

Design Research & Synthesis: Class 5

Introduction to Analysis: Making Sense of Data

Tuesday, September 20, 2010

Well-managed data is well-utilized data.

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For each research method we learn, we are going to also learn a means of making sense of data.

First, let's talk about **Information Architecture.**

# Information Architecture

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Remember when we did Affinity Diagramming?  
That is a good technique to use as a first step in practicing information architecture.

## Major Tenets of Information Architecture

1. Language is important
2. Data is useless without context
3. The visual and semantic whole is greater than the sum of its parts

As the designer, you will be overwhelmed so that your audience doesn't have to be.

# Making Sense of Data: Information Architecture Examples

## **GothamCast Episode 1**

### **1. Cue Gothamite Intro Song**

### **2. Introduce GothamCast**

- a. A vicarious New York City experience
- b. A slice of the big apple
- c. A multi-media experience steeped in the incompar
- d. An interesting mix of my passions
  - i. *Urban living*
  - ii. *Culture, art & history*
  - iii. *The sites and sounds of NYC*
  - iv. *Photography*
  - v. *Indie Music*

### **3. Introduce Myself**

- a. New to NYC
- b. *How we moved here*
- c. *One of my favorite places to live*
- d. *I have lived a lot of places*
- e. *Other interesting places I have lived: AK, Paris*
- f. Why I love living in NYC
  - i. *Spontaneity*
  - ii. *Energy*
  - iii. *Diversity*
  - iv. *History*
- g. What I do: Engineer -> REI -> Internet Marketing
- h. How I got into podcasting
  - i. *tech background*
  - ii. *internet marketing*
  - iii. *conglomerates my interests*
- i. NYCPA

### **4. What to Expect from GothamCast**

- a. Approx weekly
- b. A variety
- c. *Indie Music* from NYC area

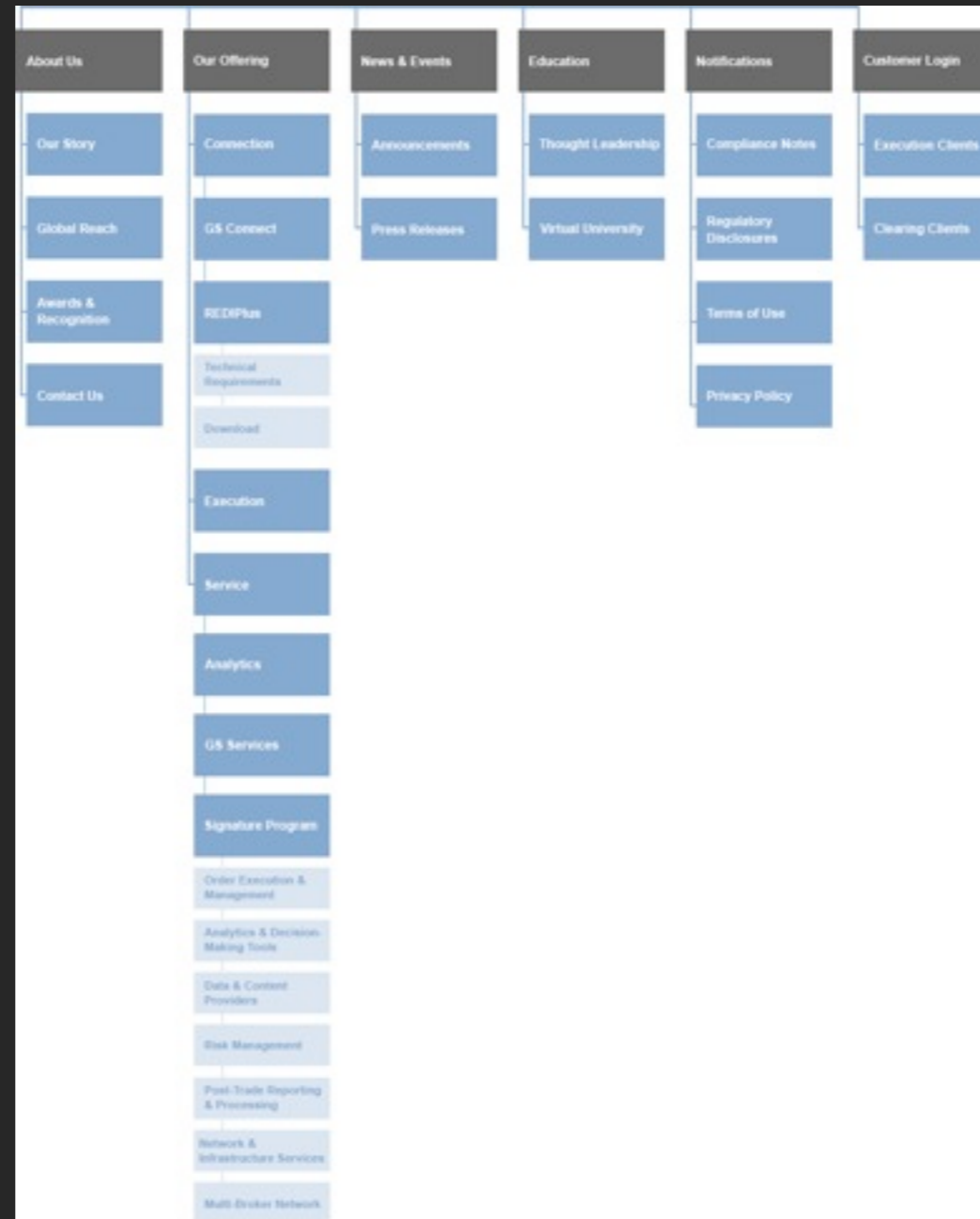
### **5. Cue Liar Bed Music**

### **6. In This Show**

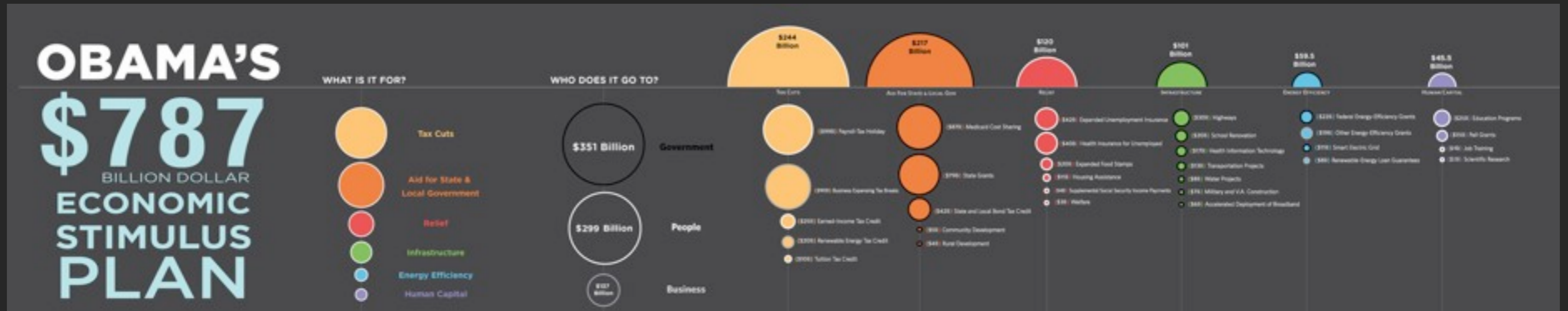
### **7. Cue Street Tone – Footsteps and Talking**

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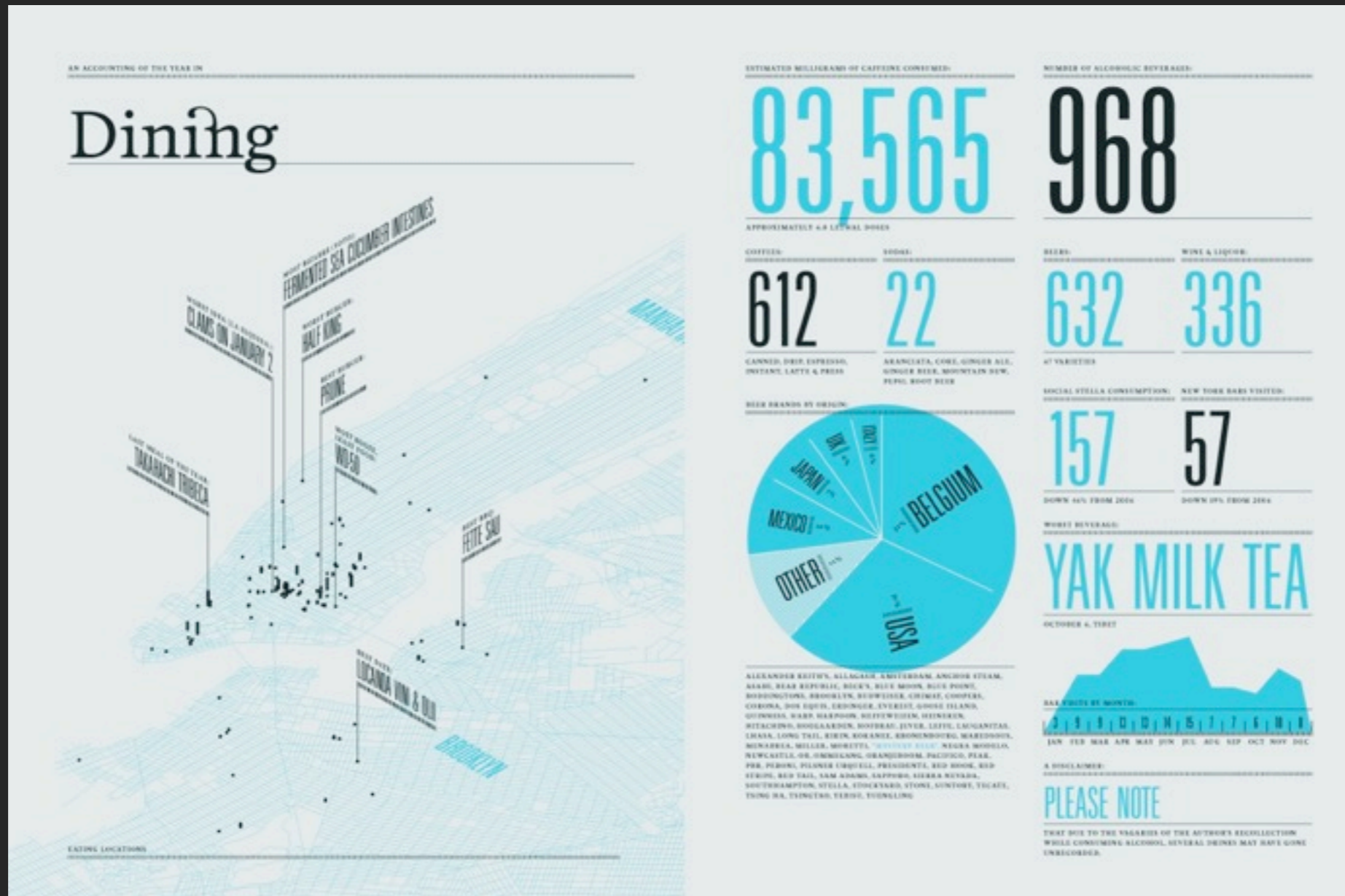
# Making Sense of Data: Information Architecture Examples



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# Making Sense of Data: Information Architecture Examples



To make sense of our Contextual Inquiry data (which should currently be raw video and notes), we are going to use transcripts and work models.

## Transcribe your inquiry.

List all participants

### Participants

- interviewer (I)
- mother, 45 year old woman (M)
- father, 44 year old man (F)
- child, 11 year-old girl (C1)
- child, 8-year-old girl (C2)

Include line numbers and, if possible, time stamp from video

### Transcript

1. 00:00:02:06  
I: *Introduction*: "Thanks for taking the time to work with me today, I'm going to be tagging along in your car as we go for a ride. I'm primarily focused on understanding the dynamics in the car surrounding the stereo system, so I'm going to be watching as we drive and asking some questions."  
F: "No problem, we were just going to go to the Mall".
2. 00:00:20:06  
I: "Great, I always enjoy the mall. Is it OK if I video and audio tape this trip? The results may be shown to an audience, including a class of students at UT".  
F: "Oh, that's fine."

Line numbers = a chunk of dialogue & events per a certain time

Write exactly what was said and done

### Transcribe your inquiry.

Set aside time and have one person operate the video while the other types. It is also an option to alternate transcribing between group members.

Remember: Transcription isn't the only output. The insight you'll gather by re-living the research is invaluable and will help immensely when you begin synthesis.

So... what do we do with our transcripts?

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...you model them!

A model is a small object, usually built to scale, that represents in detail another, often larger object.

Models give us...

- A shared understanding of the user-data
- A shared language for the design team
- An easily understandable deliverable for communication outside the design team

Most importantly, models give us a visual representation of user data (yay)!

There are five types of models that can be built to integrate, summarize and refer back to the data we've collected:

<b>Flow</b> How work is divided among roles and coordinated, without regard for time	<b>Sequence</b> The order of work tasks over time	<b>Cultural</b> The influencers which define expectations, desires, values and the overall approach people take to their work	<b>Artifact</b> The tangible items people create and use to help them get their work accomplished	<b>Physical</b> The physical environment in which work is accomplished
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### **Flow**

How work is divided among roles and coordinated, without regard for time

- Individuals who do the work, shown as circles
- Groups (sets of people), shown as circles
- Responsibilities of the individual or the group, shown as a list in a circle
- Flow of communication, shown as arrows and lines between individuals or groups
- Communication topics, shown as labels on the flow lines
- Artifacts, shown as small boxes on a flow
- Places, shown as large boxes
  
- Breakdowns in communication or coordination, shown as **a red lightning bolt** and annotated as necessary.

# Making Sense of Data: Work Models

## Sequence

The order of work tasks over time

### Sequence Model

Trigger	Intent	Action	Line #
Morning routine	To Cook the Bacon	Places bacon on tray	2
The boxes are in the wrong place	To move to-go boxes	Stands on top of box to move them	3
Morning routine	To make use of sausage that was precooked	Removes sausage from the line	5
To get dish ready for opening	To add to pre-existing portion of the dish	Cooks peppers and onions daily	6
Delivery arrives	Take them out of the boxes before deli opens	Placing meats into case	7
Out of 2% reduced fat milk	To add milk to the delivery order	Calls supplier and requests milk order	8
Friday delivery arrives	To put all delivery items away before opening	Hurries to put delivered items away	9
He is finishing slicing peppers	To clear space	Moves sliced peppers	10
Needs to get hamburgers ready for day	To thaw out frozen burgers	Puts patties in refrigerator containers	13
Easy access to meats cooked that day	To save time	Moves pre-thawed meats to refrigerator	14
Desire to keep food in containers fresh	To keep from spoiling food		15
Desire not to confuse employees and to keep customers happy	To maintain organization within deli	Putting things in the same place everytime	18
Desire to keep from retraining employees	To make organization instinctual		19
So many dishes build up that they have to be washed	To be able to use the dishes that were dirty	Washing piled up dishes	24
Order is placed	To meet customer's specific requests	Used toaster	25
Fred forgets how salad is made	To find out how to make a greek salad	Fred walks over and asks Dave how to make salad	27
(We asked)	To increase productivity during work hours	Storage underneath station is utilized	29
The food has been prepared	To make order accessible to person delivering	Places food on the line	30
Crumbs are left from making sandwich	To keep counters and cutting boards clean	Sweep crumbs into trash can	33

## Sequence

The order of work tasks over time

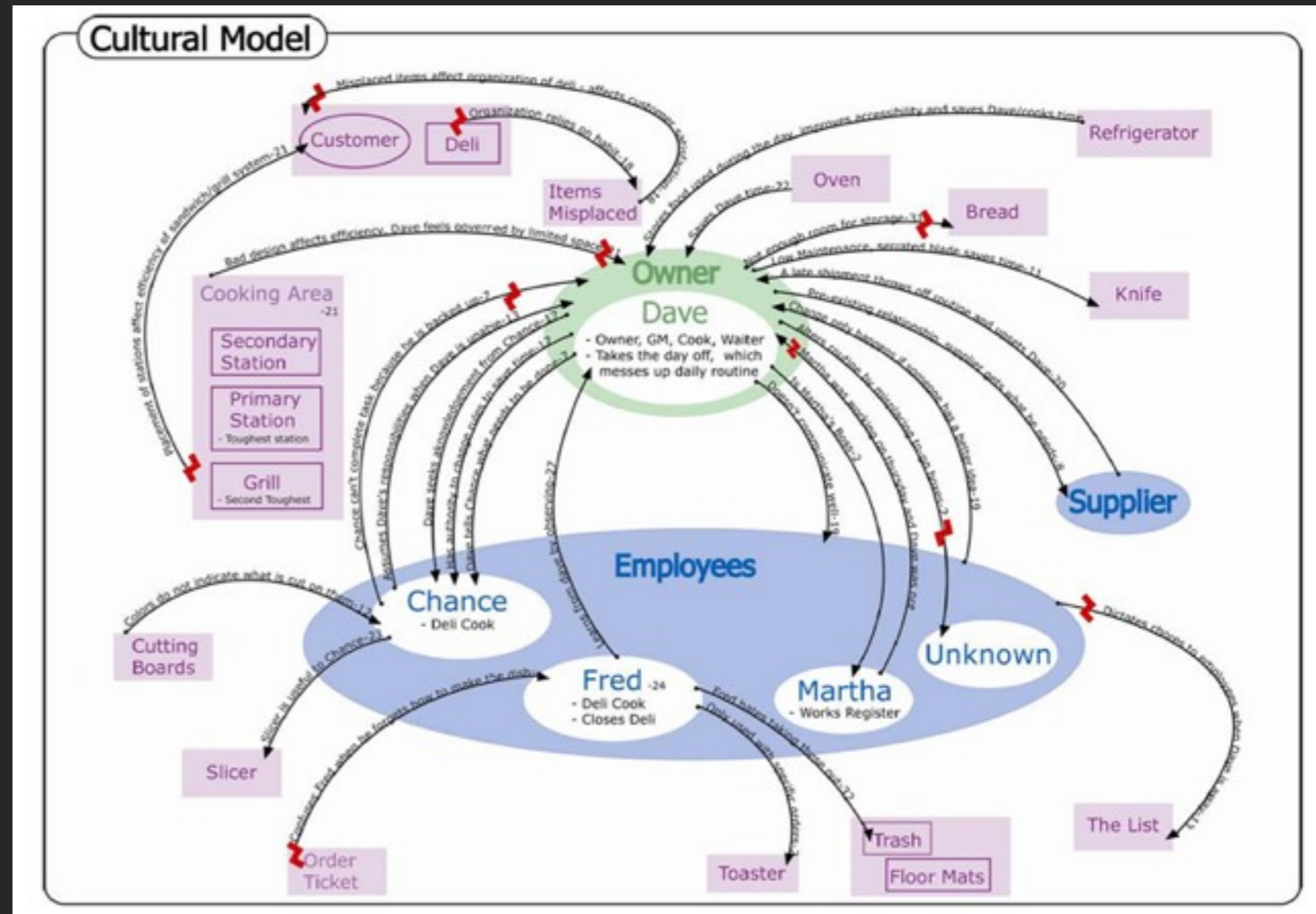
Work tasks are ordered and unfold over time. The steps people take aren't random; they happen the way they do for a purpose.

- Triggers, described in sentences or blurbs
- Intents, described in sentences or blurbs
- Actions, described in sentences
  
- Breakdowns in doing the steps, shown as a red lightning bolt and annotated as necessary.

# Making Sense of Data: Work Models

## Cultural

The influencers which define expectations, desires, values and the overall approach people take to their work



### **Cultural**

The influencers which define expectations, desires, values and the overall approach people take to their work

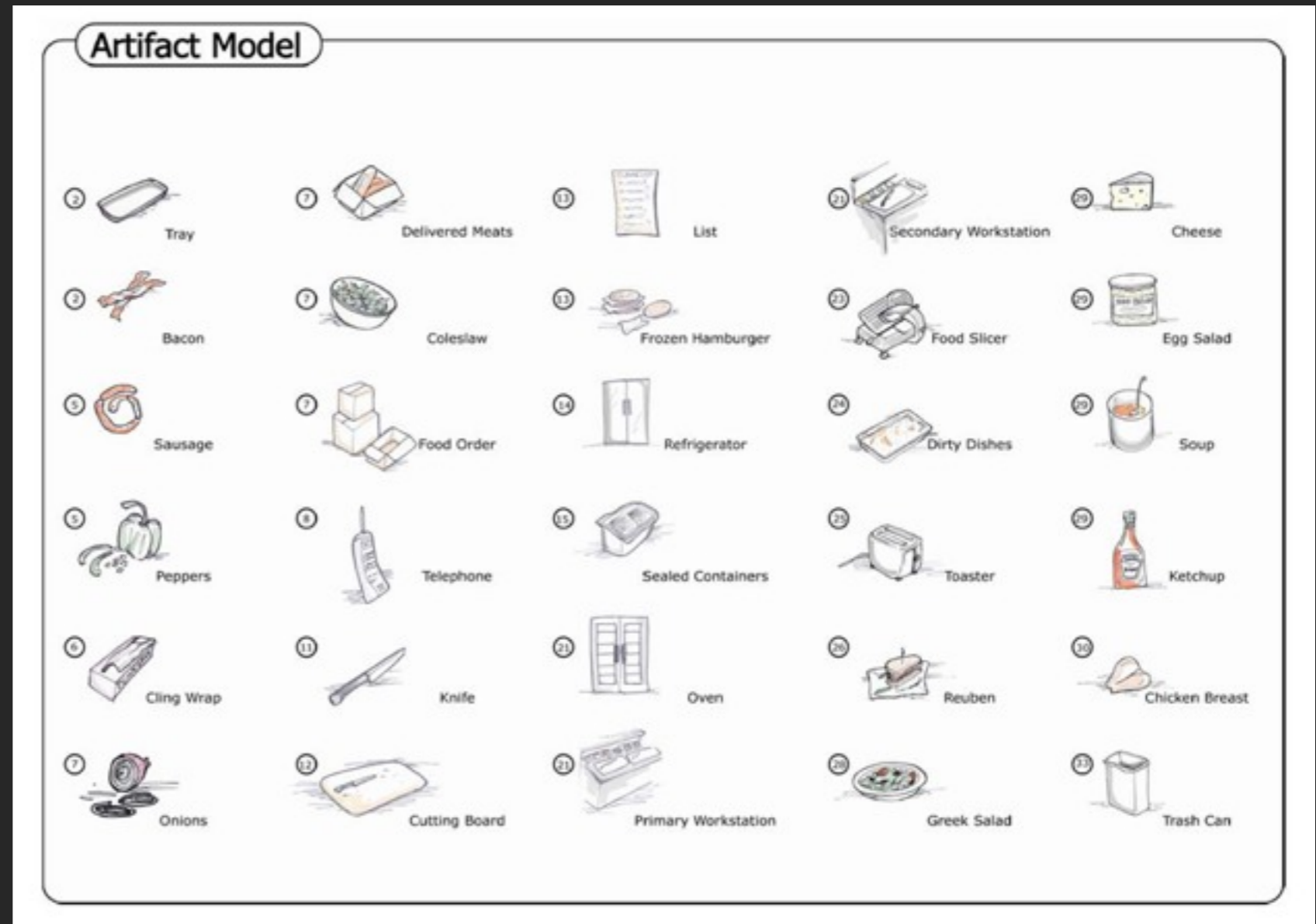
Work takes place in a culture, which defines expectations, desires, policies, values and the whole mindset people take for their work.

- Influencers, shown as circles.
- The extent of the influence, illustrated by the size of the circles
- The influence, shown as an arrow pointing from one influence to another, and described in text.
- Breakdowns in cultural influence, shown as a **red lightning bolt** and annotated as necessary.

# Making Sense of Data: Work Models

## Artifact

The tangible items people create and use to help them get their work accomplished



### **Artifact**

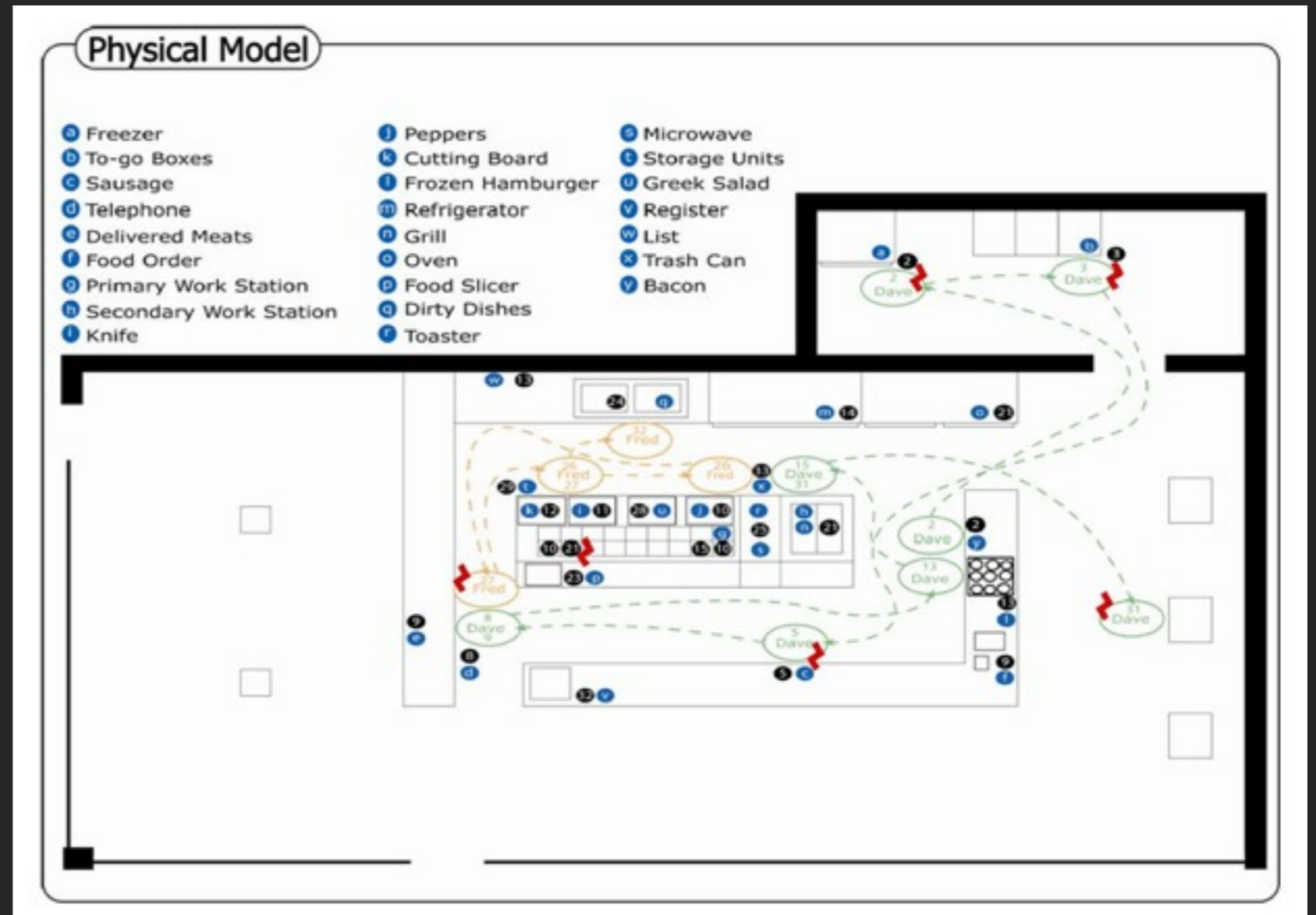
The tangible items people create and use to help them get their work accomplished

People create, use and modify things in the course of doing work. These things become artifacts, which each tell their own stories.

- A visual representation of the object, either drawn, photographed, or scanned
- Presentation of the object, including relevant physical characteristics
- Information presented by the object, such as the contents of a form
- The structure, or grouping, of the parts of the object
- Annotations showing informal usage of the object, such as highlighting, post-its, etc
- A description of the object and its use, in sentences
- Breakdowns in using the artifact, shown as a **red lightning bolt** and annotated as necessary.

## Physical

The physical environment in which work is accomplished



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The physical environment in which work is accomplished

Work occurs in a physical environment that either supports and enabled the work or gets in the way.

- Places that work occurs, shown in plan view and annotated
- Physical structures that define the space, shown as geometric shapes
- Movement throughout the space, shown as arrows and lines and annotated
- Hardware, software, and tools that are present, shown visually as appropriate and annotated
- Artifacts, shown visually as appropriate and annotated
- Breakdowns in the physical space, shown as a **red lightning bolt** and annotated as necessary.

Always label all data on the models (citations) with line numbers from the transcript or time on the tape; allowing you to go back to the raw data (red thread!!)

Anything unlabeled is a hypothesis

Legibility is very, very, very important!

How do we get from our transcript to our work models?

An Interpretation Session!

## Roles in an Interpretation Session:

### **Interviewer**

- Describes what happened
- Answers questions
- Draws the Physical Model

### **Modelers**

- One each for Work, Sequence, Artifact & Cultural

### **Recorder**

- Takes note of any design ideas, breakdowns and key points

### **Participants**

### **Moderator**

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*Participants*

*Moderator*

### Steps in an Interpretation Session:

1. Hand out the transcript; make sure everyone has a copy with line numbers labeled.
2. As a group, discuss the interview in general terms to make sure everyone is at the same starting point.
3. Assign roles; in a small group, each person may need to perform multiple roles.
4. Set up large sheets of paper on the walls, one for each model.
5. Step through the interview transcript, and begin to create the models. For each line in the transcript, make additions to each model as relevant.
6. Record observations, insights, influences, questions, design ideas, and breakdowns
7. Summarize important insights on a separate piece of paper.

Interpretation Sessions take a long time, but should be fun and insightful.

Let's do one.

Due 9/27

## Assignment 4: Contextual Inquiry Transcripts & Work Models

- Transcription of at least 1 consecutive hour of your contextual inquiry
- 3 Work Models