ITI8740/ITX8522: Software Development Team Project

06. Minimal Viable Product

Martin Verrev
martin.verrev@taltech.ee

Minimum Viable Product

2001. Frank Robinson. CEO of SyncDev:

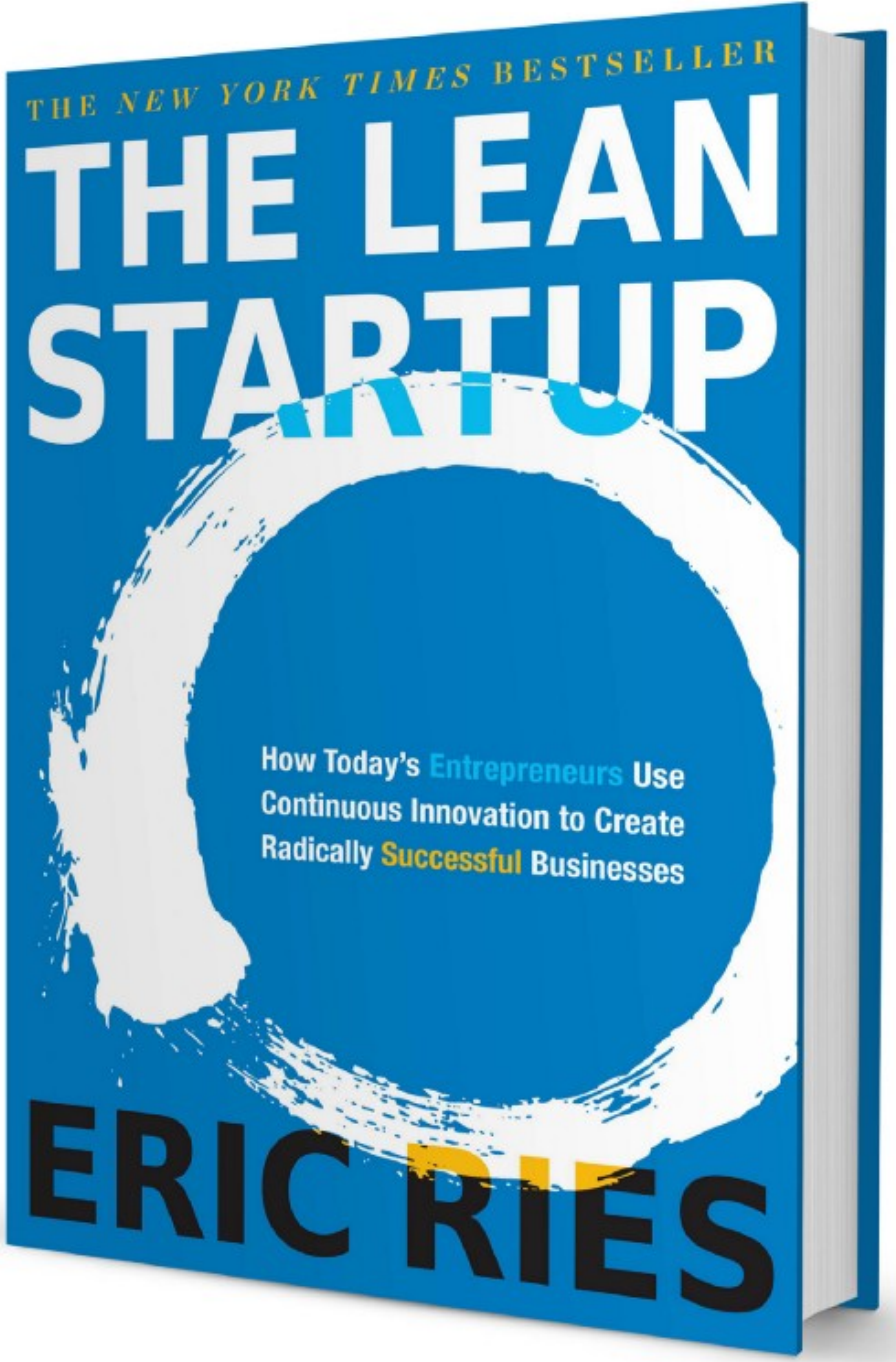
Unique product that maximizes return on risk for the customer.

or

A simplest version of a deployable product

Minimum Viable Product is that version of a new product that allows a team to collect the maximum amount of validated learning about customers with the least effort.

Eric Ries. Lean Startup



A Minimum Viable Product is the smallest thing you can build that delivers customer value (and as a bonus captures some of that value back).

Ash Maruya. Running Lean

An MVP is a process that you repeat over and over again: Identify your riskiest assumption, find the smallest possible experiment to test that assumption, and use the results of the experiment to course correct.

Jim Brikman. Hello Startup.

MVP is ..

- A *tactic* for cutting back wasted engineering hours
- A *strategy* to get the product into earlyvangelists hands as soon as possible
- A *tool* for generating maximum customer learning in the shortest possible time.

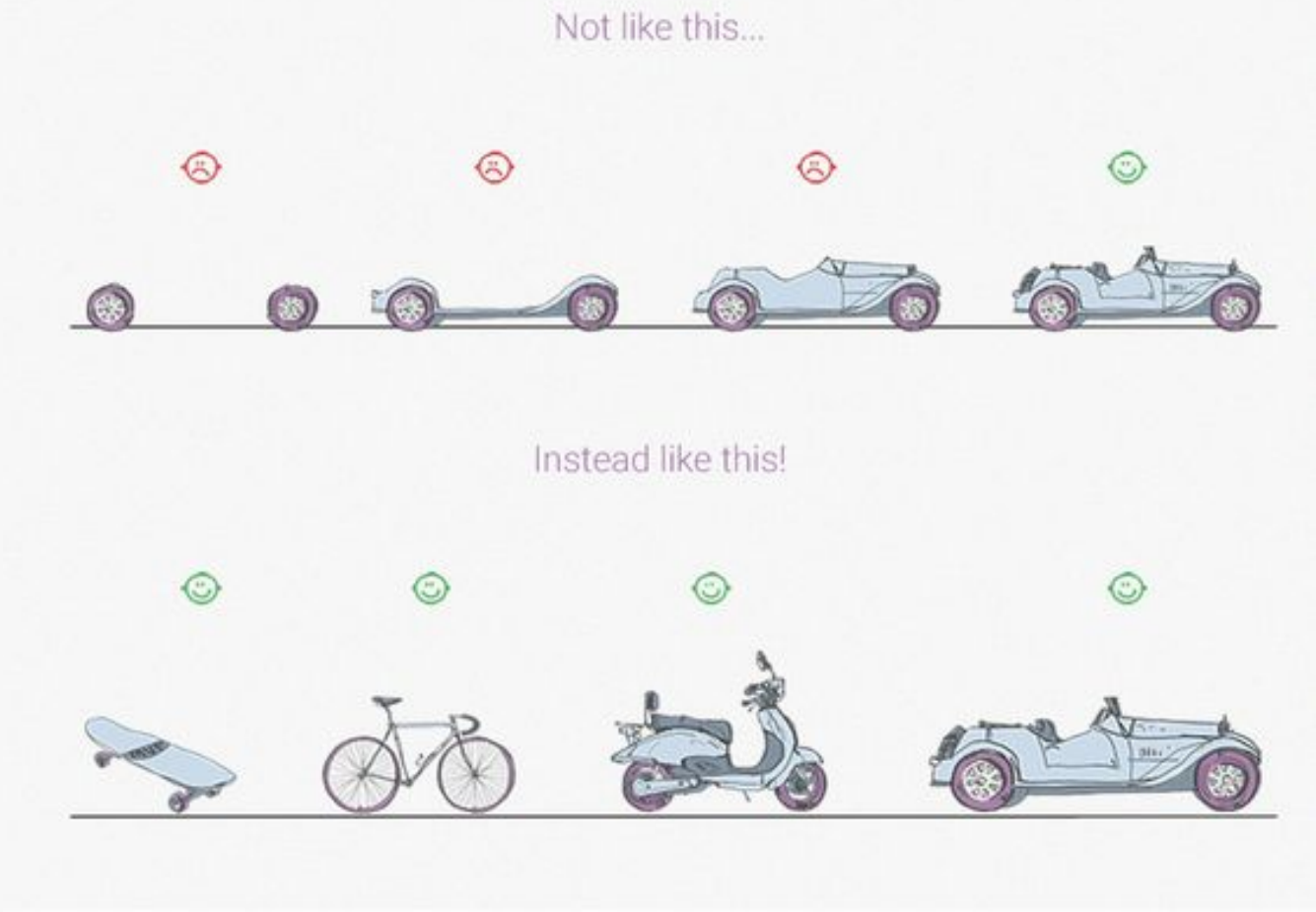
Steve Blank. The father of customer development

MVP is not just a product with half of the features chopped out, or a way to get the product out the door a little earlier. In fact, the MVP doesn't have to be a product at all. And it's not something you build only once, and then consider the job done.

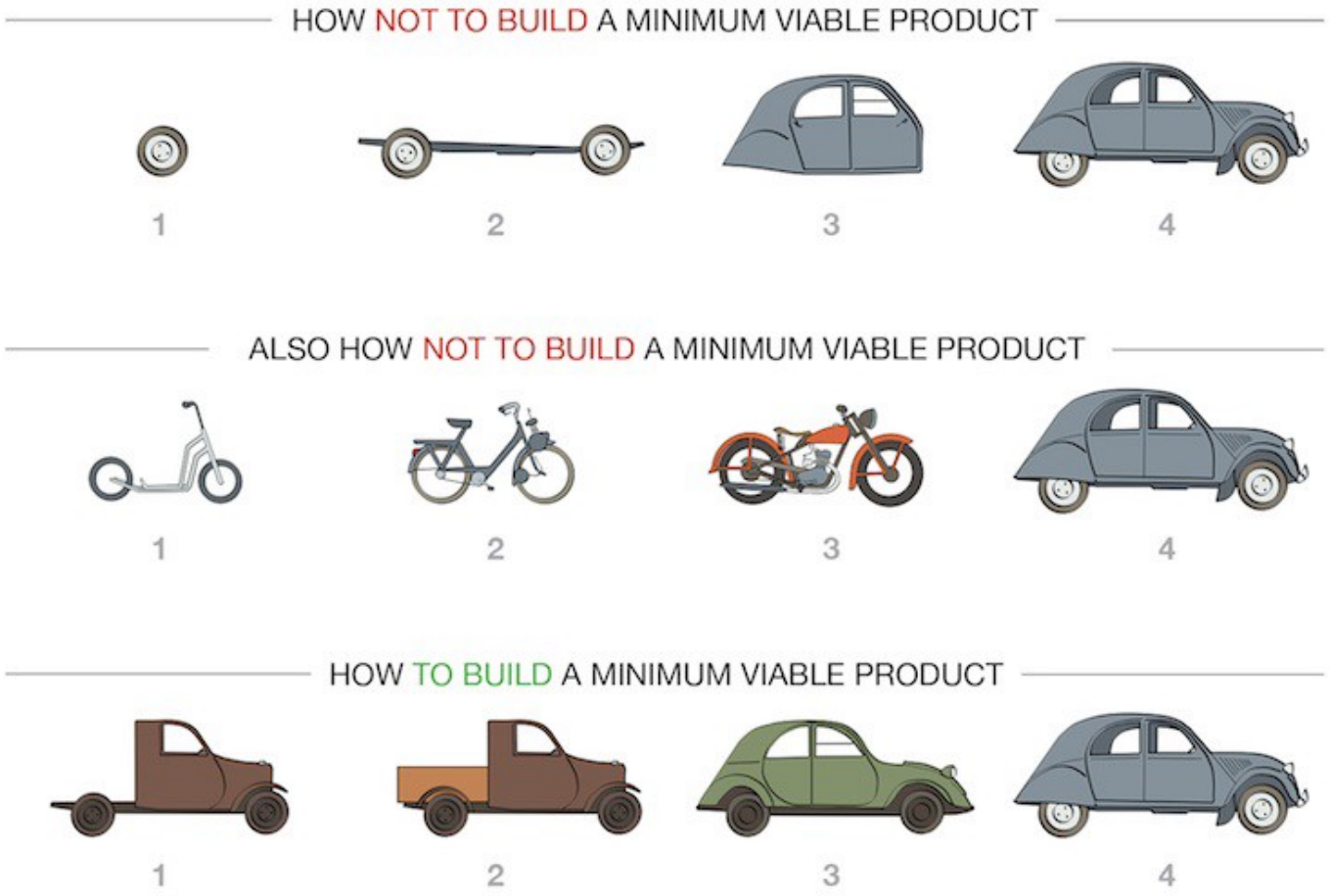
Examples: Spotify & Minecraft

https://blog.crisp.se/2016/01/25/henrikkniberg/making-sense-of-mvp

Good Way to build MVP



... and even better one



Regular Product Development

MVP Development

MVP is a prototype that focuses on the most important part of a product or service.

Typically offered to a group of potential customers, the most important aspect is viability in order to test the core of the value proposition; to learn from it; and to be able to replicate the idea

Define the Features

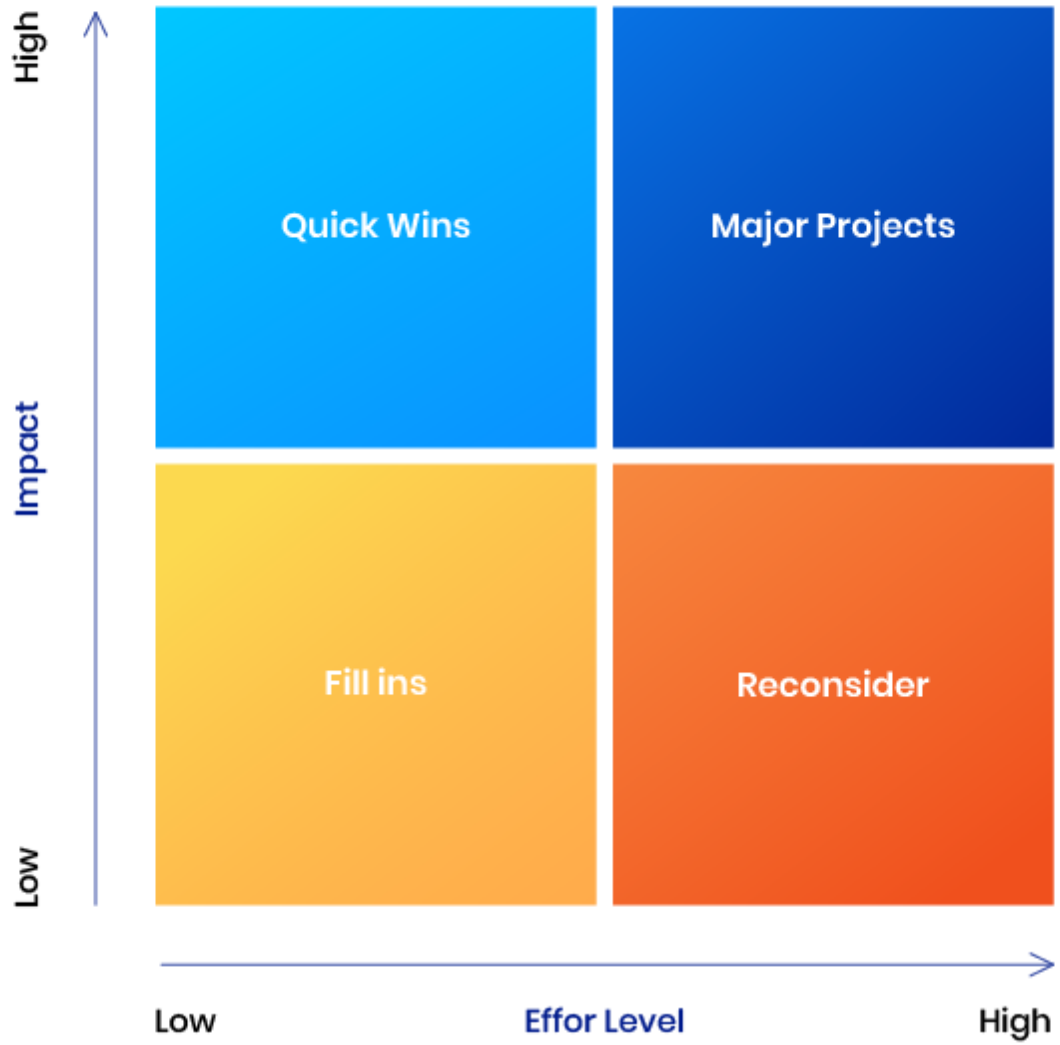
- Define your target audience.
- Find out their biggest issues.
- Decide how your product will solve these issues.
- Learn how customers solve these issues right now.
- Research who your direct competitors are.
- Research who your indirect competitors are.
- Define killer features.

Scoping the Features

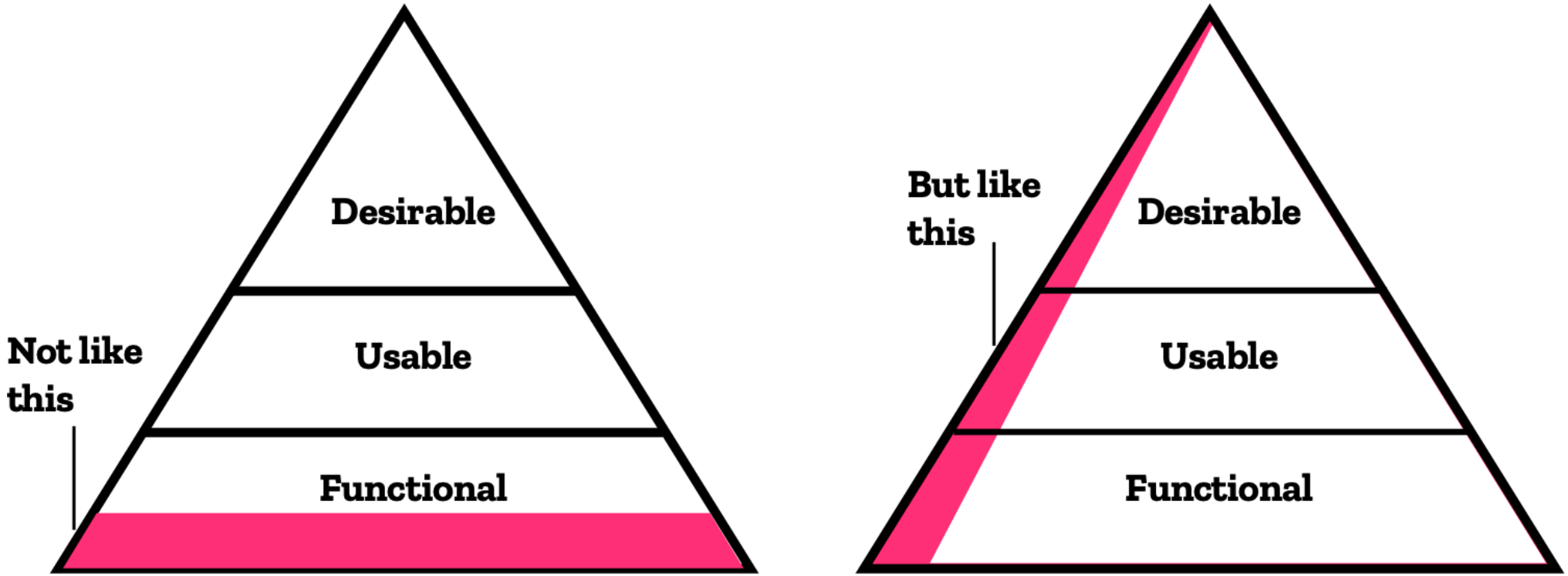
- *Business value:* Can we measure the cost of a feature?
- *Relation between the feature cost and its https://sloboda-studio.com/blog/how-to-decide-on-mvp-features/complexity:* How complex is a new feature? Can we use a simpler one?
- *Timing:* How much time do we need to create a new feature?

See: https://sloboda-studio.com/blog/how-to-decide-on-mvp-features/

Effort and impact prioritization



Minimum viable product



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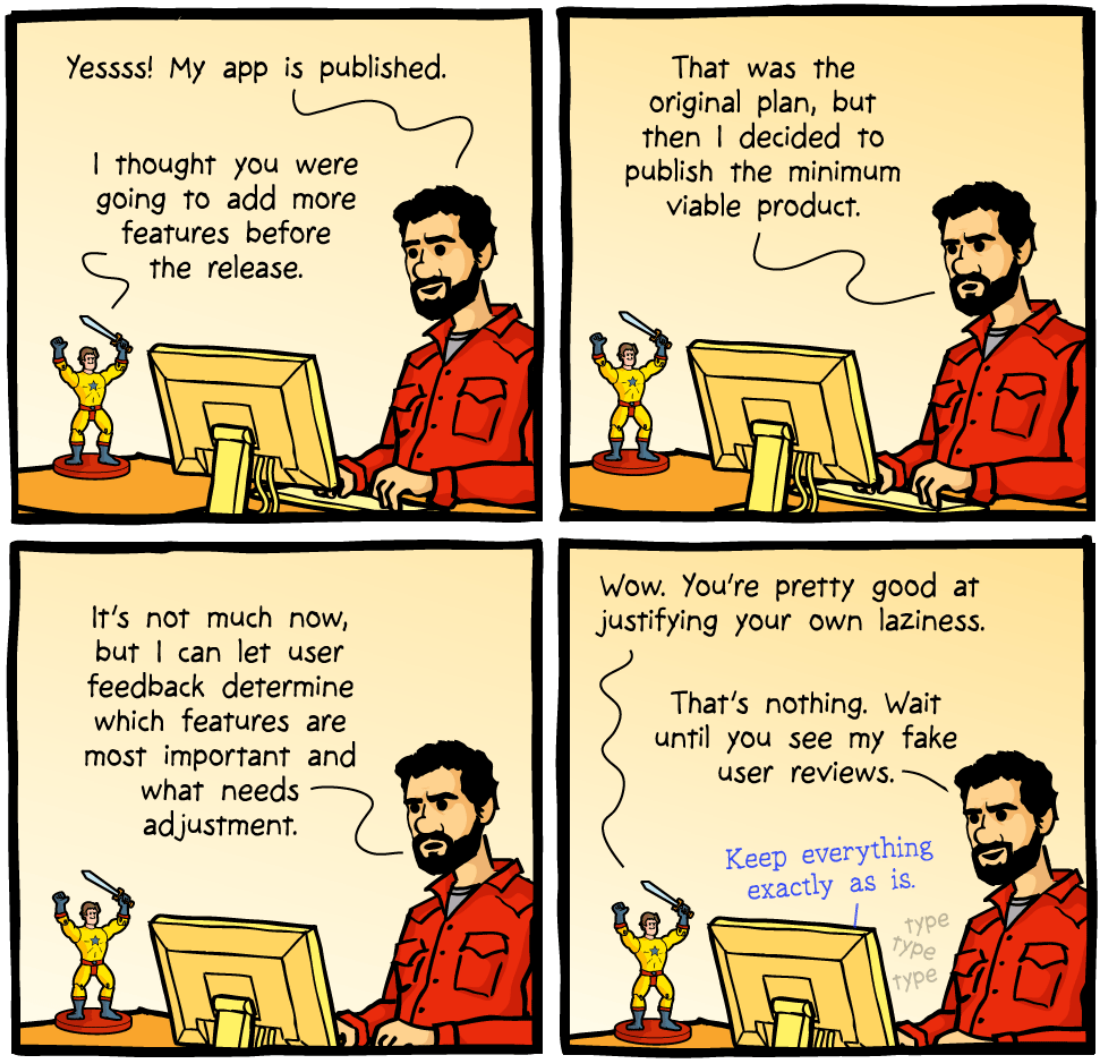
Sometimes little is too little



Outcomes of MVP

- The hypothesis is **completely correct**: development continues
- Hypothesis is **partially true**: customer feedback helps to refine the idea
- Hypothesis is **refuted**: at least most of the funds are retained that would have been used or implementation.

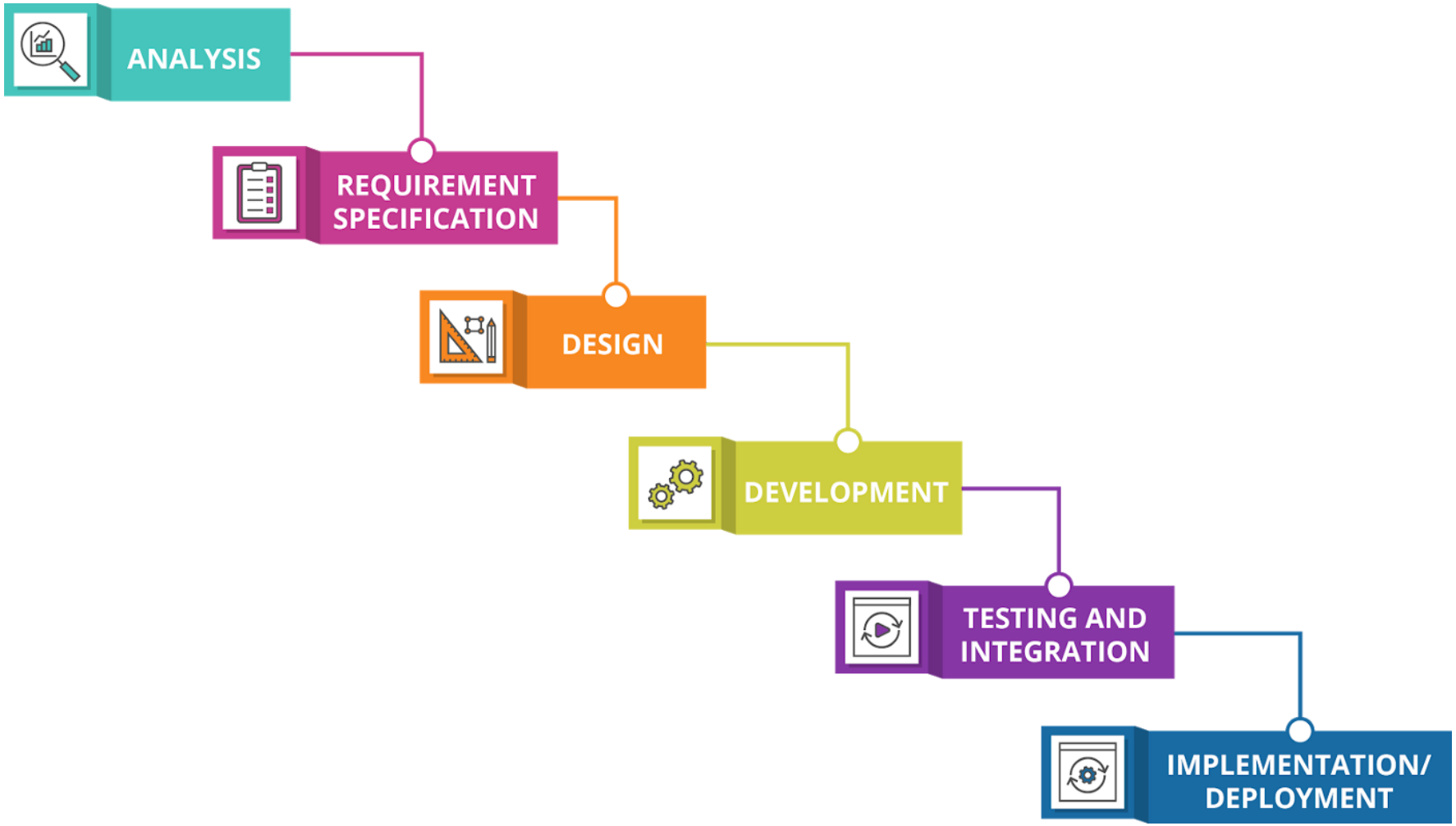
Key takeaways

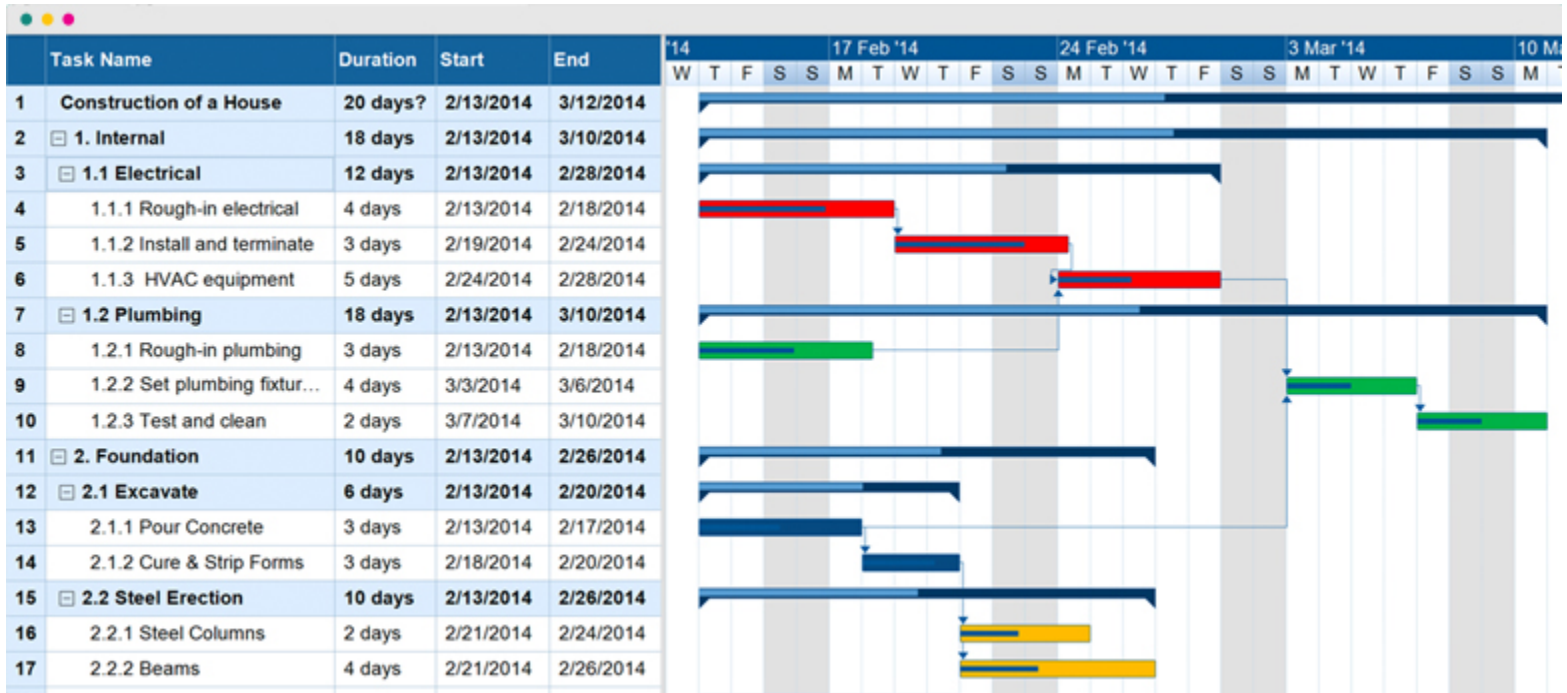
- MVP is a process not a one-off thing.
- Figure out the minimal for your specific case.
- MVP is not an excuse for a s***y product.
- Frontend-oriented for especially business-to-customer cases.

Overview of Methodologies

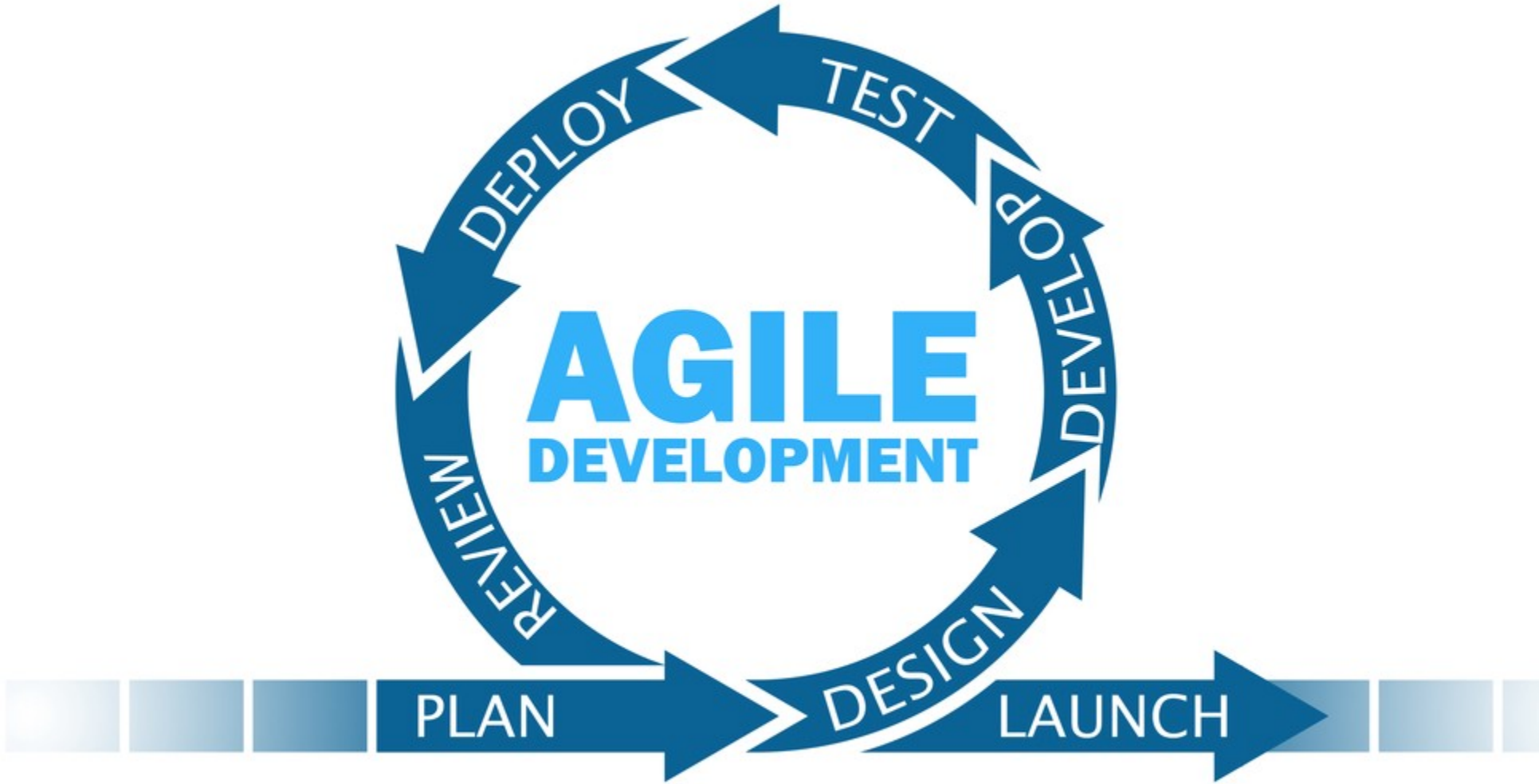
Two different approaches.

Waterfall Development





	Task Name	Duration	Start	End
1	Construction of a House	20 days?	2/13/2014	3/12/2014
2	1. Internal	18 days	2/13/2014	3/10/2014
3	1.1 Electrical	12 days	2/13/2014	2/28/2014
4	1.1.1 Rough-in electrical	4 days	2/13/2014	2/18/2014
5	1.1.2 Install and terminate	3 days	2/19/2014	2/24/2014
6	1.1.3 HVAC equipment	5 days	2/24/2014	2/28/2014
7	1.2 Plumbing	18 days	2/13/2014	3/10/2014
8	1.2.1 Rough-in plumbing	3 days	2/13/2014	2/18/2014
9	1.2.2 Set plumbing fixtur…	4 days	3/3/2014	3/6/2014
10	1.2.3 Test and clean	2 days	3/7/2014	3/10/2014
11	2. Foundation	10 days	2/13/2014	2/26/2014
12	2.1 Excavate	6 days	2/13/2014	2/20/2014
13	2.1.1 Pour Concrete	3 days	2/13/2014	2/17/2014
14	2.1.2 Cure & Strip Forms	3 days	2/18/2014	2/20/2014
15	2.2 Steel Erection	10 days	2/13/2014	2/26/2014
16	2.2.1 Steel Columns	2 days	2/21/2014	2/24/2014
17	2.2.2 Beams	4 days	2/21/2014	2/26/2014


AGILE
DEVELOPMENT
PLAN
DESIGN
LAUNCH
REVIEW
DEPLOY
TEST
DEVELOP

Benefits

- Reduction of uncertanity
- Minimal time to market
- Measurability
- Traceability
- Right action right time

AGILE
Manifesto for Agile Software Dev.
INDIVIDUALS AND INTERACTIONS OVER PROCESSES AND TOOLS
WORKING SOFTWARE OVER COMPREHENSIVE DOCUMENTION
CUSTOMER COLLABORATION OVER CONTRACT NEGOTIATION
RESPONDING TO CHANGE OVER FOLLOWING A PLAN

Scrum Process

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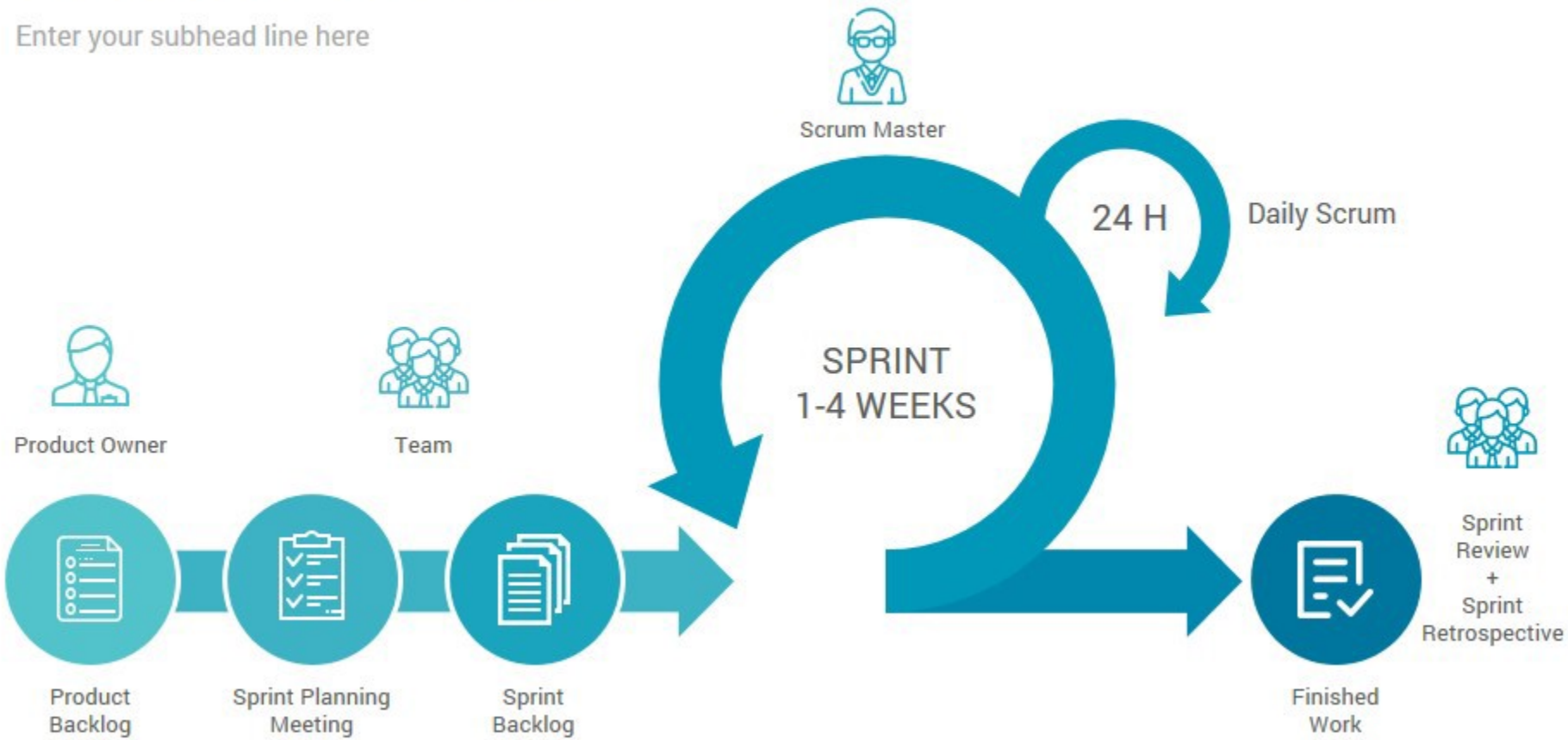


Scrum: Roles

- **Product Owner -** Represents the stakeholders and is the voice of the customer.
- **Development Team -** Self-organizing, cross-functional team of people who are responsible for building the actual product.
- **Scrum Master -** accountable for establishing the Scrum process

Scrum: Elements

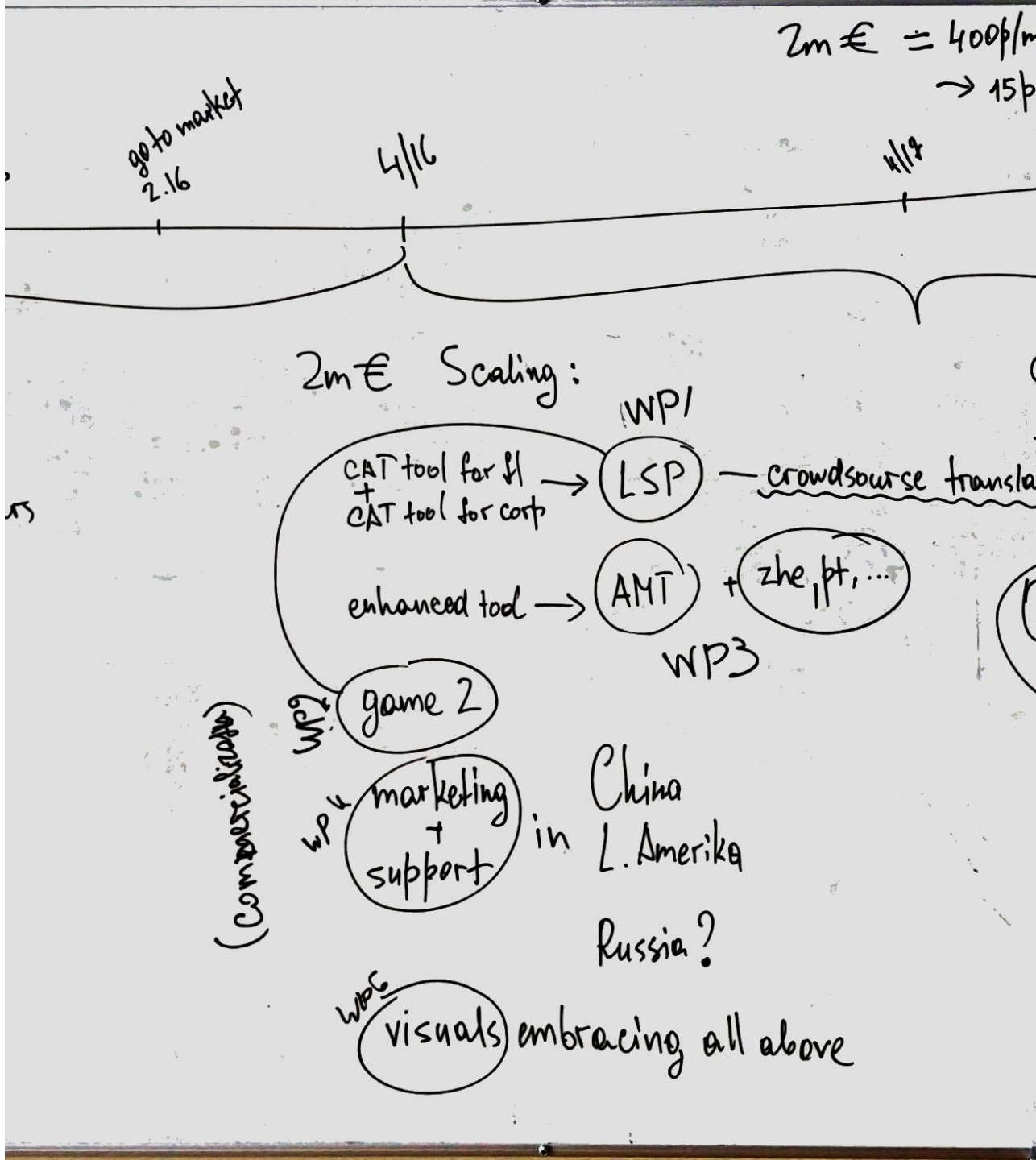
- **User Story** linformal, general explanation of a software feature written from the perspective of the end user. Its purpose is to articulate how a software feature will provide value to the customer.
- **Sprint -** short, timeboxed period when a team works to create a done, usable, and potentially releasable product increment.
- **Product Backlog -** prioritized list of all the functionalities that we need in the product. It is a single source of truth for all the product requirements.
- **Sprint Backlog -** Set of Product Backlog items that we select for the sprint.

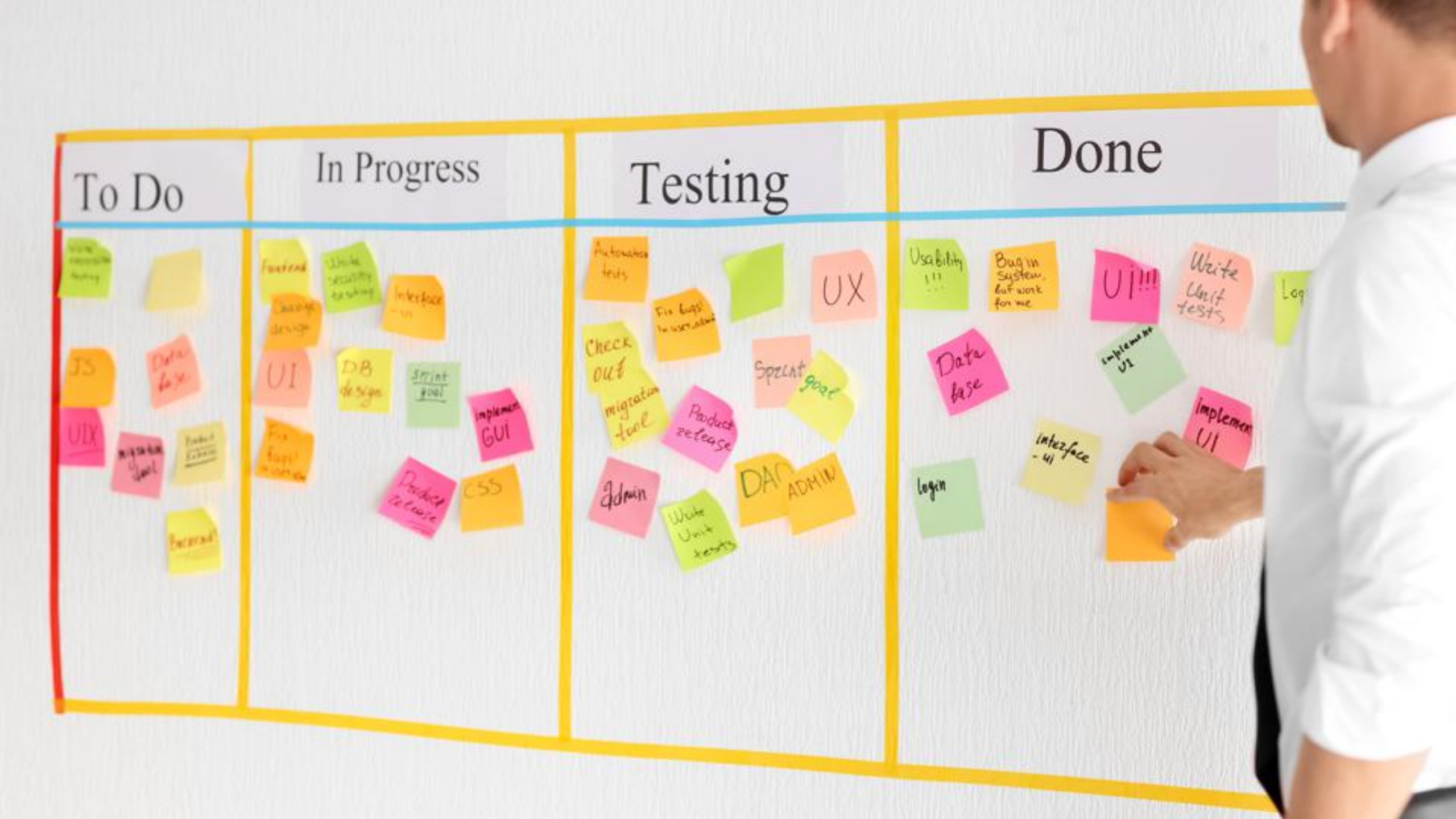
Scrum: Practices

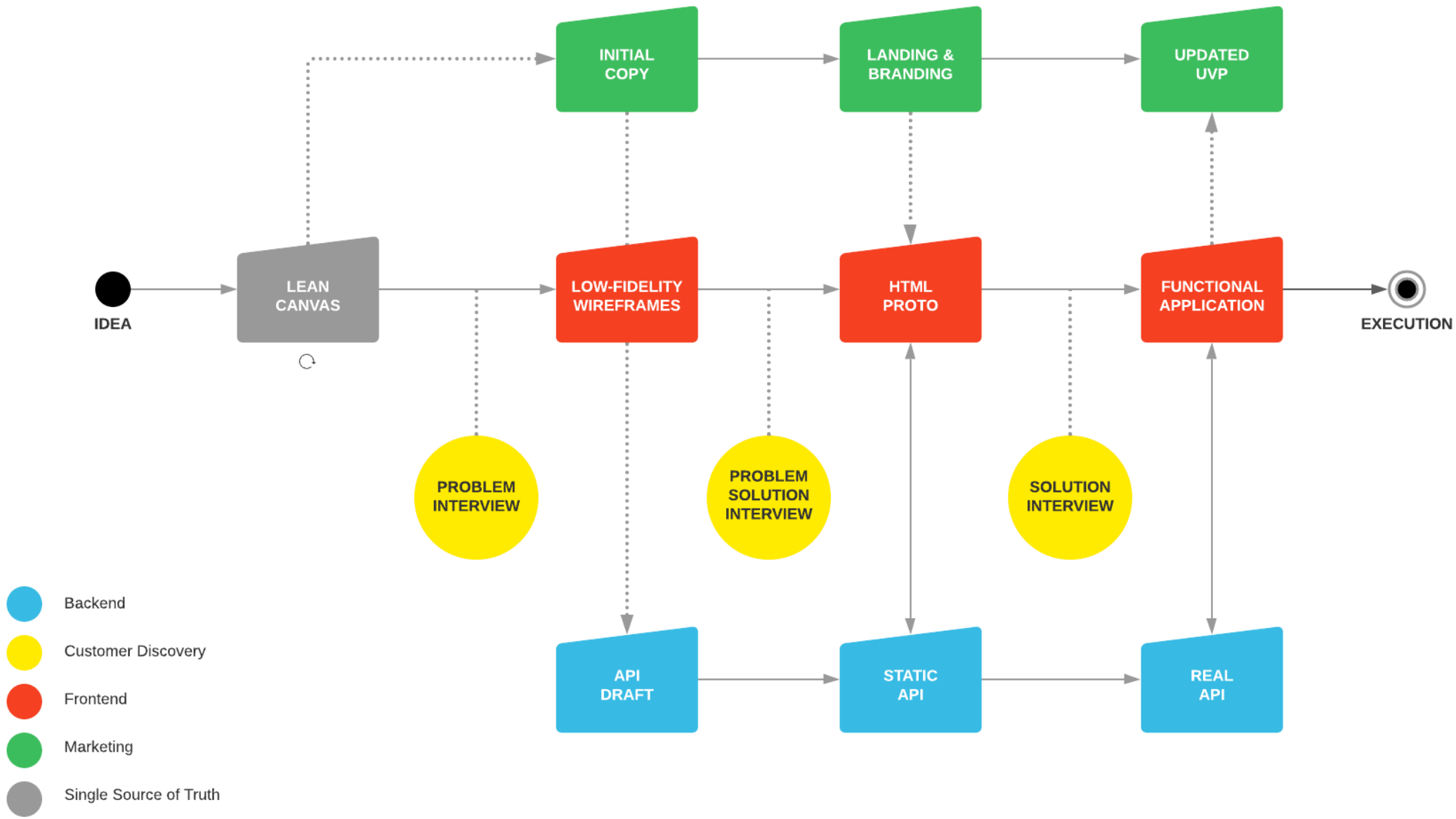
- **Sprint Planning -** event in Scrum that kicks off the sprint by defining the scope of delivery and how to accomplish that work.
- **Stand Up (Daily Scrum) -** 15 minute PPP event to keep track of progress.
- **Sprint Review -** event that takes place at the end of the sprint to inspect the increment and adapt the product backlog.
- **Retrospective Meeting -** event that solely focuses on improvements on every aspect of Sprint

Scrum: How does it work in practice?

- Describe a product strategy that describes the desired end result in general terms.
- Time is split into fixed-term increments that each produce visible end results.




To Do
In Progress
Testing
Done
JS
UIX
Data base
Interface - UI
UI
DB design
Sprint goal
implement GUI
Product release
CSS
Automation tests
UX
Check out
migration tool
Product release
Sprint goal
admin
Write Unit tests
DAO
ADMIN
Usability !!!
Bug in system, but work for me
UI!!!
Write Unit tests
Data base
implement UI
interface - UI
Implement UI
login


IDEA
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LANDING & BRANDING
UPDATED UVP
LOW-FIDELITY WIREFRAMES
HTML PROTO
FUNCTIONAL APPLICATION
EXECUTION
PROBLEM INTERVIEW
PROBLEM SOLUTION INTERVIEW
SOLUTION INTERVIEW
API DRAFT
STATIC API
REAL API
Backend
Customer Discovery
Frontend
Marketing
Single Source of Truth

Do not invent the wheel

- Lean Validation Playbook: https://guides.co/g/the-lean-validation-playbook/60783
- Startup Playbook https://playbook.samaltman.com/
- Thoughtbot Playbook https://thoughtbot.com/playbook

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Thank you!