

**DESIGN**

**Thinking**

**Virksomhedsinnovation**

**Jørgen Rasmussen**

# DESIGN

**"Everyone designs who devices courses of action to change existing situations into preferred ones"**

**Herbert Simon**

**"Design, stripped to its essence, can be defined as the human capacity to shape and make our environment in ways without precedent in nature, to serve our needs and give meaning to our lives"**

**John Heskett**

# DESIGN

# Thinking

Design Thinking er det tankesæt, med hvilket **designere** tilgår problemløsninger eller mulighedsrum.

# Mental models?



**Design tænkning** kan bruges som fælles platform til at udvikle fælles: **sprog – kultur – mål - teams**

# What is this?



- Build-in printer!
- Works off-line!
- Works without power!

**“We see things not at they are, but as WE are!”**

Richard Seymore

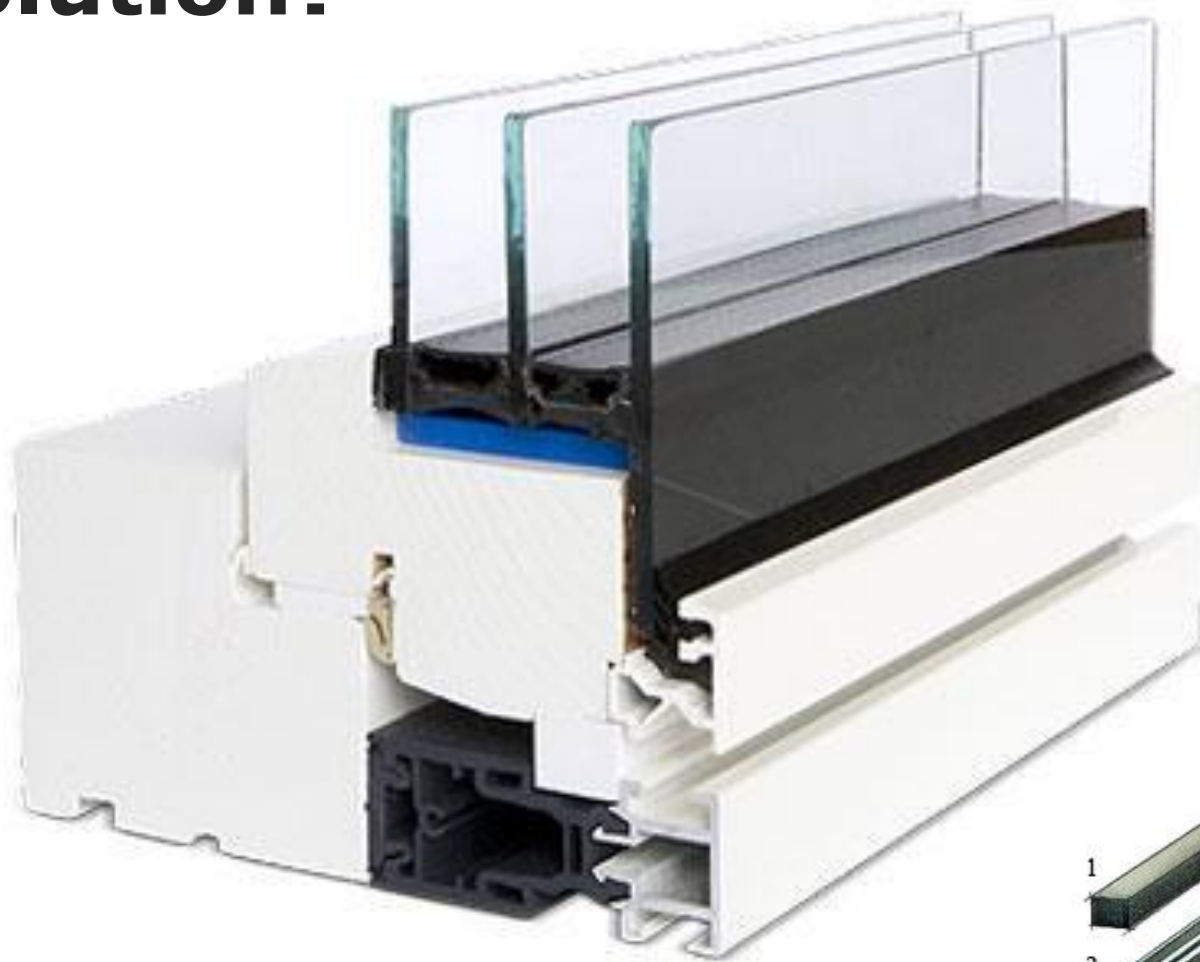


# Problem?





# Solution?



**5 X "Why"**

**Eric Ries – The lean Startup**



# Problem?





**Problem?**





**Solution?**





## Casual wear campaign



In this Tuesday, May 1, 2012 file photo, ministry workers sport a relaxed look as they leave their offices in Tokyo as the government's "Cool Biz" casual wear campaign is launched Tuesday, May 1, 2012. The Cool Biz encourages workers to dress down while turning down air conditioners to set office temperatures at 28 degrees Celsius (82.4 degrees Fahrenheit). On May 5, the last of the country's 50 usable nuclear reactors will be switched off, completely idling a power source that once supplied a third of Japan's electricity. At a time when temptation to set the aircon to deep freeze is at its greatest, companies and ordinary Japanese will be obliged to economize amid temperatures that can climb above 40 degrees Celsius (104 Fahrenheit). (AP Photo/Koji Sasahara, File)

Read the article: [Crisis-hit Japan mulls shift to renewable energy](#)

# Design Thinking is a cultural trend

**It's Optimistic.**

Design Thinking is the fundamental belief that we all can create change - no matter how big a problem. (Motivation and *management ownership*)



# Design Thinking is a cultural trend

**It's Optimistic.**

**It's Human-Centered.**

Design Thinking begins from deep empathy and understanding of needs and motivations of people. (users and colleges!)

# Design Thinking is a cultural trend

**It's Optimistic.**

**It's Human-Centered.**

**It's Collaborative.**

Several great minds are always stronger when solving a challenge than just one.

Design Thinking benefits greatly from the views of multiple perspectives. (ownership)



# Design Thinking is a cultural trend

**It's Optimistic.**

**It's Human-Centered.**

**It's Collaborative.**

**It's Experimental.**

Design Thinking gives you **permission to fail** and to learn from your mistakes, because you come up with new ideas, get feedback on them, then iterate.

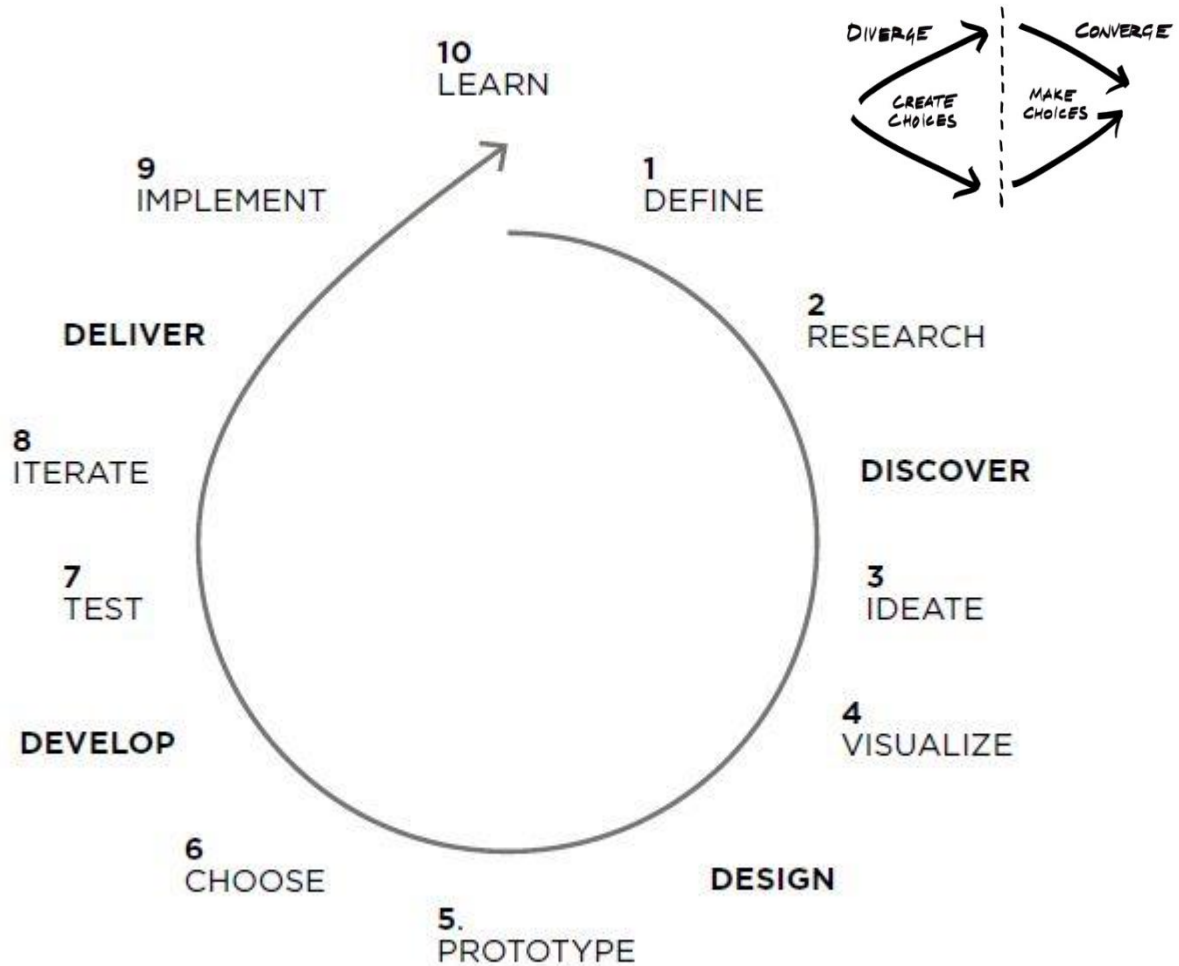
# ***The design process is what puts Design Thinking into action.***

*It's a structured approach to generating and developing ideas.*

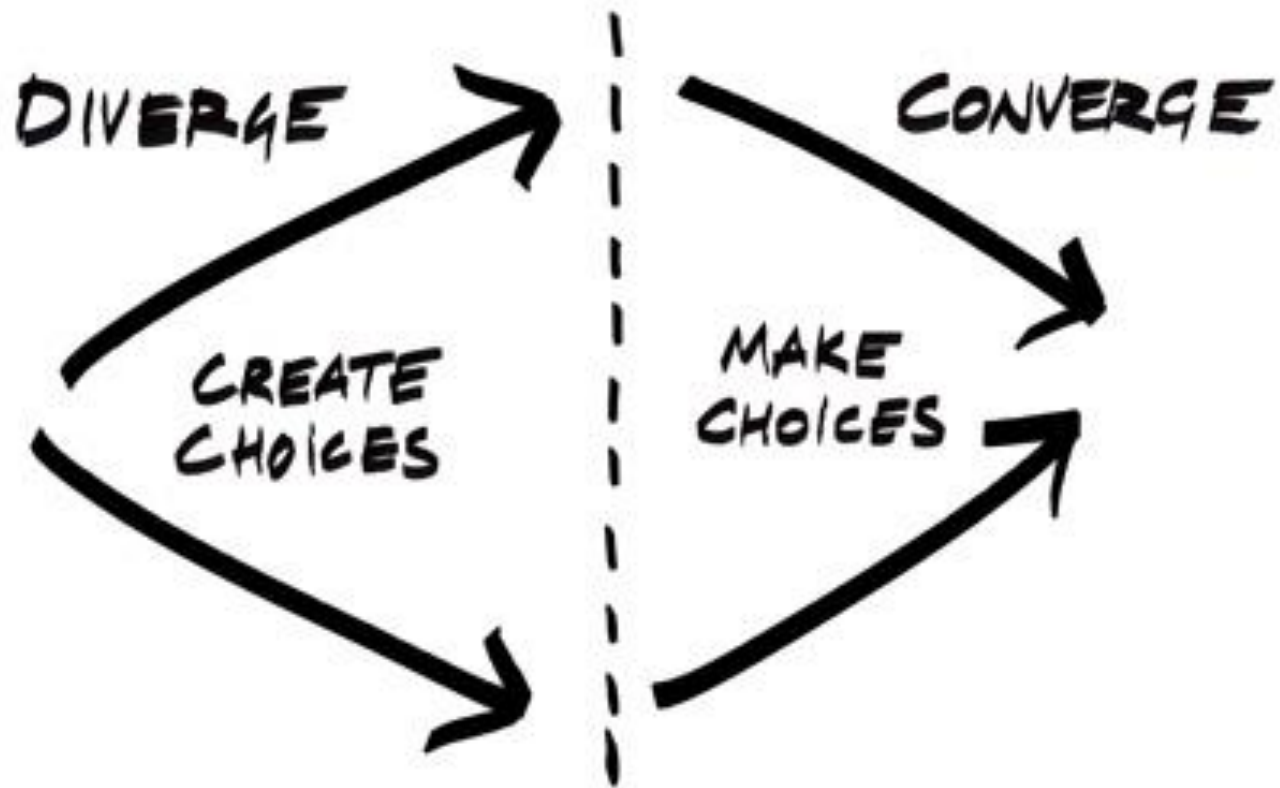
## **The five phases of the design process:**



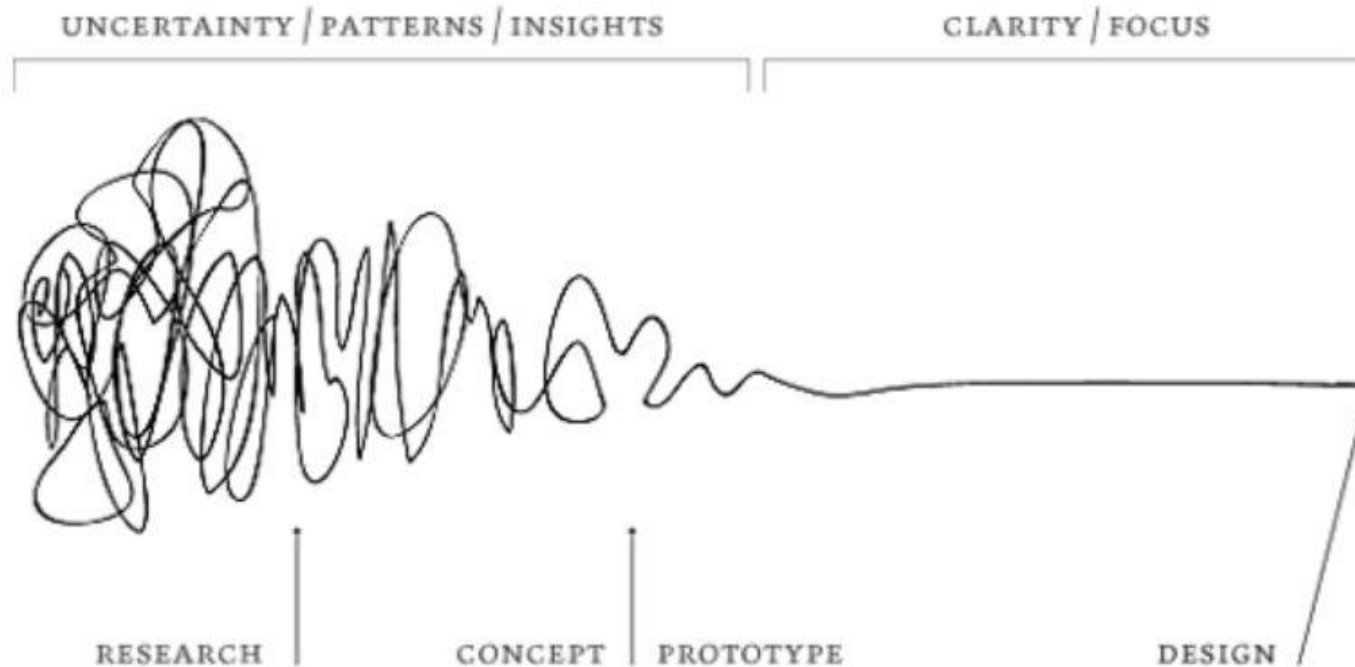
# HUMAN-CENTERED INNOVATION PROCESS







# Design Thinking



- **Space**
- **Multidisciplinary teams**
- **Prototyping**

# Space





# SCALING

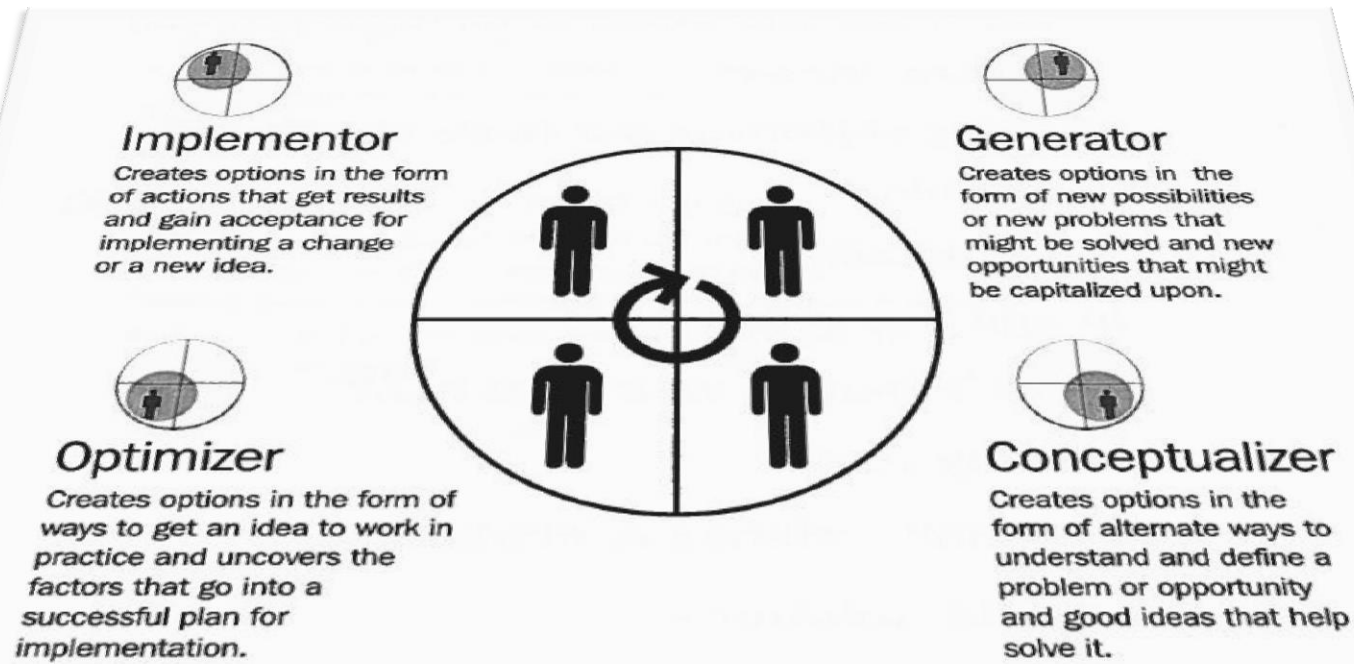


# Multidisciplinary teams





# Multidisciplinary teams



Source: Basadur Creative Problem Solving Tool, Copyright Dr. Min Basadur.

# Prototyping





# Prototyping

## Urban Prototyping Using LEGOs and Parametric Modeling for Designing Cities

### A City Science Workshop

**Course Description** – The world is experiencing a period of extreme urbanization. In China alone, 300 million rural inhabitants will move to urban areas over the next 15 years. This will require building new infrastructure to accommodate the equivalent of the current population of the United States in a matter of a few decades. It is a global imperative to develop systems that improve livability while dramatically reducing resource consumption. This workshop will explore the complex and interdependent nature of housing, mobility, energy, and food production systems for high-density cities.

**Student Deliverables** – Students will explore urban systems at both the neighborhood scale (~1km<sup>2</sup>) and the block scale. Participants will develop a process for understanding and resolving a set of interdependent urban parameters including building massing, space use, shared mobility networks, streetscape types, parks, urban food production, and energy generation nodes. Students may elect to work with either 3D physical models using color-coded LEGO bricks as an abstract framework, or parametric computation software such as Grasshopper. Precedents from existing cities and current urban theory will be used to inform the development of urban strategies that maximize livability and positive human interaction while minimizing the consumption of resources.

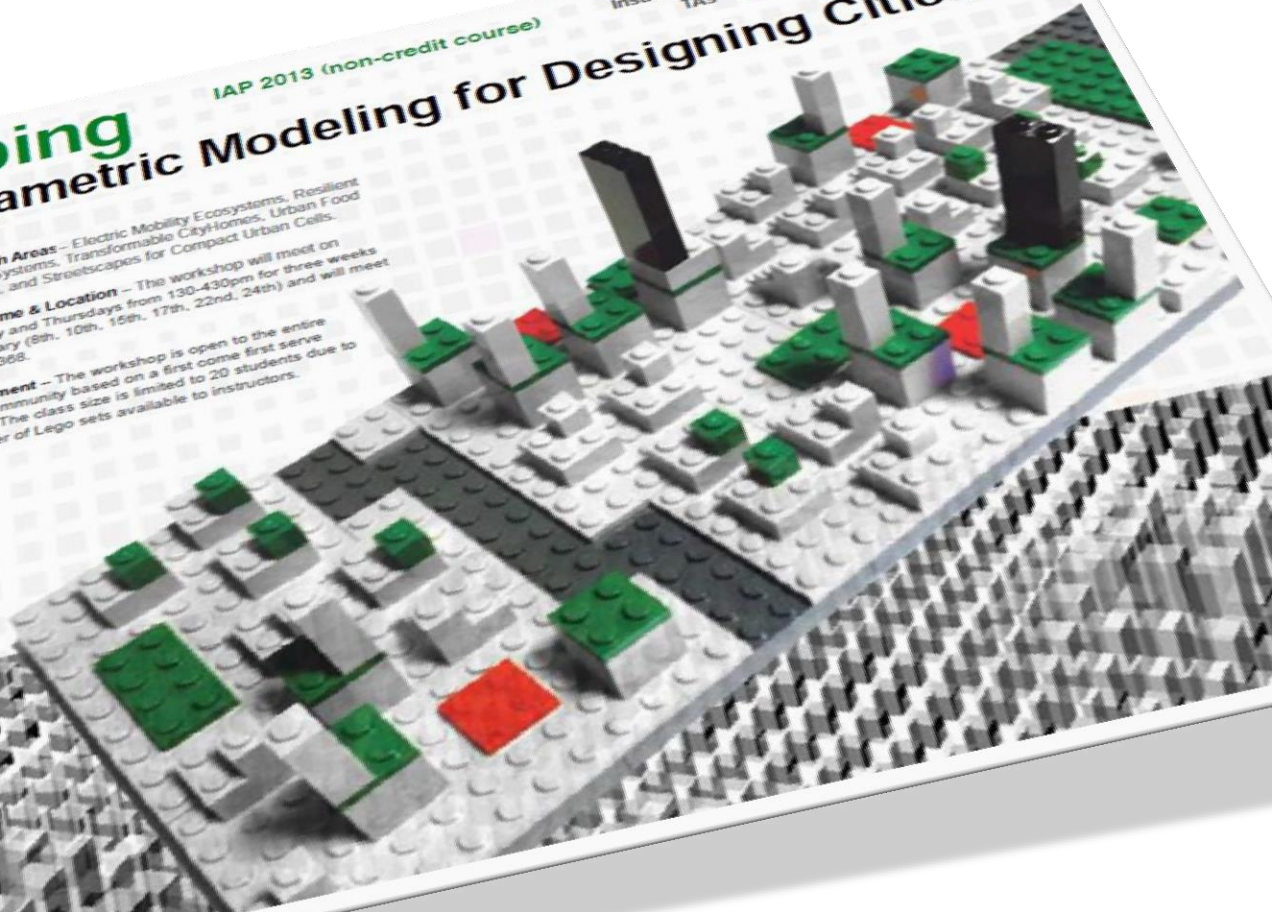
**Research Areas** – Electric Mobility Ecosystems, Resilient Energy Systems, Transformable City-Homes, Urban Food Systems, and Streetscapes for Compact Urban Cells.

**Date, Time & Location** – The workshop will meet on Tuesday and Thursdays from 130-430pm for three weeks in January (6th, 10th, 16th, 17th, 22nd, 24th) and will meet in E15-368.

**Enrollment** – The workshop is open to the entire MIT community based on a first come first serve basis. The class size is limited to 20 students due to number of Lego sets available to instructors.

IAP 2013 (non-credit course)

Instructors  
TAS Kerit Larson, Ryan Chin  
J. Ira Winder, Michael Lin







# Prototyping

## **Quality (do what is needed!)**

Low-Fi,  
Med-Fi,  
Hi-Fi Prototypes

## **Scale (learn from the process)**

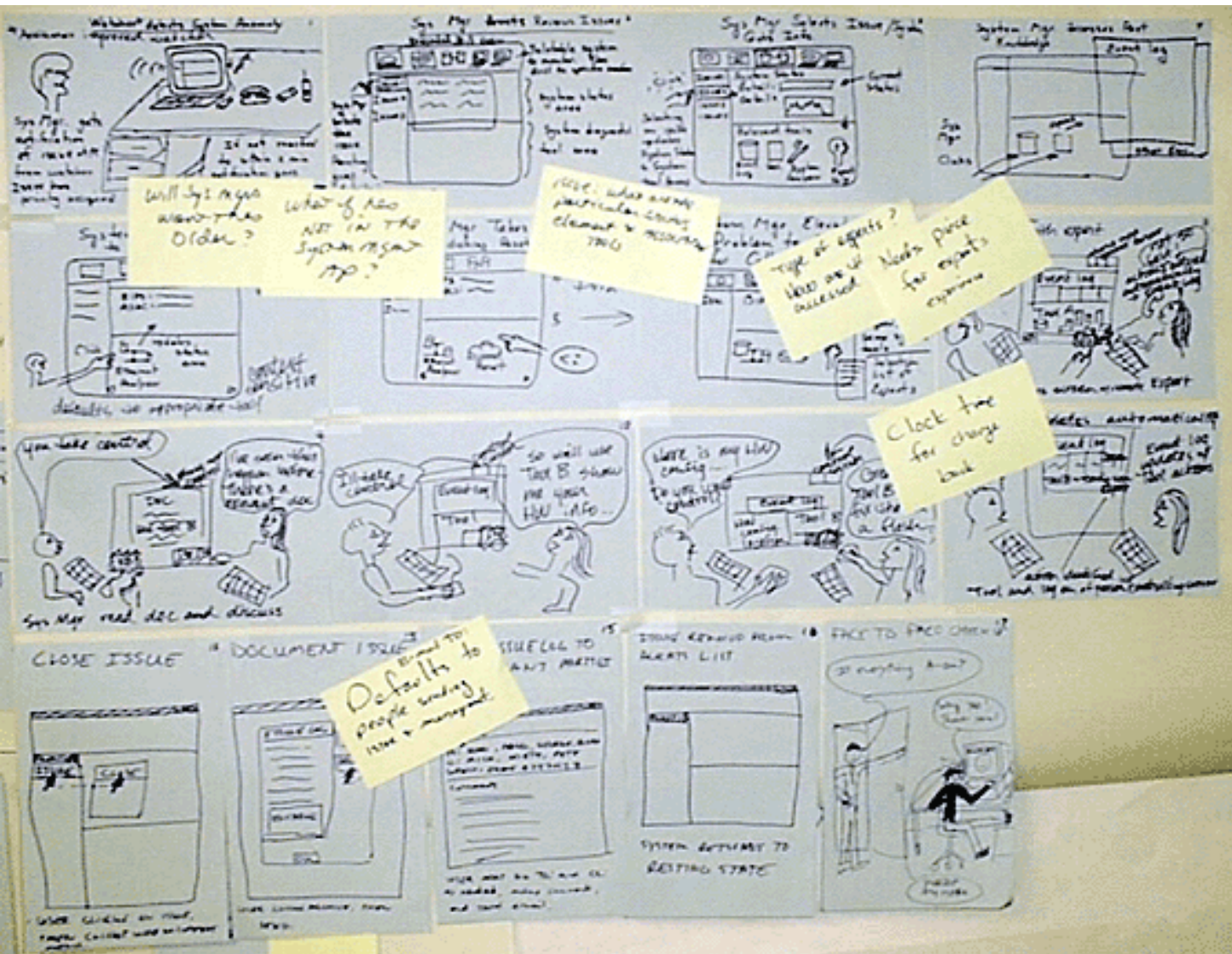
User groups  
Friends and partners  
Limited groups of actual users

## **Scaling organizational prototypes**

Project group  
Department – or “cross department” group  
Organization – over a limited time



# Prototyping







# Prototyping

Reid Hoffman, founder of LinkedIn once said:

**“If you are not embarrassed by the first version of your product, you’ve launched too late.”**

## Fail fast!

# **“Strategic Fitt”**

**“What is Strategy?” Michael E. Porter** HARVARD  
BUSINESS REVIEW November-December 1996

**“A strategy is a plan of  
action designed to  
achieve a specific  
goal!”**

# “Strategic Fit”

“While operational effectiveness is about achieving excellence in individual activities, or functions, **strategy is about combining activities.**”

“... competitive advantage comes from the way its **activities fit and reinforce one another.**”



# “Strategic Fit”

“**First-order** fit is *simple consistency* between each activity (function) and the overall strategy.”

“**Second-order** fit occurs when *activities are reinforcing* each other.”

# Strategic Fit







**Mac OS X**  
Just try to think different.



