



Facilitators



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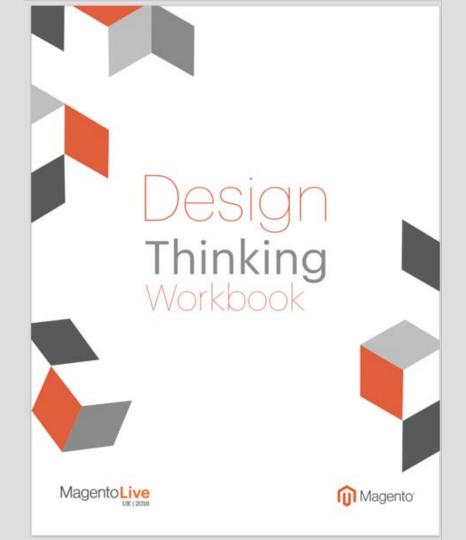


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Agenda

- Introductions and Background
 - Case Study: Staging in Magento 2.1
- Process of Design Thinking
 - Empathize
 - Define
 - Ideate
 - Prototype
 - Test
- Summary
- Q&A







About the Workshop

Design Thinking is a repeatable method for creating great ideas and products. It is based on a rigorous understanding of your customers and their needs. Developed by the Stanford d.School, similar variations are in use at companies across the world, such as PayPal, eBay, Google, IDEO, Lego, and many more.

We have collected and compiled material from numerous sources to provide a solid overview of the overall Design Thinking process. Some, but not all, methods are described in detail. As a result this workbook is a great starter kit for your introduction into Design Thinking.

These proven tools and techniques are practiced by the Magento User Experience team in designing Magento 2 and other Magento products.

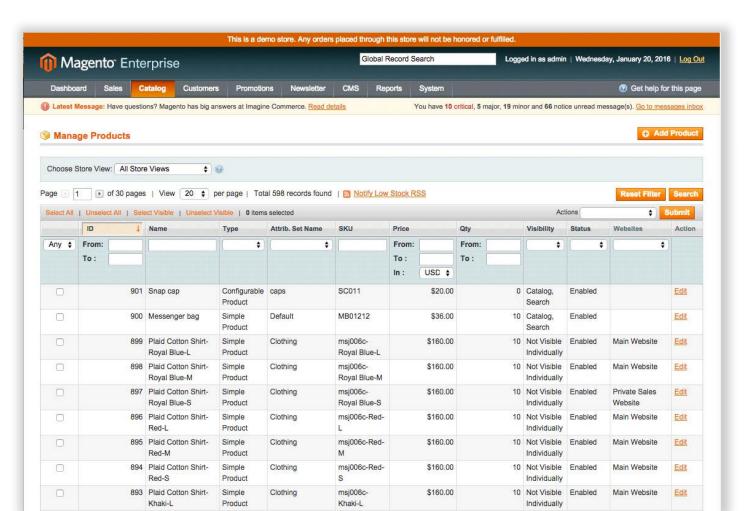
Magento 2.0 Launch

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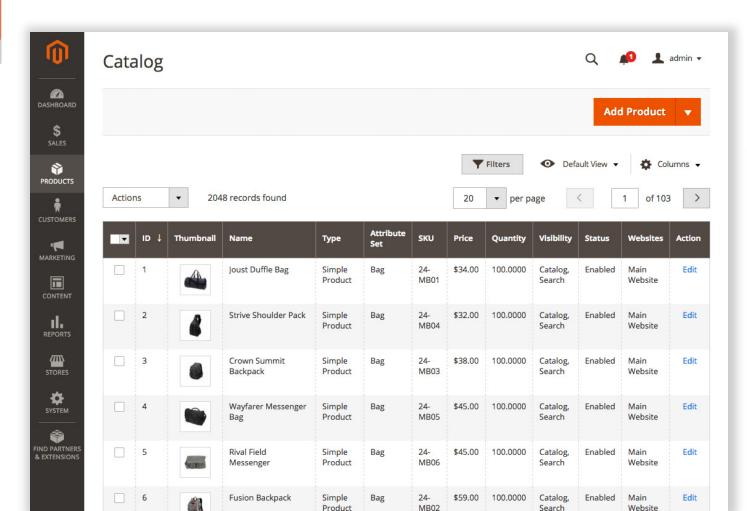


- Open, Flexible Architecture
- Enterprise-grade
 Scalability and
 Performance
- Secure Payments
- Easier Maintenance and Upgrades
- Enhanced Business Agility and Productivity





Magento1.14Product Catalog



Magento 2.0 Product Catalog

Reviews of Magento 2



The Magento 2 admin is fast! It's so...so..beautiful.





What is Design Thinking?



A process for solving problems and discovering new opportunities with the customer at the center.



Similar methods are taught at Stanford, IDEO, Google, IBM, eBay and Magento.



User Centered Design

Human Factors

Customer Driven Innovation

Human Centered Design

User Experience Design

Design Thinking



A Design Story From Magento 2.1

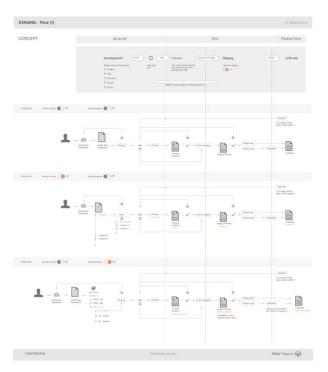


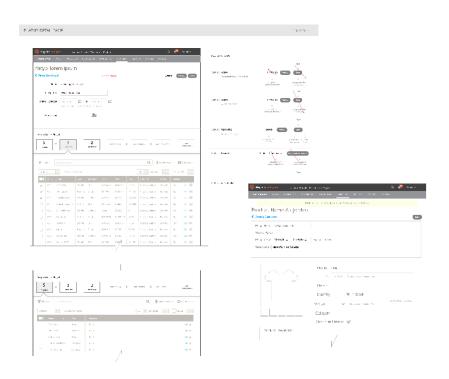
Introducing a new feature for Magento 2.1... Staging



Staging will allow merchants to easily schedule changes to any of their site's content.

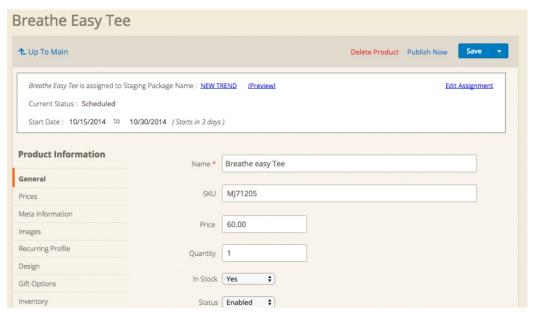
Over one year ago the design team started work on this new feature...







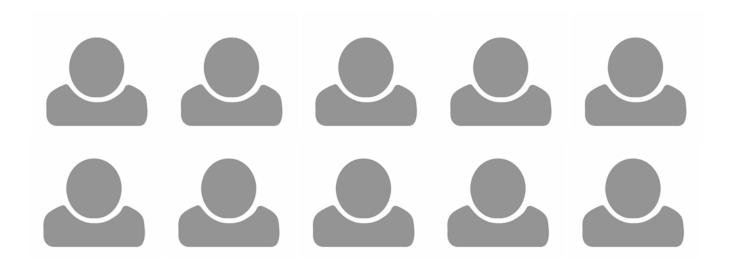
After several months of research and design we believed we had a good first draft.



Early design wireframe

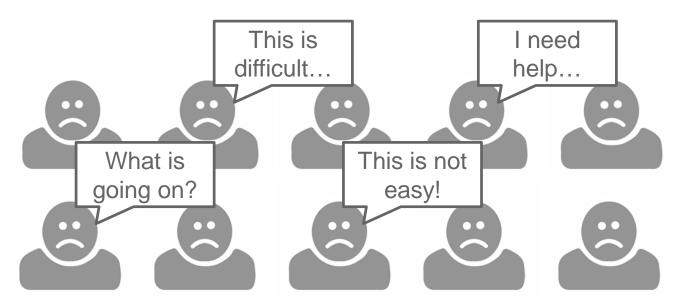


After building a prototype of our design we tested it with 10 merchants...





... and it did not go well.



"This is not making sense to me... This is not intuitive" Participant 7



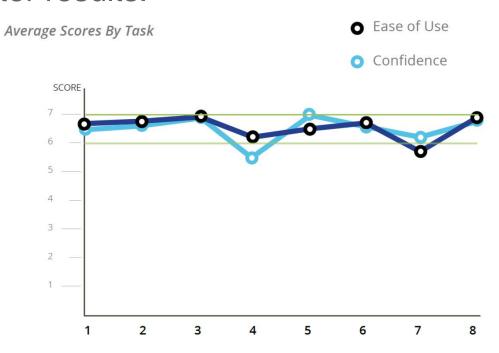
Our test scores told the same story.





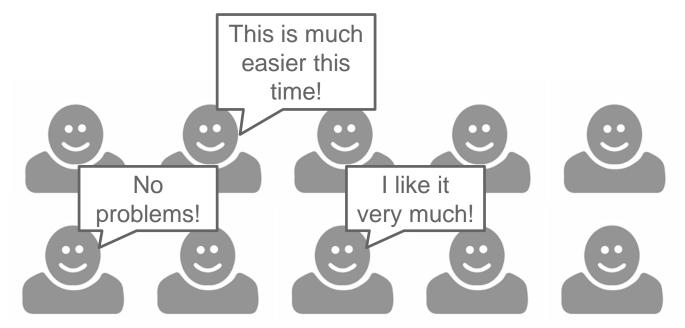
We decided to start over...

Several months later we tested an improved design with much better results.





Participants feedback also improved dramatically.



"How soon before can I start using this every day?" Participant 3





It was the same team of designers facing the same problems. We had to solve for the same complexities.

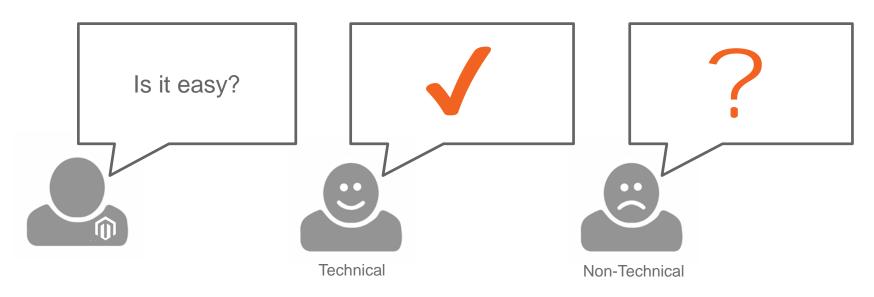
So... what changed from design 1 to design 2?



After some investigation we realized our initial research did not include enough different types of Magento users.

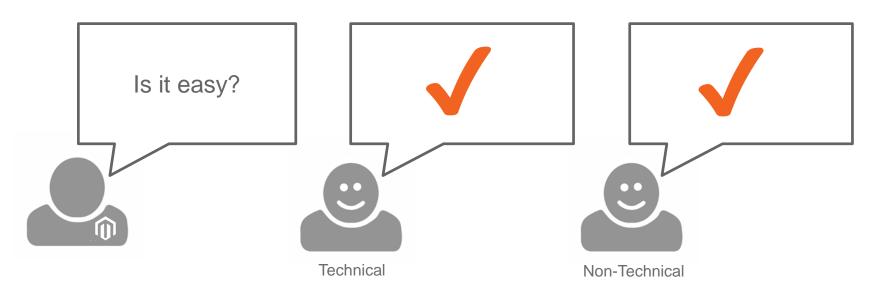


The Staging design worked well for technical users. Non-technical users struggled.



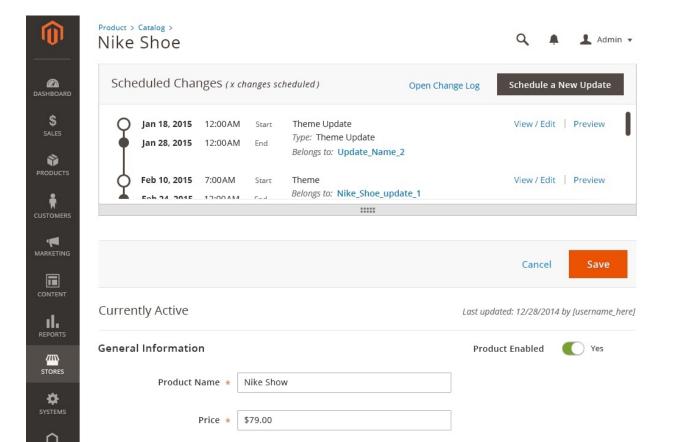


We started over. By designing for the non-technical group first we achieved a design that worked well for all users.





Product Page for Magento 2.1





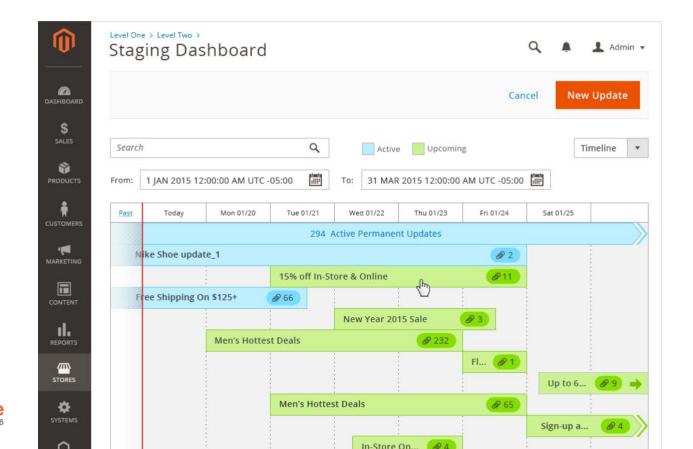
But there was more...



Along the way we discovered new ideas. We invented ways that Magento could help users even more.



Staging Dashboard for Magento 2.1





What did we accomplish?







We avoided an expensive mistake

We made Staging easier to use

We discovered new opportunities



All of this by using Design Thinking...



Introduction to Design Thinking



What is Design Thinking?

Design Thinking is a repeatable method for creating great ideas and products. It is based on a rigorous understanding of your customers and their needs.





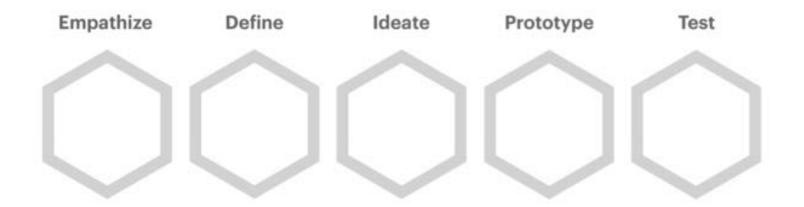
Why Design Thinking?

- 1. Customer first. It is powered by the people who matter most.
- 2. Saves time. Quickly transforms customer input into solutions.
- 3. Saves money. Offers a low-cost way to stretch budgets.









Phases of Design Thinking

Empathize. Gain a real understanding of the users and problem

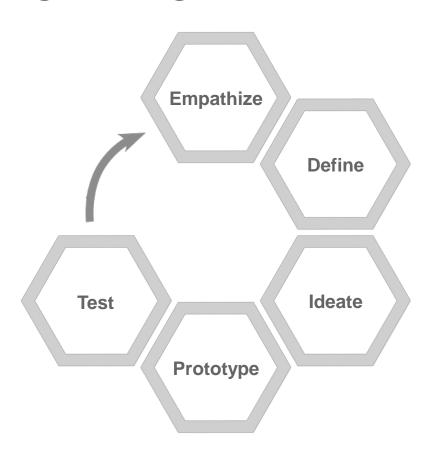
Define. Synthesize the data and understand root causes

Ideate. Brainstorm solutions to the problems identified

Prototype. Build a simulation to better understand your design

Test. Evaluate your design to learn if your solution really works

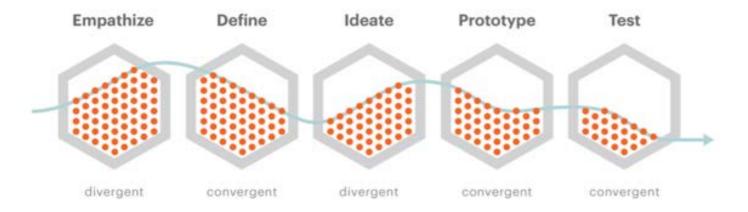
Design Thinking with Agile





Convergent and Divergent Thinking

Design Thinking leverages the power of divergent and convergent thinking to arrive at solutions to problems that are often missed in traditional analysis. Divergent thinking compels designers to expand their set of ideas and concepts about the problem, while convergent thinking drives us to focus our ideas towards an answer. By diverging and converging at different stages in the project, we enable maximum creativity while simultaneously driving for results.





Today's Design Challenge

Today's workshop for Design Thinking will walk you through each of the five phases of the process as a team. You will work in small groups to solve a design challenge and compare findings throughout the journey. In order to save time, we have completed some activities for you.

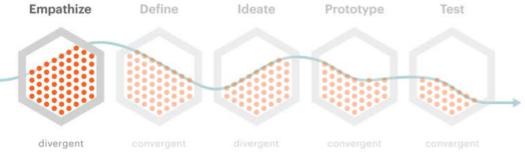
Design Challenge

You are interested in purchasing a new mobile plan using your mobile or tablet device. You have an existing mobile plan.

You are hoping to find a plan that combines all of your services that meet your needs but does not exceed your budget.







Magento Live



Have a beginner's mind.

Our expertise and experience can quickly restrict us towards poor preconceived solutions. Seek to be surprised as you learn, observe and listen without judgment.

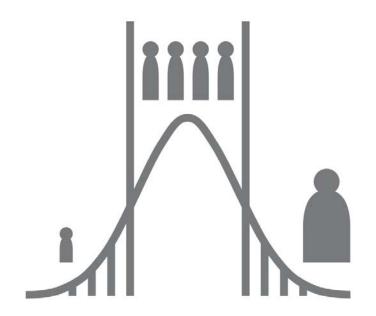




Get out of the building

Engaging your audience in their context, rather than bringing them into yours, is far more valuable because you will be able to capture actions, emotions and values in a natural, real environment.





Engage with extreme users

Discovering the behaviors of extreme users will amplify the needs and desires of your audience.





Explore new areas of inspiration

Similar problems solved in different contexts can offer fresh insights to address your design challenge. For example, luxury hotel concierges inspired the development of Apple's retail stores.



Define Your Target Audience

- 1. Who do we envision will use our solution?
- 2. What are their pain points, needs, goals?
- 3. How are they currently solving these needs?





Tools and Methods

- Secondary Research
- Competitive Analysis
- Analytics
- Surveys

- Group Interviews
- Semi-Structured Interviews
- Diary Studies
- Contextual Research



Activity: Role Play As The Participant

In this activity you will play the role of a participant of "Participant One" in a semi-structured interview about the needs of customer purchasing a mobile phone plan.

Think about your needs as a customer looking for a mobile plan online or in a store. What was your experience? Was it positive or negative? You should consider elements like pricing and comparison in your summary.

Summarize your findings and complete the Participant 1 summary on the next page.



Research Summary

Several participants were interviewed about their needs in finding a new mobile plan. Participants were consumers ranging in age from 23-57 and had mixed experience with technology. Results from the sample were consistent despite differences in demographics and technical ability.

ticipant	1	1	1

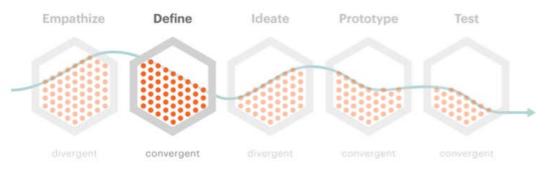
Participant 3 was not comfortable making this transaction online and preferred to interact with a retail associate or by contacting the provider.

Participant 5 wants to find a plan online but is not confident that she had the best pricing. She was technical savvy does almost every purchase online.

Summary: Participants felt that it was difficult to compare plans online based on their situation. They felt that in general, websites were organized based on promotions, which leads to some confusion. They also felt like it was difficult to get any pricing information without answering too many questions. As a result, they felt less confident completing the task online and would rather do this in a retail store.







Magento Live



Any solution you design needs to be crafted towards a target audience. In order to define the problem, you must answer the following questions:

- 1. Who do we envision will use our solution?
- 2. What are their pain points, needs, goals and behaviors?
- 3. How are they currently solving these needs?

Define Methods

- Personas
- Customer Problem Statement
- Customer Journey Maps
- Root Cause Analysis

- Concept Models
- Task Analysis
- User Scenarios
- Use Cases



Personas

Personas create reliable and realistic representations of your key audience segments for reference.

- What defines them?
- What are their motivations?
- Do they have common attributes?





Customer Problem Statement

Clearly describes the issue and includes a vision and method to solve the problem.

who

I am a: mobile phone user.

Who is the customer?

what

I want to: find a new plan that matches my needs.

What goal has to be achieved?

why

but the problem is: It is difficult to choose a new phone plan.

Why do you think the problem exists?



because:

Use the Five Whys example on the next page to complete the Customer Problem Statement.



Five Whys

Understand the root cause of a problem, why it happened, and a potential solution.

What is the problem?

It is difficult to choose a new phone plan.

√

✓ is it difficult to choose a plan?

I am overwhelmed by options.

W∏ am I overwhelmed by options?

I cannot find the right fit for my needs.

 $\bigvee\bigcap\bigvee$ can I not find the right fit for my needs?

These options offer services that I do not need.

Why do these options offer services that I do not need?

They do not know exactly what I need.

Wny do they not know what I need?

I am not able to customize my own plan.



Online

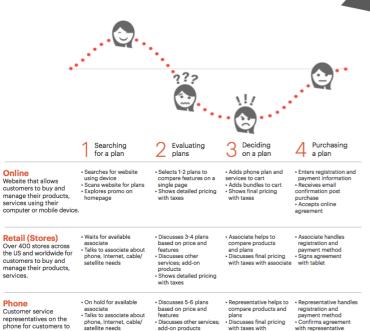
services.

Phone

services 24/7/365.

Customer Journey Map

Create a shared understanding of customers' interactions with the product over time.



· Shows detailed pricing

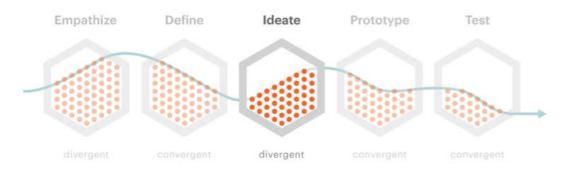
with taxes

representative



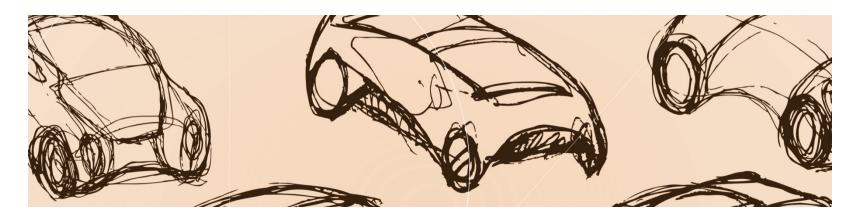
buy, manage their products, • Browsing phones





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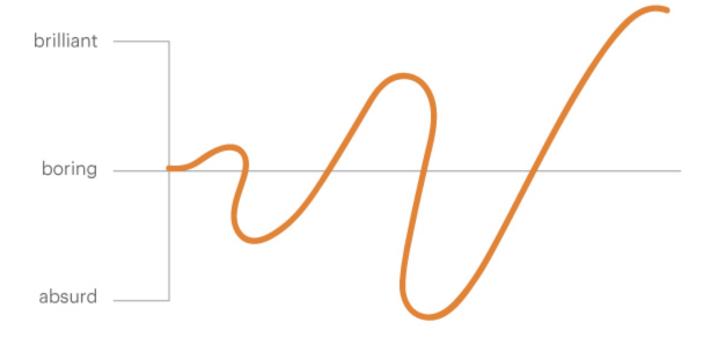
What is Ideation?



Generating lots of different ideas helps remove the filters from our thinking. We make creative leaps from one idea to the next, and begin to develop deeper concepts.



Idea Curve





Ideation Methods

Rapid Sketching

Rapidly generate as many design ideas as possible

Active Brainstorming

Leverage the collective thinking and energy of the group

Process Flows

Create flow charts to visualize the steps of the process and identify opportunities

Participatory Co-Design

Have the team co-design with people who will ultimately use the solution





Getting Started:

Generate Ideas

In order to get started with ideation, you must:

Be open minded

There are no bad ideas whatsoever.

Be optimistic

Defer your judgment and replace with positivity.

Be courageous

Replace fear with genuine curiosity.



Activity: Rapid Sketching

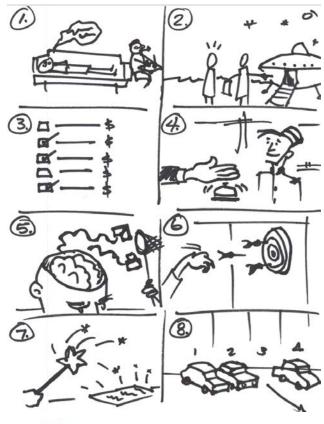
Quickly generate as many design ideas as possible.

In this activity, you will attempt to sketch as many ideas on a single page in this workbook in a short amount of time. If you have difficulty, try taking an earlier idea and changing it.

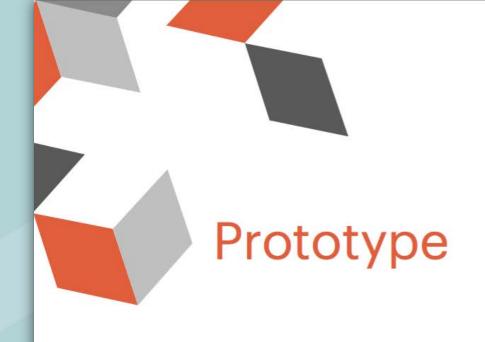
Instructions

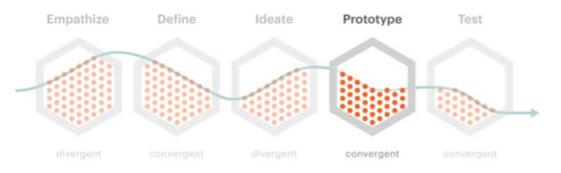
- 1. Find the "Rapid Sketching" template in your workbook.
- 2. Get ready to draw.
- Start drawing! You will have 30 seconds.
- 4. We will repeat this 8 times.

Template: Rapid Sketching



Template: Rapi		
Magento Live	1.6	





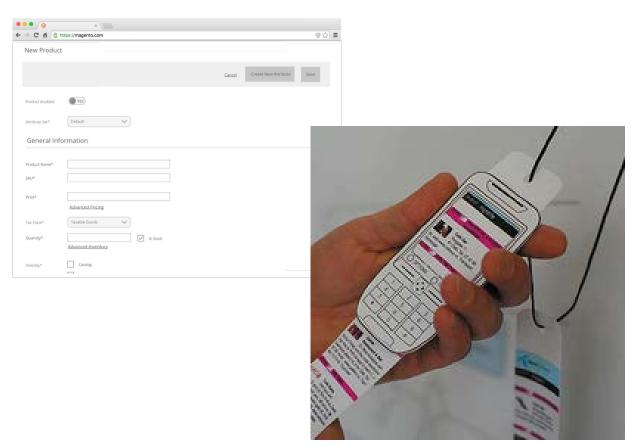
Magento Live

Why Prototype?

Prototypes should be **faster**, **cheaper**, and **easier** to build than the real product.

The cost of making a mistake after launch is **much greater.**





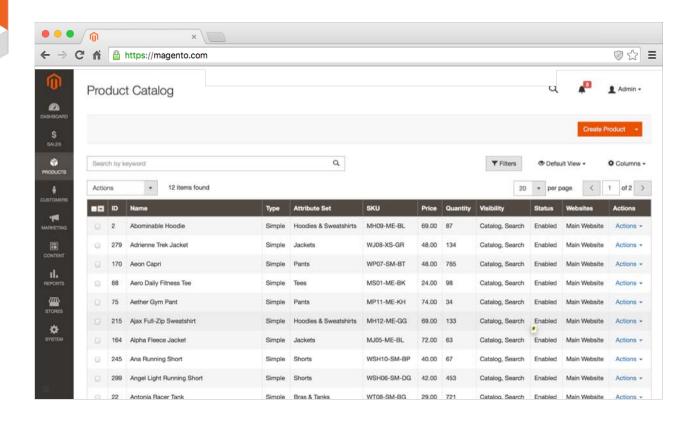
Source: creativeblog.com

Magento **2.0**

Low Fidelity Prototype

Paper prototype





Magento **2.0**

High Fidelity Prototype



Getting Started: Prototyping Your Ideas

Storyboard

Embrace your inner comic strip artist and draw the experience frame by frame. Storyboards are great for understanding the end to end process as experienced by the user. Too often, we only focus on a narrow portion of the experience – storyboards fix that.

Physical

The obvious choice for hardware products, physical prototypes can also act as 3D storyboards to force you to take a larger view of the overall experience.

Paper

Nothing beats paper and pencil for speed and cost. Anything can be drawn – from physical products to user interfaces.

Digital

A more advanced, and also more costly, version of a paper prototype. Digital prototypes have the advantage of being able to look and feel more similar to the real thing, and contain more interactivity than other prototypes. But be careful, it's easy to sink way too much time and money into creating a digital prototype. Keep it as simple as possible.



Activity:

Explore Prototype

In this activity, you will review a prototype that has already been created. For the purposes of this workshop, we will use an example website as your "prototype" for the purposes of the usability test in the next phase. In real life, this can be a simple paper prototype or clickable presentation.

Instructions

- 1. Using your mobile phone or tablet, open your browser.
- 2. From your web browser, go to this URL:

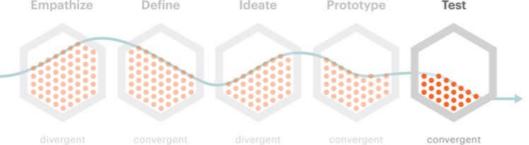


3. Familiarize yourself with the "prototype" and explore it.









Why Testing?

- Collecting feedback is key to your success
- The more times you evaluate the better
- Look for opportunities, not just validation





Quantitative vs. Qualitative

Quantitative

Numbers and data focused Measurable data



- 15 cm tall
- 568 ml

Qualitative

Observed and not measured Appearances and feelings



- Beautiful amber color
- Sweet aroma
- Crisp finish



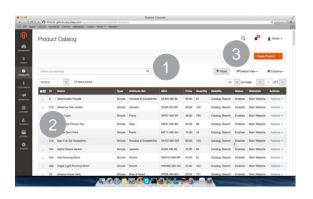
Research Methods (Experts)

Heuristic Review

A heuristic evaluation is a comparison of your prototype to a standard set of rules.

Expert Review

An expert evaluation is similar to a heuristic evaluation, except that it adds in a person's interpretation of design best practices.





Research Methods (Attitudes)

Surveys

Surveys depend on your ability to ask perfect questions without meeting your audience.

Focus Groups

Focus groups are for judging people's opinions about ideas.





Research Methods (Behaviors)

Cognitive Walkthrough

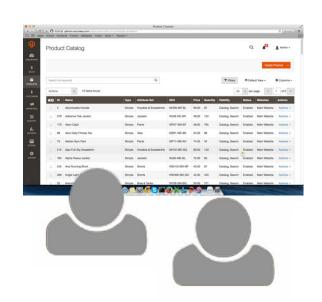
Observing customers in real scenarios.

User Interviews

Interviewing users to collect more feedback.

Usability Testing

Creating tasks for a test participant to do while interacting with your prototype.





Overview:

Usability Test Steps

Identify the testing team. Ensure that you have a facilitator, notetaker, and observer for your test.

Create the scenarios. Take the user scenarios defined from the prototype and convert them into tasks for the test participant.

Write the test plan. Using the tasks and the planned physical setup (room, equipment, etc.).

Recruit participants. Participants can be anyone that matches the basic profile of the user. Avoid recruiting anyone familiar with the project, this will bias their feedback.

Run the test. A typical session will last about an hour for each participant. Record audio and video of every session with permission.

Analyze the data. Review all the notes and video recordings of the sessions, identifying issues and rating by criticality.

Report the findings. Reports can be as brief or as formal as needed. Make sure all the relevant stakeholders are present for the presentation



Tips & Tricks:

Asking and Listening

Evoke stories

"Describe your best or worst experience with..."

Ask for "show-and-tell"

Ask open ended questions

Avoid yes or no (closed) questions

Seek surprises not validation

Avoid leading questions

Keep asking questions

Good follow-up questions

Tell me more about...

How did that make you feel? Why?

Why do you think it was done that way?

What could have been better?

What did you do in response?

Listen, listen, listen

Ask participants to "think aloud" while they perform tasks

Take note of what they say and do. Non-verbal cues are important.



Tips & Tricks:Building Rapport

What comfortable questions can you ask to build rapport with your participant?

Examples:

When was the last time you purchased a new phone? How do you feel about your phone plan?

What questions can you ask to understand your participant's values and motivations?

Examples:

Describe a time when you were really happy with your phone service. What would happen if you were unable to get help for your phone online?



Activity: Usability Testing

In this activity, you will conduct a usability test using the prototype from the previous phase on a device of your choice. For this activity, you will play one of the three roles in a usability test and rotate after the first test.

Instructions

- 1. Review the roles of moderator, notetaker, and participant
- 2. Review the usability plan and tasks that you will ask as a moderator
- 3. Determine who will play each of the roles in your group
- 4. Conduct the test!
- 5. Debrief as a group



Roles for Usability Testing

Moderator (Facilitator)

The person that will talk with the participant during the test. Ideally, the facilitator will not be the designer on the project in order to avoid bias.

In this role, you will need to ask open-ended questions -- nothing you can answer "yes" or "no" to in response. You will also need to stay neutral, don't "lead" the customer (e.g. "Do you like...?"). If you need help understanding an issue, try to ask "why" 5 times to get to the root cause. Watch for body language.

Who are they?

What are their values and motivations? How do they see themselves?

What do they do?

What tasks do they perform to achieve their outcomes?

Why and How?

Why do they do the things they do? How do they go about it?



Roles for Usability Testing

Note Taker

It's always helpful to have a second person take notes, so the facilitator can stay focused on the discussion. The note taker must strive to be as objective as possible and not insert bias. Remember that you are not transcribing, you're capturing things you think are relevant to the research. Also make sure to debrief immediately afterwards or you will forget the details.

Participant

Participants represent actual users. These can be recruited through a variety of methods depending on the nature of your product or website.



Test Moderator Note Taker

Test Participant



Instructions

- Review the roles of moderator, note taker, and participant
- 2. Review the usability plan and tasks that you will ask as a moderator
- 3. Determine who will play each of the roles in your group.
- 4. Conduct the test!
- 5. Debrief as a group

Measurement and Analysis

It's important to quantify the results from your usability test through measurement and analysis. Usability is defined by ISO (ISO 9241) as the effectiveness, efficiency and satisfaction with which specified users achieve specified goals in particular environments. You can measure this using several popular methods.

Quantitative

Time on Task

How long does it take to complete a task?

Completion Rate

Can participants accomplish or complete the task?

Satisfaction

On a scale, how confident are participants in completing the task?

Qualitative

Observed and not measured

Behaviors, including body language and facial expressions. How they answer questions are just as important as what they answer.

Appearances and Feelings

Understanding their motivations, thoughts, feeling, reactions. Capturing quotes in written, audio and video form is a powerful way to share these results.



Evaluating Your Learnings

After the usability test, you will want to evaluate your learnings. Remember, you are not selling your solution, you're testing it. Be open to being wrong at the end of the process.

Final Thoughts

- Try to not explain features. Do they understand what it does on their own?
- · Listen and watch. What was their physical reaction?
- · Ask them what they would change if they could change one thing.
- Remember that interviewees generally don't want to be rude, so they will be much more flattering than they would if left alone with your product. Consider this when evaluating answers.

Self Evaluation

- · What was the biggest surprise? What worked?
- What didn't work?
- · What questions or ideas do you have now?
- · What is the most important thing to change?



Summary

Summary

Now that we've conducted our test, collected data, and analyzed it, we now need to figure out what to improve.

- 1 Test results will identify new problems that you hadn't considered before or maybe confirm some you already suspected.
- 2 It will be tempting to jump to solutions to those problems. "Users didn't see that button? Make it bigger! "Make it blink!" Don't do it!
- 3 Go back to the tools in the Define stage, and do another root cause analysis find out why the problem really happened.
- 4 Consider the Empathize stage did the test identify a gap in our understanding of who the users really are and what they really need? Maybe the prototype failed because we solved the wrong problem.
- 5 Once the correct solutions have been defined, build a new prototype and test it again. Iteration is important to the process.

Summary

Design thinking is a process for innovation. Anyone can do it.







Design thinking is a process for innovation. Anyone can do it.

Magento has used design thinking to improve Magento 2.0.

You can help by volunteering for future research efforts.

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Q&A

