

Minimum Viable Product

Minimum Viable Product

What is an MVP?

A **proof of concept** or **prototype** that allows a team to **maximally validate** its value proposition with **minimal effort**

Not just a product with random incomplete features

Nor just a way to release an early product

[Blagojevic, V., *The Ultimate Guide to Minimum Viable Products*; Brikman, *A Minimum Viable Product is not a Product, It's a Process*]

What Product?

The MVP doesn't have to be a product at all!

[Though it MUST be a working app for the MVP assignment! 😊]

Could be a:

- landing page with elevator pitch and sign-up form
- demo video, with a survey(!)
- hand-crafted, bespoke model for early adopter(s)
- crowdfunding campaign (kickstarter, indiegogo, rockethub)

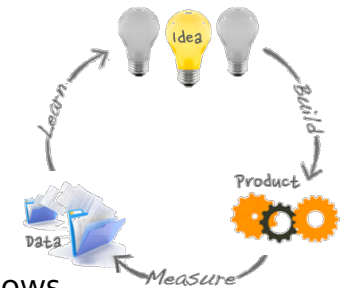
So what is an MVP?

A Unit Test

An **experiment** to test **riskiest assumption** and use the results to course correct

Assumptions could include:

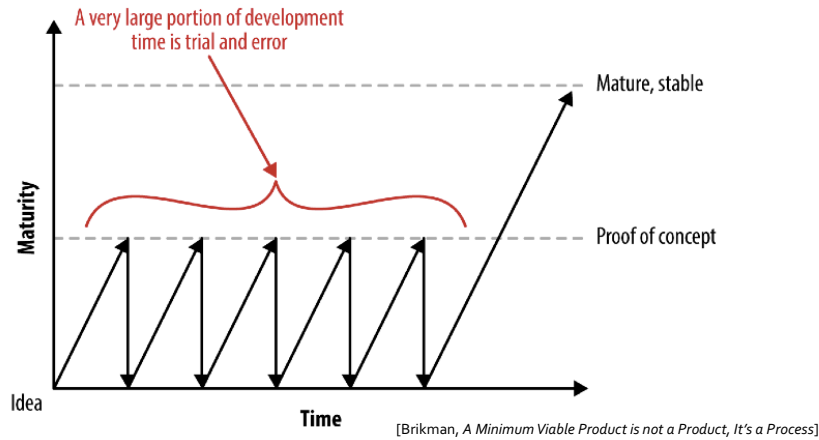
- market needs and users' wants
- monetization potential
- legal and regulatory issues
- UX/UI design
- architecture: control and data flows
- marketing strategy



It's a Debugging Process

How many unit tests do you need?

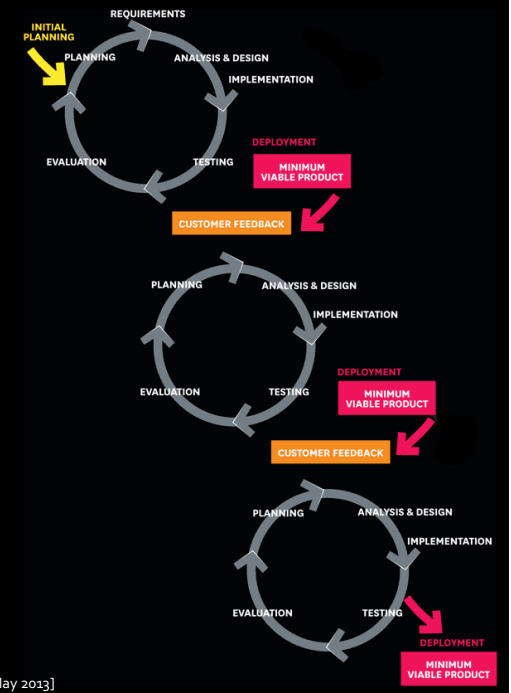
Try out "product" with real users, observe, adapt, **repeat**



Agile Development

Working hand-in-hand with customer development, rapidly assemble **minimum viable product** and immediately elicit **customer feedback**

Iterate, making small adjustments or more substantive redirections (**pivots**)



In Summary

Always be asking:

1. What is my riskiest assumption (now)?
2. What is the smallest experiment I can do to test this assumption?

"There is surely nothing quite so useless as doing with great efficiency what should not be done at all." – *Peter Drucker*

Fail Fast, Fail Often!

What to Ask Customers

Are they interested in your product? (mobile app builder for restaurants)

What are their real pain points? (want a web site)

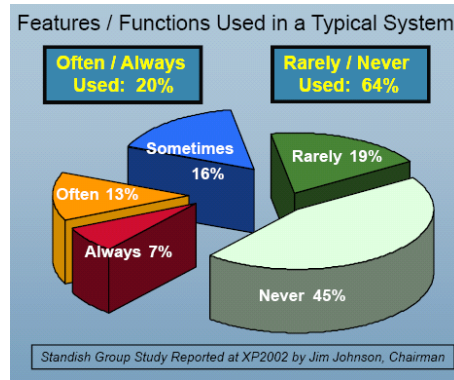
Are they willing to pay? How much? (show a hand-crafted web site (MVP!))

How can you attract more customers? (landing page, asking for email addresses)

Smallest Set of Features

64% of features in a typical system is wasted effort

Say we want to build an MVP with the smallest set of features that still captures our value proposition



How to define this **smallest set of features**?

[Cayenne Apps, 5 Steps to Building Minimum Viable Product with Story Mapping]

Story Mapping

Instead of simply listing all features by priority, map out the **features** as a **2D map**, backing up each feature with a **user story**

Example: Starting an Online Bookseller

Step 1: define your **value proposition**

Example:

Step 2: define the **User eXperience (UX)** of your product

What are the steps users take to achieve your value proposition?

[Cayenne Apps, 5 Steps to Building Minimum Viable Product with Story Mapping]

Step 2: User eXperience

What are the stages most users would follow in using your product?

Focus on the **process/usage flow**, not on the features



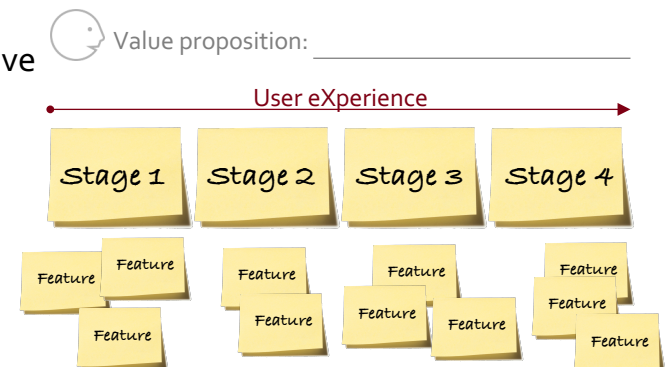
[Cayenne Apps, 5 Steps to Building Minimum Viable Product with Story Mapping]

Step 3: List of Features per Stage

List all features that should be part of a stage

Attach **user stories** to features: take user interviews into account

Let the creative juices flow, brainstorm, list features unordered



[Cayenne Apps, 5 Steps to Building Minimum Viable Product with Story Mapping]

Step 3: List of Features per Stage

Example:

- Stage: find book
- Features:
- User stories:
 - specific **type** of user
 - specific **action**
 - specific **reason** for action

BAD user story examples:

- as a reader, I want to find books
- as a reader, I want to search for books

Duh! 😞

User Personas

Construct 3 distinct **composite** (not fake or made up) user personas, reflecting different customer segments

How?

Angie Rosales



Age: 20
Location: Santa Cruz
Work: Student
Status: Relationship

Bio

Angie is a second year university student pursuing her degree in psychology. During school breaks she travels around the U.S. and Caribbean with her boyfriend of two years.

She loves to see all the tourist sites in cities and lounge on white sand beaches in front of the crystal blue waves. She takes time to carefully craft their trips and make sure the neighborhood they stay in is safe and that their flights get them in early so they can enjoy an extra day of vacation wherever they are.

Motivations

Experience: Find great sites to see or great places to relax and enjoy

Fiscal: Save money so she can do more on trip

Seamless: After booking she doesn't have to worry about the logistics just look forward to the experience

Goal

Fiscal: To easily find and compare the best trip prices

Experience: Know and see the sites and landmarks in new cities

Seamless: Plan the trip so the logistics fade away

Frustrations

Compare: Comparing prices across travel, hotel, and flight bookings sites and apps

Schedule: Trying to find the best departure times to minimize air time and max vacation time

Accommodation: Finding best location to stay in new city

Step 4: Prioritize Features

Rank order the features in each stage according to user input/interviews

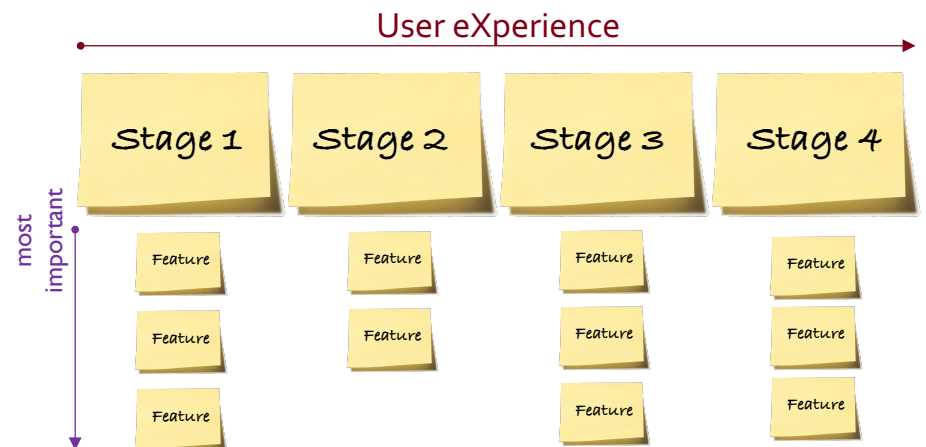
Consider:

- How important is the feature to complete the process?
- How often will the feature be used?
- How many users will use the feature?
- How much gain/pain relieve will the feature bring to user?
- How "risky" is the feature?
 - how soon to ready
 - how long to done
 - latent benefits

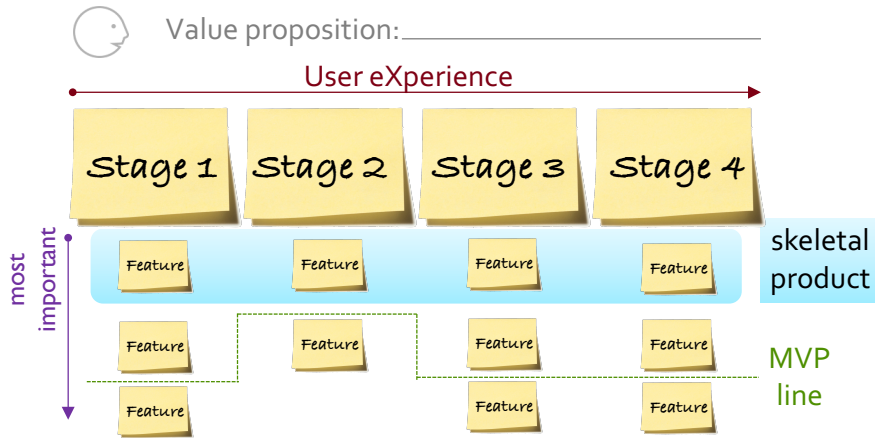
Step 4: Prioritize Features



Value proposition: _____



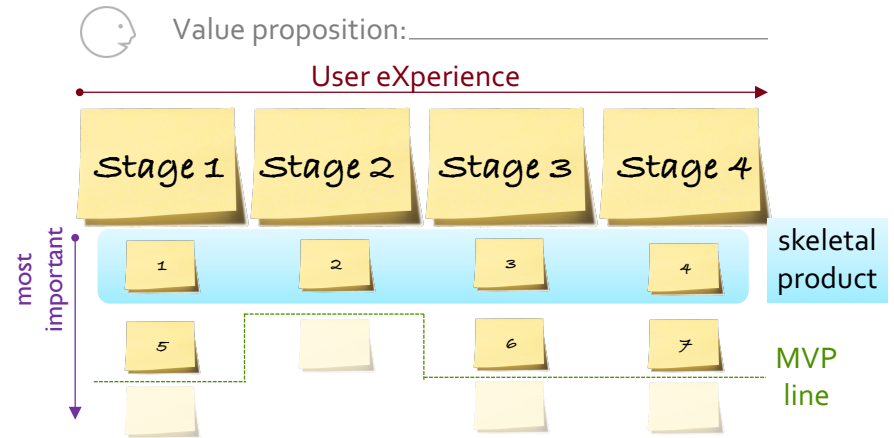
Step 5: Define MVP



Skeletal product: just functioning, built first
MVP: must have vs. nice-to-have features

[Cayenne Apps, 5 Steps to Building Minimum Viable Product with Story Mapping]

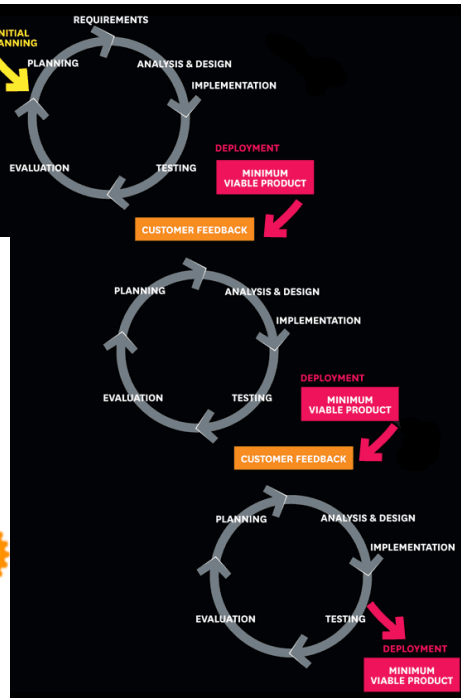
Step 5: Define MVP



Build to right, not down
What comes after you've built your MVP?

[Cayenne Apps, 5 Steps to Building Minimum Viable Product with Story Mapping]

Build,
Measure,
Learn



DUE Thu, 10/12, 2 pm

Design Presentation:

1. Title and team slides
2. Three or more user personas (at least 1 per customer segment)
3. Story map for your product features
4. Two UI/UX alternatives
5. Back-end architecture
6. Updated VPC

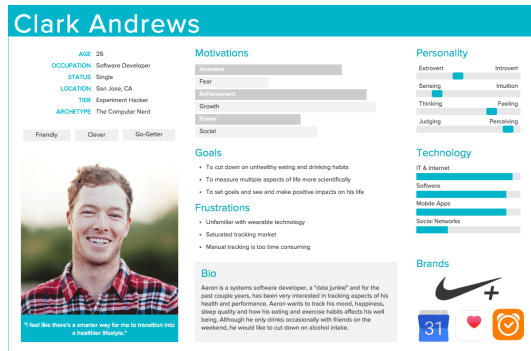
User Personas

Interview at least 3 more people **per user persona**:

- find out more about user's pain points, wants, and needs
- test your app's features and UI/UX ideas on interviewees
- keep in mind you need to construct user stories

Create 3 user personas following template:

- demographic
- bio
- motivations
- goals
- frustrations
- personality
- technology
- known brands



Product Feature List

1. Attach user stories to non-trivial features
2. Assign team members to features
3. List all 3rd-party libraries and tools used

If feature list can be completed in a 24-hour hackathon or a weekend of coding by a team of competent UM CSE seniors, your project may only get a C grade

UI/UX

Provide TWO alternative UI/UXs

- design each alternative by a separate sub-team, in **isolation** from each other
- the alternatives must be substantially different, e.g., not just landscape vs. portrait modes
- mocked up UIs using prototyping tools such as Sketch, proto.io, marvel, etc.
- create a separate storyboard for each UX

List all 3rd-party libraries and tools used

Back-end Architecture

1. List components of back-end architecture and the control and data flow between them
2. Front-end/back-end communication: APIs
3. List all 3rd party libraries and tools used