

# Making a Maker Space

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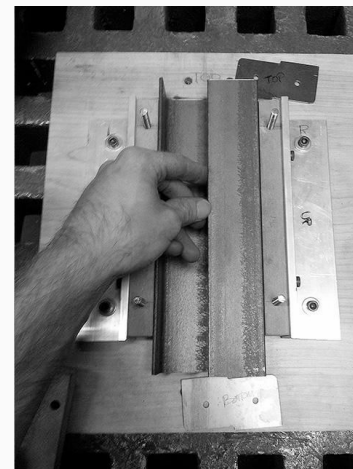
# Hello.

CHRIS

Background in Architecture, Design, +  
fabrication

Manages shops and adjunct faculty at  
Wentworth Institute of Technology,  
Dept. of Architecture

Member of Artisan's Asylum



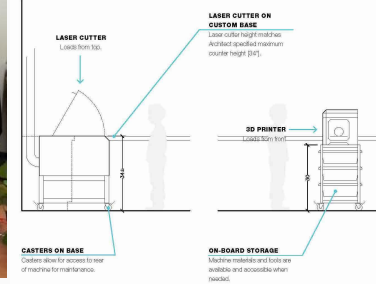
# Hello.

MARYA

Background in mechanical engineering, human factors engineering, and engineering education

Experience in designing maker spaces

Manages Tufts Mechanical Engineering design, instrumentation and fabrication labs.



**Tufts**  
UNIVERSITY

# The Plan

Background on Maker Spaces

Method 1: space critique

Method 2: space design

Wrap up



What is a Maker Space?

# What is a Maker Space?

- *Maker Space* is a concept
- not simply rooms full of tools
- social spaces which serve a community
- inhabited by people with a common interest in making



# What is a Maker Space?

Maker Spaces are shaped by their community and their interests

# What is a Maker Space?

PRIVATE ←

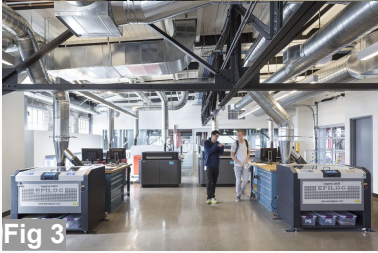
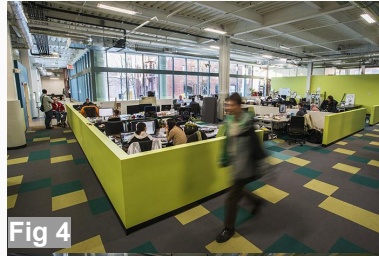
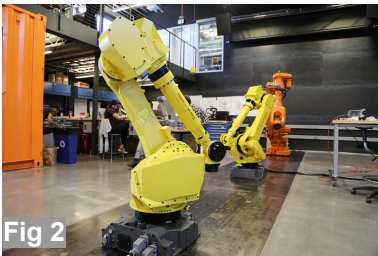
→ PUBLIC

institutional

professional + coworking

educational

community workshop



Why are Maker Spaces important  
in education?



## Why are Maker Spaces important in education?

- *Technical literacy*
- *Active learning*



Fig 10

# Why are Maker Spaces important in education?

- *Fun*
- *Motivation*



Fig 11



# Why are Maker Spaces important in education?

- *Creativity*
- *Problem solving*



Fig 12



What are the ingredients of a  
Maker Space?

# What are the ingredients of a Maker Space?

1/ CULTURE

2/ EQUIPMENT

3/ ENVIRONMENT

# What are the ingredients of a Maker Space?

## 1/ CULTURE



Fig 13



# What are the ingredients of a Maker Space?

## 2/ EQUIPMENT



# What are the ingredients of a Maker Space?

## 3/ ENVIRONMENT



Fig 17



# What are the ingredients of a Maker Space?

## 3/ ENVIRONMENT

The built environment is a reflection of the mission and values of the community. Form follows function.



IDEO - product + brand innovation



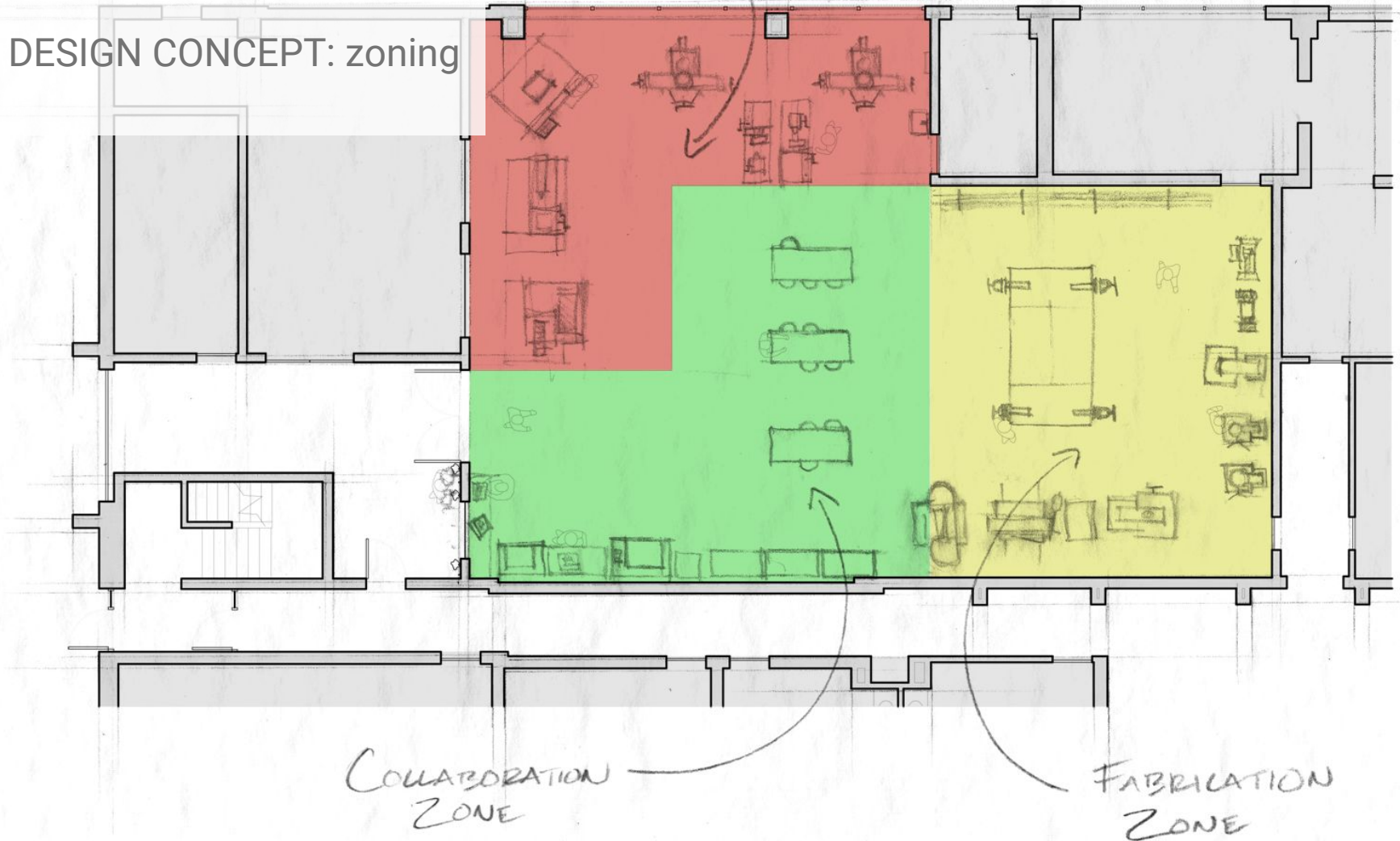
Norman Foster Architects

# What are the ingredients of a Maker Space?

## 3/ ENVIRONMENT

DESIGN CONCEPT: zoning

PRECISION  
MACHINE



# What are the ingredients of a Maker Space?

## 3/ ENVIRONMENT

DESIGN CONCEPT: defining space + zones



Fig 20



# What are the ingredients of a Maker Space?

## 3/ ENVIRONMENT

DESIGN CONCEPT: mobility



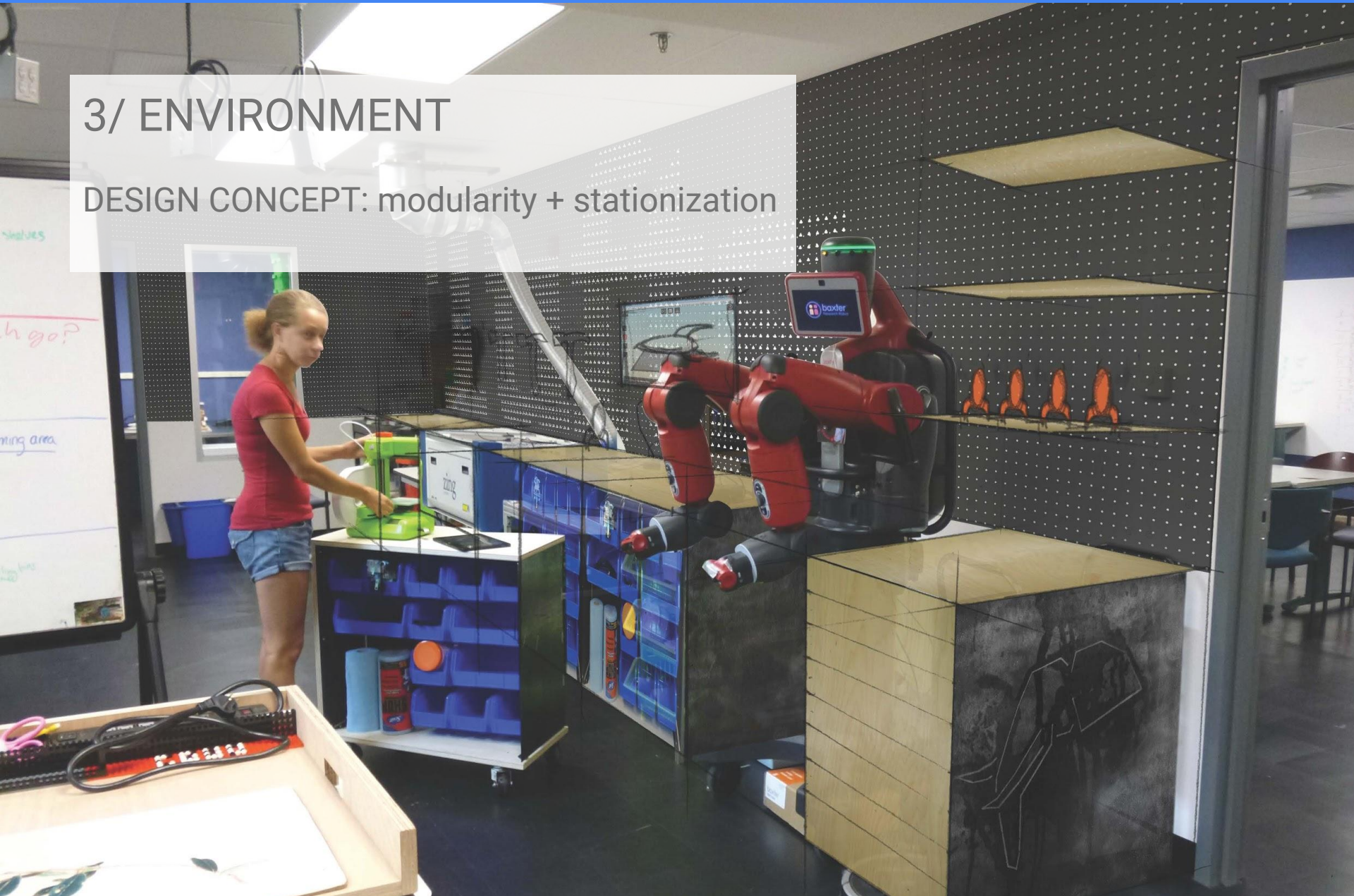
Fig 21



# What are the ingredients of a Maker Space?

## 3/ ENVIRONMENT

DESIGN CONCEPT: modularity + stationization



# What are the ingredients of a Maker Space?

## 3/ ENVIRONMENT

DESIGN CONCEPT: LOTS of storage





# What are the ingredients of a Maker Space?

## 3/ ENVIRONMENT

DESIGN CONCEPT: dynamic workspaces



Fig 22



Fig 23



Fig 24



# What are the ingredients of a Maker Space?

## 3/ ENVIRONMENT

DESIGN CONCEPT: project display



Fig 25

# Method 1: Space Critique

## 1/ What is/are the:

- Space and defined “zones”
- Strategies for spatial flexibility
- Storage strategy
- Workspace types
- Project display methods

2/ What types of use and behaviors does the design of the space encourage or discourage?

3/ What do you like about this space? Not like?

# Method 1: Space Critique

## Stanford D.School

Stanford, CA



Fig 26



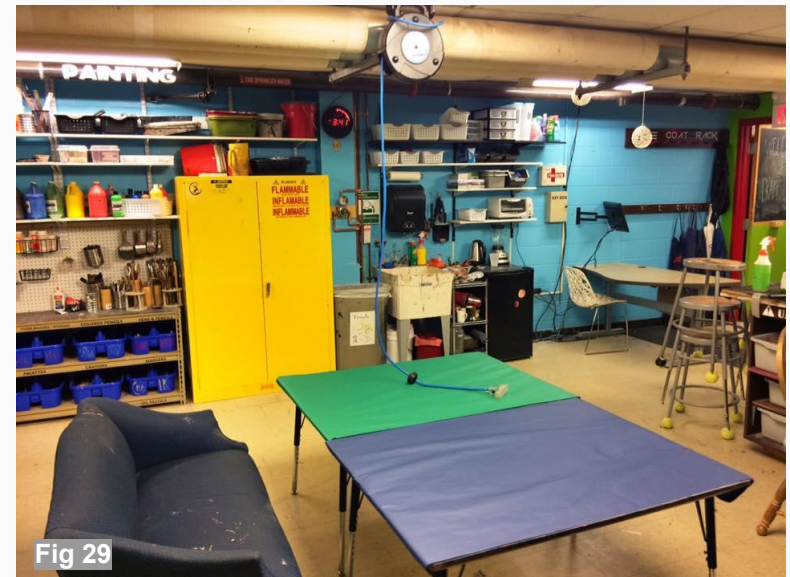
Fig 27



# Method 1: Space Critique

## Tufts Crafts Center

Tufts University, Medford MA



# Menlo School

Atherton, CA





# Port Discovery Children's Museum

Baltimore, CA



Fig 32



Fig 33

# New York Hall of Science

New York, NY





# TechShop

San Francisco, CA



Fig 36

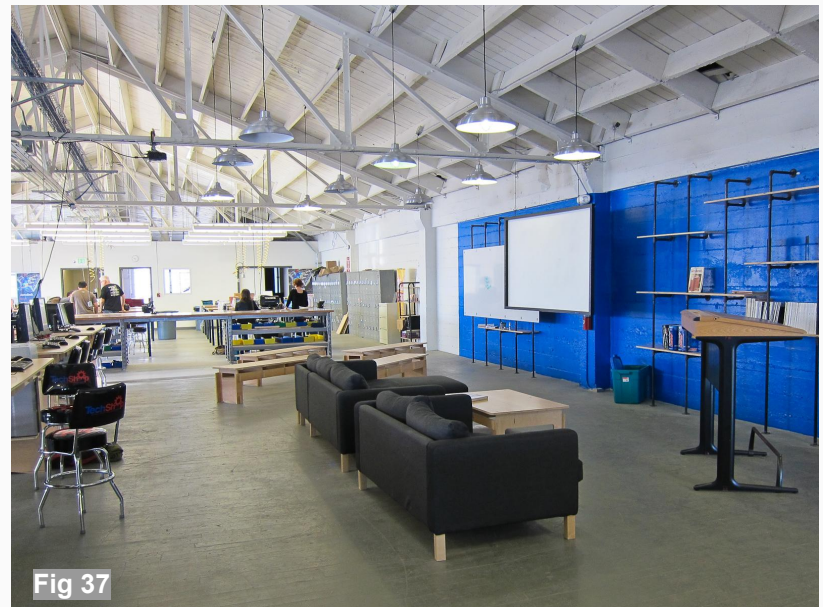
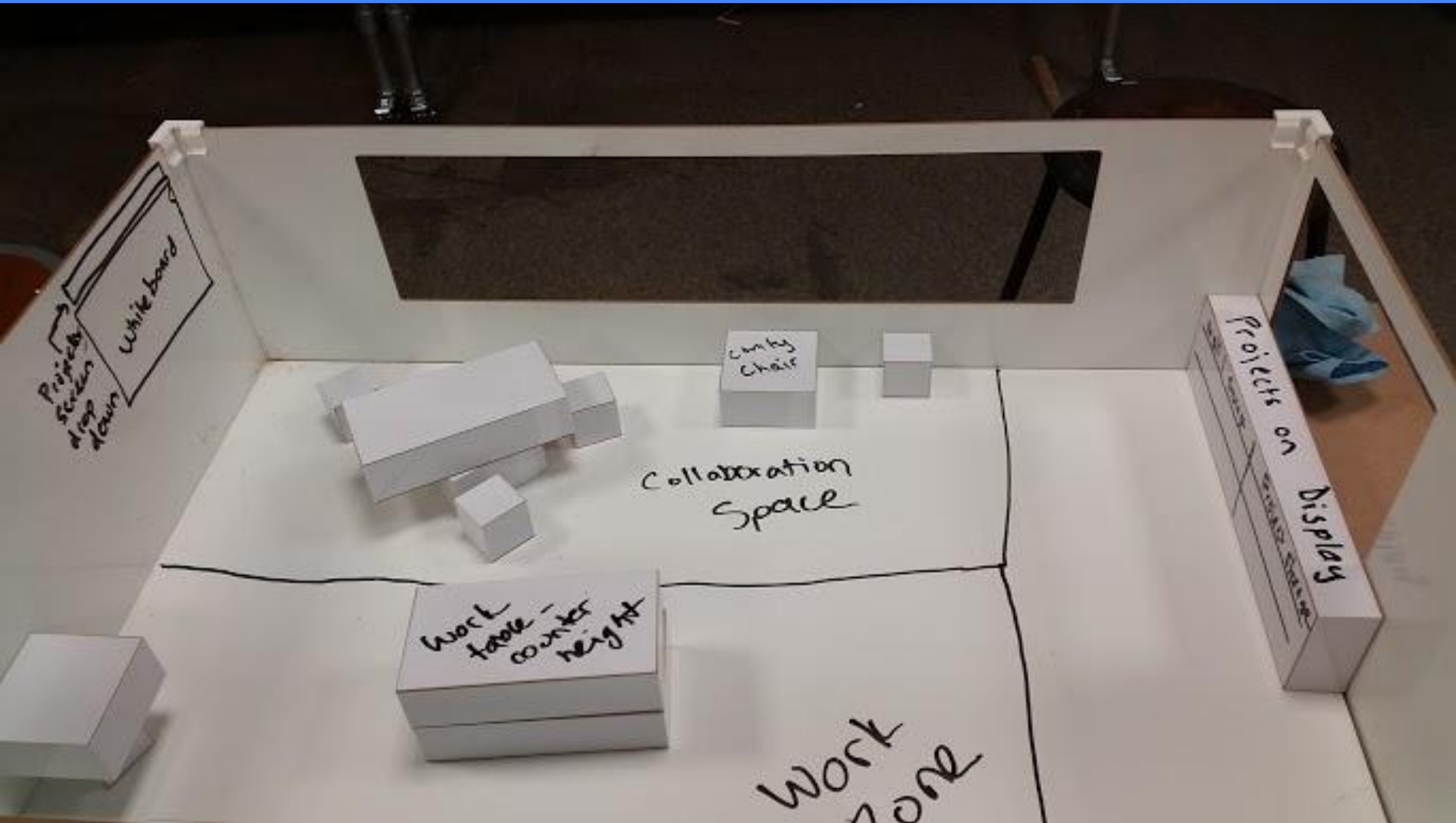


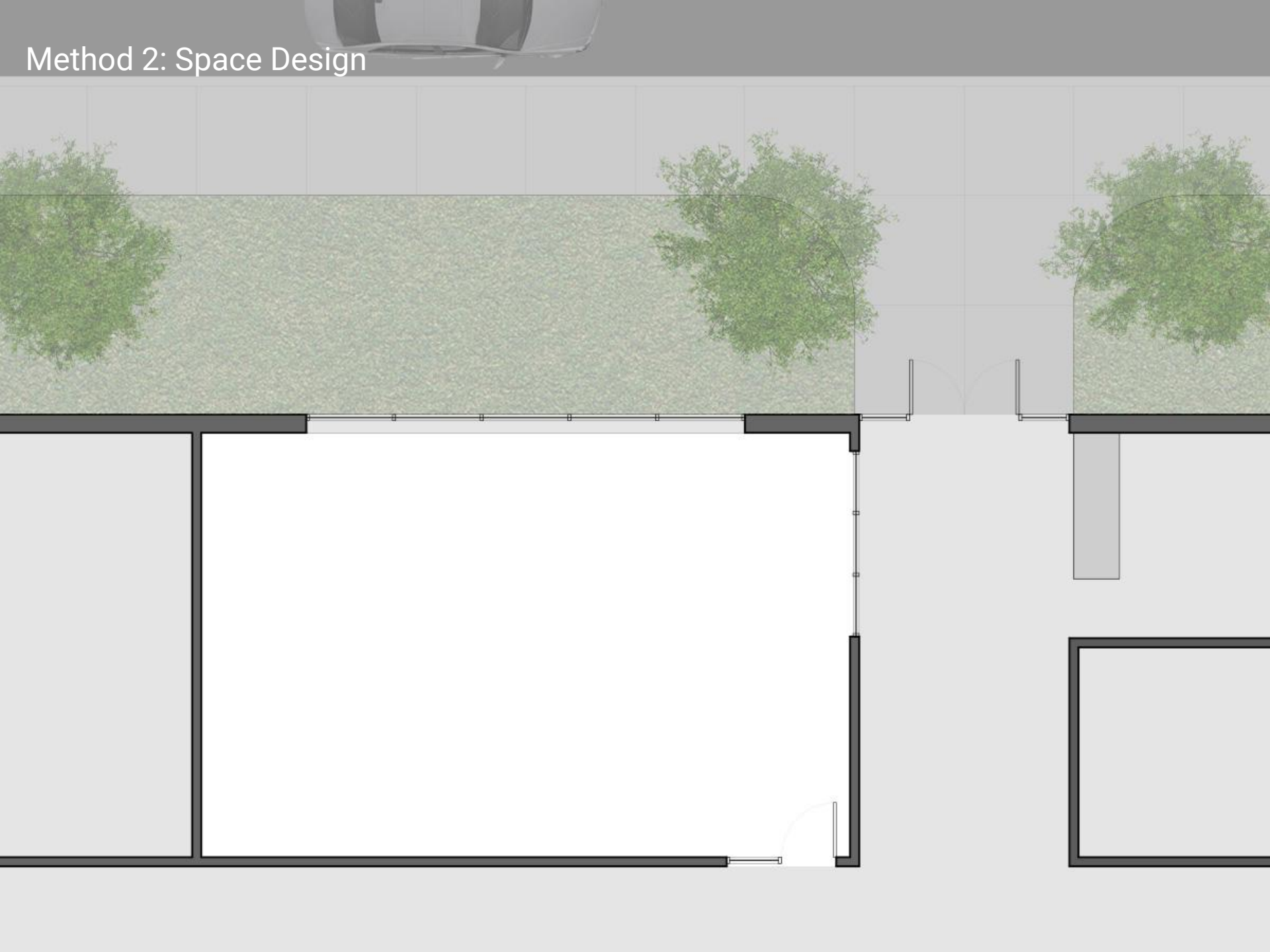
Fig 37

# Method 2: Space Design

## Method 2: Space Design



# Method 2: Space Design





Wrap Up

**Nedlam's Workshop** - How engineering inquiry within a maker context could change the way students and teachers come to recognize and value what counts as productive and academic knowledge.

**Investigating STEM Literacy Practices in Makerspaces** - A study of experienced makers to identify the ways in which they use texts and other representations as they go about their work.

**Play, engineering, and making** - Examining how narrative accompanies making, how different forms of documentation can allow us access to the thinking and reasoning of young makers, and how playfulness exists and supports making.

**The Early Childhood Makerspace at Eliot-Pearson** - An interactive Maker Space that will unify novel and traditional approaches to child development within a constructionist education framework.

# Research and Critique Other Spaces

Visiting other spaces

Online research

Maker Space Playbook School Edition - <http://makered.org/>

Fab Foundation - <http://www.fabfoundation.org/>

Make Space by Scott Doorley and Scott Witthoft

How can the space reflect the values of your community?

What is the role of the space within your institution?

What potential programming would you like to provide?



Thank you

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