

# Economically Sensible Scrum Scrum Gathering Keynote New Orleans, LA May 5, 2014 by Ken Rubin

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## Restaurant analogy takeaways

Restaurant and manager failed to grasp fundamental principles of running long-term profitable restaurant chain

Failed to evaluate specific actions in the context of an economic framework based on those principles

Many organizations do good team-level Scrum, yet don't get desired business results because they fail to grasp the fundamental principles that underlie Scrum and how those principles should be used in an economically sensible way



## 90 minutes from now...

You will walk out of here knowing the three principal inhibitors to organizational success with Scrum...

And how to use Economically Sensible Scrum to address them

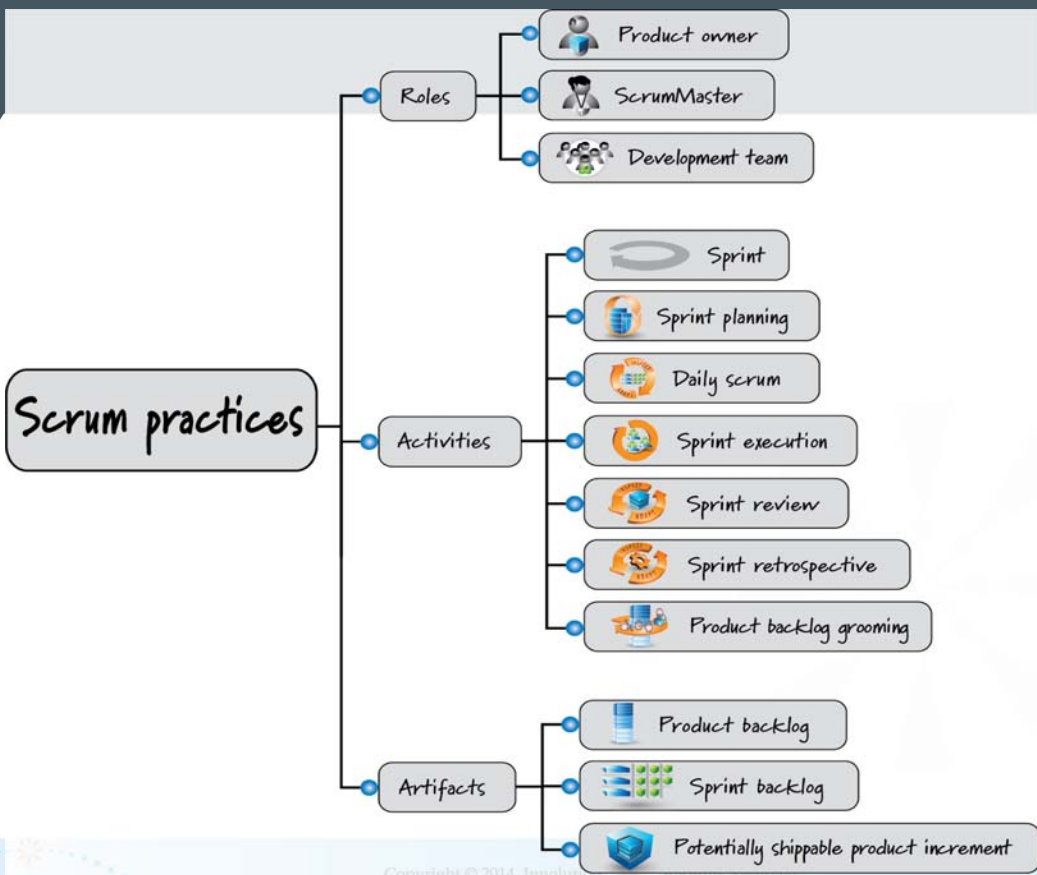


# Scrum framework

Scrum isn't sufficient for success,  
Economically Sensible Scrum is



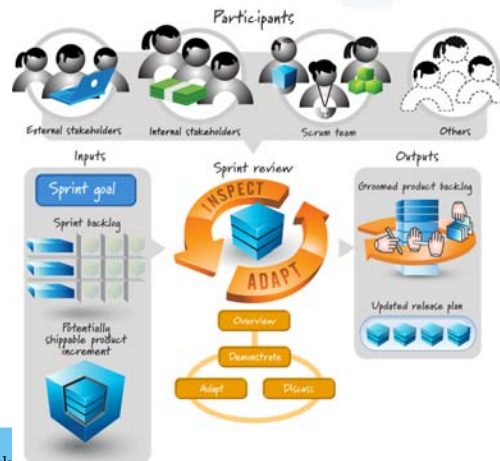
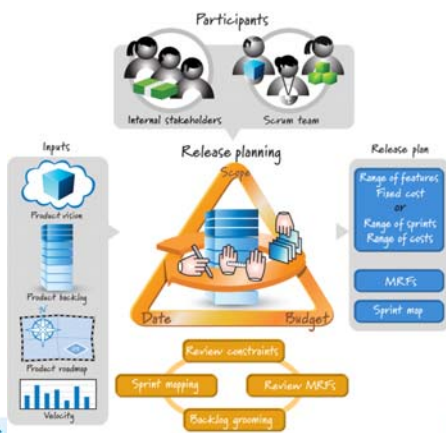
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# Approaches

**Upload File**  
 As a wiki user I want to upload a file to the wiki so that I can share it with my colleagues.

**Conditions of Satisfaction**  
 Verify with .txt and .doc files  
 Verify with .jpg, .gif, and .png files  
 Verify with .mp4 files <= 1 GB  
 Verify no DRM-restricted files



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# ScrumBut(t) – violations of the Scrum framework



We do Scrum, but...

Sprints are 8 weeks

No product owner

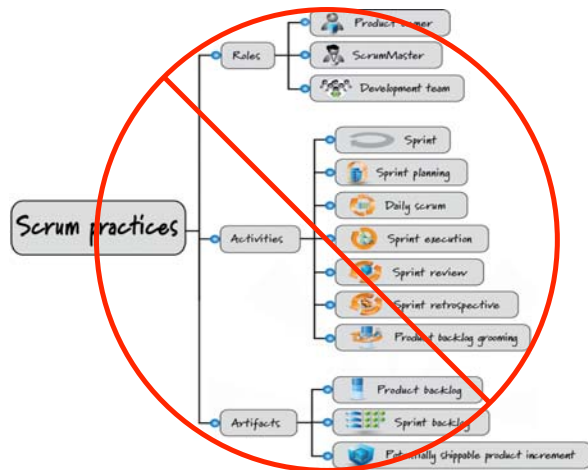
Daily scrums on M-W-F

Sprint planning is 2 days

Etc...



# What if there are no Scrum "violations?"



Do no violations = success with Scrum?



# Three inhibitors to success using Scrum

Ignorance or misapplication of core agile principles during development

Failure to apply agile principles throughout the value chain

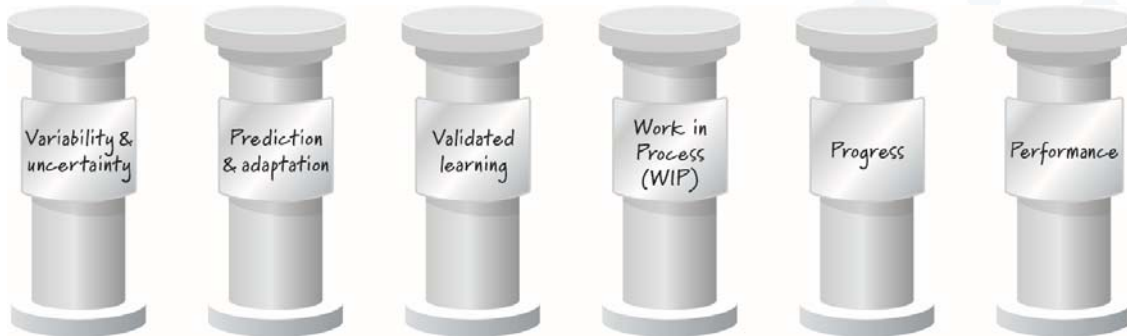
Failure to structure teams in an economically sensible way

Overall, not applying core agile principles in an economically sensible way

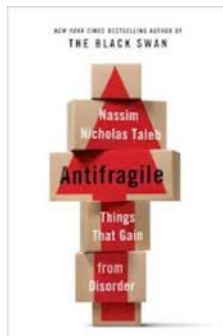


## Agile principles provide context for inspecting & adapting

People who apply Scrum without understanding its underlying principles lack the necessary context to understand why they are doing things and when and how best to inspect and adapt their approaches



## Agile principles make organizations robust & antifragile



Embracing Agile principles makes the development process and organization robust and at times antifragile to the disorder of uncertain events, avoiding harm and reaping benefits of uncertainty

Waterfall

Agile

Fragile

Robust

Antifragile

Harmed by disorder

Resilient to disorder

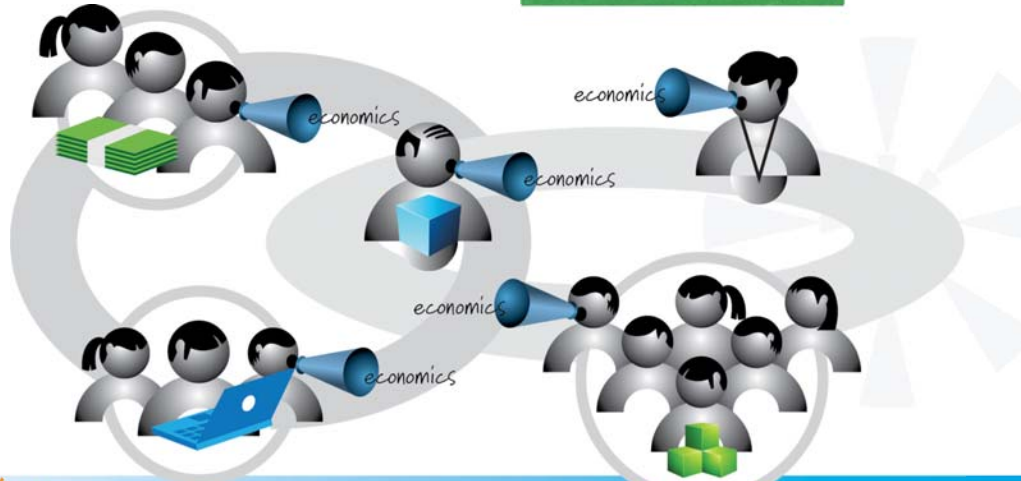
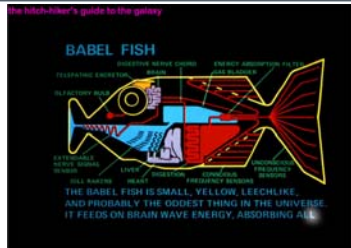
Benefits from disorder

# Economically sensible scrum



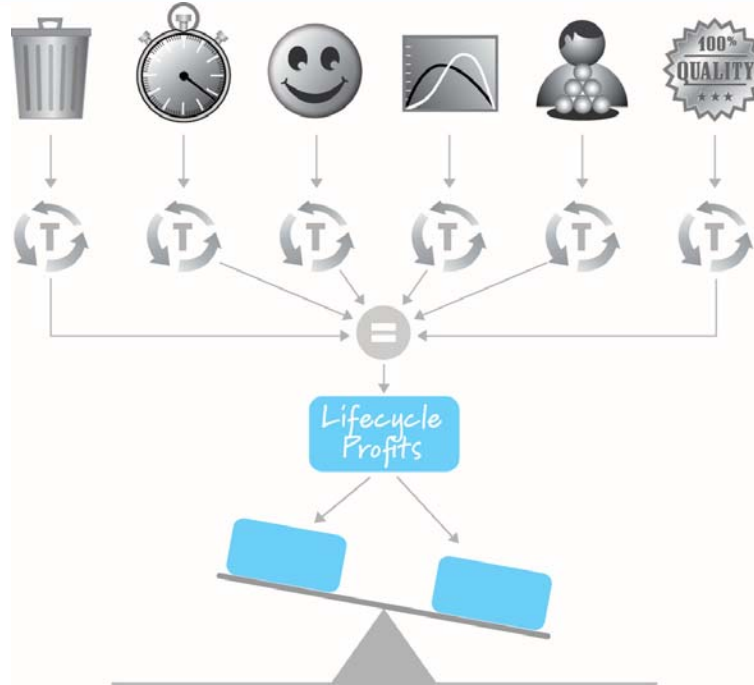
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# Economics – universal language of product development



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# ✦ We need an economic framework

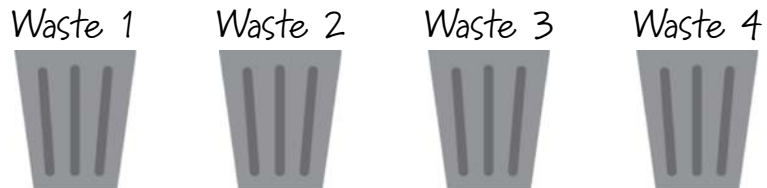


Based on Reinertsen "The Principles of Product Development Flow: Second Generation Lean Product Development"

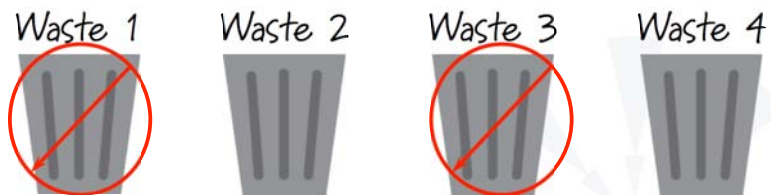


# ✦ Example: waste

Multiple forms of waste



Can't eliminate them all



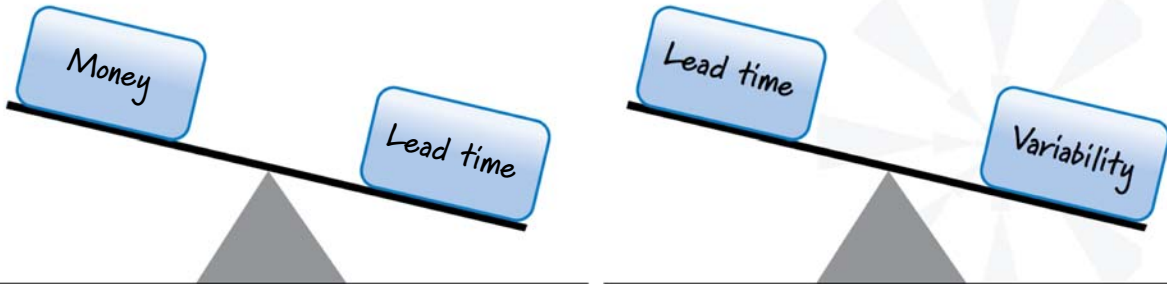
Determine which cause most economic damage





## ✦ Example: cost of delay

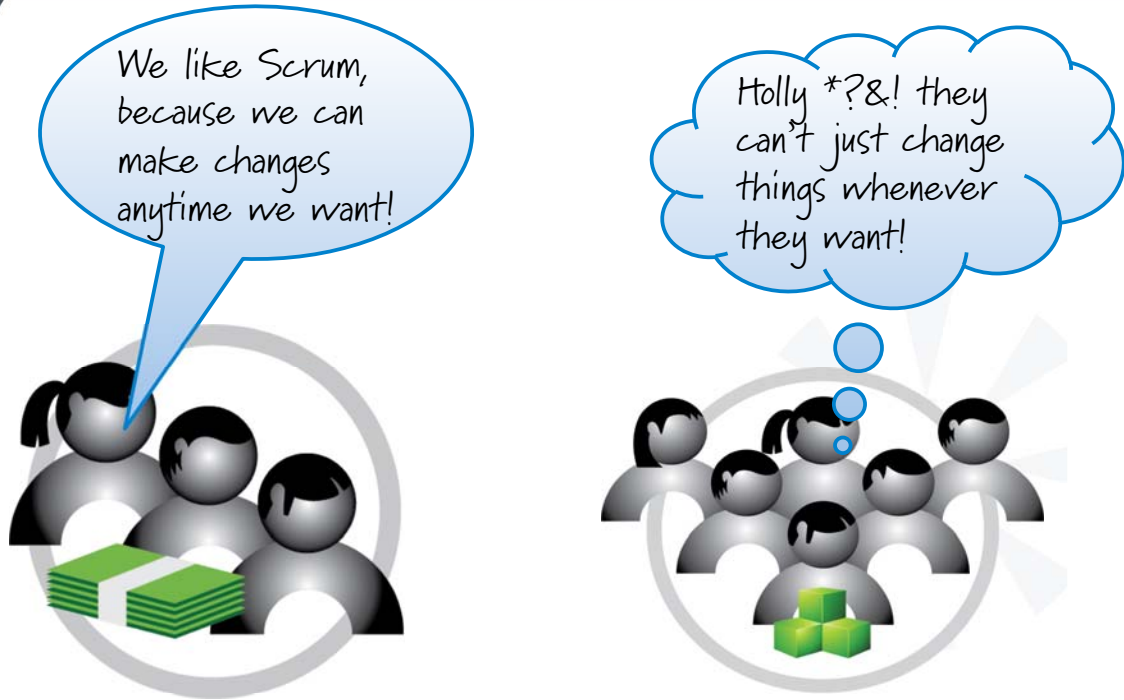
If you have to wait 3 weeks for the UX team to design your UIs, and that delay could be eliminated by having a UX designer on your team, what would be the cost of the UX-team delay (in lifecycle profits)?



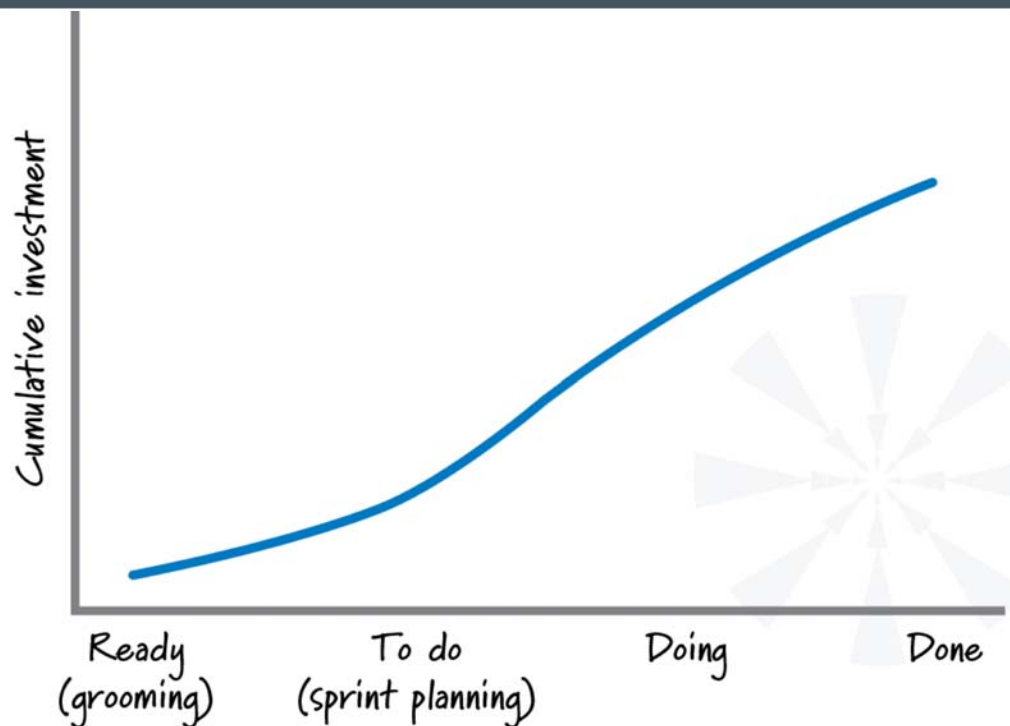
**Ignorance or  
Misapplication of  
Core Agile  
Principles During  
Development**



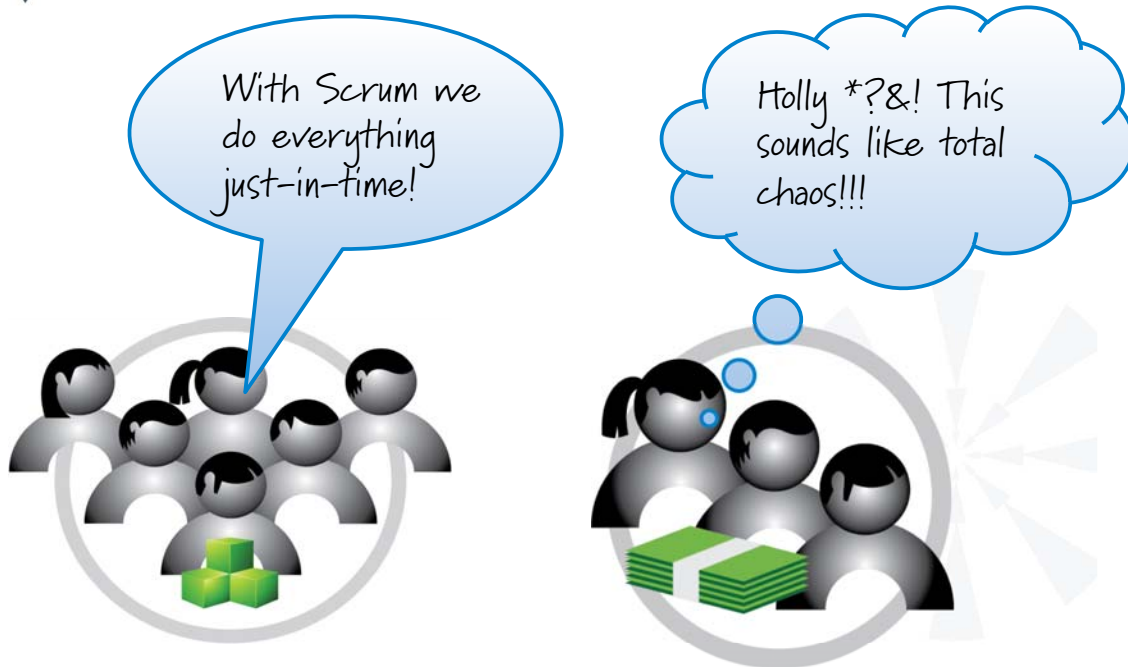
## Misunderstanding of when change occurs



## Economically sensible change

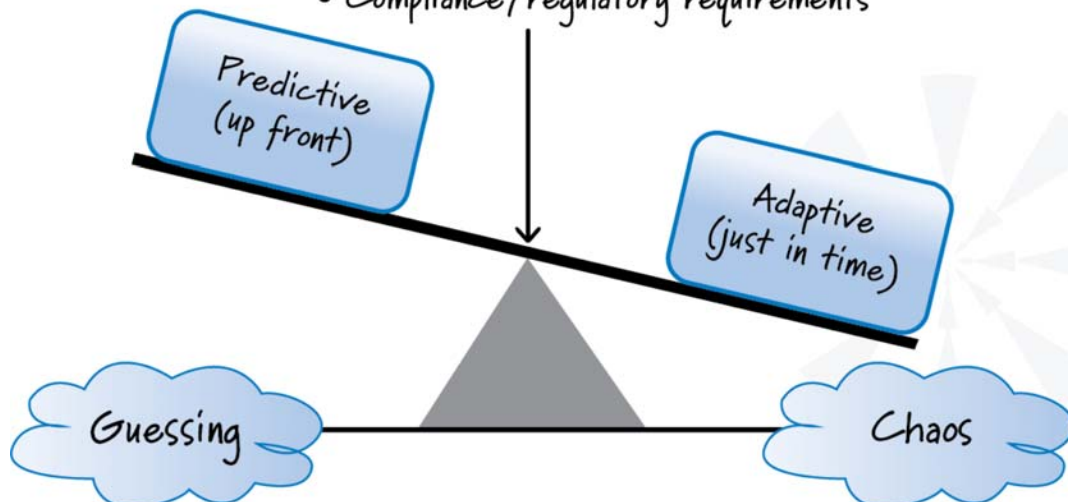


## ✱ Misunderstanding of just-in-time



## ✱ Balance up front predictive with adaptive just in time

- Type of product
- Degree of end uncertainty
- Degree of means uncertainty
- Constraints on development
- Compliance/regulatory requirements

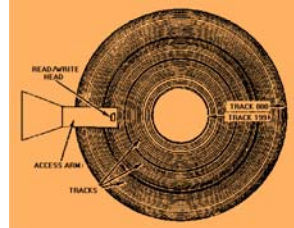


# Recognize inventory (WIP) waste

Manufacturing inventory is both physically and financially visible

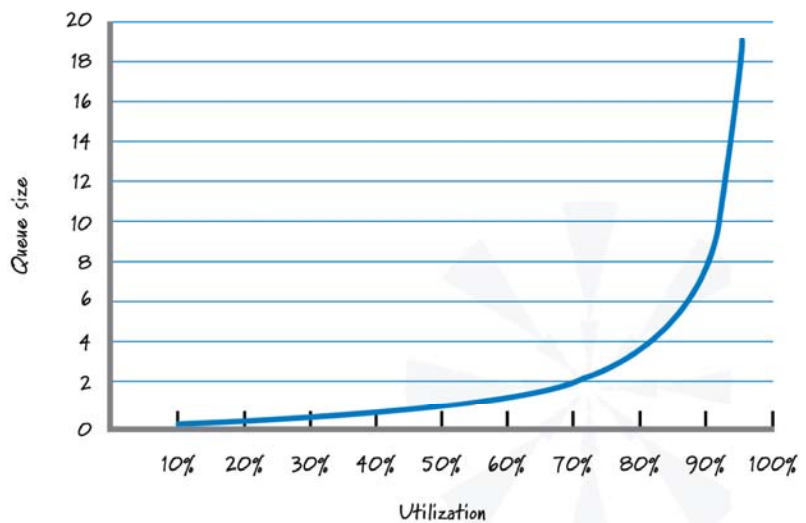


Product-development inventory is knowledge assets that are physically and financially invisible



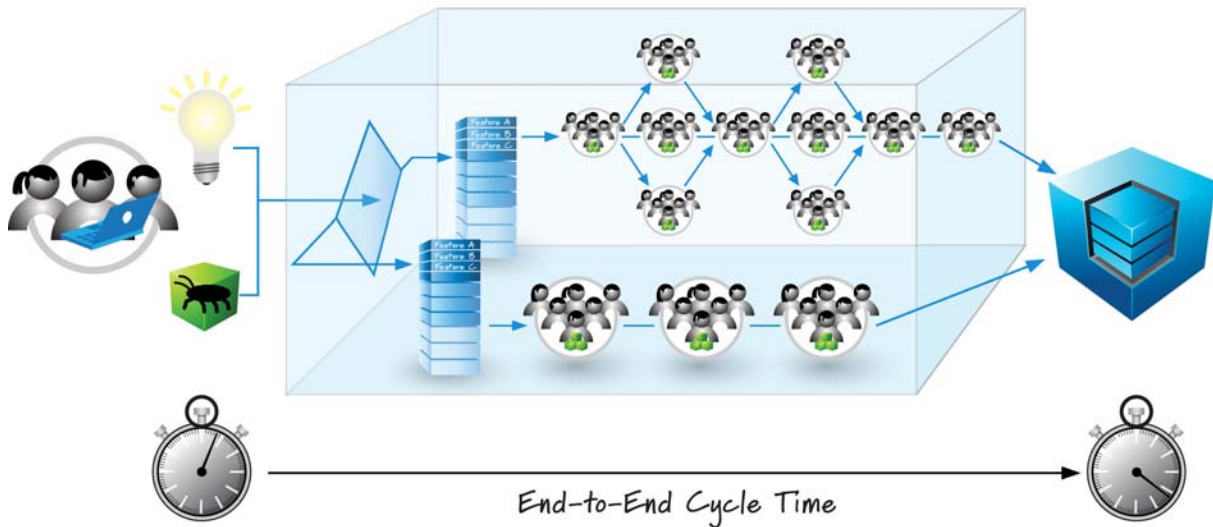
# Focus on Idle Work Not Idle Workers

Watch the Baton Not the Runners

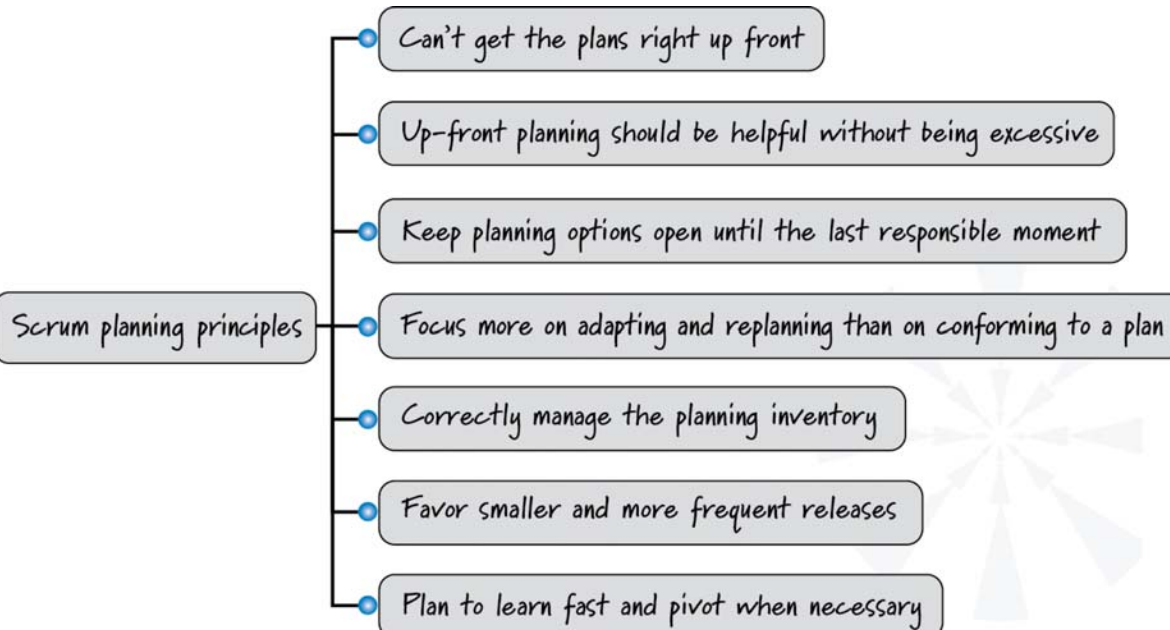


## Fast, flexible flow

System of teams working together to deliver business value quickly



## Economically sensible planning

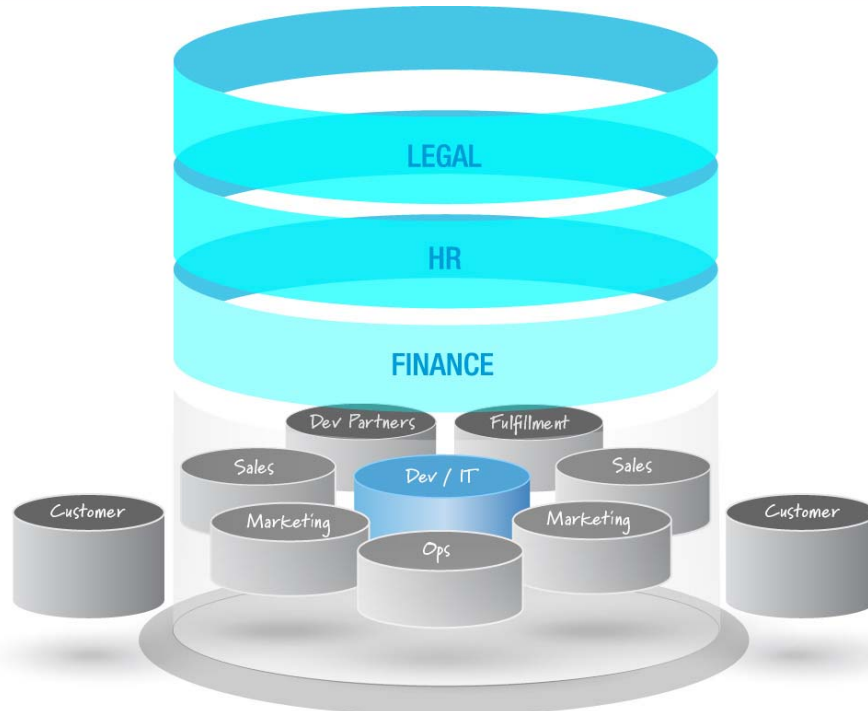




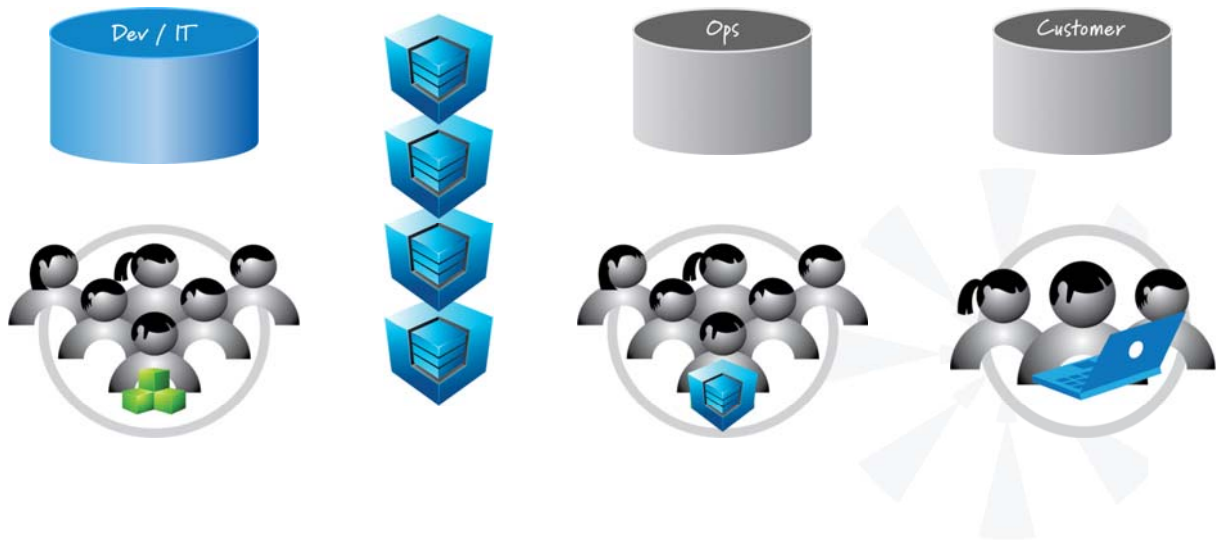
# Failure to Apply Scrum Principles Throughout the Value Chain



## Example value chain

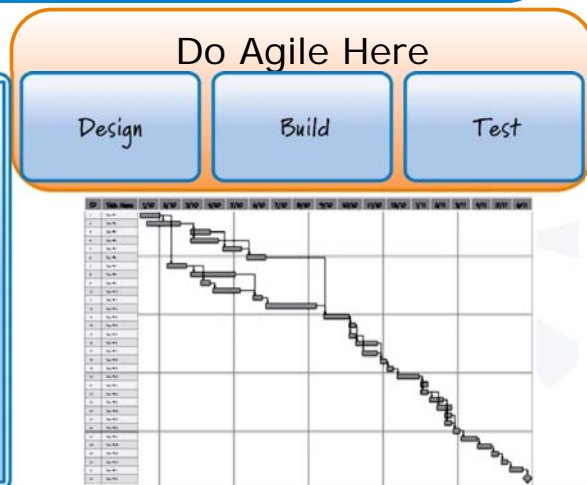
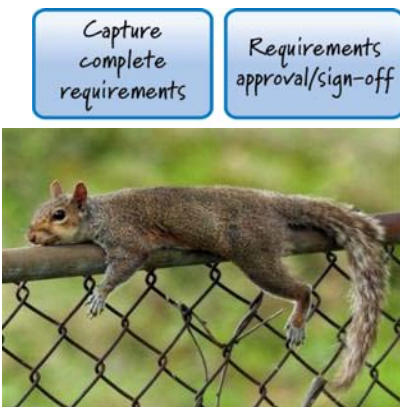


# Downstream misaligned

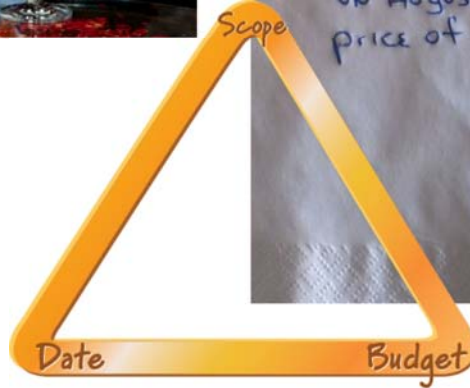
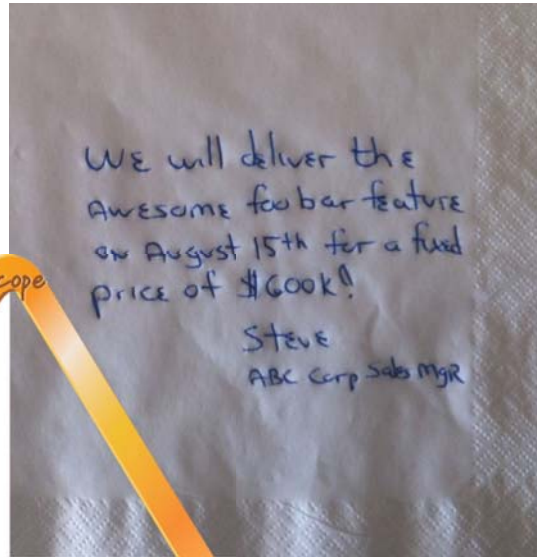


# Internal management misaligned

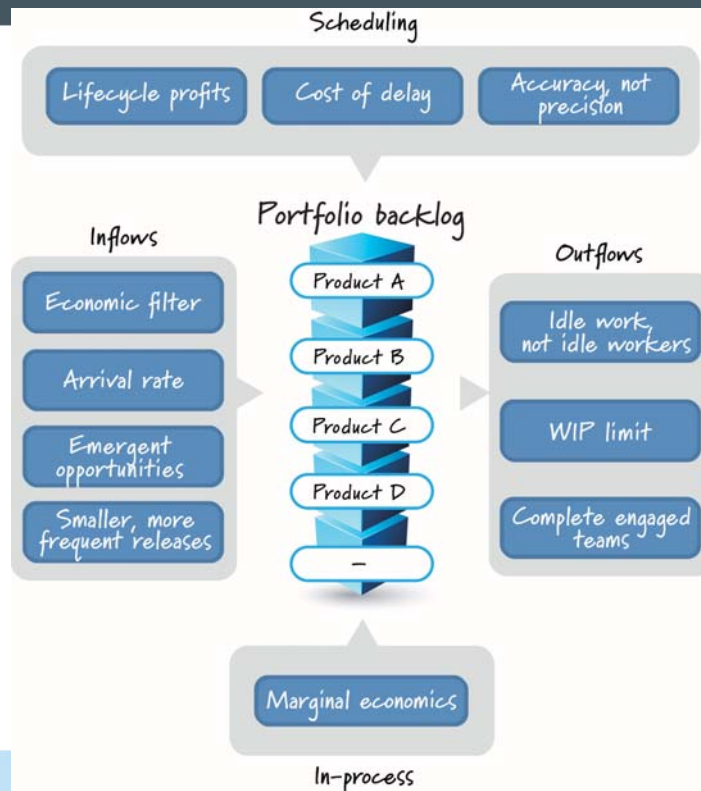
Develop in an Agile way, but still provide all of the same plan-driven artifacts (e.g., extensive up-front requirements, full budget, and precise schedule) like before to get the project approved



# ✦ Sales Misaligned

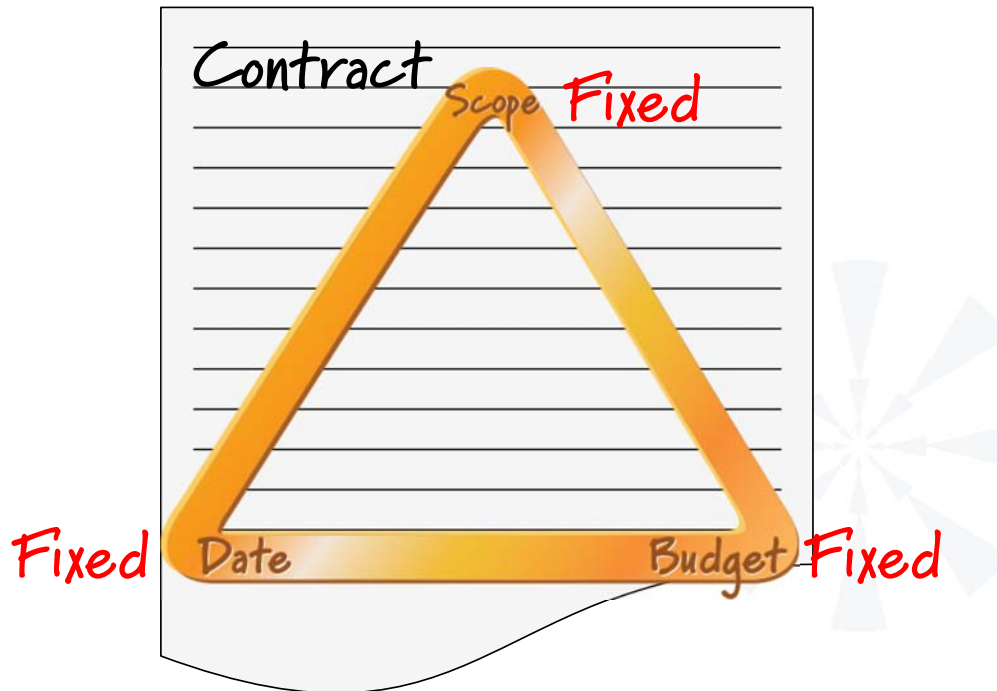


# ✦ Portfolio planning misaligned

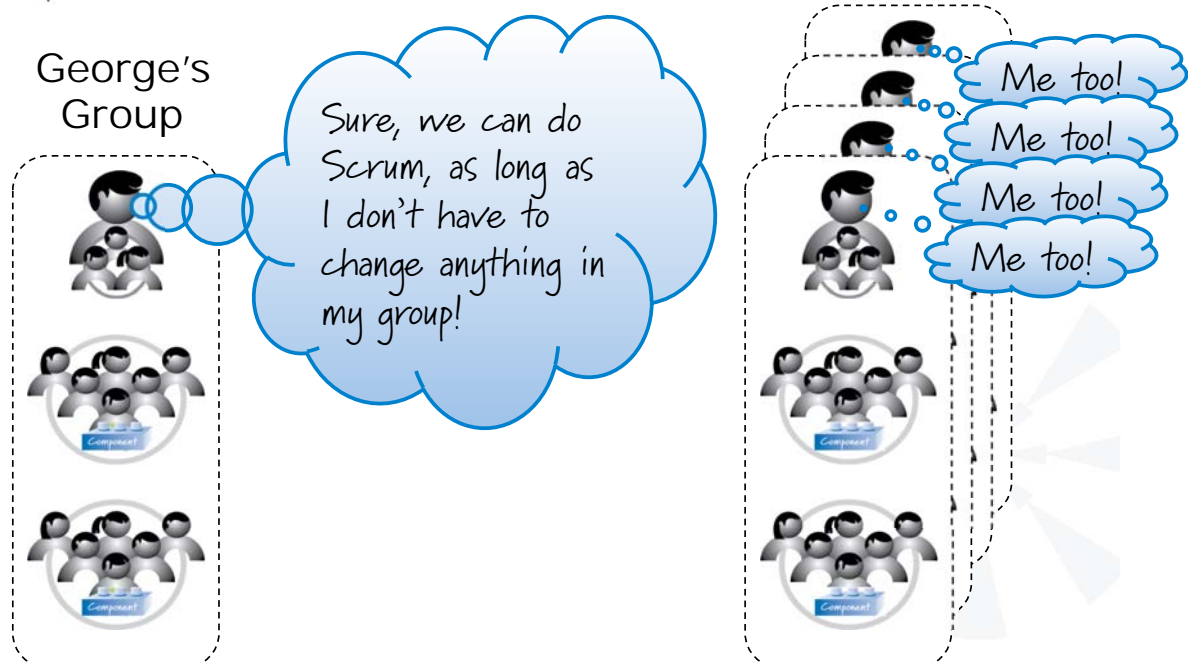




## Partners misaligned

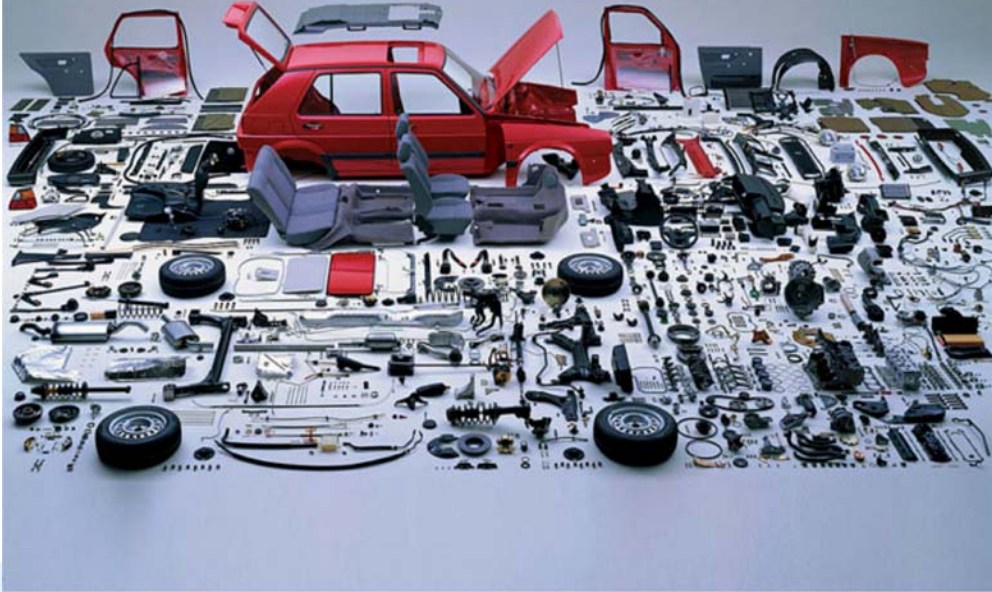


## Protection of the fiefdoms



## ✦ Failure to see the whole

Optimizing locally frequently sub-optimizes the system



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Failure to  
Structure Teams  
in an Economically  
Sensible Way



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## ✦ Economically sensible teaming

Reduce multitasking

Embrace T-shaped skills

Create and maintain long-lived teams

Scaling teams based on economics, not dogma



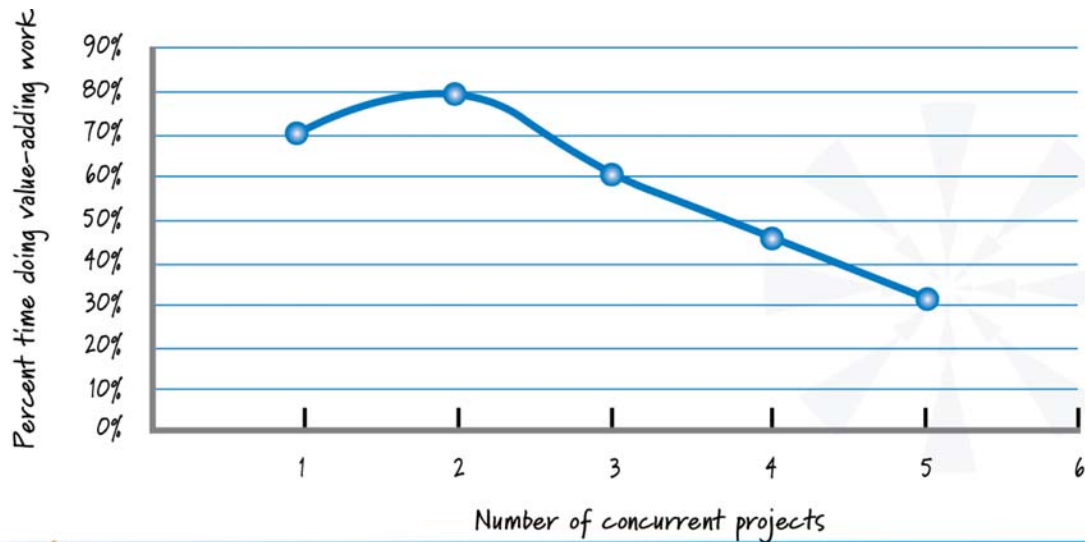
## ✦ Reduce the amount of multitasking

Not about keeping people busy



## ✦ Cost of multitasking

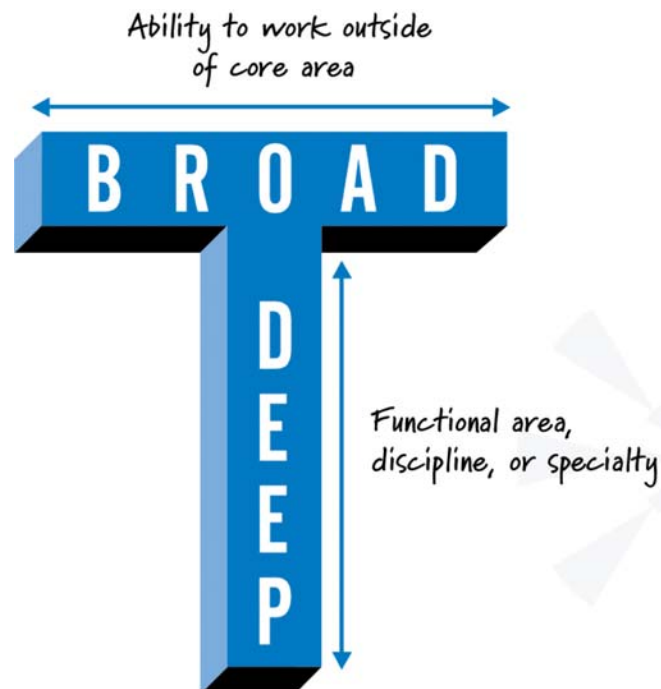
Clark and Wheelwright (1992) studied multi-tasking and determined that when working on more than **two projects**, a person's time spent on value-adding work drops rapidly



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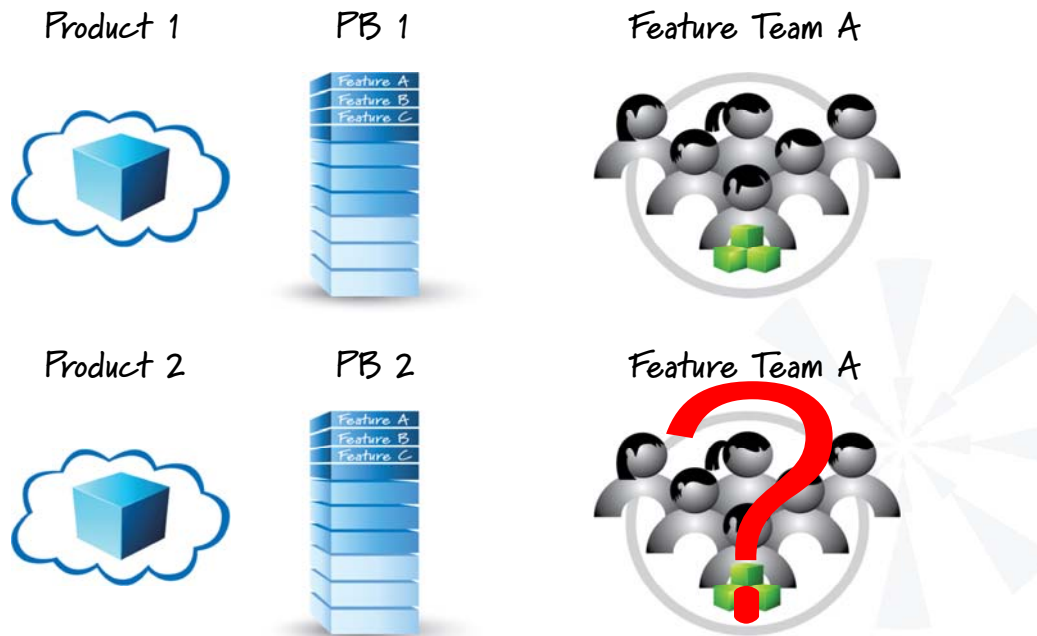
## ✦ Teams with T-Shaped skills



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# Team longevity



# Economics favor long-lived teams

Have established trust and team identity and integrity

More productive than newly formed groups

Team familiarity can positively impact efficiency and quality of team output

Has a shared velocity and estimating history that can be used during planning

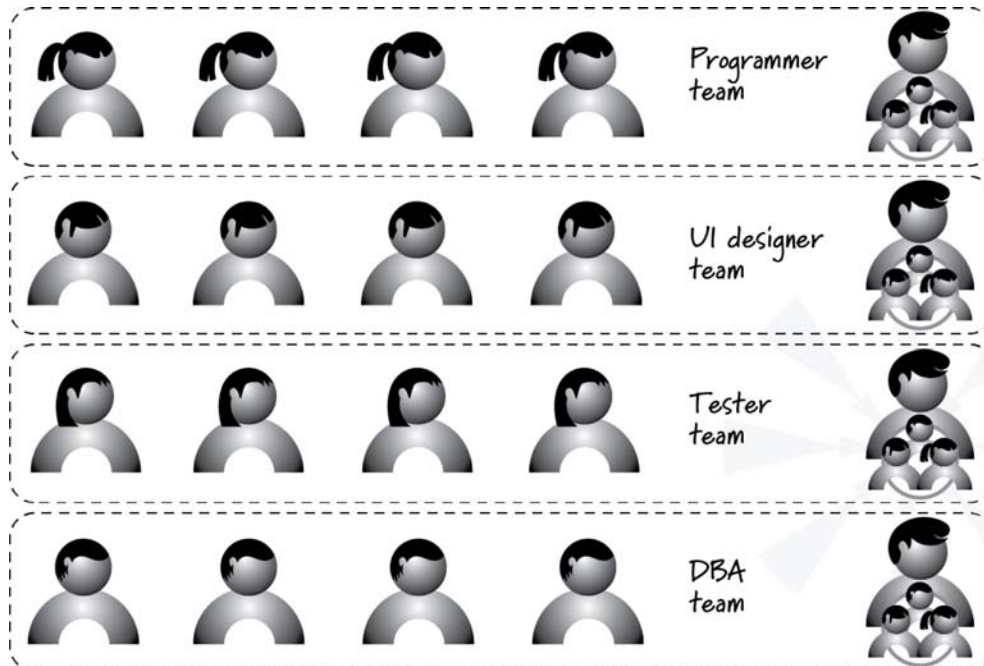


## ✦ Scaling with multiple teams

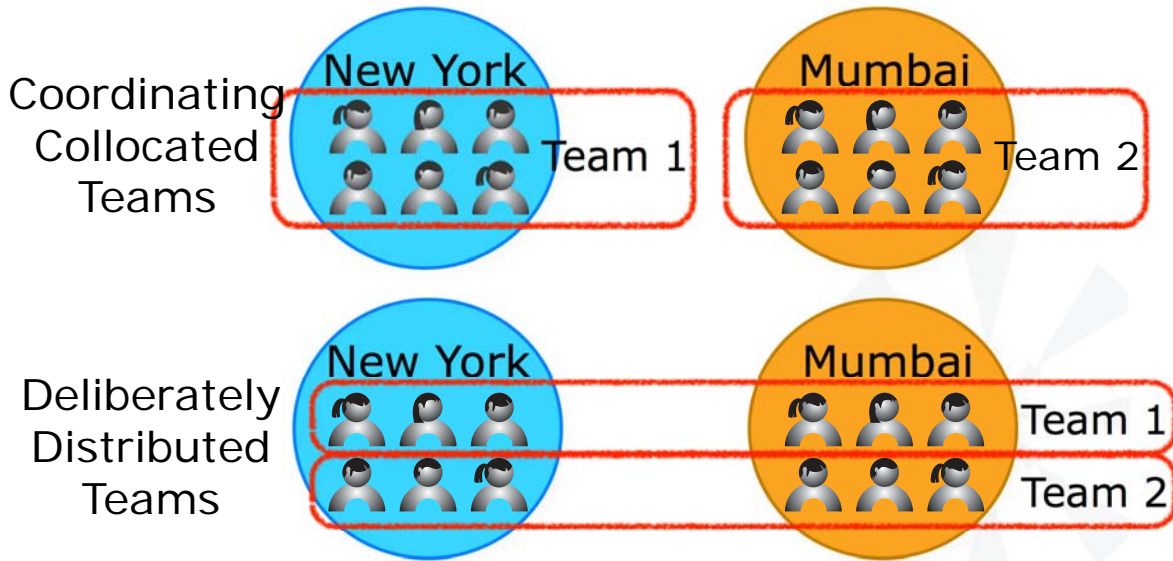
As the scope of work gets larger and one team is no longer sufficient, what is your scaling strategy?



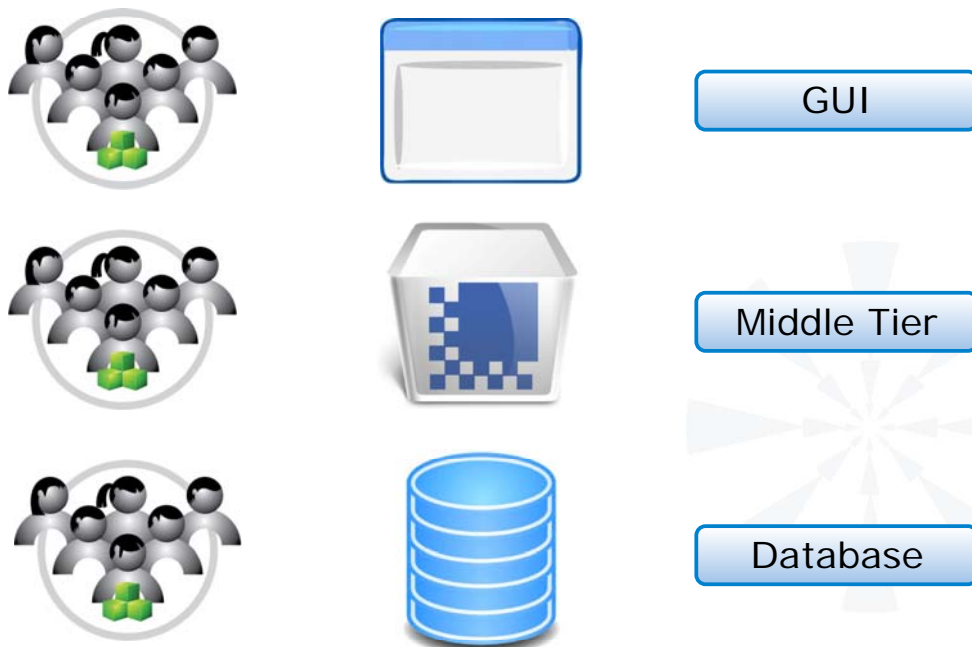
## ✦ Discipline teams



## Location teams



## Architectural layer teams



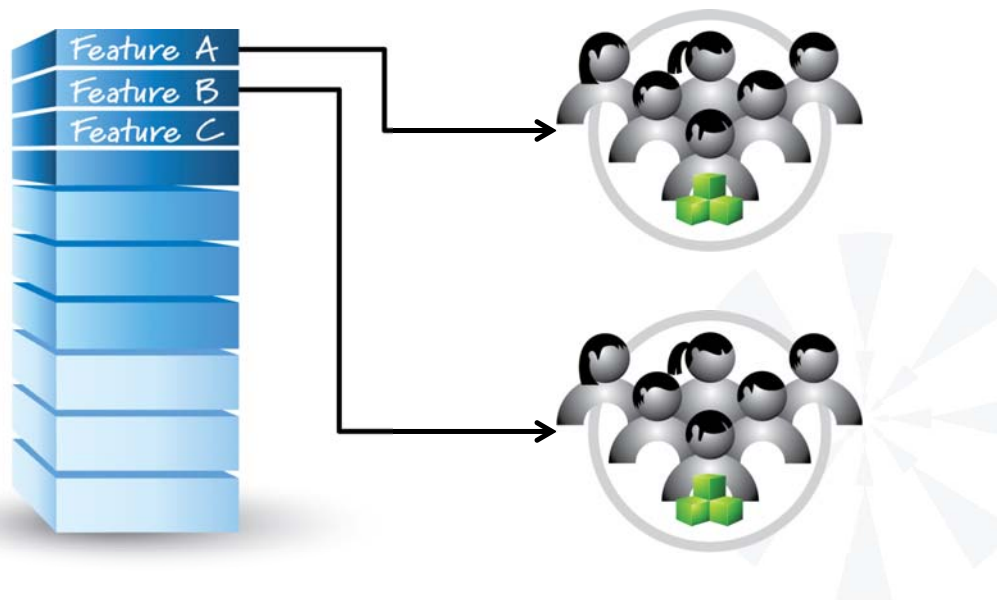
## Component teams



Example component: Routing algorithms (component) inside of a GPS

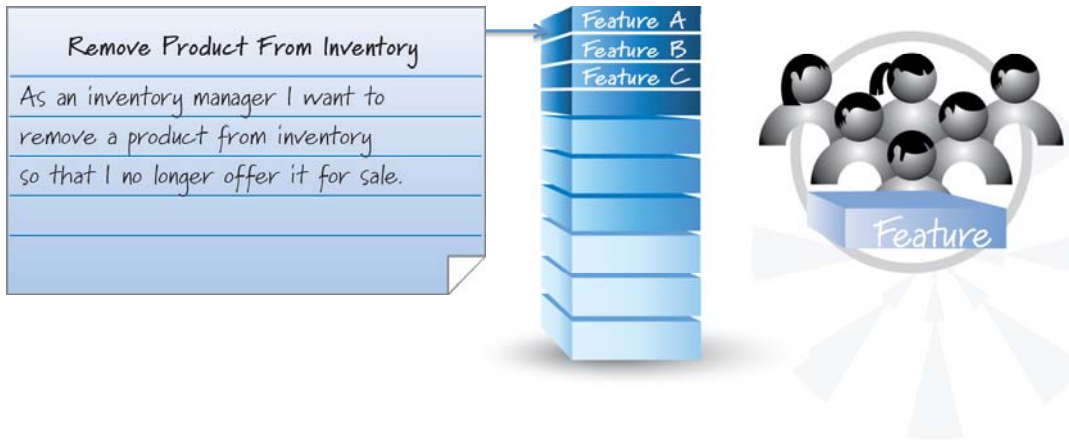


## Feature teams

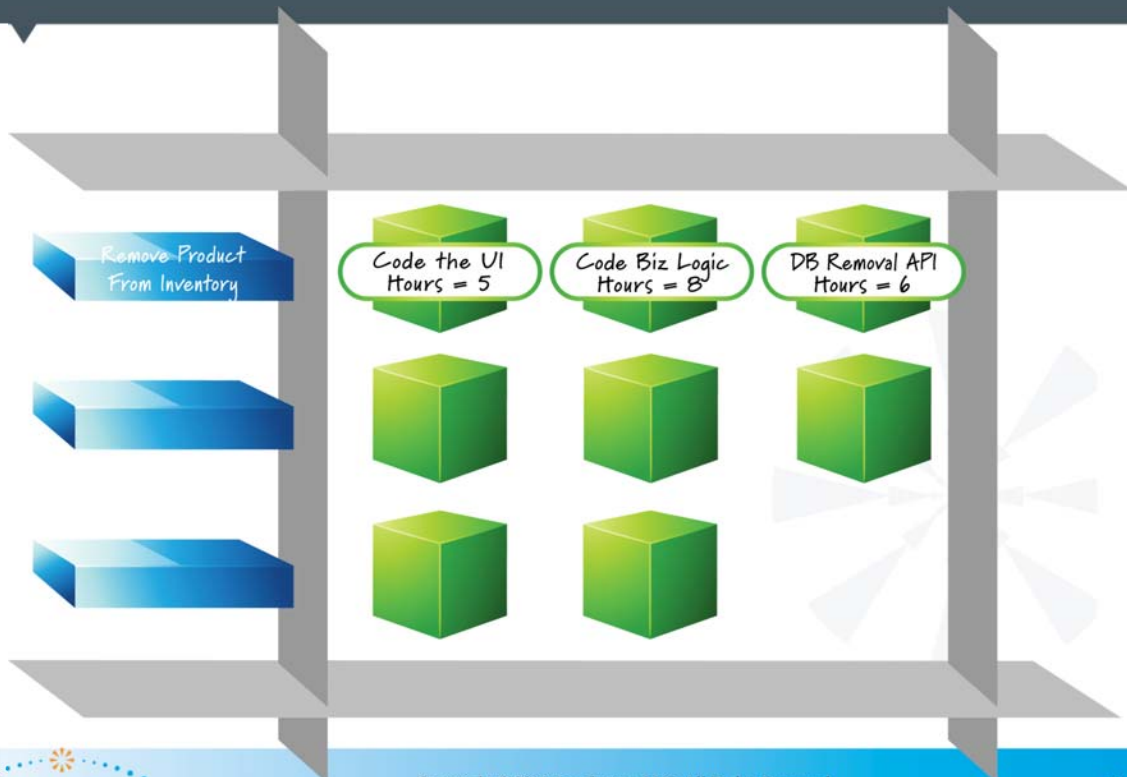




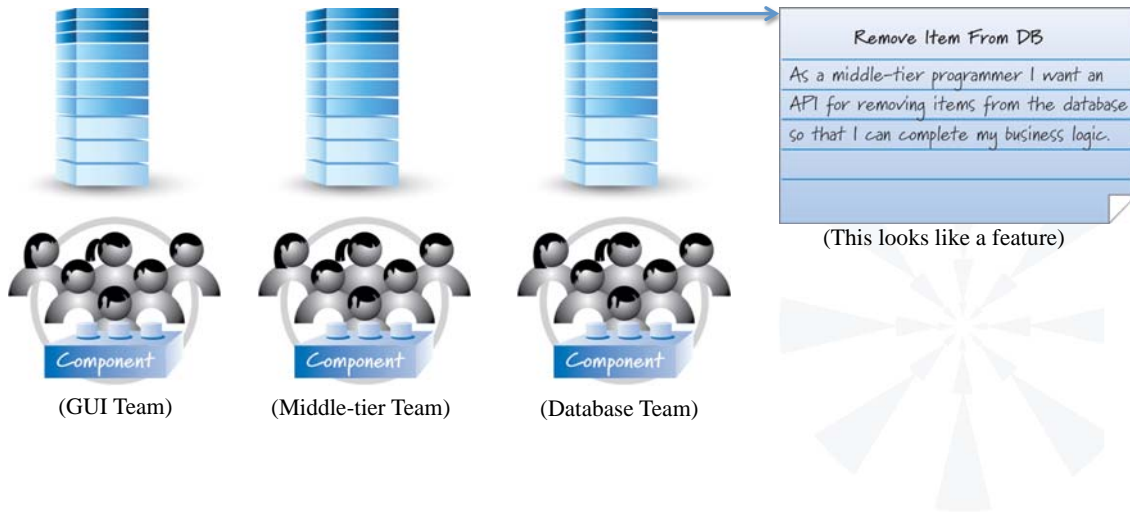
# Example feature team working on end-customer feature



# Feature team tasks

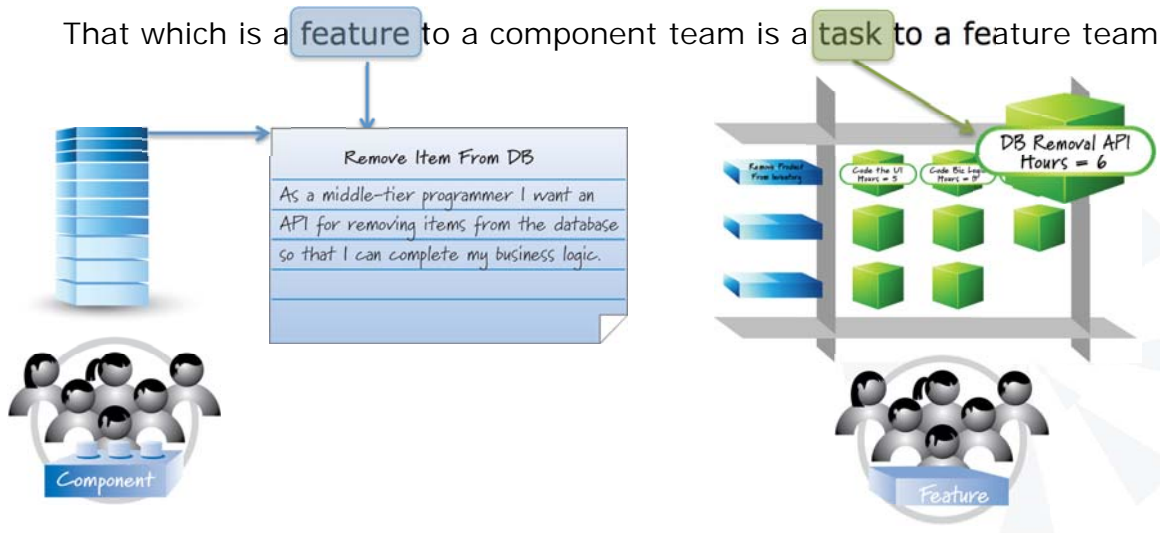


# Example "feature" to a component team

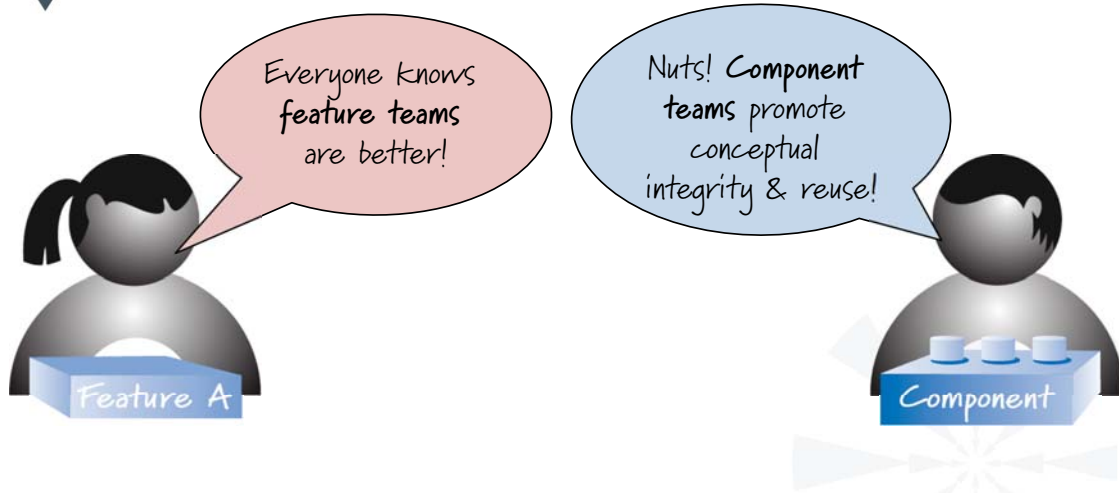


# That which is a feature to a component team is a task to a feature team

That which is a **feature** to a component team is a **task** to a feature team



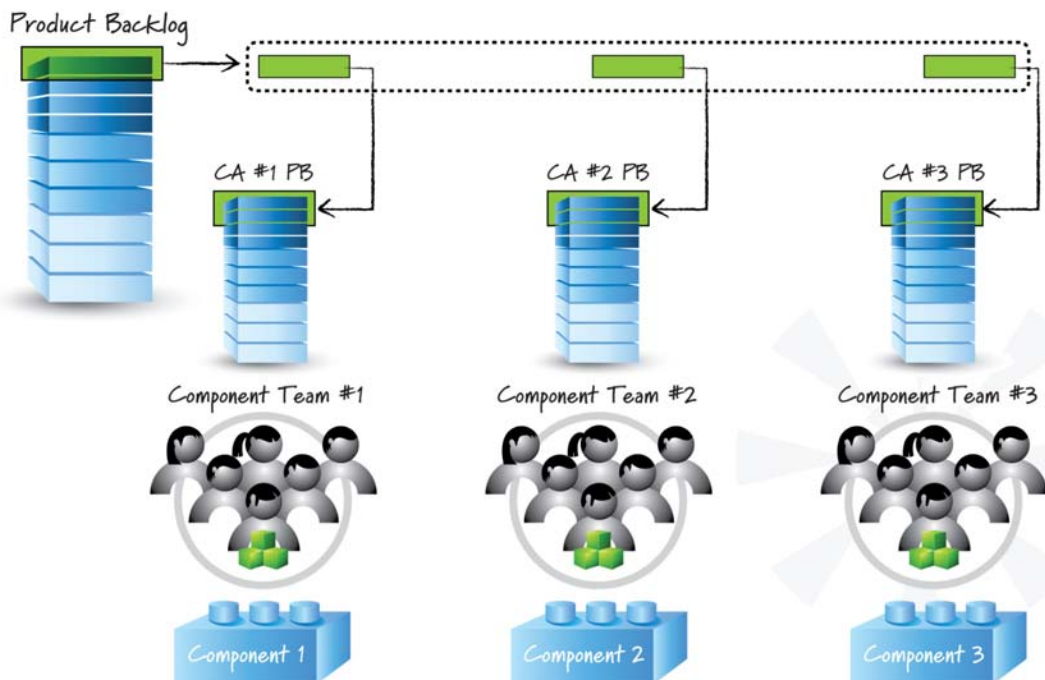
# ✦ Don't scale based on dogma!



Do you honestly think there is a single answer to scaling that universally applies to all situations (sizes and types of organizations)?



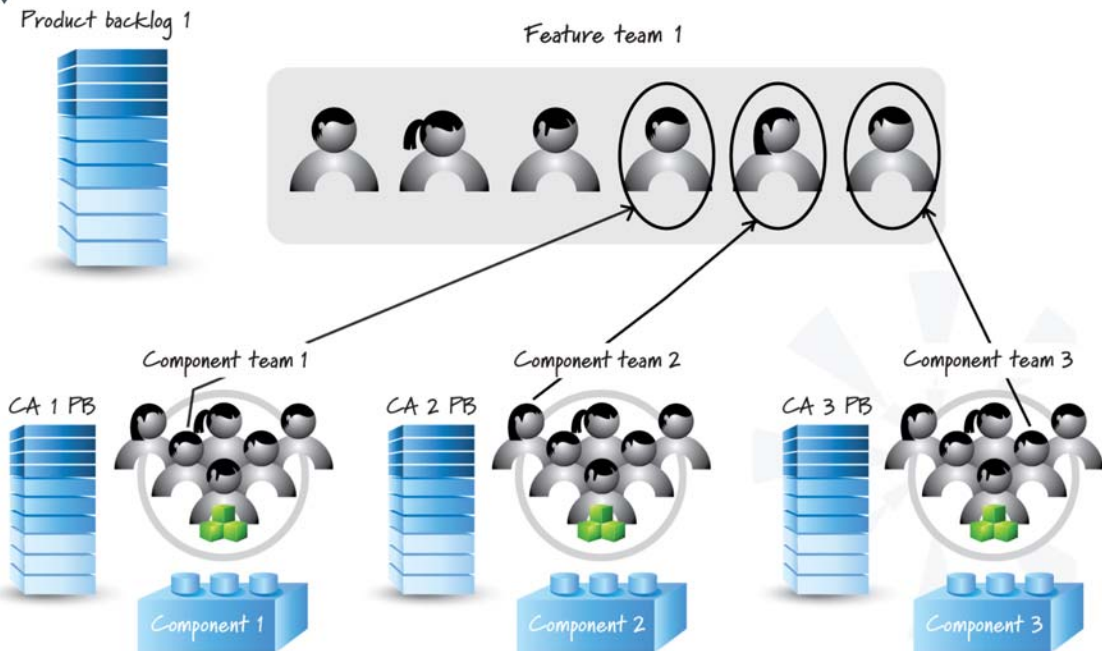
# ✦ Component teams (single source)



# Component teams (multiple sources)

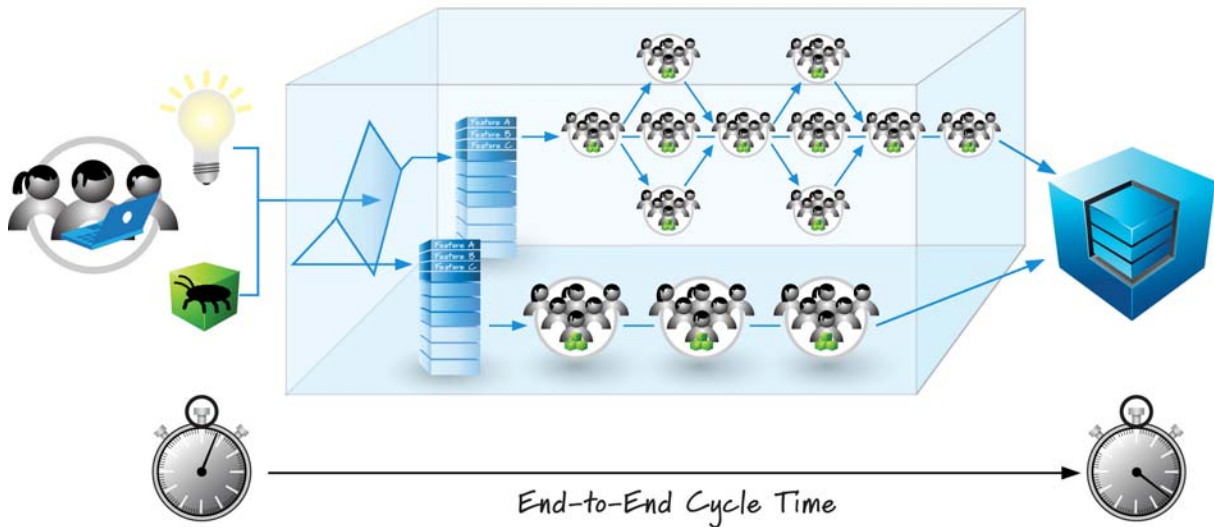


# Combined feature & component teams



# Fast, flexible flow

System of teams working together to deliver business value quickly



# Summary

Performing all Scrum practices...

Need to apply Scrum



using proven approaches...

on foundation of core agile principles

Update File	Condition of Satisfaction
As a work item I want to update a file to the table so that I can share it with my colleagues.	Verify with QA and dev that I can update the file in the table. Verify with QA and dev that I can update the file in the table. Verify with QA and dev that I can update the file in the table.



within an economic framework that allows sensible tradeoffs



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