Please **KEEP** your assignments to turn in at the end of class
MIS 5403
Summer 2015

Design Inquiry and Research

Week 2

cD+i

Fox School of Business
TEMPLE UNIVERSITY®
Welcome Back!
Did you enjoy your FIELDWORK?
Agenda:

- **Process Mapping** the way designers work
- **Understanding** the power of people and stories
- **Sharing** information collected and developing a framework for assessment.
- **Analyzing** information from observations and fieldwork and
- **Synthesizing** key insights
- **Experience Mapping** and visualizing complex systems
- **Identifying** opportunities
- **Strategizing** a research plan for advancing your project: *What do you have? What do you need? What is missing?*
To begin a project, we need a working PROCESS.
A **WARM-UP** exercise
How DESIGNERS work
Action:

act on a piece of paper +
each person needs seven sheets of paper.
do something with a piece of paper to make it stand.
do this four more times. each one must be different
choose the best one.
why is it best
make it better.
is it better? why?
act on one more
Lesson learned: design process
What is DESIGN PROCESS?
DESIGN PROCESS

1: Define the problem
2: create and consider many options
3: refine selected directions
3.5: repeat (optional)
4: pick the winner, execute
Lesson learned: learning by doing
Lesson learned: designers iterate
THINK 3X
Google’s 8 Pillars of Innovation:

*Strive for continual innovation, not instant perfection*

"Our iterative process often teaches us invaluable lessons. Watching users ‘in the wild’ as they use our products is the best way to find out what works, then we can act on that feedback.... Iterating has served us well."

- Susan Wojcicki, Google's Senior Vice President of Advertising

From: http://www.google.com/think/articles/8-pillars-of-innovation.htmls
Lesson learned:
fail to succeed
Google’s 8 Pillars of Innovation:

Never fail to fail

"It’s okay to fail as long as you learn from your mistakes and correct them fast. Trust me, we’ve failed plenty of times. Knowing that it’s okay to fail can free you up to take risks."

- Susan Wojcicki, Google's Senior Vice President of Advertising

From: http://www.google.com/think/articles/8-pillars-of-innovation.htmls
"We love to invent. We love to pioneer. We even like going down alleys that turn out to be blind alleys,"

... 
"Every once in a while those blind alleys turn into broad avenues. And that turns out to be lots of fun."

- Jeff Bezos, Amazon

From: Amazon announces new wave of Kindle
Reflection:

How does a design process differ from a typical management approach?

What is a design attitude?
DRAWING is part of the design PROCESS
diagram noun

Greek diagramma, from di graphein to mark out by lines, from dia- + graphein to write

First Known Use: 1619

1: a graphic design that explains rather than represents; especially: a drawing that shows arrangement and relations (as of parts)

2: a line drawing made for mathematical or scientific purposes

diagram verb

: to show or explain (something) in a diagram

From: http://www.merriam-webster.com/dictionary/diagram
How would you **DIAGRAM** the **DESIGN PROCESS** and **OUTCOMES**?
Think visually
“… human life is not grounded in precision, but in the grasping of connections, facts, relationships, links, analogies…”

— Otl Aicher
As a team, discuss how you would begin to DIAGRAM the Exercise, Design Process and OUTCOMES.

How will you begin?

What will you include?

How will you show it?
Lesson learned: design process PRESENTATIONS + DISCUSSION
7 sheets

1. Act on 1. Make it stand
2. 4 more. All different
3. Pick the best
4. Why?
5. Make it better.
6. Is it better?
7. Why?
8. 1 more...

**Process**

- Define the Problem
- Exploration
- Selection
- Reasoning
- Refinement
- Reasoning
- Open ended

**Converging / Diverging**

**Actions**

- Assessment
- Reasoning
Lesson learned from artists:

10 BUSINESS REASONS TO DRAW
"When I see a white piece of paper, I feel I've got to draw. And drawing, for me, is the beginning of everything."

Ellsworth Kelly

From: http://www.brainyquote.com/quotes/keywords/drawing.html#o5vx6m5G4LYI1Ywt.99s
"If you have an idea, you have to move on it, to make a gesture. **Drawing is an immediate way of articulating that idea** - of making a gesture that is both physical and intellectual."

Jeff Koons

From: [http://www.brainyquote.com/quotes/keywords/drawing.html#o5vx6m5G4LYl1Ywt.99s](http://www.brainyquote.com/quotes/keywords/drawing.html#o5vx6m5G4LYl1Ywt.99s)
"But usually I begin things through a drawing, so **a lot of things are worked out in the drawing**. But even then, I still allow for and want to make changes."

Roy Lichtenstein

From: http://www.brainyquote.com/quotes/keywords/drawing.html#o5vx6m5G4LYl1Ywt.99s
"I prefer drawing to talking. **Drawing is faster, and leaves less room for lies.**”

Le Corbusier

From: http://www.brainyquote.com/quotes/keywords/drawing.html#o5vx6m5G4LY1Ywt.99s
"Photography is an immediate reaction, drawing is a meditation."

Henri Cartier-Bresson

From: http://www.brainyquote.com/quotes/keywords/drawing.html#o5vx6m5G4LYI1Ywt.99s
"I've been fifty thousand times to the Louvre. I have copied everything in drawing, trying to understand."

Alberto Giacometti
"A drawing is simply a line going for a walk."

Paul Klee

From: http://www.brainyquote.com/quotes/keywords/drawing.html#o5vx6m5G4LYl1Ywtt.99s
"Drawing is a way of coming upon the connection between things, just like metaphor in poetry reconnects what has become separated."

John Berger

From: http://www.brainyquote.com/quotes/keywords/drawing.html#o5vx6m5G4LYI1Ywt.99s
"Drawing makes you see things clearer, and clearer and clearer and clearer still, until your eyes ache."

David Hockney
"It is only by drawing often, drawing everything, drawing incessantly, that one fine day you discover to your surprise that you have rendered something in its true character."

Camille Pissarro

From: http://www.brainyquote.com/quotes/keywords/drawing.html#o5vx6m5G4LYI1Ywt.99s
Understand the power of stories.

Look for very personal moments + insights people.
ASSIGNMENT PART 2: INTERVIEWS

You must interview at least 3 people who represent stakeholders for your project.
You want to learn as much as you can about them and their personal relationship to the project domain of interest.

Write a 1-2 page (full page minimum) personal portrait telling their “story”. Provide details and insights into their personalities, choices, preferences, and personal intellectual and emotion drivers. **This is a story – not a Q+A summary.**

The interview assignments are opportunities to understand the relationship between PEOPLE and SITUATIONS. Your goal is to understand what people want and need. Successful interview assignments usually involve multiple interviews and several pages of transcribed conversation that are summarized and distilled into a meaningful narrative.

If your interview is very brief or cut short – I strongly suggest doing another until you have sufficient material.
Look for very personal moments and important insights.
“Contrary to the common commuter, to Francis, the bus serves not as a part of an average day but as an occasional treat granting him the freedom to explore the city in which he operates. The fact that he cannot take this “trip” as often as he wishes makes the entire transit experience much more important in his life. One may conclude that the bus helps him to escape the trials of his everyday life, at least for a short while.”
“She admits that she tries to minimize her exposure to the bus shelter because it is not very accommodating and it makes her feel isolated. She describes the experience of sitting on the small wooden bench by herself while cars zoom past her at a high rate of speed. She jokes that it feels like every car speeds past mocking her misfortune of waiting for the bus in such miserable conditions.”
Learning by doing: assessing the work of your team
30 min
Distribute your interviews among members of your team.

Read at least 3 interviews that are not your own. Make note of what captures your imagination. Look for personal wants and needs.

ASSESS THE QUALITY OF THE NARRATIVE AND WRITE YOUR COMMENTS ON THEM.

Discuss which are the most effective stories and WHY.

______________________________________________

Select YOUR BEST ONE and turn it in to be graded.
5 min to individually answer:

What makes a good NARRATIVE?

What are the essential COMPONENTS?

What can it REVEAL?
ASSIGNMENT PART 1: RESEARCH

You will conduct ethnographic research related to your project.

1. Go out and visit / observe / experience the bus system and bus shelters. RIDE THE BUS.

2. You must take at least 20 different pictures of a situation relevant to your project domain of interest. Photos should present a range of perspectives from general overview images to very specific details and situational context.

3. Take at least 3 video clips of 3 minutes each.
What kind of RESEARCH did you do?
How does this relate to “Design Research for Radical Innovation”
TELL ME MORE ABOUT . . .

1. What are 3 key points you took from the assigned readings?

2. How do your personal research and fieldwork reflect the ideas and methods in the readings?

3. What are 3 ways you personally conducted research that were unexpected, uncomfortable, exciting or most unusual?

4. What are 3 things you discovered that surprised you?
Generative
Evaluative
Predictive
Each of you is an EXPERT. Now your team has to KNOW what you know.
sharing research
observations + interviews
Sharing your research
Analyzing your research
Visualizing connections
Understanding what the information tells you
Synthesizing insights
process review
1. Tell your story
2. listen for meaning + take notes
2.5. isolate ideas
3. then put them on the wall
4. look for patterns
5. identify **key words**.
Our goal is to DISCOVER the underlying patterns, structures, needs and opportunities
Let’s begin.
Sharing project RESEARCH
sharing observations + interviews

Use your photos, video and notes to share what you saw, heard, noticed, questioned...

:04 each
Cluster and look for patterns
Identify key words
0:20
CLUSTERS TO CONSIDER:

+ System Components
+ Actors
+ Actions
+ Drivers: Emotional / Operational / Functional / Cultural
+ Places / Locations
+ MONEY / Pricing / Value
+ Information
+ Needs
+ Risks / Rewards
+ Other?
Questions your fundamental ASSUMPTIONS
“Not surprisingly, disruptive ideas stand a small chance of ever seeing the light of day when they are evaluated with the screens and lenses a company uses to identify and shape sustaining innovations. Companies frustrated by an inability to create new growth shouldn’t conclude that they aren’t generating enough good ideas. The problem doesn’t lie in their creativity; it lies in their processes.”

From Christensen: *The Innovator’s Solution: Creating and Sustaining Successful Growth*
Quoted by Fulton Suri: *Informing our Intuition: Design Research for Radical Innovation*
“Processes that are good at instilling confidence when it comes to directions for incremental innovation can be incorrectly limiting and personally discouraging to more radical innovation efforts, in which many variables are unknown or unknowable.”

From Fulton Suri: *Informing our Intuition: Design Research for Radical Innovation*
What is the information TELLING you?
Answer the essential questions:

Why do people drive?
Why don’t people drive?
Why do people ride the bus?
Why don’t people ride the bus?

ALSO CONSIDER:

“The BUS SYSTEM is …”
“The current situation lacks…”
“The consumer wants…”
“The consumer/system needs…”
“The main components of the system are…”
“The challenges they face are…”
“A hidden opportunity is…”
Now we need to use our research and insights to understand the SYSTEM
Mapping a **system** or an **experience**.
Making the **COMPLEX** more CLEAR.
Let’s look at mapping.
maps show where you have been.
maps show where you are.
maps show where you are going.
As it was.

Retrospective
As it is.
As it will be.
Map a process/system.
Map an experience.
Map a strategy.
map
diagram

Medieval Latin *mappa*, from Latin, *napkin, towel*

First Known Use: 1527

*verb*
: to plan the details of (something)

*transitive verb*
1a : to make a map of <map the surface of the moon>

b : to delineate as if on a map <sorrow was *mapped* on her face>

c : to make a survey of for or as if for the purpose of making a map

d : to assign (as a set or element) in a mathematical or exact correspondence <map picture elements to video memory>

2: to plan in detail —often used with out <map out a program>

3: to locate (a gene) on a chromosome
Maps help to explore.
explore

transitive verb

1a : to investigate, study, or analyze : look into <explore the relationship between social class and learning ability> —sometimes used with indirect questions <to explore where ethical issues arise — R. T. Blackburn>
b : to become familiar with by testing or experimenting <explore new cuisines>

2: to travel over (new territory) for adventure or discovery

3: to examine especially for diagnostic purposes <explore the wound>

intransitive verb
: to make or conduct a systematic search <explore for oil>

Origin of EXPLORE
Latin explorare, from ex- + plorare to cry out
First Known Use: 1585

From http://www.merriam-webster.com/dictionary/explore
Explore
etymology:

1580s, "to investigate, examine," a back formation from exploration, or else from M.Fr. explorer (16c.), from L. explorare "investigate, search out, examine, explore," said to be originally a hunters' term meaning "set up a loud cry," from ex- "out" (see ex-) + plorare "to cry." But second element also explained as "to make to flow," from pluere "to flow." Meaning "to go to a country or place in quest of discoveries" is first attested 1610s.

Maps examine.
Maps “cry out”.
Maps “make flow”.
Tableaux Graphiques et Cartes Figuratives de M. Minard, 1845-69

From *The Visual Display of Quantitative Information*  
Edward Tufte
Figurative map of the successive losses in men of the French Army in the Russian Campaign of 1812-1813

Drawn by Mr. Minard, Inspector General of Bridges and Roads in retirement, Paris, 20 November 1869. The numbers of men present are represented by the widths of the colored zones in a rate of one millimeter for ten thousand men; these are also written beside the zones. Red designates men moving into Russia, black those on retreat. — The informations used for drawing the map were taken from the works of Mores, Chier, de Ségur, de Fezensac, de Chambray and the unpublished diary of Jacob, pharmacist of the Army since 28 October. In order to facilitate the judgement of the eye regarding the diminution of the army, I supposed that the troops under Prince Jérôme and under Marshal Davout, who were sent to Miotek and Mohlov and who rejoined near Orsha and Wielbok, had always marched with the army.

Graphic table of the temperature in degrees of Réaumur thermometer:

-26° December 7
-30° December 7
-20° November 18
-10° November 14
-1° November 9

Rain October 24

0° -10° -20° -30° -40° -50°

"Minard map of napoleon" by Íñigo Lopez - Own work. Licensed under CC BY-SA 4.0 via Wikimedia Commons - http://commons.wikimedia.org/wiki/File:Minard_map_of_napoleon.png#/media/File:Minard_map_of_napoleon.png
This is an exploration
Your NEXT Assignment:

VISUALIZING A SYSTEM

INDIVIDUALLY prepare a visual representation of your project as a system. SHOW HOW THIS SYSTEM WORKS.

Use Powerpoint (or other graphic software that enables you to generate a jpeg or pdf file) to create your representation. You may use any graphic tools, animations or effects to communicate your idea – but they must enhance communicating your ideas.

You may only use 1 slide.

THIS IS A VISUAL REPRESENTATION, NOT A PRESENTATION.

Conduct any additional research to understand you persona’s unmet needs and fill any gaps in the general research identified by the team.

Review the samples on the course blog.
MAP or DIAGRAM your RESEARCH

As a team, DIAGRAM/MAP the RESEARCH you have done.

1. Show what you have DONE
2. What have you DISCOVERED?
3. What are the GAPS in your research?
4. What do you need to do next?
1. Make it stand
2. Act on 1. Make it stand
3. 4 more. All different
4. Pick the best
5. Why?
6. Make it better.
7. Is it better?
8. Why?
9. 1 more...

Instructions:
- 7 sheets
- Act on 1. Make it stand
- 4 more. All different
- Pick the best
- Why?
- Make it better.
- Is it better?
- Why?
- 1 more...

Process:
- Define the Problem
- Exploration
- Selection
- Reasoning
- Refinement
- Reasoning
- Open ended

Actions & Assessment
Reasoning
Converging / Diverging
the system

Movie is produced

Movie opens in theaters

Pirate lab burns the master copy

Pirate lab packages the DVDs

Pirate lab "warehouses" the DVDs

Pirate lab sells DVDs to vendors, 1 dollar per unit

Vendors sell DVDs to consumers, 4-5 dollars per unit

Master copy is sold to a pirate lab, 50-100 dollars per movie

The pirate lab provides the most profitable portion of the system
If my employees cared a little more about stopping theft, it would be a big help. I can't be held responsible for what falls off the back of my truck.

Meet me out back.

I buy for the lowest price I can get. I do everything I can to give my kids as much as I can.

I'll flip this in no time...easy money.
Counterfeit Designer Shoe Map

**Manufacturing**
- Designer's Manufacturing
- Designer Shoe Blueprints
- Counterfeiters
- Counterfeit Manufacturing

**Distribution**
- Import Locations
- Vendors Purchase Inventory

**Retail**
- Vendors set-up displays at local flea markets
- Vendors & customers haggle over prices in a very competitive market
- A transaction is completed once both parties' needs are fulfilled
MANUFACTURING

Distribution

Retail

Vendors set-up displays at local flea markets

Vendors & customers haggle over prices in a very competitive market

A transaction is completed once both parties needs are fulfilled

进口地点

供应商购买库存

在线供应链

传统供应链
Team WORK session

USE YOUR RESEARCH CLUSTERS:
1. Begin mapping your project information as a system.
2. Based on your clusters, what information are you missing?
3. Plan + coordinate your team research for next week.
As a team update your research plan:

- What does your information REVEAL as a system?
- Are there opportunities here?
- What do you want to know more about?
- How will you approach the research?
- How will you find qualitative and quantitative data?
Capture the **CONTENT** and **DETAILS**
Next CLASS

11 Sept at TUCC

Challenge Kick off:

1. Speed-dating interviews with EXPERTS

2. Plan + coordinate additional team research for the next week.

3. Networking

4. The CHALLENGE will be about bringing it all together as a PROPOSAL
The Challenge Kick-off

Learn from experts
The Challenge:
Create + share ideas
Quickly clean up:

**PUT YOUR TOYS AWAY!**

place all your tools away in an ORGANIZED AND NEAT MANNER

return the bins to the stack.

return all other materials to supply tables