Draw It Out: The Power of Visual Communication

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GE Digital
Today’s Session

• **Exercise: Drawing warm-up** 5 MINUTES

• **Intro: Visual communication** 10 MINUTES

• **Practice: Build your visual toolkit** 30 MINUTES

• **Exercise: Visual “telephone”** 30 MINUTES

• **Wrap-up: Practice into action** 15 MINUTES
Exercise: Drawing warm-up

1. On a blank sheet of paper, make a random mark…a squiggle.
2. Pass the sheet to the person on your right.
3. Take the sheet from the person on your left and add something more…whatever occurs to you.
4. Continue drawing and passing the sheets for about 3 minutes.

Keep it moving!
Exercise: Debrief

What do you notice?

• Abstract marks quickly become faces, animals, etc. Only basic information is needed to convey the idea.

• Humans can’t help but make meaning; we’re hard-wired to see patterns.

• It was easy! Drawing is something you already know how to do.
Exercise: Take-away

If you can draw something from nothing, you can also draw things with intention.

What is the minimum information necessary to communicate?

Squiggles can be a helpful starting point.

Image: http://gamestorming.com/games-for-any-meeting/squiggle-birds
Why visual communication?

• Nearly 50% of your brain is involved in visual processing

• 70% of all your sensory receptors are in your eyes

• Human ability to quickly interpret visual information is far greater than written words
  – Sense of a visual scene in less than 0.01 second
  – 323% better comprehension by following instruction with images and text than text alone

• Information retention
  – People remember 10% of what they hear; 20% of what they read; 80% of what they see and do

Source: Ann Algier, Everything You Need To Know About Learning, Dartmouth College
What is visual communication?

• One or more symbol languages:
  – **Letterforms** are symbols for phonetic speech (A = “Ah” etc.) or modular pictograms for ideas
  – **Numerals** are symbols for specific quantitative ideas
  – **Graphics or icons** are symbols of objects, concepts, abstract ideas, etc.

• Integrates visual (left) and verbal (right) sides of the brain

• Both a process and a product

• Cost- and time-efficient way to achieve shared understanding
  – Helps mitigate language barriers
Visual communication is...

- A powerful way to generate new ideas **THINK**
- The fastest way to develop and test an idea **SHOW**
- An effective way to share ideas with other people **TALK**
Visual communication is…

• A powerful way to generate new ideas **LEARN**

• The fastest way to develop and test an idea **BUILD**

• An effective way to share ideas with other people **MEASURE**
Integral to collaboration

1. Define the (right) problem
   FRAME

2. Create and consider many options
   GENERATE

3. Refine selected directions
   ITERATE

4. Develop the winner
   EXECUTE
How do we use it today?
$MMs in Deferred Revenue

Today

Reactive

LITTLE CONTINUITY BETWEEN PEOPLE, PROCESS & TECH
DATA STORED IN SILOS, NOT AGGREGATED
NO OPTIMIZATION, NO ANALYTICS
NO TOOLS TO DEPLOY EFFECTIVE SOLUTION AT SCALE

"10,000 data points...
27 different data sources...
no insight derived...
reactive"

-BP

7 DAYS

vs.

Transforming the Customer Experience

2 Day

New solution takes us from 7 days RCA to 1 day, allowing us to perform proactive maintenance...

-CHEVRON

Tomorrow

Proactive

$MMs in Realized Revenue

Predix

NEW SOLUTION CREATES A SINGLE SOURCE OF TRUTH
DATA WORKFLOW
ON SHARED
ALIGNMENT
OFFSHORE
MANAGER
CONTINUITY THROUGH KNOWLEDGE BASE FOR PEOPLE, PROCESS & TECH
DATA AGGREGATION AND ANALYTICS
SCALABLE SINGLE SOURCE OVERVIEW IN SIGHT
**User-Initiated Workflows**

1. **User clicks 'New Workflow'**
2. **User selects workflow**
3. **User is prompted to select assets**
4. **User applies workflow...**

**Task/Activity/Workflow-Driven**

- User receives new task/activity
- User accepts activity
- User starts activity
- User is prompted to activity description card
- User can swipe through all cards as usual
- Some cards may have complete or incomplete status (same or not)
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<td>NOLAMERICA</td>
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<td>10/17 13:37</td>
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</table>

[Image of a computer screen with a software interface and data display.]
Practice: Build Your Visual Toolkit
Visual Grammar

Christian Leborg
Visual Grammar

A DESIGN PRIMER

10. Point
11. Line
12. Surface
13. Volume

14. Dimensions
16. Format
19. Formal Structures
19. Basic Structures

20. Gradation
21. Concentric Radiation
21. Centrifugal Radiation
22. Informal Structures

23. Visual Distribution
23. Similarity Structures
24. Invisible Structures
24. Structural Skeleton
Practice: Basic Shapes

Dots

Lines

Boxes + Triangles

Build skill eyeballing equidistant
doesn’t take long to get good
at symmetry

Circles

Can do same thing

Spirals

Arc part of circle
Practice: Lines and connectors
Practice: Lines and connectors

construction line

centre line

hidden line

phantom line

drawing line

break line

dimension line

leader

cutting plane

Image: http://engineeronadisk.com/bookplementation/draftinga2.html
Practice: Lettering
Practice: Containers

Pro tip: Create little “pillows” of white space

- Content First
- Box second
Practice: People
Practice: Faces
Practice: Structures

ONE
- Unity, Wholeness
- Inclusion
- Gathering

TWO
- Conflict
- Duality, Opposition
- Balance, Contrast
- e.g. Force Field

THREE
- Hierarchical Order of Relationship

FOUR
- Directions
- Elements
- Axes
- Balance
- Weak/Strong

Multiples
- Network
- Branches
- Systems
- Timeline
Exercise: Visual “telephone”

1. In the top section of your handout WRITE:
   • One or two required quality attributes
   • A brief scenario of use

2. Pass the page to your neighbor.

3. When you receive your neighbor’s page, read what they wrote then fold the page backwards along the line so the writing is hidden.

4. Now DRAW a solution that addresses the scenario you just hid and then pass the handout to the person on your right.

5. Continue hiding and writing/drawing until the last section is complete.

No peeking!
Exercise: Debrief and Take-away

• Where did the visual communication break down?
• Where did it remain intact?
• Do you see things you might have done differently?
• What’s challenging to represent? Easy?
• How will this inform your approach in the future?
Wrap-up: Practice into action

Why not?

Michelangelo illustrated his grocery lists (16th century)

Image: http://www.openculture.com/2013/12/michelangelo-illustrated-grocery-list.html
Wrap-up: Practice into action

• Hang a flip chart in your home and/or office
• Dedicate a notebook
• Practice drawing anything you’d normally write (user stories, for example, or even your grocery list)
• Find a drawing buddy or mentor you trust; draw with your kids
• Hold brown bag practice sessions or online hangouts

Practice makes permanent: 60 days to cement new behavior (via FastCo.)
Wrap-up: Methods

**A Periodic Table of Visualization Methods**

<table>
<thead>
<tr>
<th>Visualization Type</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Visualization</td>
<td>Bar charts, line graphs, scatter plots</td>
</tr>
<tr>
<td>Information Visualization</td>
<td>Maps, grids, timelines, heat maps</td>
</tr>
<tr>
<td>Concept Visualization</td>
<td>Flowcharts, mind maps, storyboards</td>
</tr>
<tr>
<td>Compound Visualization</td>
<td>Mind maps, concept maps, ontologies</td>
</tr>
<tr>
<td>Metaphor Visualization</td>
<td>Icons, symbols, logos, metaphors</td>
</tr>
<tr>
<td>Strategy Visualization</td>
<td>Gantt charts, timelines, roadmaps</td>
</tr>
<tr>
<td>Process Visualization</td>
<td>Flowcharts, process diagrams, Gantt charts</td>
</tr>
<tr>
<td>Structure Visualization</td>
<td>Hierarchies, network diagrams, entity-relationship diagrams</td>
</tr>
<tr>
<td>Divergent thinking</td>
<td>Brainstorming, mind mapping, divergent thinking</td>
</tr>
<tr>
<td>Convergent thinking</td>
<td>Summary charts, mind maps</td>
</tr>
</tbody>
</table>

Click to launch interactive chart (in slide mode)
Wrap-up: Resources
Thank you!

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