

PROTOTYPING PRODUCTS AND DIGITAL SERVICES 101

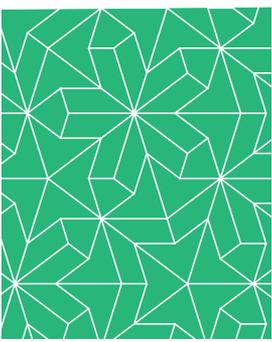
CODE FOR AMERICA SUMMIT | WEDNESDAY, MAY 29, 2019



PART 1: PROBLEM DEFINITION 35 min

1. Why prototype
2. The business case
3. Exercises

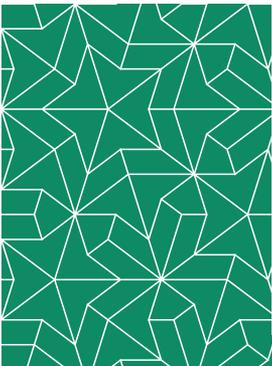
BREAK 10 min



PART 2: DESIGN 60 min

1. Ideation
2. Refinement
3. Sketching

BREAK 10 min



PART 3: TEST 65 min

1. Real users will be here to test



PROBLEM DEFINITION

HYPOTHESIS

GOAL

The goal of this activity is to clearly state the objectives of your work. Having a hypothesis to validate will make it easy to identify whether your ideas are working or if you need to change directions.

ACTIVITY

1. Craft a hypothesis that targets your pain point and will drive your prototype creation using the following “mad lib” format.
2. Write your hypothesis on one of the giant sticky notes and put it on the wall.
3. Take a look at the other hypotheses around the room.

We believe that [**creating this capability/feature**] for [**these people/personas**] will result in [**this outcome**].

We will know we are right when [**we see this measurable signal**].



PROBLEM DEFINITION

5 WHYS ROUND TABLE

GOAL

The goal of this activity is to deconstruct a problem to help understand the root cause. You will identify potential levers you can pull to address the pain point beyond the immediately visible symptom.

ACTIVITY

1. Stand up!
2. Write your pain point on the middle of a large sheet of paper.
3. Draw lines out from that pain point and brainstorm 'why' this is happening.
4. Continue building from each answer with the next layer deep.
5. Move around the table helping each other.
6. Try to go 5 layers deep on as many threads as you can.



DESIGN

GENERATIVE SKETCHING

GOAL

The goal of this activity is to generate as many ideas as possible. This activity values quantity over quality and is structured to encourage creative thinking.

ACTIVITY

1. Draw your ideas.
 - A. Work independently.
 - B. Include no more than 3 words to help clarify.
 - C. Stick figures are great!
2. Hold your idea up to your table, say it out loud and throw it in the middle of the table.
3. Generate as many ideas as you can.
4. Silly ideas are welcome at this stage.



DESIGN

CONCEPT VOTING

GOAL

The goal of this activity is to evaluate all of the ideas generated to identify the most promising ones to iterate on. At this stage you're starting to define a specific approach to your hypothesis.

ACTIVITY

1. Review ideas from everyone.
2. Ask for clarification as needed. You will have heard most of these ideas as they were generated.
3. Dot vote
 - A. Each person votes for 3 ideas.
 - B. Top 2-3 ideas with the most votes will move forward to the next activity.



DESIGN

RAPID PROTOTYPING

GOAL

The goal of this activity is to build out your idea so that you can get feedback from the people you are designing for. You will put just enough work in to test the direction so you can get back in and make it better or choose to change directions and test something new.

ACTIVITY

1. Pick one of two approaches
 - A. Wireframing
 - B. Storyboarding
2. Draw your ideas
 - A. Everyone will work with the same 3 ideas
 - B. Add clarification to the ideas
 - C. Find ways to combine ideas
3. Work independently



DESIGN

DOT VOTING - WHICH ONE WILL YOU TEST?

GOAL

The goal of this activity is to identify the most promising idea to test with users.

ACTIVITY

1. Dot vote
 - A. Each person votes for one idea
 - B. If there is a tie, the table facilitator will make a judgement call.



TEST

TEST PLAN

GOAL

The goal of this activity is to prepare for the testing you'll do of your prototype, by outlining the questions you hope to have answered, as well as documenting logistics that will need to be managed.

ACTIVITY

Document the following

1. Logistics like time, place and contact information
2. Your learning objectives or the primary questions you expect to answer with this test.
3. Your original Hypothesis
4. Participant characteristics or needs



AD HOC HOTEL TEST PLAN

LEARNING OBJECTIVES

What do users find most frustrating about the check-in process?

Does our prototype measurably improve their experience?

Can we confirm or refute our hypothesis?

HYPOTHESIS (RESTATE YOURS)

USER SAMPLE

We have one user from our **[target persona]** group, who has completed the check-in process within the last 24 hours.



TEST

TEST SCRIPT

GOAL

The goal of this activity is to outline the steps you'll need to go through with each participant. By scripting your interaction, you will set guide rails for yourself to make sure you cover everything necessary to answer the questions you outlined in your test plan.

ACTIVITY

1. Background

A. Ask questions that may provide context for observations you make during the prototype testing.

2. Testing the prototype

A. Write open ended questions.

B. Write questions that will prompt behavioral observations.

C. If the participant asks you a question, send it back to them?
e.g. What do you think would happen? Why do you think that is?

3. Wrap up

A. Ask the participant for overall observations

B. Give them a chance to mention something they thought of after they'd moved onto another part of the prototype.

C. This is the chance to ask overall questions about how they think this prototype might impact their experience.



TEST SCRIPT

1 OF 3

BACKGROUND (5 MIN)

Introductions: We're working with the Ad Hoc Hotel and Casino to improve our guest experience. One area we're focusing on is the check-in experience.

We're going to show you some ideas we're exploring and ask for your feedback. We'll be testing our ideas, not you, so please be open and honest with your feedback and don't worry if something looks confusing, or doesn't work as expected. That's why we're doing these tests.

What was your last check-in experience like? What did you like about it? What did you dislike about it?



TEST SCRIPT

2 OF 3

TESTING THE PROTOTYPE (10 MIN)

If testing a digital interaction (wireframes): Looking at the prototype now, how would you go about checking in? (if prototype is testing a specific part of check in, update phrasing to reflect that)

If prototyping a service interaction (storyboard): For this prototype we're actually going to be testing a service that someone provides you. Imagine you're checking in to the hotel and <role-player> is the hotel clerk. I may pause the interaction to ask you questions.

<separate script for the service interaction>

Clerk: "Welcome to the Ad Hoc Hotel and Casino! How may I help you?"

...



TEST SCRIPT

3 OF 3

WRAP UP (5 MIN)

Was that easier or better than your last check-in experience?

Thank you for your time! (Give the user the gift card.)



TEST

COLLABORATIVE NOTE-TAKING

GOAL

The goal of this activity is to generate behavioral observations. By engaging the entire prototyping team, you will capture more unique observations and will be able to generate more meaningful insights as a team.

ACTIVITY

1. Create a matrix on a large post it that looks like this:

Feature	Positive	Negative
(ex./ new type of greeting)	(ex./user smiled when they were greeted)	(ex./User appeared confused, scared)

2. Write down your observations on sticky notes
 - A. If you think the observation is a positive one, stick it in the positive column for the related feature.
 - B. If you think it's overall negative, put it in the negative column.
3. Keep doing this until the interview is over!
4. There should be no conversation during this time.



TEST

SYNTHESIS AND ANALYSIS OF RESEARCH

GOAL

The goal of this activity is to identify patterns in your notes of the usability test.

ACTIVITY

1. Create groups of stickies that seem related.
 - A. These are sometimes called Affinity Diagrams.
 - B. Sometimes the first group you make is too big, or not the most valuable. Feel free to try again.
2. After everything is grouped, talk through the largest clusters and discuss the insights.
3. Review your learning objectives from the test plan.
 - A. Can you answer your questions?
4. Review your hypothesis.
 - A. Does the test support or refute it?