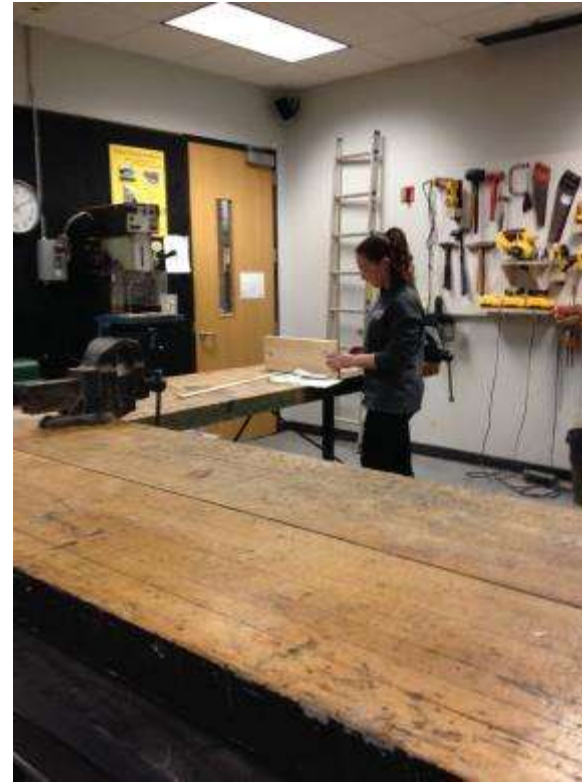
- Makers innovate through tinkering
- Hackers innovate through deconstruction
- Co-working members innovate through networking







Community of learners



Hands-on Learning



Teaching and Learning





Photo Credit: Vocademy





Photo Credit: Brandeis University



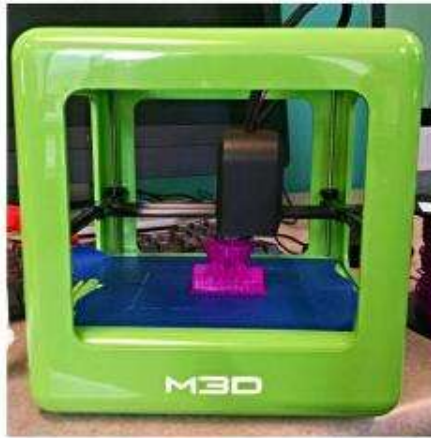


Photo Credit: Brandeis University





Photo Credit: Brandeis University



## Overview and Purpose

The purpose of the Vision Session is to engage MSU BSSC key decision makers in the process of defining goals, context and visions for the project. The framework derived from this work session will help form the criteria for evaluating solutions and developing concepts for the design of the new facility. The vision & goals are summarized in this report





## VISIONING EXERCISE HOUSE RULES

*The group was given rules to encourage participation...*

- All comments are important so don't be shy - chime in !
- Express likes and or dislikes.
- Visioning is not about designing space. It is about identifying the vision and goals for the building.
- We will not achieve 100% agreement but areas of alignment will become apparent.
- Try to keep it at a high level, stay out of the weeds (assume the new building will not have drafts or leak etc.)
- Think broad context and do not limit yourself to "how we do it now".



# Visioning: Images

*Architectural images were pinned to the wall and each individual was asked to place 3 blue dots on the images they liked and three red dots for the images they did not like as representative of the new building*

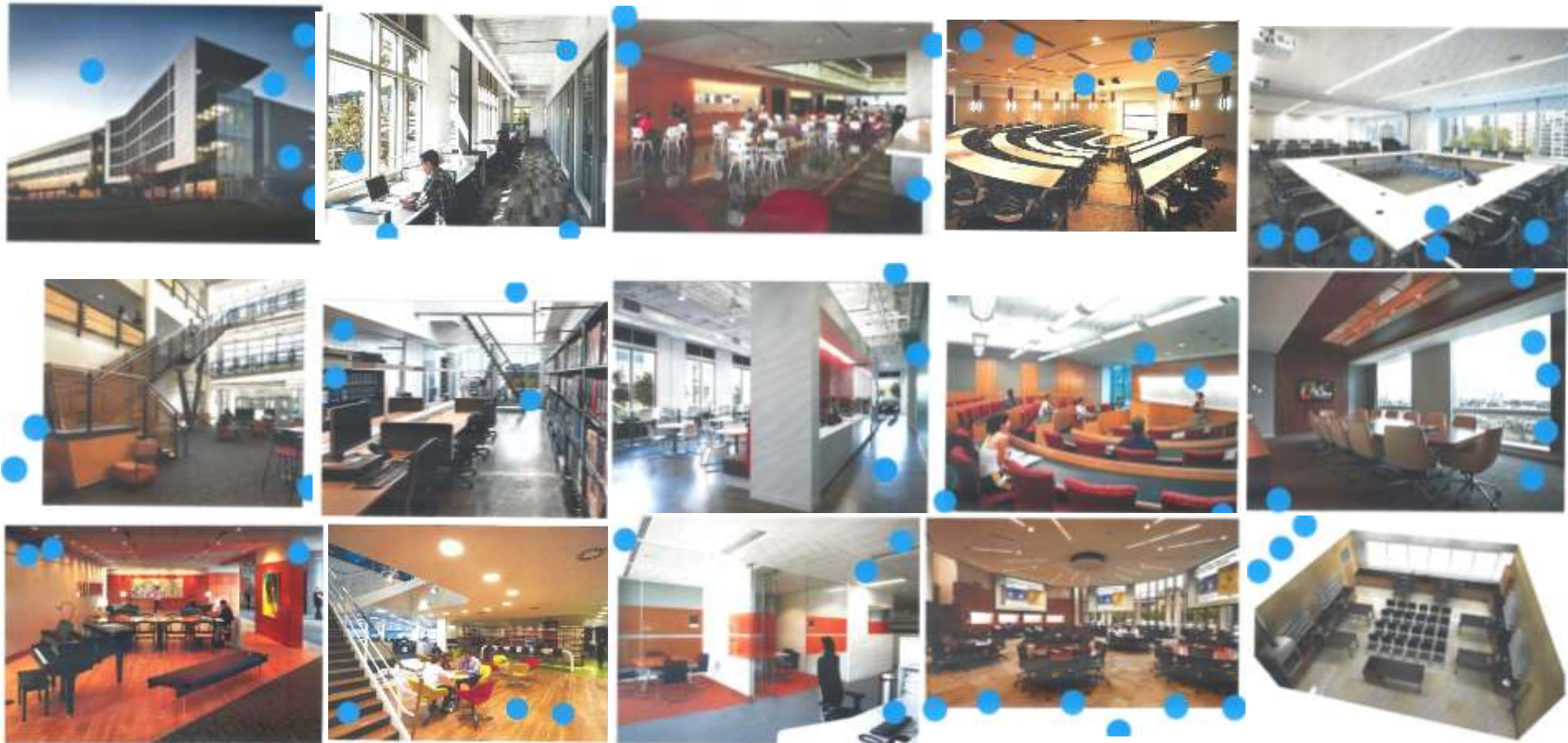




# Visioning: Images Most Representative



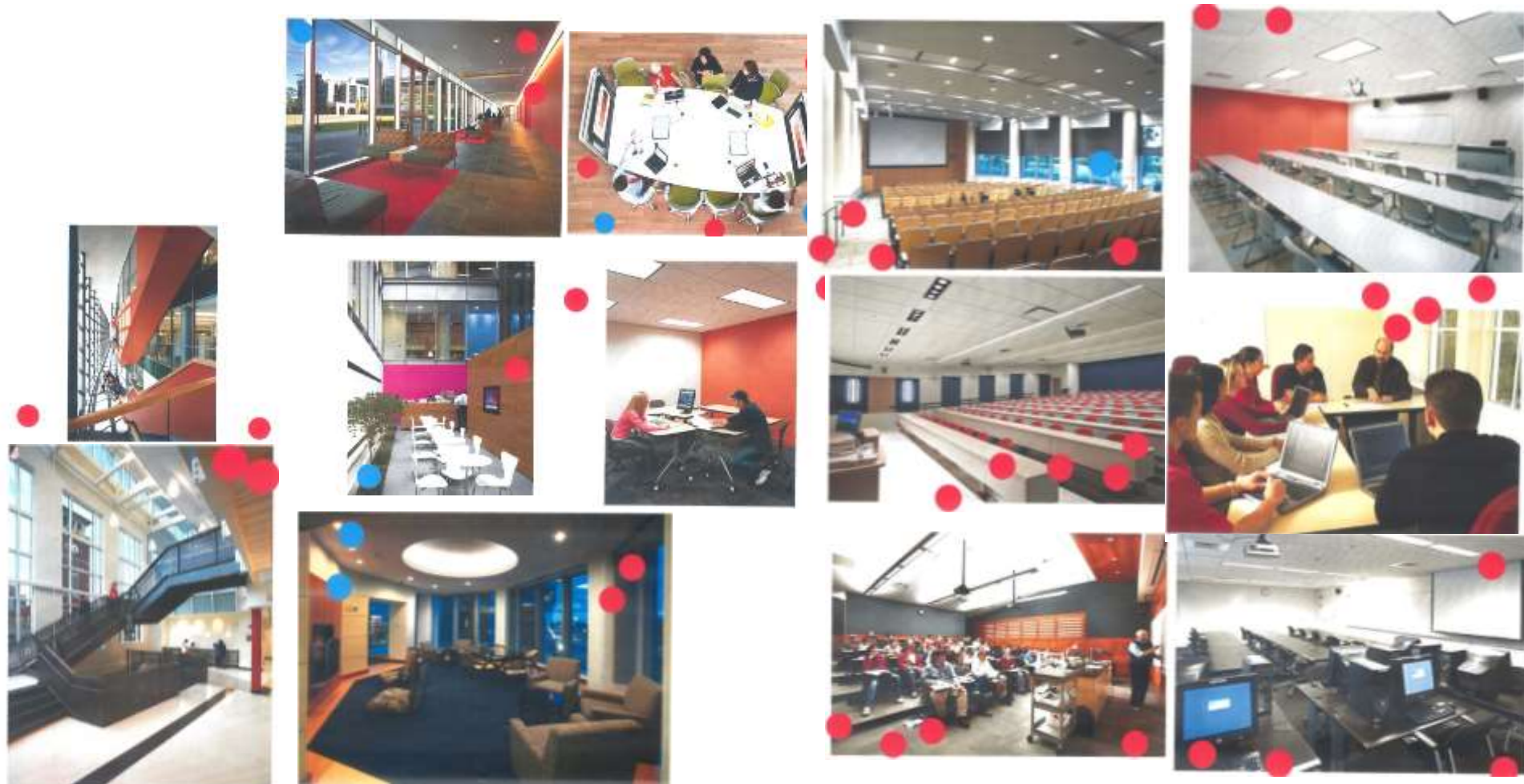
*Architectural images were pinned to the wall and each individual was asked to place 3 blue dots on the images they liked and three red dots for the images they did not like as representative of the new building*



# Visioning: Images Not Representative



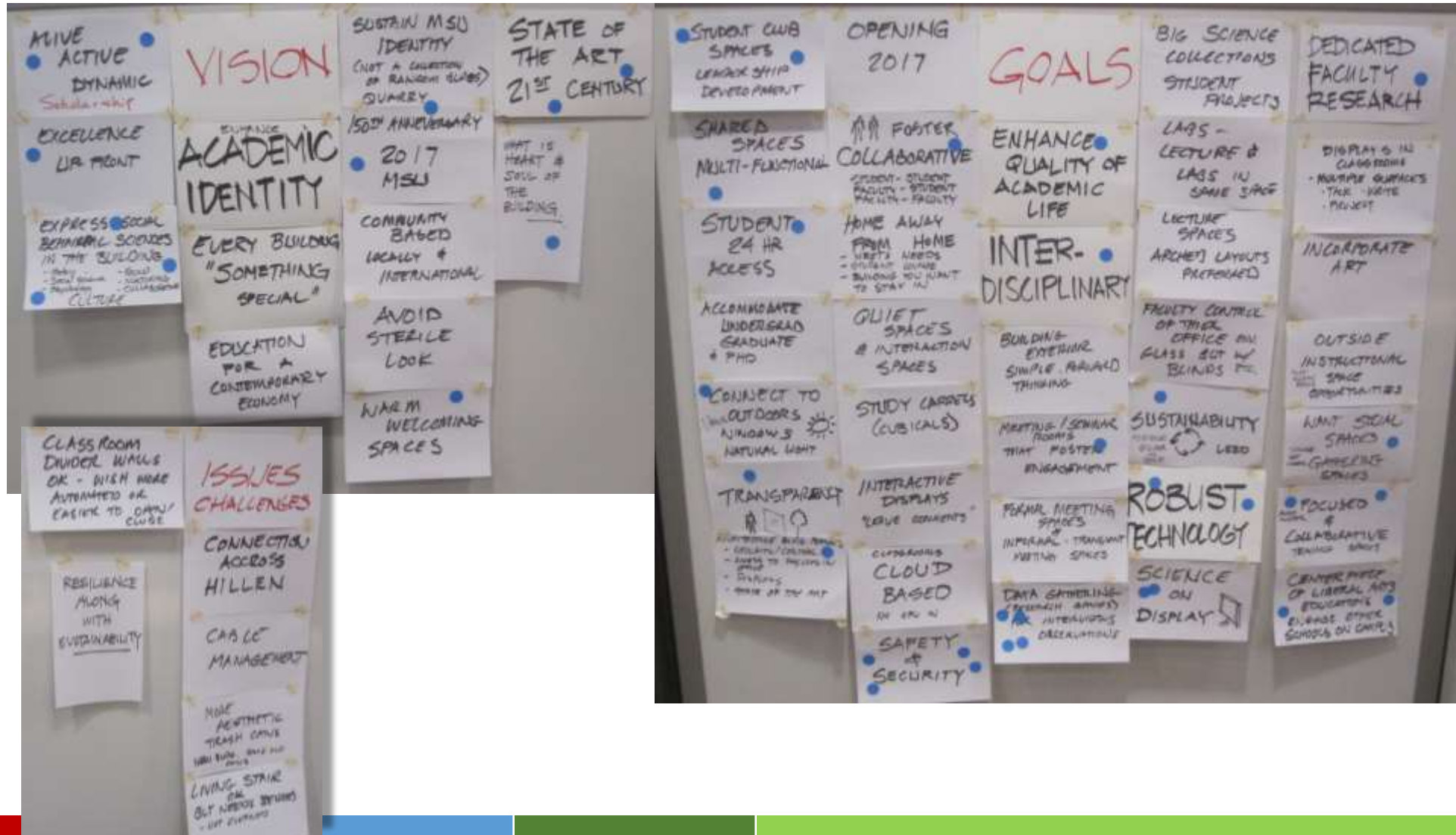
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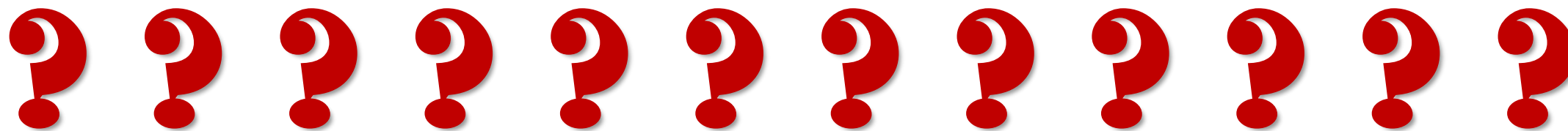




# Visioning: Snow Cards & Alignment

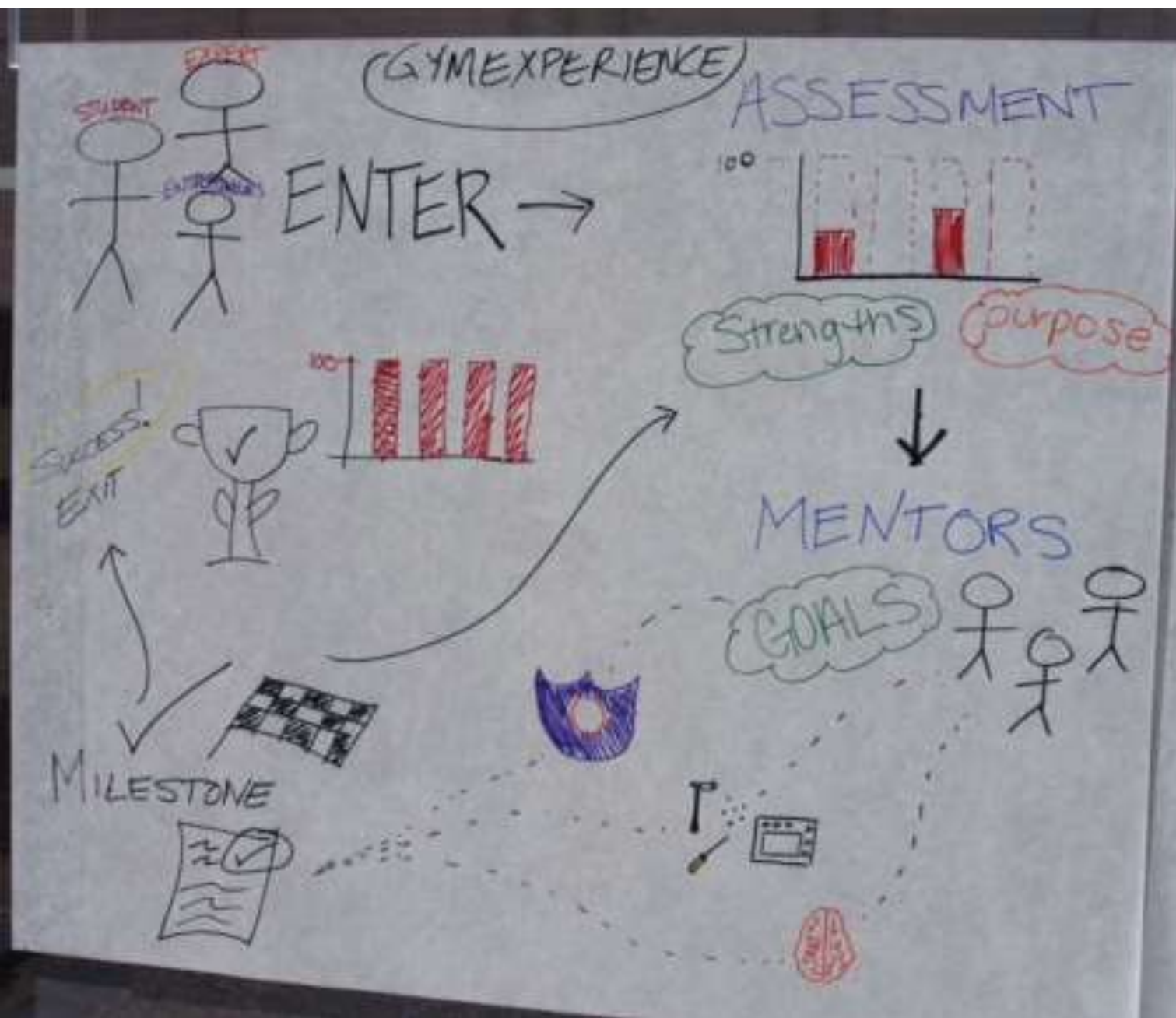
Snow cards were written to capture the ideas as the group expressed them. They were grouped by topic & hung on the wall. Then each individual was given 3 dots to place on the 3 most important goals as they saw them





Auraria Library ♦ Berea College ♦ Cal Poly State University, San Luis Obispo ♦ Calvert Wright Architecture, PC ♦ Carthage College ♦ Central Washington University ♦ Century College ♦ Claremont Colleges Library ♦ Connecticut College ♦ Emory University ♦ George Fox University ♦ Harford Community College ♦ Harold B. Lee Library ♦ Harvard University ♦ Herman Miller ♦ Hord Coplan Macht ♦ Illinois State University / Milner Library ♦ Iowa State University Library ♦ James Madison University ♦ Lafayette College ♦ Lafayette College ♦ Lamar University ♦ Lawrence University ♦ Mansfield Library ♦ Marquette University Libraries ♦ Miami University Libraries ♦ Michigan State University Libraries ♦ Mount Holyoke College ♦ National Institutes of Health Library ♦ New York Public Library ♦ Payette Associates Inc. ♦ Skidmore College ♦ Smith College - Neilson Library ♦ SWBR Architects ♦ Syracuse University ♦ Texas Tech University Library ♦ The College of William & Mary, Swem Library ♦ The University of New Haven ♦ UC Berkeley ♦ UC San Diego ♦ Union College ♦ The SLAM Collaborative ♦ Univ. of Maryland. HS/HSL ♦ University of Alabama ♦ University of Arizona ♦ University of Illinois Urbana-Champaign ♦ University of Iowa Libraries ♦ University of Nebraska at Omaha, Criss Library ♦ University of New Hampshire ♦ University of Richmond ♦ University of Saskatchewan Library ♦ University of Texas Libraries ♦ University of Virginia ♦ University of Washington ♦ VMDO Architects ♦ Washington and Lee University ♦ Washington University in St. Louis University Libraries ♦ Western Carolina University





## Summary Thoughts



*Spaces in which humans grow: a learning community...where mind and sensibility are shared...a place to learn together about the real world, and about possible worlds of the imagination, of materials and learn the power of doing these things together.*

—Jerome S. Bruner. *Toward a Theory of Instruction*.  
Harvard University Press . 1996

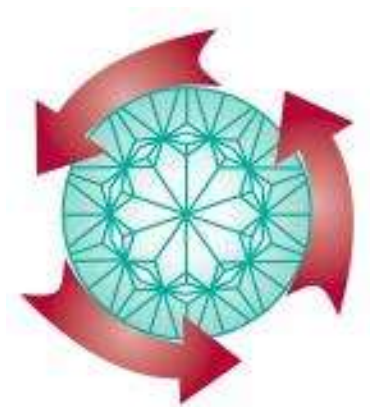




## Fall LSC Webinars

### Learning Spaces Collaboratory

Join the conversation –  
send us your ideas about  
questions to ask in  
shaping learning spaces  
[pkallsc@pkallsc.org](mailto:pkallsc@pkallsc.org)



<http://www.pkallsc.org/>

- *Making the Case: Spaces that have a Role in Preparing Students for Productive and Meaningful Lives*  
**October 20, 2015**
- *Making the Case: Spaces that Matter in Ensuring the Persistence and Success of all Students*  
**November 17, 2015**
- *Making the Case: Spaces that Nudge Learners to Become Boundary-crossing Agents in an Increasingly Complex World*  
**December 9, 2015**