

Product Management



# Product Lifecycles

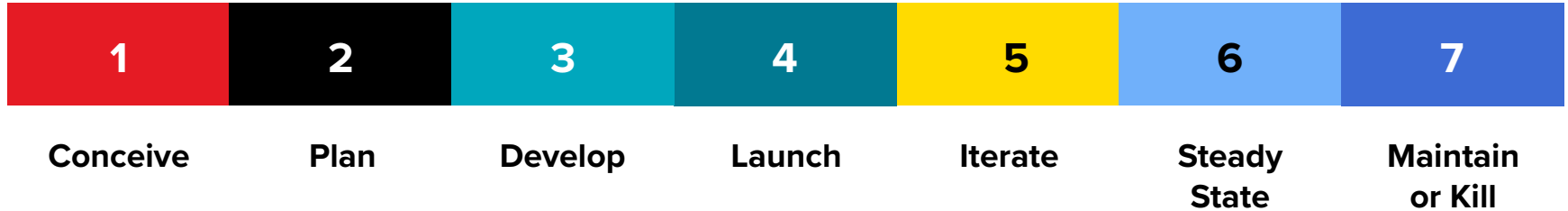


# Our Learning Goals

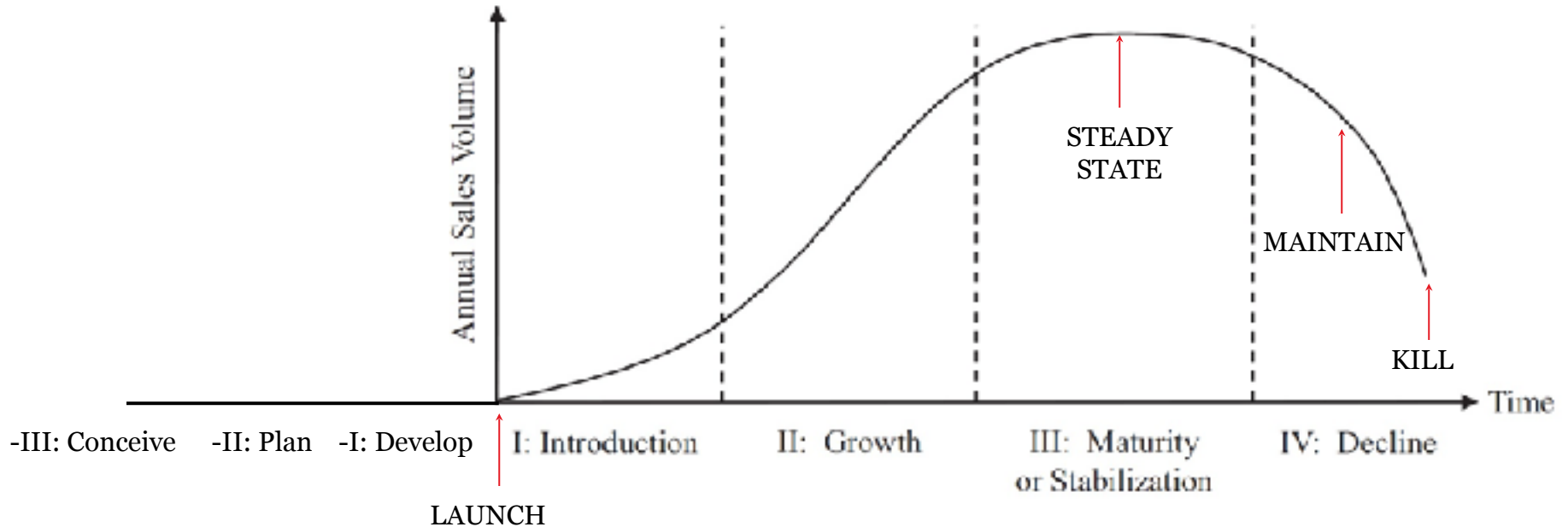
- **Describe** the role and responsibilities of a PM at each phase of the product development cycle.
- **Identify** the key stakeholders and their needs at each phase of the cycle.
- **Explore** the metrics that PMs use throughout the cycle.



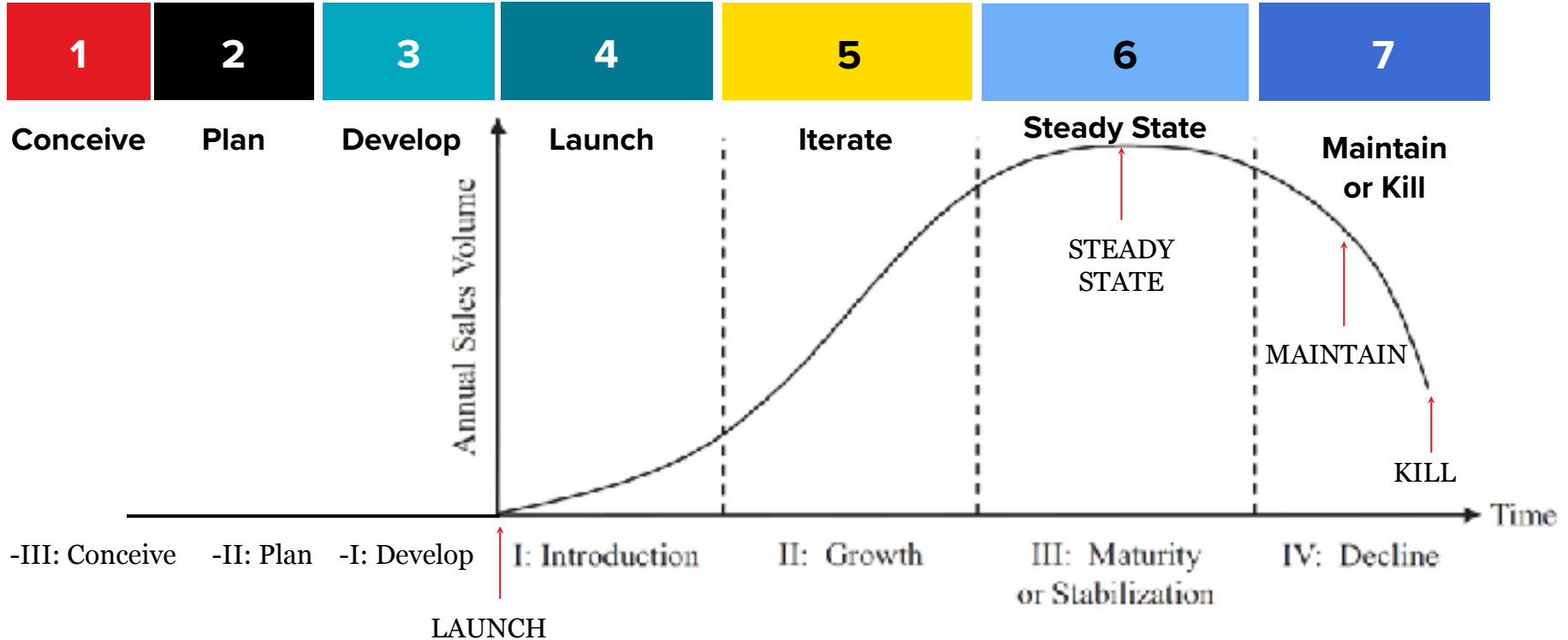
# The Product Development Process

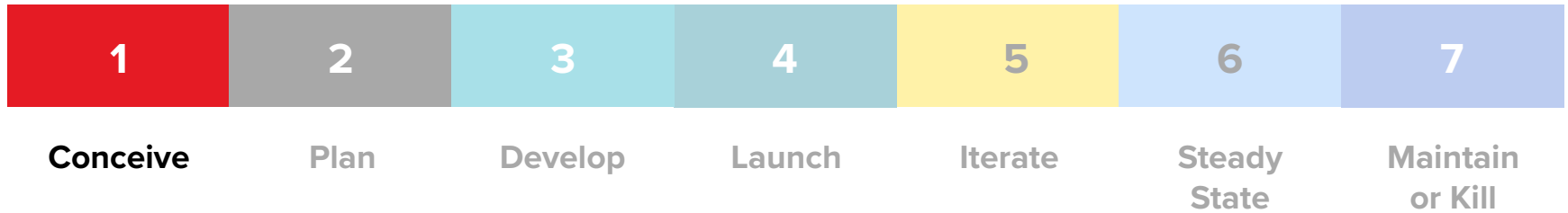


# The Product (and Business) Lifecycle



# The Product (and Business) Lifecycle

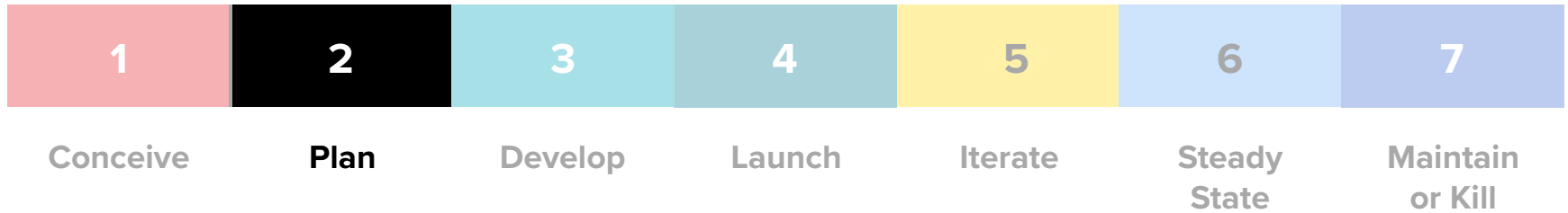




**There are opportunities everywhere.**

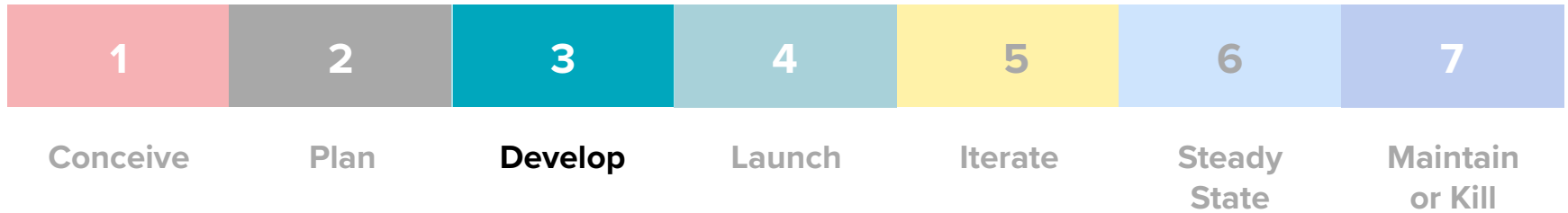
**It's the PM's job to find the right ones to focus on.**

- Look for customer problems wherever someone is complaining about something.
- Understand business challenges that need to be addressed.
- Create a plan to validate your hypothesis with customers and better understand their needs.



**Having an idea for a solution is no good unless you've validated that there's a market.**

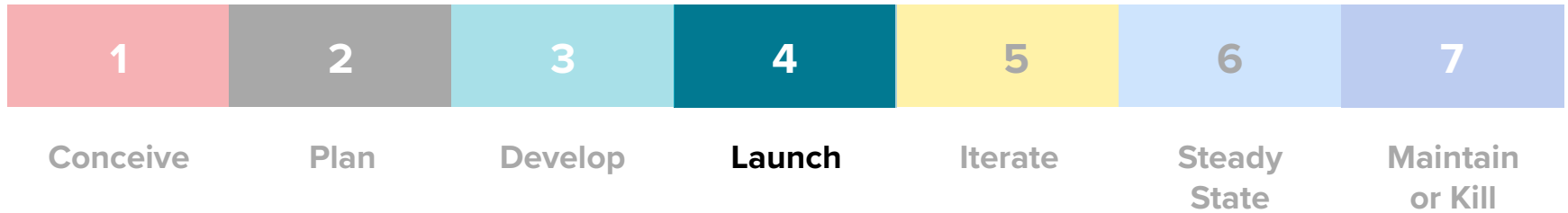
- Understand the size and nature of your market in terms of competitors and potential customers.
- Conduct research to validate your hypothesis and better understand your customers.
- Estimate the time and resources required to solve the problem.



**The PM makes a decision on what should get built, when, and in what order.**

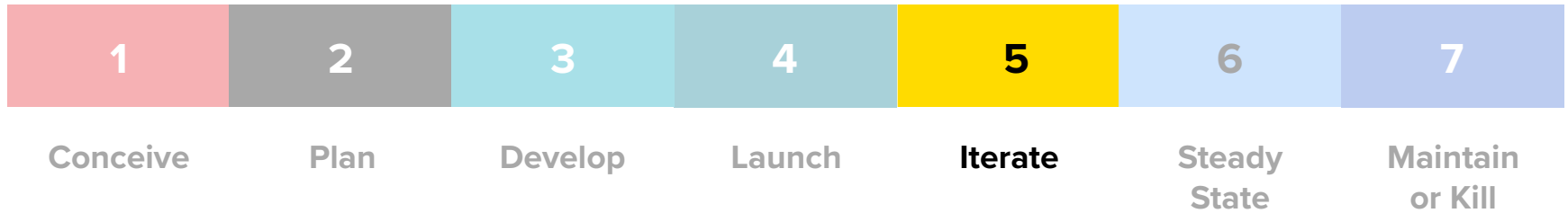
- Determine the priority, scope, and requirements of features to be built.
- Partner with design and engineering teams to review priorities and agree on a timeline based on their resources.
- Design, build, and test features.





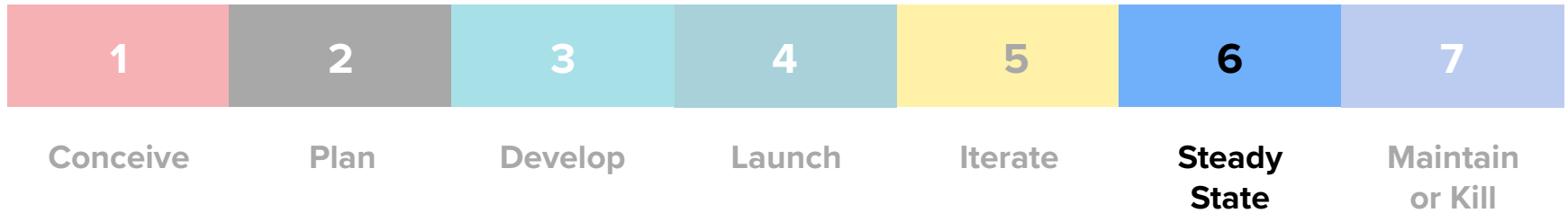
## **Get your product out to customers with the right support and positioning.**

- Work with the Marketing, Sales, and Customer Support teams to position and support the product well for customers.
- Write release notes and documentation explaining what is being released and why.
- Set metrics to determine the success of the new updated product.



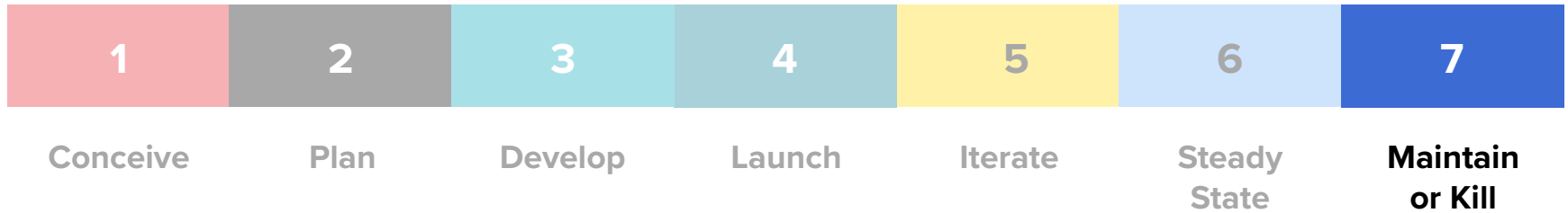
**Understand how a product is satisfying (or not satisfying) users and how it can be changed to better meet their needs.**

- Gather data to determine what aspects of the product are successful.
- Gather feedback:
  - Current customers
  - Potential customers
  - Internal stakeholders (especially customer-facing teams)
- Run tests and experiments to optimize performance.



## Maintain the overall health of a product while making adjustments over time.

- Analyze and optimize ROI.
- Continue to improve the product by working through the backlog.
- Monitor the market for new developments and new competitors.



## Decide if it's worth it to keep a product alive, or sunset it.

- Decide if it's financially viable to maintain a product, or sunset it and move on.
- For maintenance, manage revenue levels and decide what updates must be made.
- For sunseting, establish an end-of-life plan, including messages to users and a retrospective.

# Stakeholders Through the Process

## Internal Stakeholders

<b>Conceive/Plan</b>	Design, engineering, executives
<b>Develop</b>	Design, engineering, executives
<b>Launch</b>	Marketing, sales, customer support, executives
<b>Iterate</b>	Sales, customer support, design, engineering, executives
<b>Steady State/ Maintain or Kill</b>	Sales, customer support, marketing, engineering, executives

# Stakeholders Through the Process (Cont.)

## External Stakeholders

<b>Conceive/Plan</b>	<b><i>Customers</i></b> , investors
<b>Develop</b>	<b><i>Customers</i></b> , suppliers
<b>Launch</b>	<b><i>Customers</i></b> , partners, media, influencers, investors, analysts
<b>Iterate</b>	<b><i>Customers</i></b> , suppliers
<b>Steady State/ Maintain or Kill</b>	<b><i>Customers</i></b> , media, partners, investors



Now that we've seen the product development process...

- Which phases **stand out to you**? Why?
- Which phases seem the **most complicated**?
- Which phases do you have the **most questions about**?



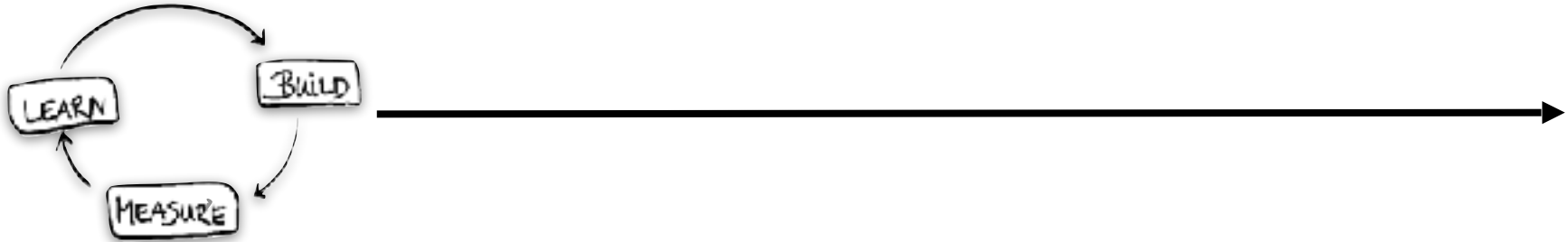
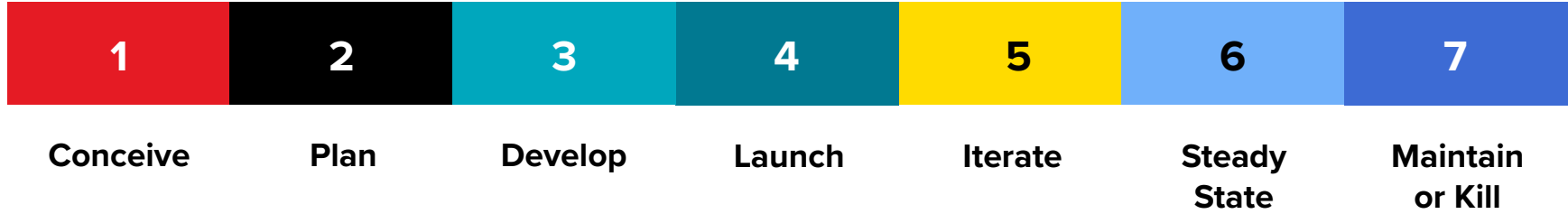
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# Being Data-Driven







# 1. Goals & Metrics vs Product Lifecycle

	Goal	Metrics
<b>Conceive / Plan</b>	Define opportunities	Customer feedback, customer behavior, market size, market dynamics, competitive insights, business goals, OKRs
<b>Develop</b>	Define & deliver initial feature set	Budget estimates, time estimates, resources available
<b>Launch</b>	Support launch, understand product-market fit	Sales, customer growth, usage, customer satisfaction, referrals
<b>Iterate</b>	Iterate product-market fit, drive growth	Customer behavior, usage, customer feedback, customer satisfaction, test results
<b>Steady State/ Maintain or Kill</b>	Maintain product relevance and ROI	Return on investment, revenue, development costs, customer growth, usage, market dynamics, competitive insights

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# Managing Product Health

# Our Learning Goals

- **Identify** risks and benefits for a product based on where it is in the product life cycle.
- **Determine** the best course of action for a product based on its overall health.





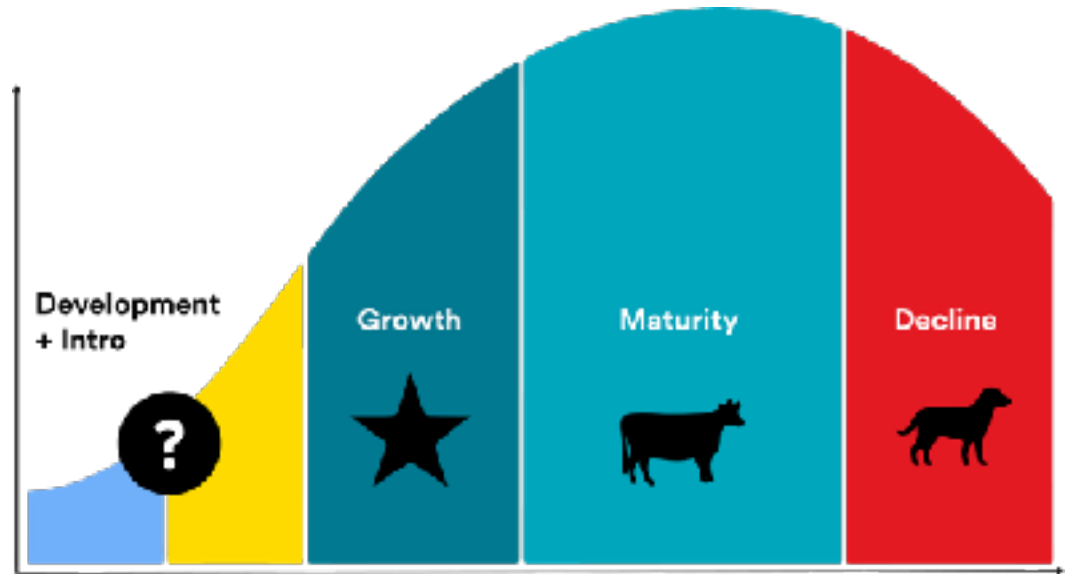
## Discussion: Let's Recap

5 minutes



What is the product life cycle all about?

What does each phase represent?



# Life Cycle Phase Indicators

Stage	Sales	Competition	Marketing	Distribution
<b>Introduction</b>	Slow	Low	Informing	Selective
<b>Growth</b>	Heavy	Some	Persuading	Intensive
<b>Maturity</b>	Leveled out	Fierce	Reminding	Limited
<b>Decline</b>	Low	Low-medium	Sales promoting	Limited

# Product Health Through the Life Cycle

Introduction → Growth → Maturity → Decline



## Challenges

- Small or no market.
- Low product/brand recognition.
- High development costs.
- Overall financial losses, not profits.

## Opportunities

- Potential to be a market leader because of limited competition.
- Early adopters are often willing to pay more for a product/service.

# Product Health Through the Life Cycle

Introduction → **Growth** → Maturity → Decline



## Challenges

- Increasing competition.
- Need to lower prices due to increase in competitors.
- Requires a unique marketing approach to drive growth.

## Opportunities

- Reduction in development costs.
- Increase in profits.
- Increase in brand/product recognition.



# Product Health Through the Life Cycle

Introduction → Growth → **Maturity** → Decline



## Challenges

- Peak in sales.
- Decrease in market share due to increasing competitors.
- Profits decrease due to lower market share and flattening sales.

## Opportunities

- Continued reduction in development costs.
- Chance to differentiate via marketing strategies and new features.
- Increase in market share due to differentiation.

# Product Health Through the Life Cycle

Introduction → Growth → Maturity → **Decline**



## Challenges

- Decline in market and customer interest.
- Falling sales and profits.
- Possible need to withdraw product from market.

## Opportunities

- Lower production costs.
- Potential to maintain profits if costs reduce.
- Look for new, cheaper markets to enter.



## Partner Exercise: Product Health Through the Life Cycle

5 minutes



In the last class, we determined where each of these products falls in the product life cycle.

Choose **one of these products** and determine (or recap on) where it is in its life cycle.

With your partner, discuss the specific **challenges and opportunities** that product may face.

- Facebook
- Major airlines
- Virtual assistant tools
- News media companies
- Grocery delivery services

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# Diagnosing Product Health



# Diagnosing Product Health





## Discussion: Trouble at Netflix

5 minutes



You're a PM at Netflix. Last month, the average monthly cancel rate increased by 10%.

The head of product asked you to **diagnose the problem** and **recommend a solution**.

**Where do you start?**



# Trouble at Netflix

**Step 1:** Understand the nature of the problem.

Is viewership down in some regions more than others?

Is this a sudden change or have we been trending down for a while?

Are certain types of content being watched less than others?

Is it only happening on certain platforms or operating systems?

Is this happening more with new or existing users?

## Trouble at Netflix (Cont.)

- Most of the cancellation increase is happening in Latin America.
- The increase started about six weeks ago.
- Many users who are cancelling are heavier watchers of movies than TV shows.
- Cancellation is consistent across users on different platforms.
- Newer and longer-term users are cancelling at similar rates.





## Trouble at Netflix (Cont.)

**Step 2:** Investigate internal changes.

Are we running an A/B test that would affect this?

Did we release any code updates that are failing?

Was there an unexpected issue with the network, infrastructure, or database?

Are there any new marketing activities that are affecting behavior?

Did we launch a new feature that's cannibalizing another feature?

## Trouble at Netflix (Cont.)

**Step 3:** Look at external factors.

**Was there a large network outage?**

**Are we running into any governmental or regulatory issues?**

**Have there been any big moves by competitors?**

**Are there any major holidays or events that are taking people away from watching?**

## Trouble at Netflix (Cont.)

- We released a major update to our codebase, but it shouldn't have affected performance very much.
- There were no major holidays or events that would have affected viewership.
- Disney began offering a promotion for its new streaming service a few weeks before cancellations started to increase.



## Trouble at Netflix (Cont.)

**Step 4:** Talk to customers.

What else do you want from your Netflix experience?

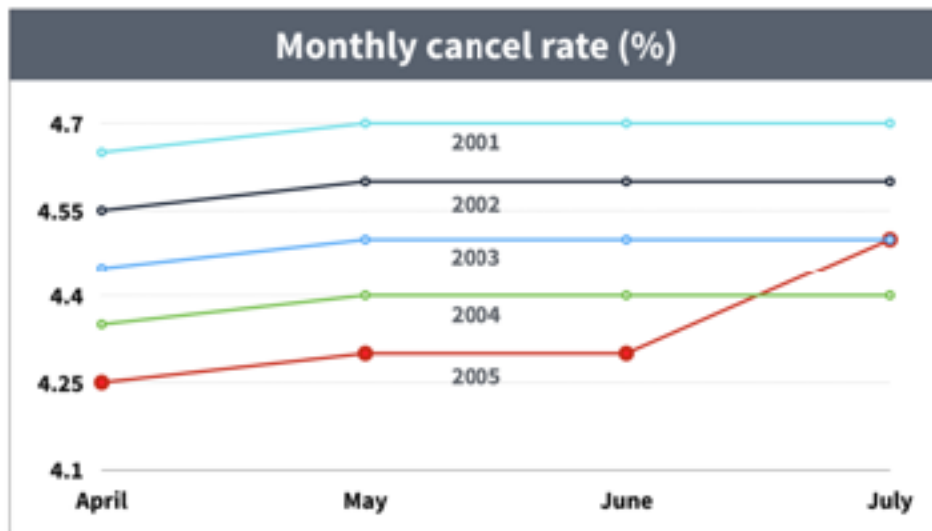
What did you watch on Netflix in the past week?

What other streaming services do you use? What do you like about them?

Why do you watch Netflix over other services?



### Why did the cancellation rate spike between June and July 2005?

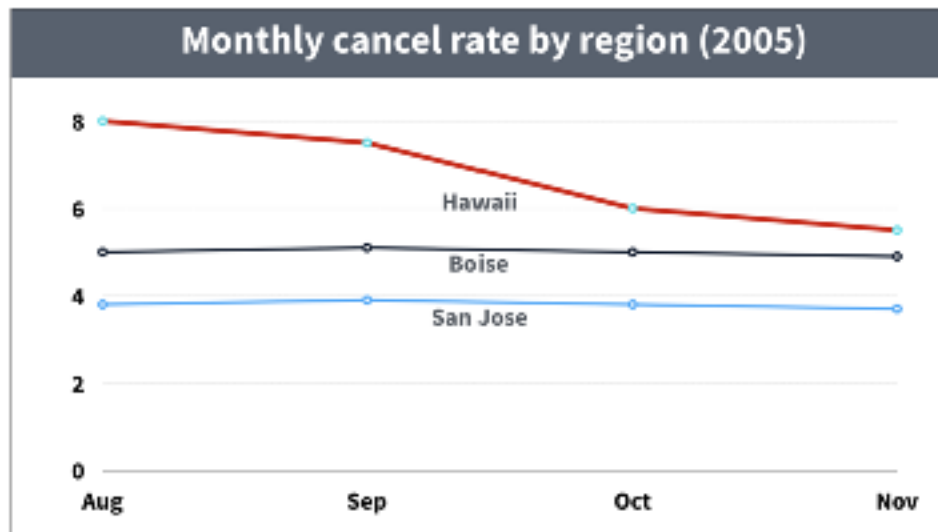


**Answer:** In previous years, there was a pricing promotion in late spring that slowed cancellations.





### Why did cancellations in Hawaii improve so quickly?



**Answer:** In August, a new DVD mailing hub was launched in Los Angeles, decreasing the delivery time to Hawaii from three nights to overnight.



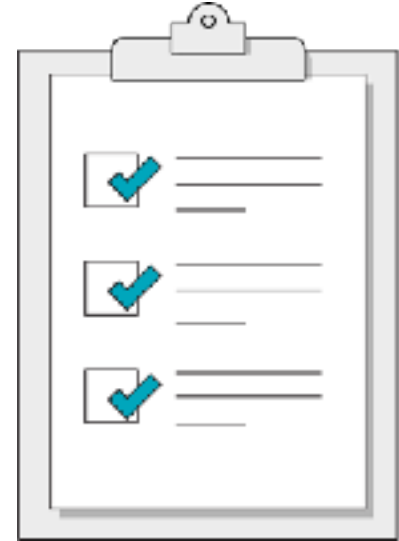
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# Product Development Frameworks

# Our Learning Goals

- **Explain** the benefits and trade-offs of common product development frameworks: Agile, lean, and waterfall.
- **Describe** the role of the product manager in an Agile environment.
- **Choose** the development method that is the best fit for a team or product.



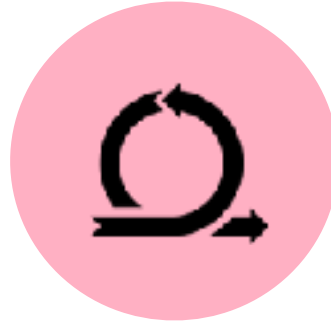


# How Work Gets Done



**Waterfall**

All at once



**Agile**

Iterative



**Lean**

Deliver value  
quickly

# Waterfall (aka, Stage-Gate)

## DISCOVER

Business  
requirements

## DESIGN

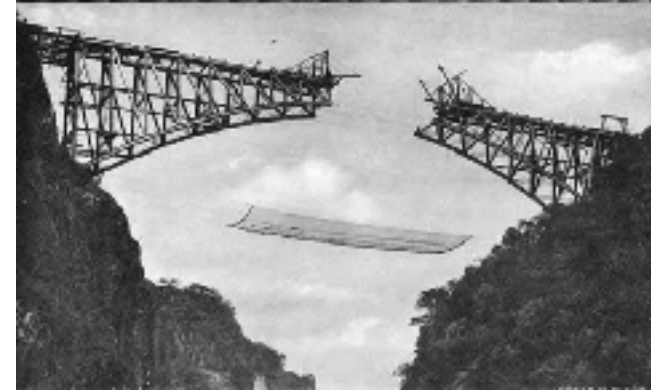
Technical design

## DEVELOP

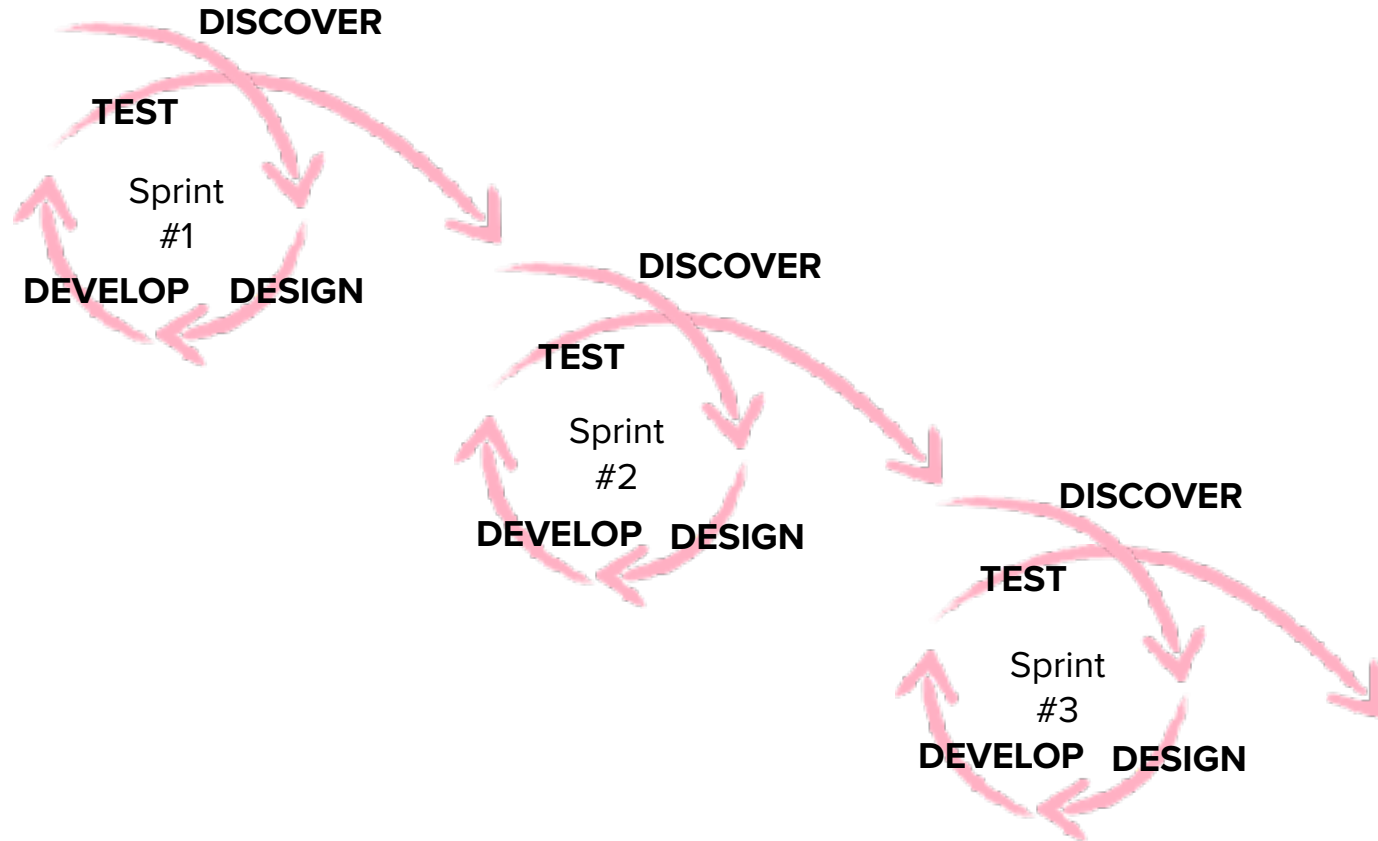
Coding and  
testing

## TEST

Approval and  
launch



# Agile



## Waterfall: Great If...

- Market conditions are stable and predictable.
- Requirements are clear at the outset and remain clear.
- Late changes are expensive or impossible.
- Mistakes are catastrophic.

Healthcare, government, sales teams

## Agile: Great If...

- Customer preferences change frequently.
- Customer collaboration and feedback is easy.
- Scope and specifications might change.
- Late changes are manageable.

Software teams, IT, marketing, SaaS businesses





## Real Cases: An Agile Success: John Deere

5 minutes



- Adapted Agile lingo and tools from software teams to be more relevant for a business team.
- Used Agile coaches and internal evangelists to drive adoption.



**75%**

Project cycle  
time



**200%**

Work  
velocity



**2/3**

Employee  
engagement





## Real Cases: Not-So-Successful Agile: ING Bank

5 minutes



“What you can’t do is cherry-pick from different building blocks. Some people embrace the Agile way of working but do not let go of their existing organizational structure and governance. That defeats the whole purpose and creates more frustration.”

— Peter Jacobs, ING CIO

- Rolled out Agile to IT and software teams without ensuring that management also embraced the approach.
- Didn’t see real business outcomes despite gaining internal efficiencies.



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# Agile Basics



# Agile

- Agile is **philosophy** (a set of principles, beliefs, and values) about how software should be delivered.
- It is **not** a system. It is not a set of processes, it has no rules or set meetings or specific ways of working.



# The Agile Manifesto

**Individuals and interactions** over processes and tools.

**Working software** over comprehensive documentation.

**Customer collaboration** over contract negotiation.

**Responding to change** over following a plan.

**“While we value the items on the right, we value the items on the left more.”**



# Agile + Lean Go Hand in Hand

Agile: How We Build	Lean: What We Build
Customer satisfaction	Customer satisfaction
Changing requirements are welcome	Value for money
Frequent delivery cycles	Customer participation
Stakeholder collaboration	Team effort
Trust, support, and motivation	Everything is changeable
Working product is the metric	80% solution today
Simplicity	Minimalism is essential

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**Remember:**  
**Product management  $\neq$  Agile**

# The Product Manager and the Agile Ecosystem



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# Agile in Practice



# Being, Not Doing

**Process,  
frameworks**

**Mentality,  
culture**

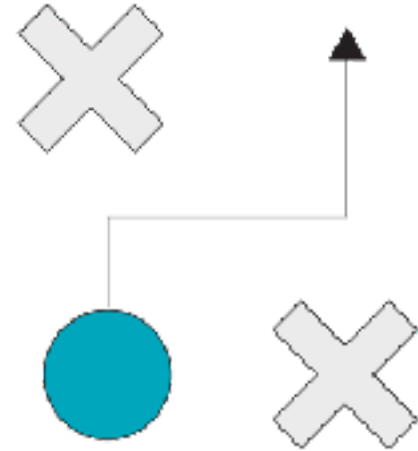


# Doing Agile

Agile is an **philosophy**.

It's implemented via a variety of **frameworks**:

- Scrum
- Kanban
- Extreme Programming (XP)
- Hybrid
- Scaled Agile Framework (SAFe)



# No Matter the Framework...

...the PM is always responsible for:

- Communicating **feature priority, value, design, and functional criteria** to the teams that build things.
- Working with the build team to **answer questions, make decisions, and remove blockers** to ensure clarity throughout the build process.
- Assessing the “**doneness**” of the thing based on agreed-upon criteria.
- **Testing and iterating** on things once they're in-market.





# Scrum v Kanban

<b>Origin</b>	Software development	Lean manufacturing
<b>Ideology</b>	Learn through experiences, self-organize and prioritize, and reflect on wins and losses to continuously improve.	Use visuals to improve work-in-progress
<b>Cadence</b>	Regular, fixed-length sprints (i.e. two weeks)	Continuous flow
<b>Practices</b>	Sprint planning, sprint, daily scrum, sprint review, sprint retrospective	Visualize the flow of work, limit work-in-progress, manage flow, incorporate feedback loops
<b>Roles</b>	Product owner, scrum master, development team	No required roles



# Kanban



# Scrum

- A 2–3 week sprint as the basis for planning and delivering work.
- Four key meetings throughout a sprint.
- A Scrum master helps team move through the process.



# Hello, Old Friends

## Epic

A large body of work that **cannot be delivered** by one team during a single work cycle (i.e., a sprint).

## Story

A piece of business value that **can be delivered** by one team during one work cycle (i.e., a sprint).

Stories are assigned **story points** to define how much work they entail.

# Scrum Meetings

## **Sprint Planning**

Determine what work will be completed in the upcoming sprint based on the backlog.

## **Daily Standup**

A 15-minute meeting for team to share what they did yesterday, what they'll do today, and blockers.

## **Sprint Review**

Share work completed in the sprint and get feedback from stakeholders.

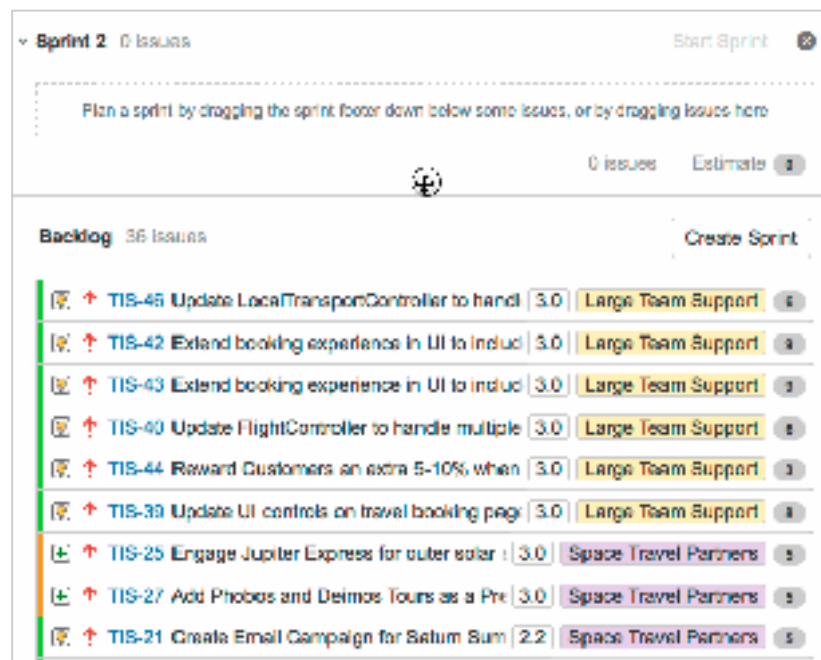
## **Retrospective**

Reflect on what did/did not go well in the previous sprint and identify improvements.

# Sprint Planning

**Purpose:** Determine what work will be completed in the upcoming sprint based on the backlog.

- Ensure all user stories in the backlog are ready for development.
- Assign points to user stories to indicate the level of effort.
- Agree on what work will be done and by whom.



# Daily Standup

**Purpose:** Drive alignment during a sprint by sharing everyone's progress and blockers with the larger team.

- 15 minutes max: Additional conversations can happen after standup (as needed).
- Happen on a daily basis during a sprint.
- Everyone answers three questions:
  - What did I do yesterday?
  - What will I do today?
  - What blockers do I have?



# Sprint Review

**Purpose:** Share work completed in the sprint and get feedback from stakeholders.

- Team members share the work that they completed in the sprint.
- Stakeholders share feedback that's incorporated into future sprints, the roadmap, and iterations of work.
- Celebrate progress and achievements!

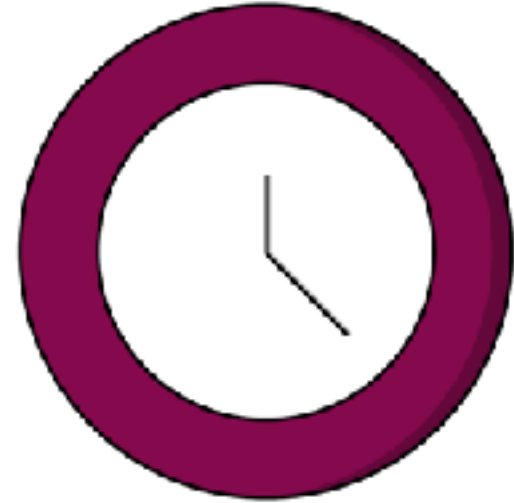




# Retrospective

**Purpose:** Reflect on what did/did not go well in the previous sprint and identify improvements to how the team operates.

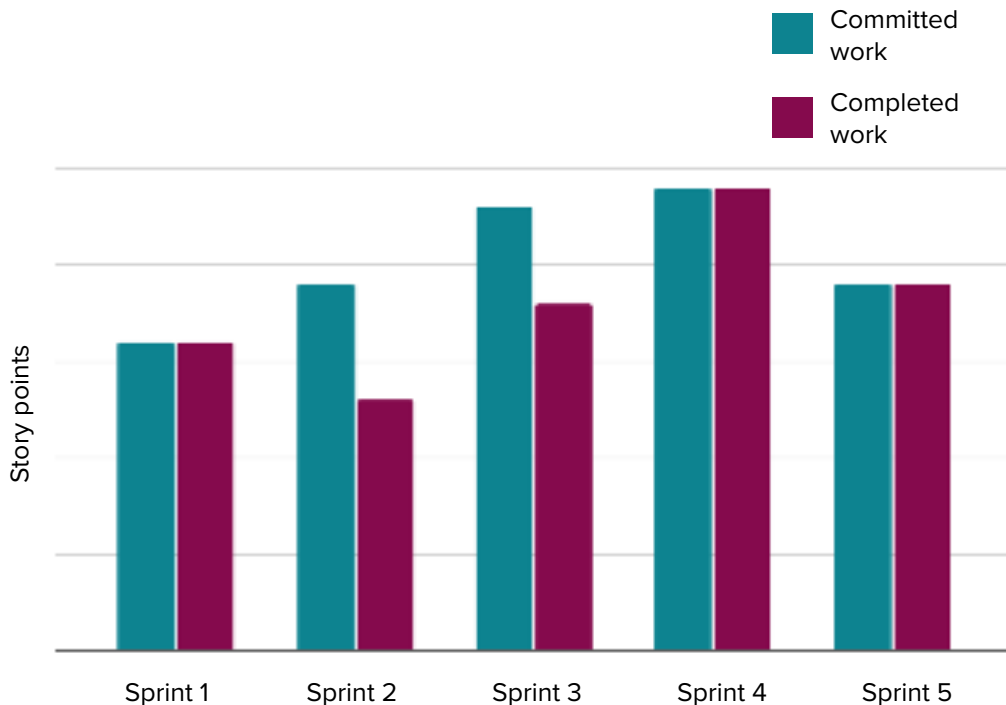
- A time for team members to talk openly about how they're working together and what could be improved.
- Learnings are incorporated into future sprints.



# Measuring an Agile Team's Performance

## Velocity:

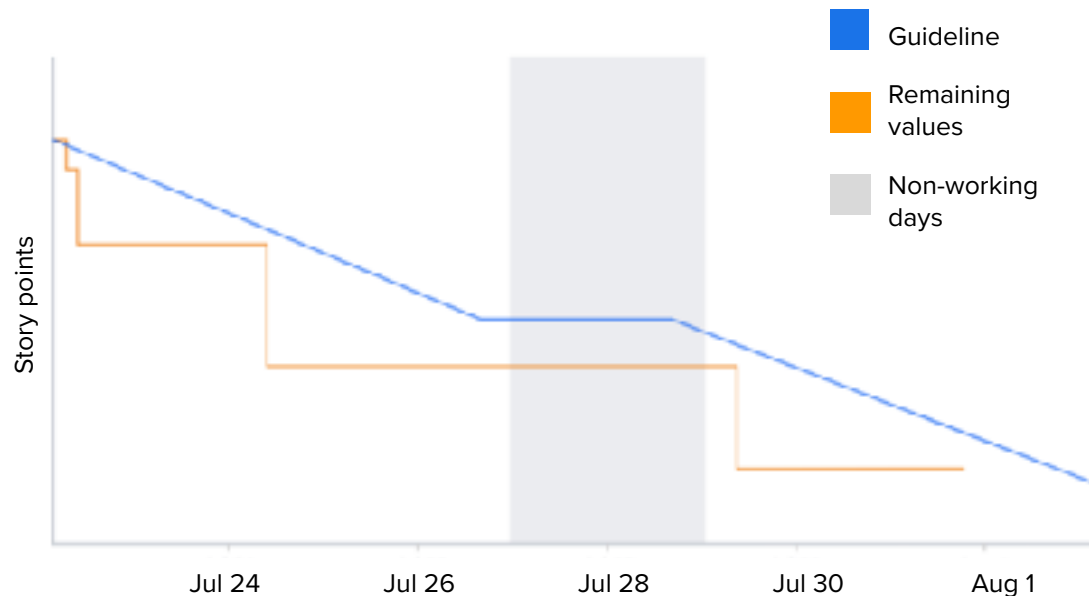
How much work is completed in each sprint.



# Measuring an Agile Team's Performance (Cont.)

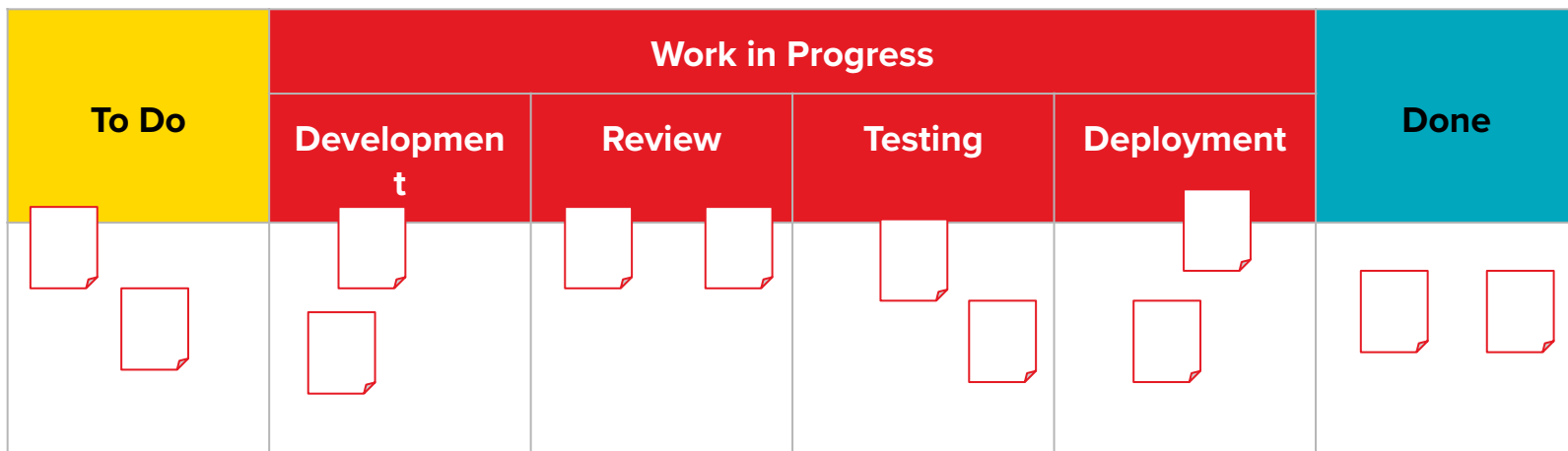
## Burn down charts:

Visualize how work is completed over the course of a sprint.



# Kanban

- Workflow is tracked on a shared Kanban board.
- Limit work in progress to ensure efficiency.
- No sprint cycle; items continuously move across the board.
- Focus is on optimizing flow and reducing cycle times.





## Discussion: This One Time, With Agile...

5 minutes



- Have you worked in an Agile environment?
- What worked well?
- What was the hardest part?



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# Wrapping Up



# Today's Learning Objectives

## In this lesson, we:

- Described the role and responsibilities of a PM at each phase of the product development cycle.
- Identified the key stakeholders and their needs at each phase of the cycle.
- Explored the metrics that PMs use throughout the cycle.

**What are your takeaways?**  
**What questions remain?**

# Today's Learning Objectives

## In this lesson, we:

- ✓ Explained the benefits and trade-offs of common product development frameworks: Agile, lean, and waterfall.
- ✓ Described the role of the product manager in an Agile environment.
- ✓ Chose the development method that is the best fit for a team or product.

**What are your takeaways?**  
**What questions remain?**



# Additional Resources

Practice Again	Digging Deeper
<b>Defining Product Development Frameworks</b> <ul style="list-style-type: none"><li>● <a href="#">Agile vs. Lean: Learn the Top 9 Differences and Comparisons</a></li><li>● <a href="#">Scrum vs. Waterfall vs. Agile vs. Lean vs. Kanban</a></li><li>● <a href="#">How PMs Should Work With Agile Development Teams</a></li></ul>	<b>Agile Essentials &amp; When to use Different Frameworks</b> <ul style="list-style-type: none"><li>● <a href="#">When to Use Waterfall vs. Agile</a></li><li>● <a href="#">Agile Essentials</a></li></ul> <b>Other Agile Frameworks</b> <ul style="list-style-type: none"><li>● <a href="#">What Is an Agile Framework?   Definition and Overview</a></li><li>● <a href="#">The 3 Main Roles in an Agile Team</a></li><li>● <a href="#">Why We Need to Rethink Product Management in an Agile Practice</a></li></ul>

# Additional Resources

## The Product Development Process:

### Stakeholders & Metrics

- [Product Development Process | Definition and Overview](#) (including physical products)
- [How to Manage Your Stakeholders as a PM](#)
- [How PMs Can Better Tie Metrics to Product Strategy](#)

# Don't Forget: Exit Tickets!



