

# Agile & user-centered software development

A brief overview



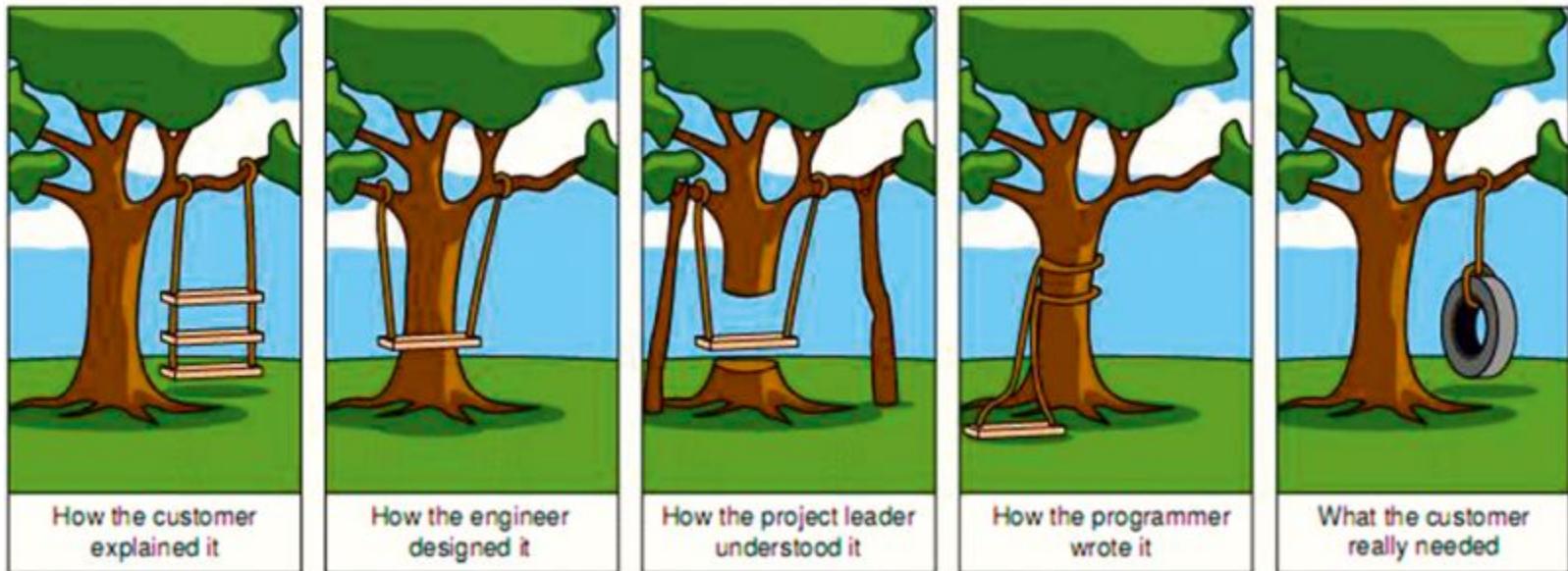
Jesse Taggart and Vraj Mohan // June 2016

# Agile software development

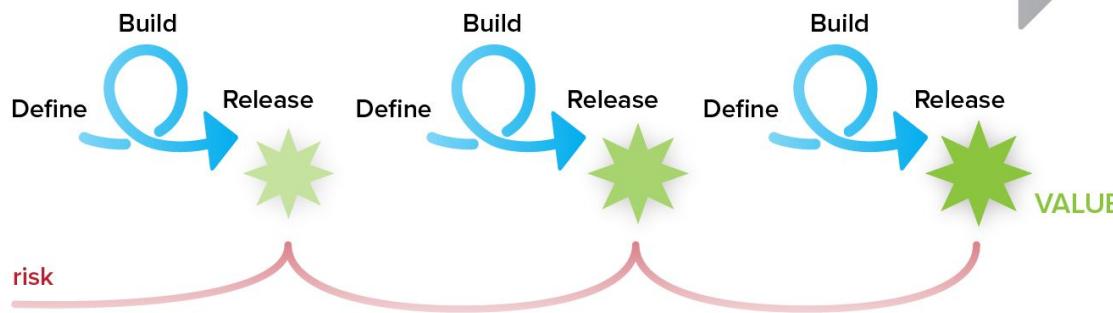
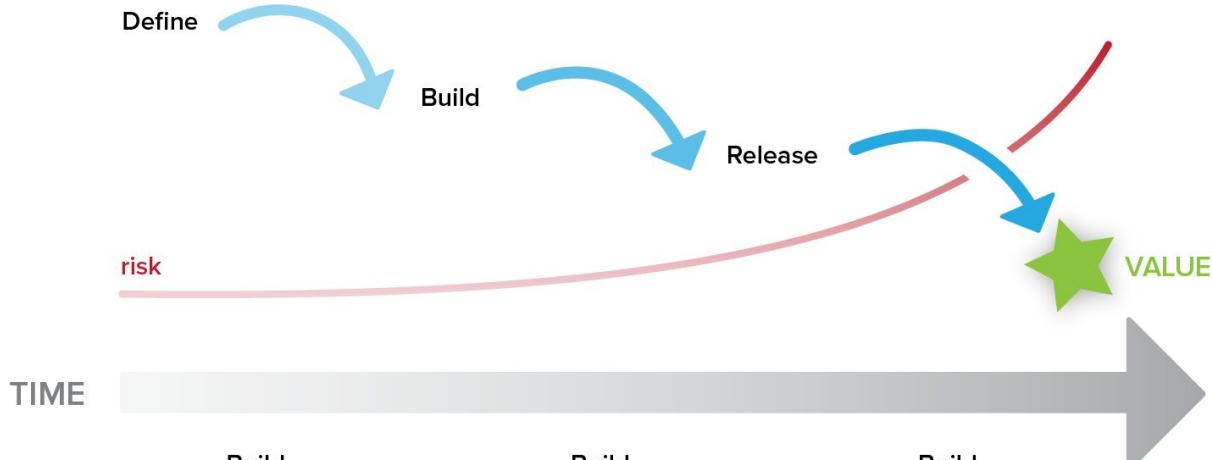
# Large vs Small Projects

- Few **Large** projects perform well to the project management constraints of cost, time, and scope.
- **Large** projects have virtually no chance of coming in on time, on budget, and within scope.
- **Small** projects have more than a 70% chance of success
- Compared to **small** projects, **large** projects have *twice the chance* of being late, over budget, and missing critical features
- A **large** project is roughly 10 times more likely to fail outright, meaning it will be cancelled or will not be used because it outlived its useful life prior to implementation.

# Communication is hard

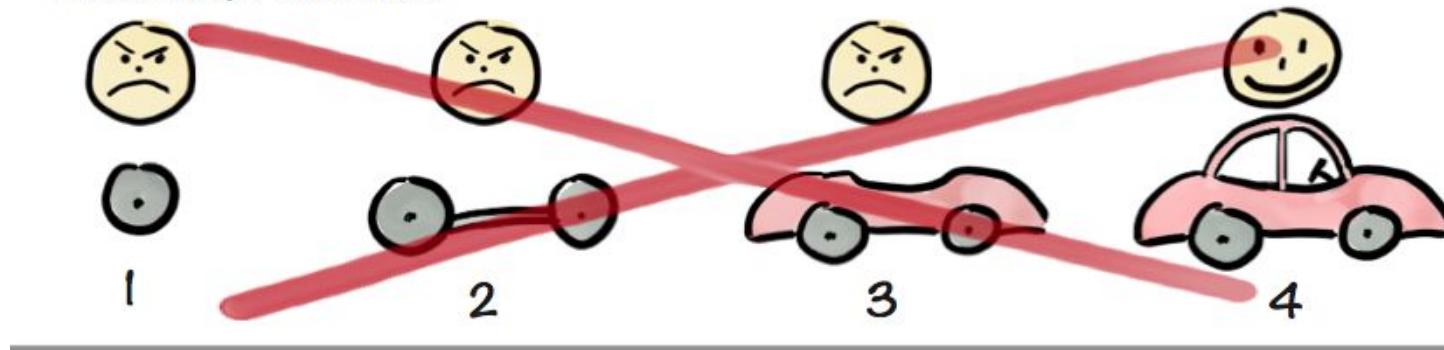


# WATERFALL

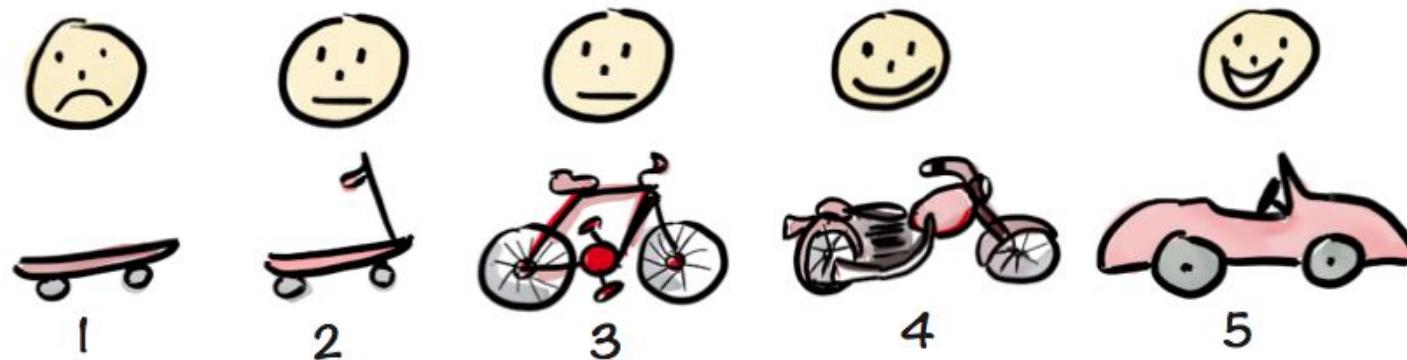


# AGILE

Not like this....



Like this!



# Agile Manifesto

## Value:

- **Individuals and interactions** over processes and tools
- **Working software** over comprehensive documentation
- **Customer collaboration** over contract negotiation
- **Responding to change** over following a plan

*That is, while there is value in the items on the right, value the items on the left more.*

# Enabling development practices

- Test driven development
- Continuous Integration
- Continuous Deployment
- Web-based architecture - stateless and RESTful
- Platform-as-a-Service and Infrastructure-as-a-service
- Microservices

# Scrum Practices

- Cross-functional teams
- Sprints: 2-3 weeks duration
- Prioritized backlog of user stories
- Sprint Planning
- Daily scrum
- Common Definition of Done
- Sprint Retrospectives
- Shippable code

# User Story Template

As a <type of user>

I want to <goal>

so that <reason>

# Example User Stories (Online Bookstore)

“As a customer, I want to be able to browse books by genre, so that I can find the type of books I like.”

“As a customer, I want to put a book into a shopping cart, so that I can buy it.”

“As a product manager, I want to be able to track a customer’s purchases, so that I can market specific books to her based on past purchases.”

# User-centered design

# User-centered design

## DISCOVER ACTUAL NEEDS

Understand actual user  
**GOALS**  
**NEEDS**  
**ATTITUDES**  
through direct  
observation

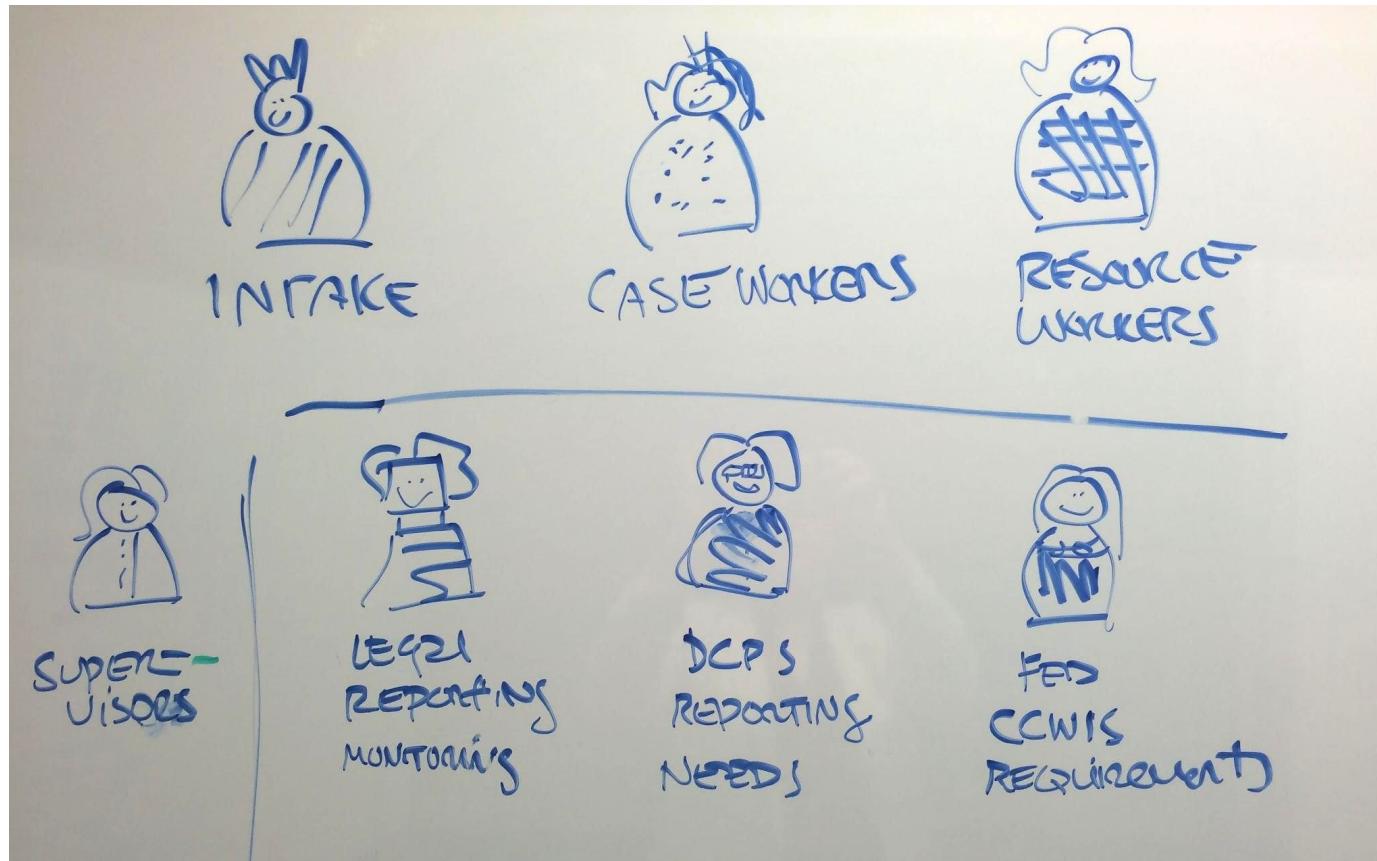
## PRIORITIZE NEEDS

Surface insights that can  
**lead project/product**  
**decisions** and serve as a  
“true north” Software is  
only as good as people  
using it.

## CONTINUOUSLY VALIDATE

Lower risk of building  
ineffective experiences  
through **task-based**  
**usability testing**

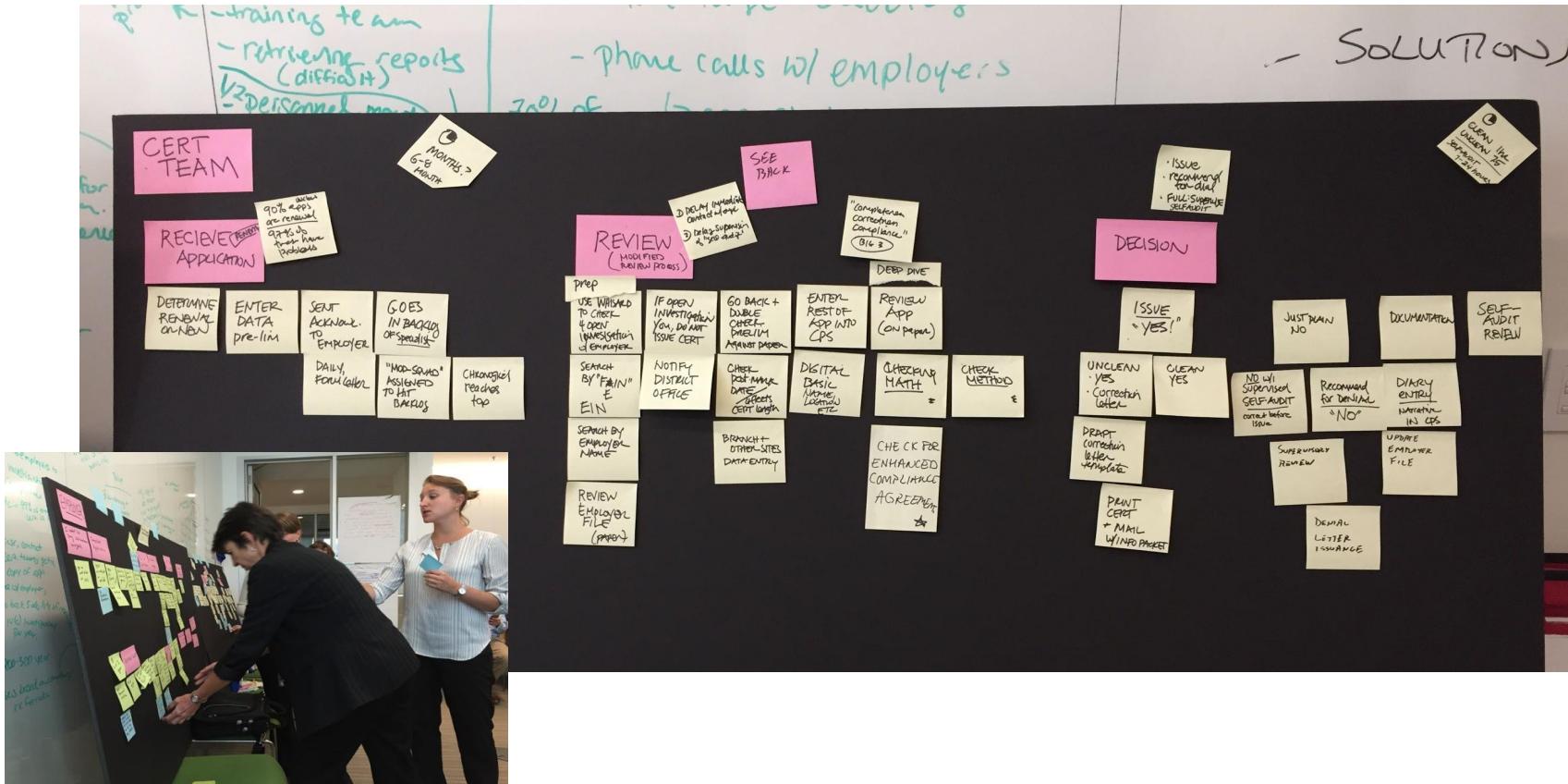
# Who are the actual users?



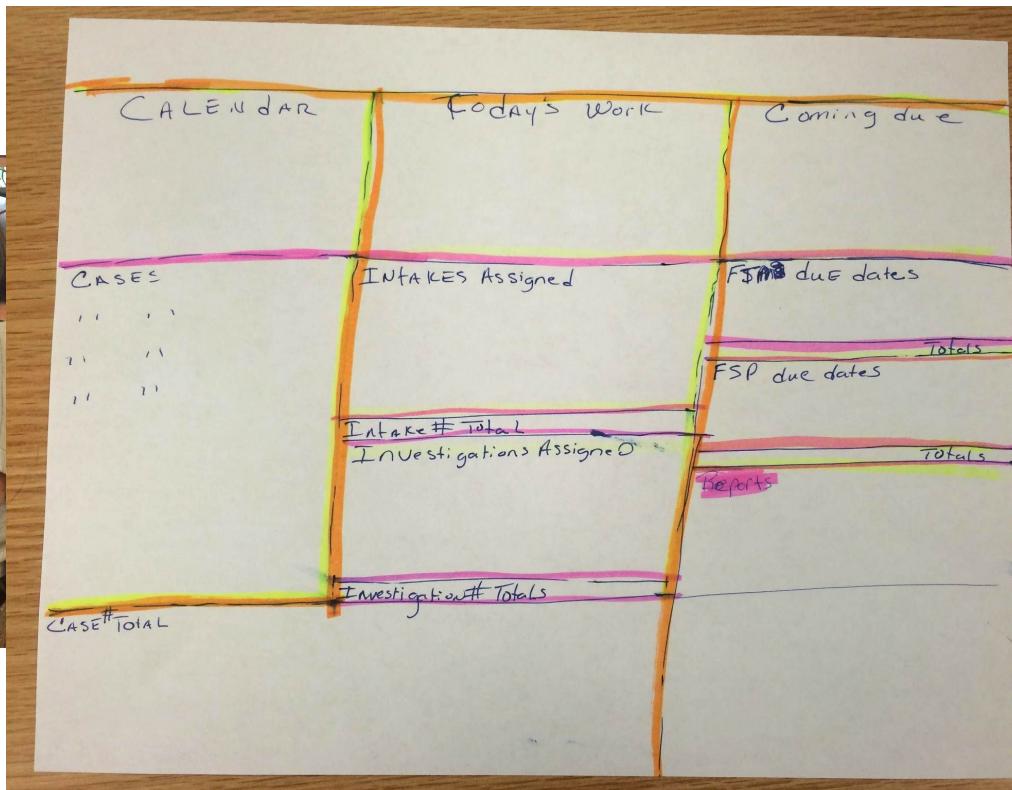
# Directly observe behaviors



# Create journey maps, service blueprints, etc



# Participatory design with actual users



# Participatory design with collaborators

Andrea Thornton

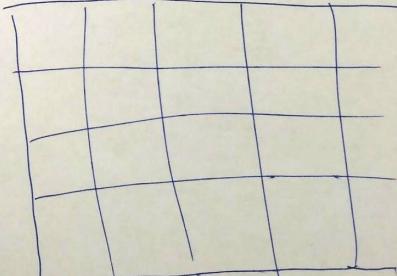
Investigations		Initiation Due	Completion Due
Overdue initiation	HH 1	6/1	6/05
Overdue initiation	HH 2	6/5	6/30
	HH 3	6/10	7/5
Due now initiation	HH 4	6/16	7/11
play use	HH 5	5/1	5/30

Foster Children	Contacts	
	Home	Other
Child A	6/2	6/10
Child B	—	6/15
Child C	6/3	—
Child D	—	—

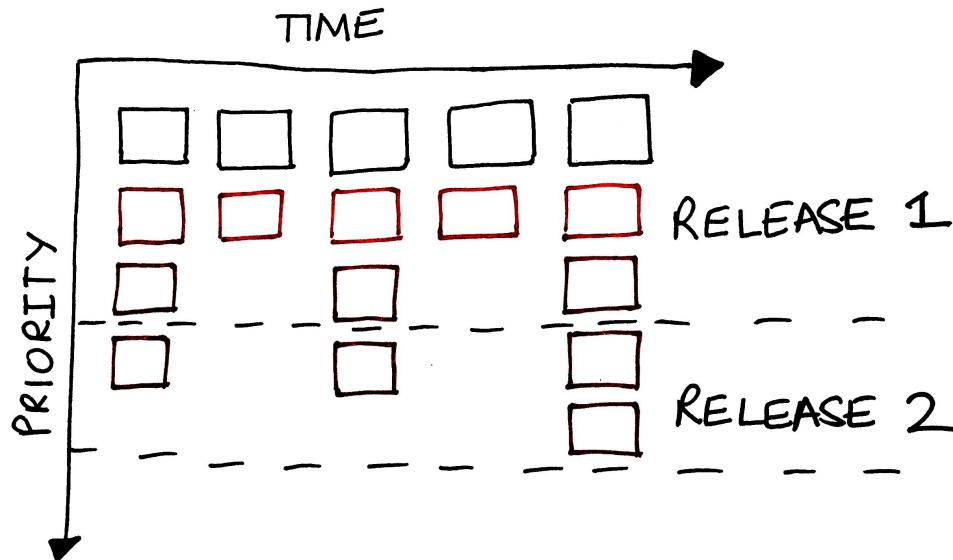
## To Do Today

- Pulls from Calendar
  - Can Add Info
  -

## Calendar



**This knowledge informs product strategy goals and the backlog.**



# Prototyping



# Thank you



Jesse Taggart and Vraj Mohan // June 2016