DESIGN THINKING & PROJECT MANAGEMENT

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2018 Project Management Symposium
• Describe the benefits of incorporating design methodologies on projects for increased customer alignment and business impact.

• Identify and apply Design Thinking techniques for improving benefits realization and project success.
Design Drives Business Value

Source: The Design Management Institute (DMI)
Section 1

What is Design Thinking?
Common Elements of Design Thinking
(Based on the Hassi & Laasko Framework)

Design thinking is …

**PRACTICES**
- Human-centered approach
- Thinking by doing
- Visualizing
- Combination of divergent & convergent approaches
- Multidisciplinary collaborative work style

**COGNATIVE APPROACHES**
- Abductive reasoning
- Reflective reframing
- Holistic view
- Integrative thinking

**MINDSET**
- Experimental & explorative
- Ambiguity tolerant
- Optimistic
- Future-oriented

What is Design Thinking?

“Design Thinking is the creative and systematic approach to problem solving by placing the user at the center of the experience.”

Prof. Anthony Mayo
HARVARD BUSINESS SCHOOL
Differing Approaches: PM vs Design

Project Management

- Start
- Project Execution
- Monitoring & Controlling
- Closing

Design

- Uncertainty / Patterns / Insights
- Clarity / Focus
- Divergence
- Convergence

Source: Process of Design Squiggle by Damien Newman

Design Thinking & Project Management | @brucegay
Differing Approaches: Analysis vs Design

• **Analysis** is characterized by an attempt to solve a known problem.
  - It is the process of breaking a problem into smaller parts in order to gain a better understanding of it.
  - Relies on proof.

• **Design** is characterized by an attempt to create a response to a perceived problem.
  - It is the purposeful move from a current situation to a preferred situation.
  - Relies on trial and error.
Stanford Design School Model

Empathize → Define → Ideate → Prototype → Test → Iterate / Repeat

Design Methods – Tools that Project Teams Can Use

Design “Toolboxes”:

- User Research
- Idea Generation
- Visualization
- Prototyping

Not a process, but a set of toolboxes, each with tools that can be used by teams.
Section 2

Business Benefits of Incorporating Design Methods into Projects
“Good design is good business.”

~Thomas Watson, Jr.

Source: IBM Corporation Archives. Photograph, Mel Koner
Design Thinking Helps with Solving the Right Problems

“Doing the right thing”

Problem Finding

“Doing the thing right”

Problem Solving

Design Thinking

Lean Six Sigma  Agile  Traditional PM

Project Management Execution
Design Helps Mitigate Risk & Failure

95% of returned consumer electronic products have no defects…

68% worked properly but didn’t meet customers’ expectations. (They either thought it was broken or it did not work properly.)

In 2011, this represented a $17 billion problem in the U.S. alone.

Source: Accenture and CEA 2011
Design Reduces Overall Development Costs

The Cost of Design is Not All That High

“Elaborate usability tests are a waste of resources. The best results come from testing no more than 5 users and running as many small tests as you can afford.”

– Jacob Nielson

Section 3

Case Studies
Case Study: Re-designing the Imaging Workspace
Case Study: Re-designing the Imaging Workspace

Key Problems in Radiology Workflow

• Image-centric, not patient-centric
• Multiple data silos with multiple log-ins
• Radiologists lacked full patient context
• Too much information, not enough intelligence
• Poor user interfaces with multiple pop-up boxes and complex menus
Case Study: Re-designing the Imaging Workspace

Thesis

- Embedding designers into the product development teams would produce higher quality, lower usability defects and higher overall satisfaction by users.
Case Study: Re-designing the Imaging Workspace

What did we did…

• Conducted early exploration & discovery
• Mapped clinician experiences
• Included design in the full development process
• Generated conceptual designs and prototypes
• Utilized a “Living Lab” to conduct product evaluations and testing with clinical users
• Ran usability testing per FDA regulatory requirements
Case Study: Re-designing the Imaging Workspace

Results

• By embedding designers in the teams, close collaboration allowed rapid iteration on designs and prototypes
• Co-design sessions helped to uncover constraints between user needs, legacy products and technical constraints
• User metrics for product usability and satisfaction improved
Case Study: Designing a Unified Admin Website
Case Study: Designing a Unified Admin Website

Key Problems

• System administration tools emerged in an ad-hoc manner, built by multiple companies with minimal coordination
• Overall unsatisfactory user experience
• The primary user base had a wide range of technical expertise
Case Study: Designing a Unified Admin Website

Thesis

• By taking a “Make it work for the users” approach, the user experience challenges would be solved through pre-development design and prototyping sessions with end users (aka design charrette).
Case Study: Designing a Unified Admin Website

Implementation

- Held a three-day human-centered design exercise to define the "future user" and brainstorm design solutions
- Validated concepts and workflows with active field service engineers
- Utilized a Cost-Impact Matrix to prioritize end-user functionality
- Tested multiple prototype wireframes
Case Study: Designing a Unified Admin Website

Results

• The design sessions produced a final mock-up of the front-end system
• The Government customer was happy with the results
• Field Service Engineers were happy with the modern and simple-to-use front-end
LESSONS LEARNED

• Allow time up-front for design research before jumping into developing a solution.

• Design should be involved in the full development lifecycle, not something bolted on at the end of the process.

• Sequencing of design activities matters.

• Get as close to your users as possible for feedback on concepts and designs. Embed users into your project if possible.

• Strive for extensive collaboration and share designs artifacts early and often.

• Visualizing solutions (e.g. paper prototypes) helps identify problems before they become built into the product or service.

• Co-Design works.
TAKE AWAYS
Incorporating design methods into your projects will

• Drive business value and increase customer alignment
• Focus teams on building the “right thing”
• Mitigate risk and failure related to missed customer expectations
• Reduce overall product development costs
• Can be accomplished at a relatively low cost
Thank You.

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RESOURCES

IDEO
- https://www.ideou.com/pages/design-thinking-resources
- http://www.designkit.org/methods

Frog Design
- https://www.frogdesign.com/work/frog-collective-action-toolkit

Stanford d.school
- https://dschool.stanford.edu/resources

Luma Institute

Google
- https://designsprintkit.withgoogle.com/

IBM
- https://www.ibm.com/design/thinking/

Interaction Design Institute

Canva
- https://www.canva.com/learn/design-elements-principles/

Design Council UK
- https://innovationenglish.sites.ku.dk/model/design-thinking/

Hasso Plattner Institute
- http://thisisdesignthinking.net/on-design-thinking/design-thinking-resources/