



匠人学院
jiangren.com.au

Agile + Scrum

敏捷开发原理与实践

今天我将学到

- 为什么使用敏捷开发?
- 什么是敏捷开发?
- 什么是 Scrum?
- 如何实践?
- 真实案例

Project Management



Project Management



- Construction began in March 1959
 - Estimated completion date: 26th January 1963
 - Estimated cost of \$7m
-
- Year of completion: 1973
 - Total cost: \$102m

Project Management

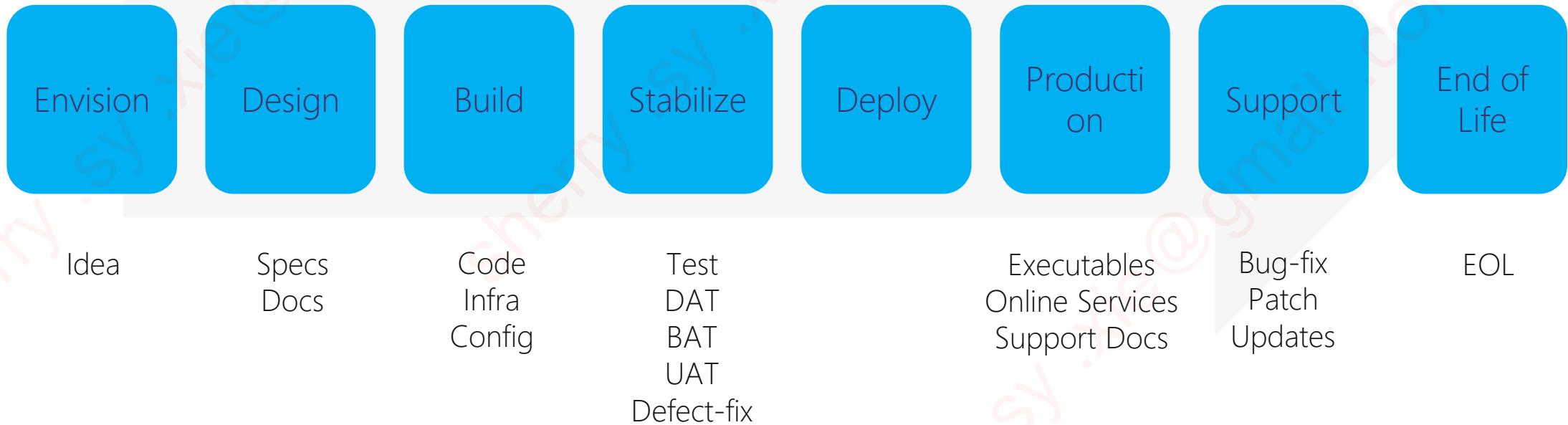


Project Management



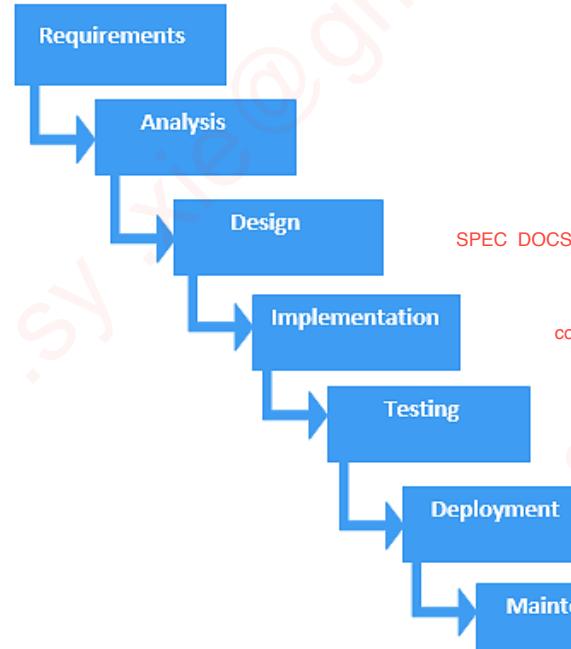
- Construction began in October 2015
- Estimated completion in 2018
- Estimated cost of \$1.8bn
- Major delays at all stages
- Construction still not finished
- Estimated total cost of \$3.45bn
- Government sued by construction company Acciona
-

Software Development Life Cycle (SDLC)

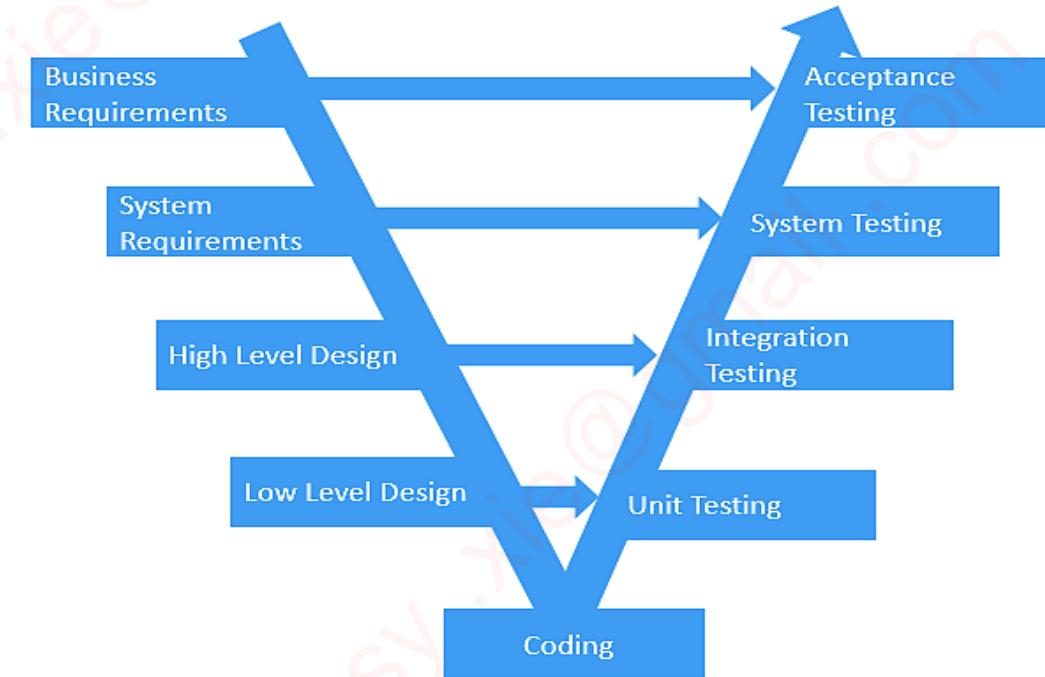


SDLC Model – Waterfall & V Model

Waterfall

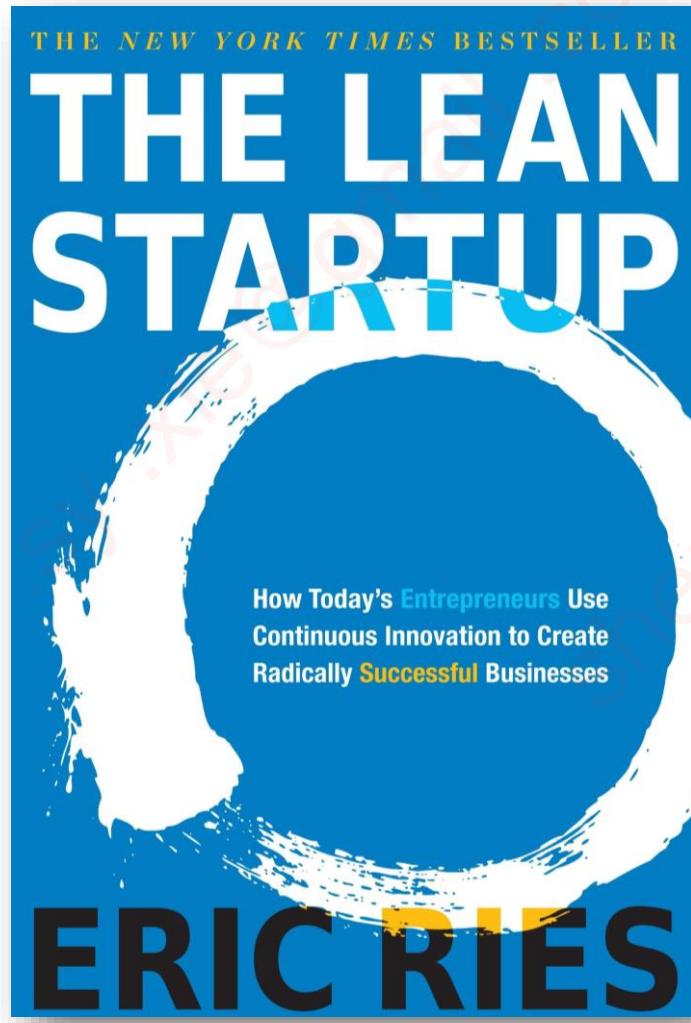


V Model



Project Management Methodologies





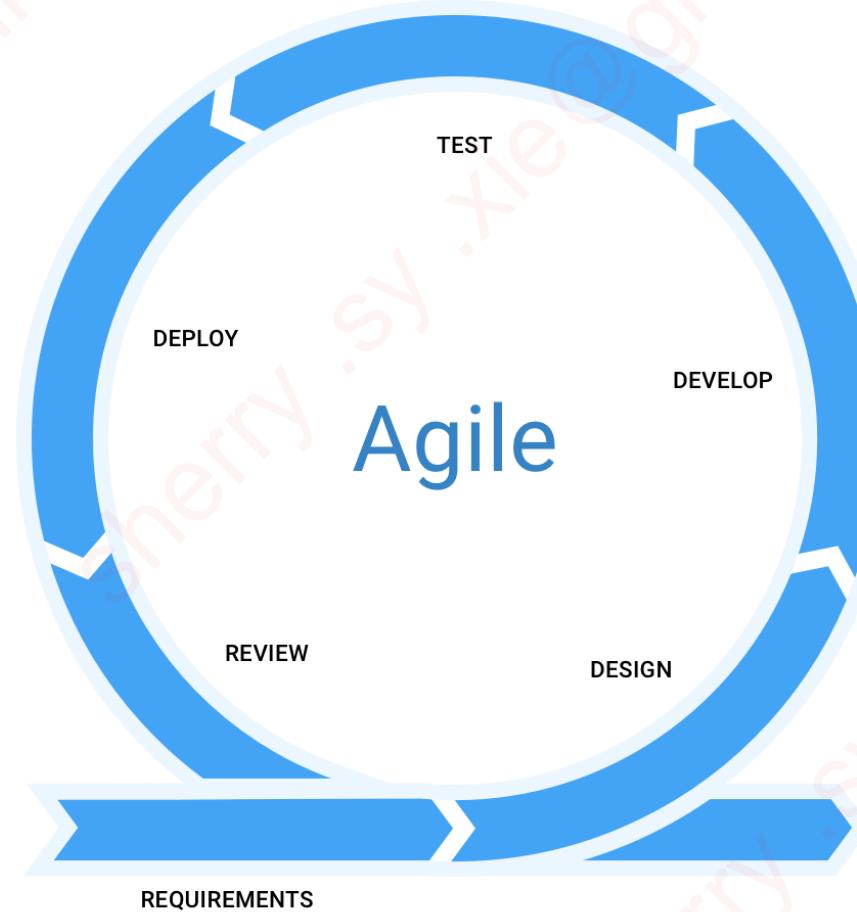
Lean Startup



Agile

Agile project management is an **iterative** development methodology that values human **communication** and feedback, adapting to **changes**, and producing **working results**.

SDLC Model - Agile

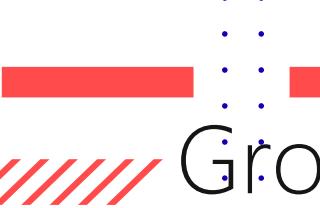


Agile Values



12 Agile Principles Behind The Agile Manifesto

- 1 Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
- 2 Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
- 3 Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
- 4 Business people and developers must work together daily throughout the project.
- 5 Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
- 6 Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
- 7 Working software is the primary measure of progress.
- 8 The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
- 9 Continuous attention to technical excellence and good design enhances agility.
- 10 Simplicity – the art of maximizing the amount of work not done – is essential.
- 11 The best architectures, requirements, and designs emerge from self-organizing teams.
- 12 At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.



Group Activity

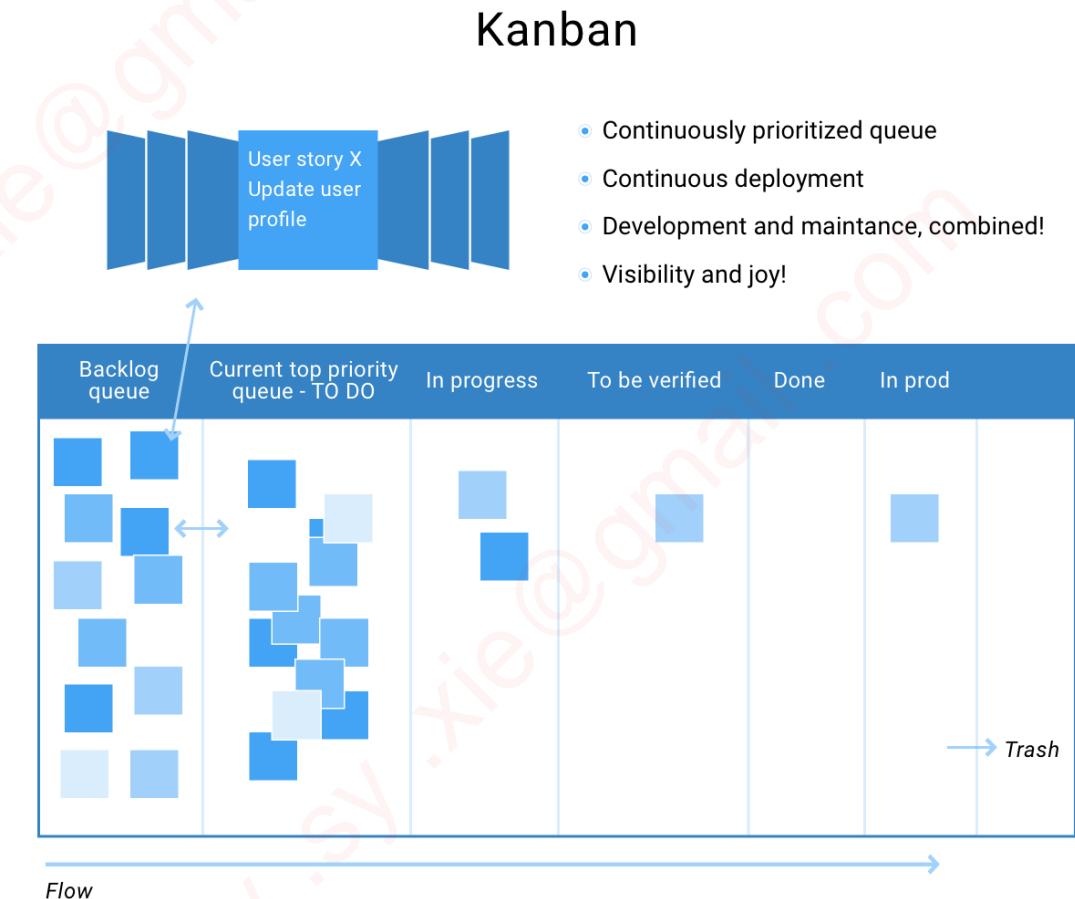
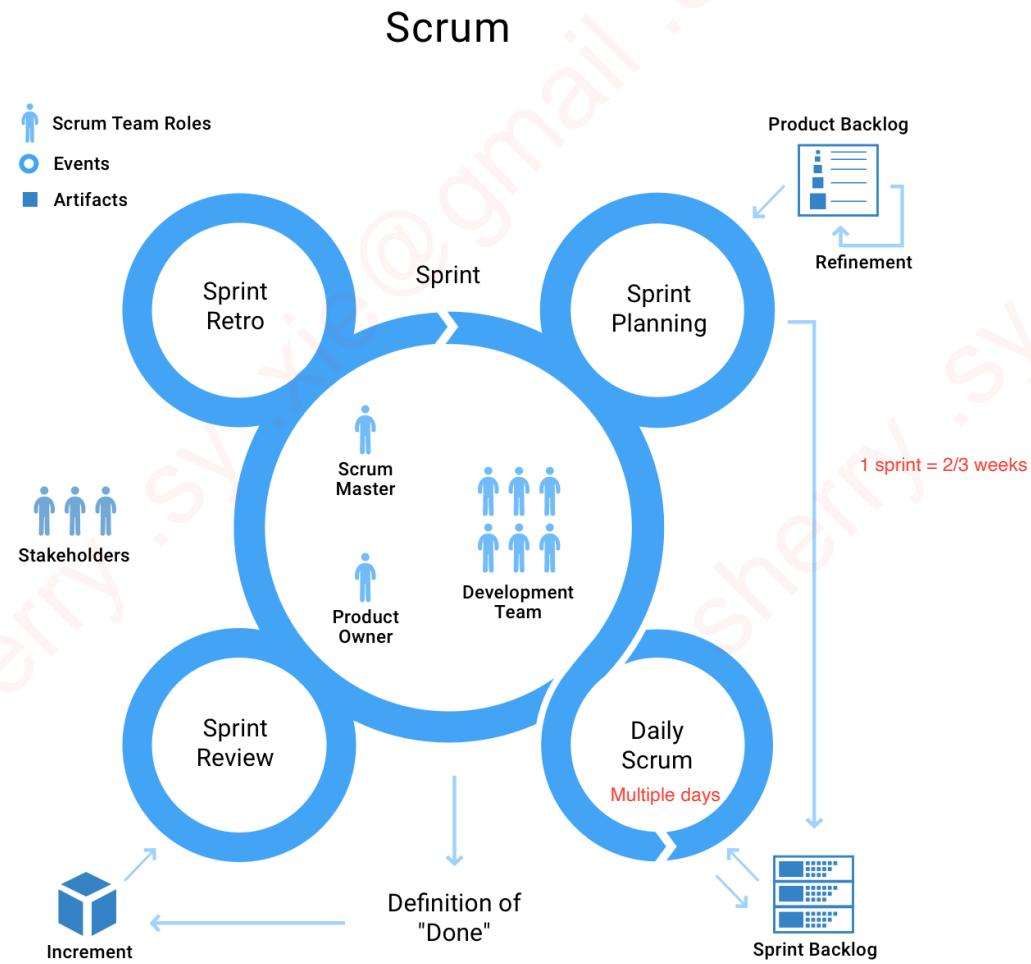
4-5 人一组，在10分钟以内完成以下任务：

- 用三个词总结每一条principle
- 选出你们最认同，最重要的两条principles
- 选出任何你们不认同，或者不理解的principle

Summary

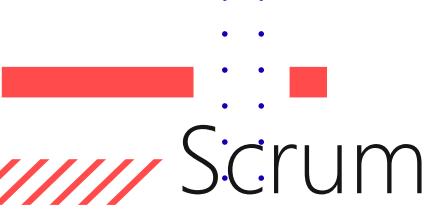
- 敏捷开发是一种理念/精神/价值观，而并不提供具体的方法
- Agile的原则是：
 - 减少浪费
 - 快速产出
 - 不断迭代
 - 交流沟通
 - 响应变化

Agile Methodologies



Scrum





Scrum is a **framework** within which people can address complex problems, while productively and creatively delivering products of the highest possible value.

Scrum is:

- Lightweight **tool** for enabling business agility
- Simple to understand, yet difficult to master

Scrum

Roles:

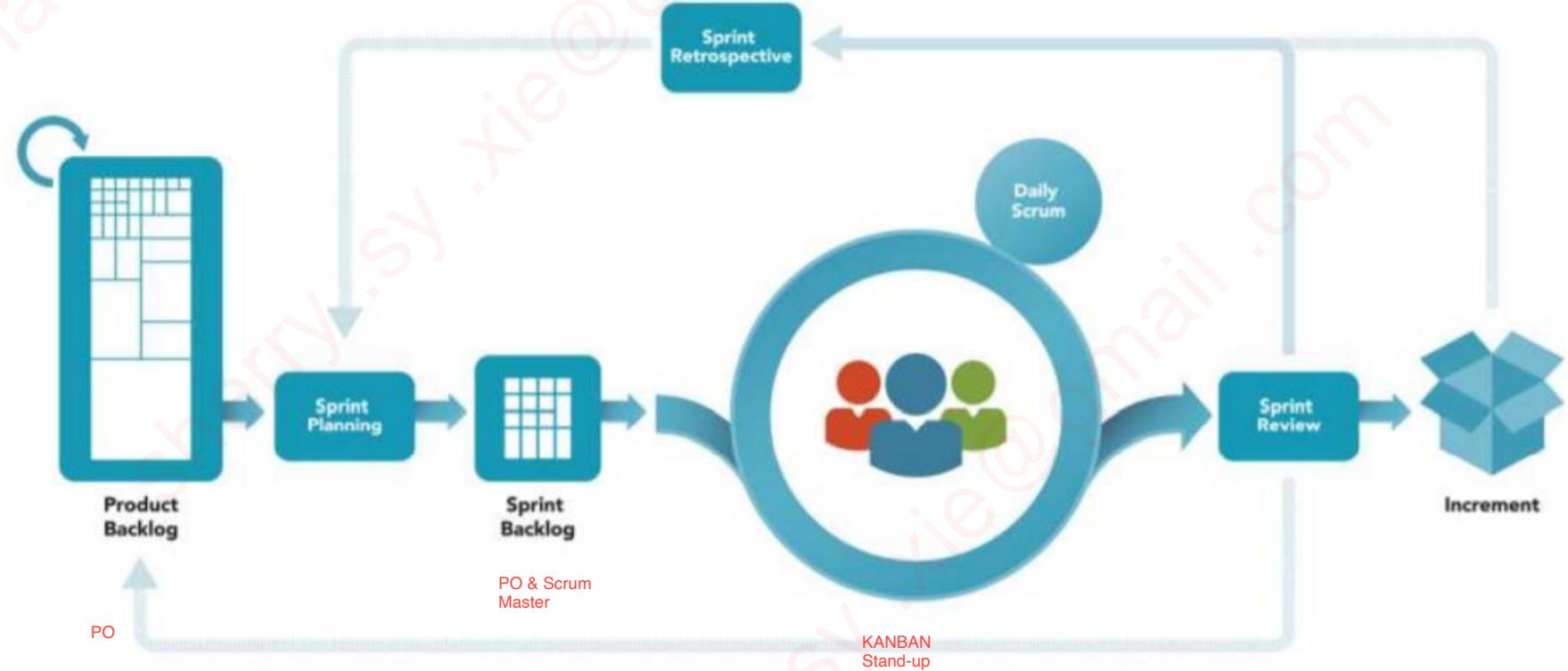
- Product Owner
- Development Team
- Scrum Master

Artifacts:

- Product Backlog
- Sprint Backlog
- Increment

Events:

- Sprint
- Sprint Planning
- Daily Scrum
- Sprint Review
- Sprint Retrospective



3

Roles:

- Product Owner
- Development Team
- Scrum Master

3

Artifacts:

- Product Backlog
- Sprint Backlog
- Increment

5

Events:

- Sprint
- Sprint Planning
- Daily Scrum
- Sprint Review
- Sprint Retrospective

5

Value propositions:

- Commitment
- Focus
- Openness
- Respect
- Courage

Scrum Retrospective Meeting

Sprint

Definition: A retrospective is a meeting held after a product ships to discuss what happened during the product development and release process, with the goal of improving things in the future based on those learnings and conversations.

What is the ideal outcome of a retrospective meeting?

Every retrospective should at a minimum result in a list of “things that went well” and “things that could use improvement.” Those lists may not be particularly long and exhaustive, but each project probably has a few standouts in each column.

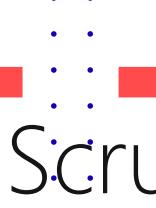
A Typical Sprint Retrospective Model

What worked well?

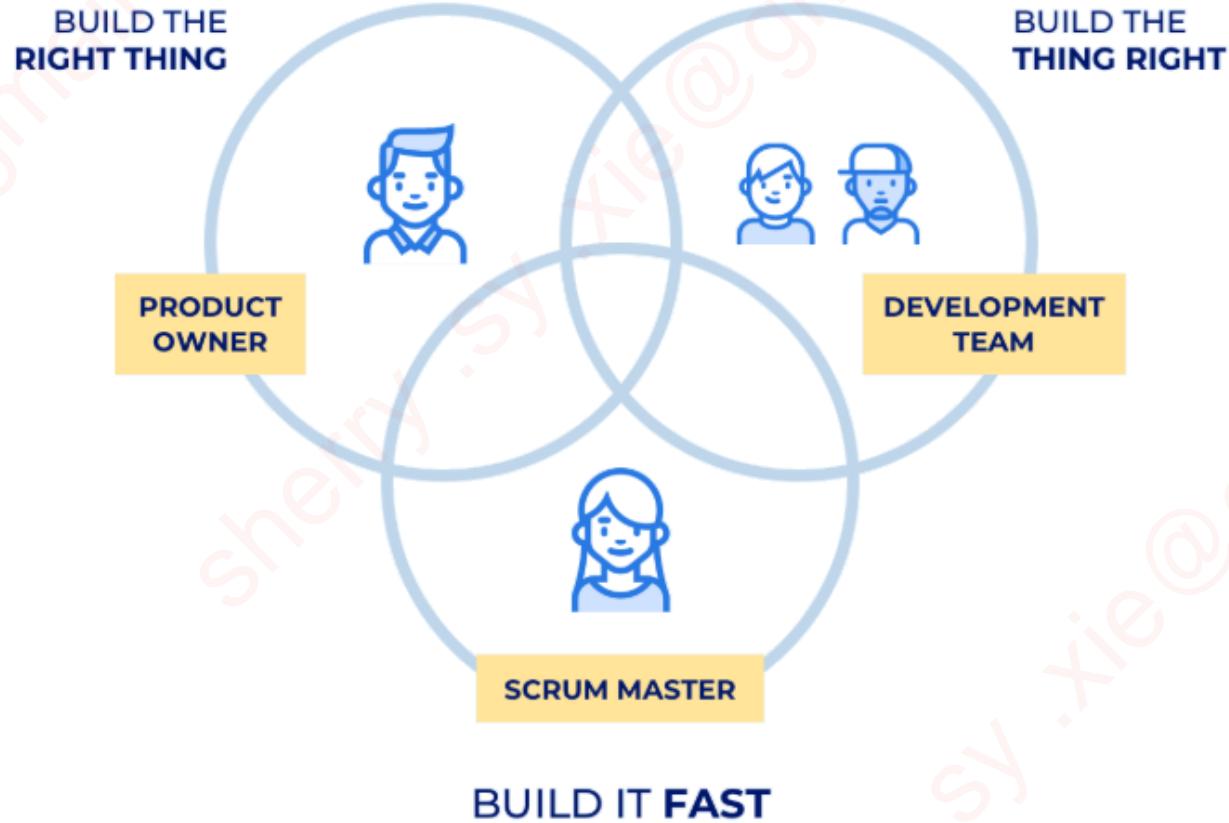
What could be improved?

What will we commit to doing in the next Sprint?

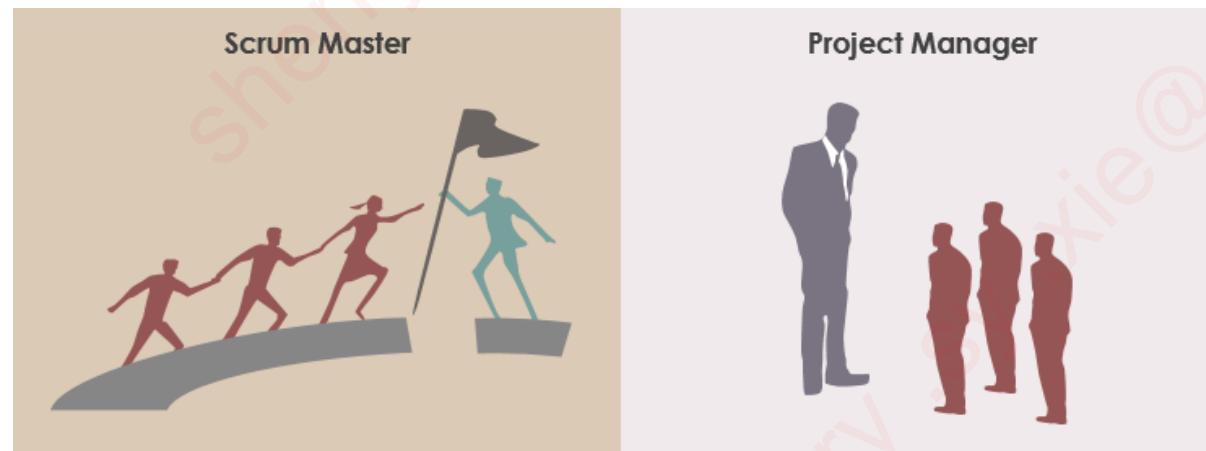
Scrum Team members make actionable commitments



Scrum Team Roles

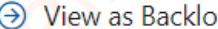


Scrum Master





PartsUnlimited Team   

Board Analytics | 

New In Progress 1/5 Done

 New item			
 262 Rewards Redemption	State	 New	
 264 Ratings for purchased items	State	 New	
		 0/1	
 261 Points Accrual on Purchases	State	 New	
 265 Supplier Feedback	State	 New	
 266 Customer issues			
 263 Ask for customer feedback	State	 In Progress	
 257 Ops needs the ability to quickly roll back to a known good state in the event of a critical problem in production.	State	 Done	
 258 As an Ops guy, I want to ensure that the legacy MRP system configuration is consistent.	State	 Done	
 259 As a business owner, I would like to know how much our historical spend is to help project future spend for budgeting + financials.	State	 Done	

Agile Backlog

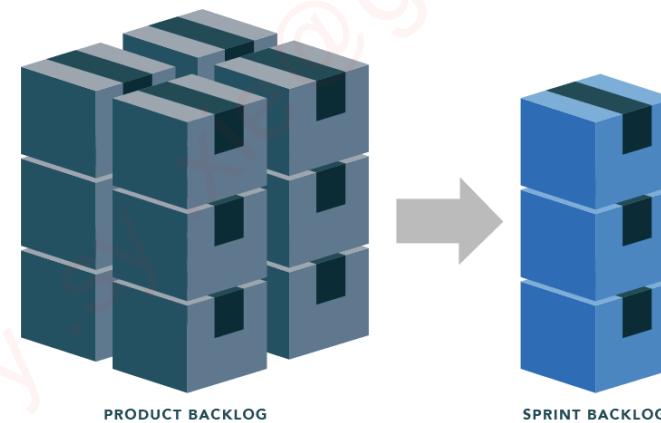
In Agile development, a product backlog is a prioritized list of deliverables (such as new features) that should be implemented as part of a project or product development.

Think of a product backlog as a wish list — not a to-do list.

This backlog is often fed by a strategic roadmap, then divided into themes, epics, sprints, and user stories. Most include items that would be completed within the next quarter or fiscal year.

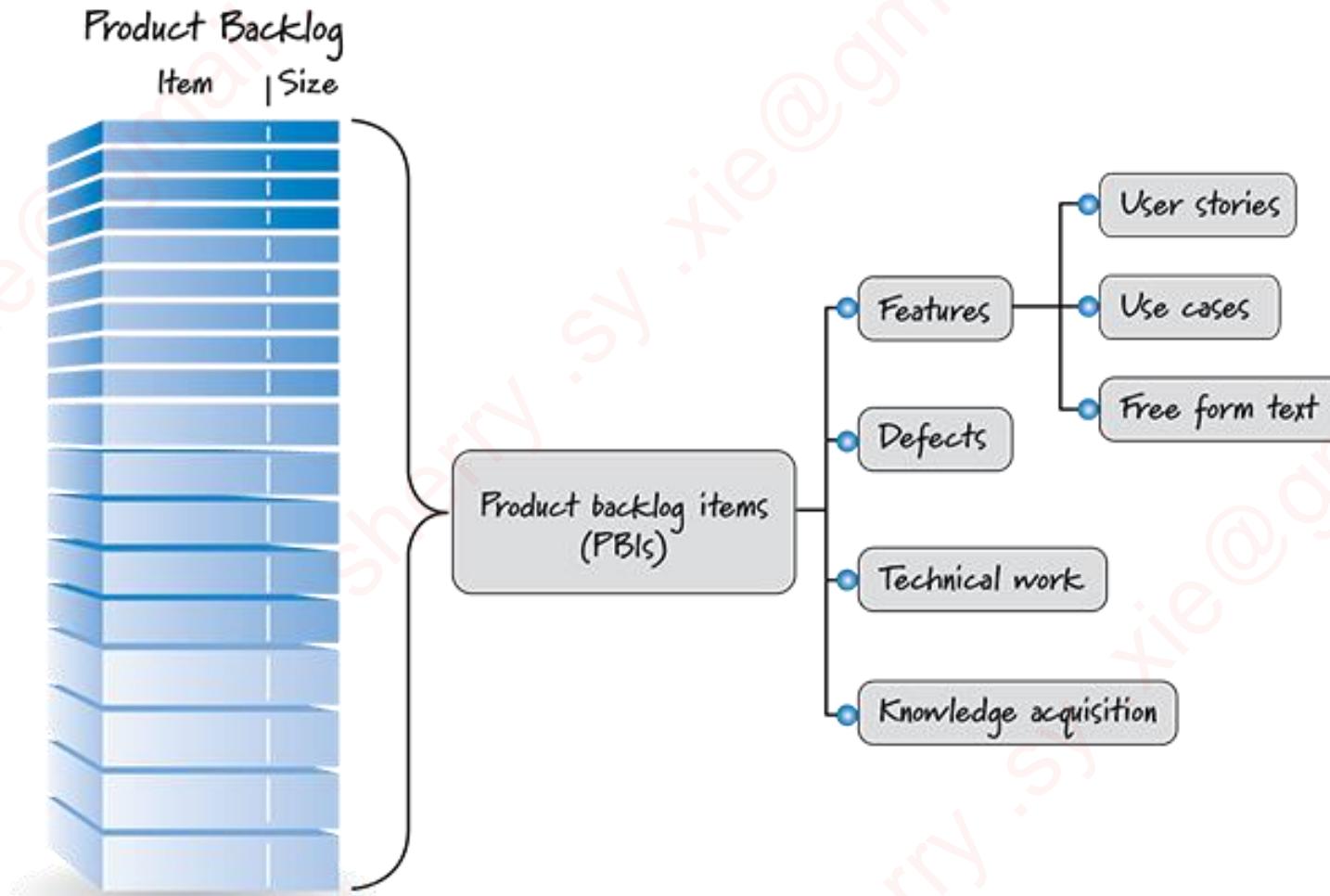


Item name	Status	Points	Product backlog priority	Release tag
▼ Our new product	🕒 In progress	Sum: 360 points	🟡 Medium priority	
▼ RA: Continuous integration	🔴 Not done	Sum: 75 points	🟢 Low priority	
New NMS solution	🔴 Not done	75 points	🔴 High priority	Release 1.0 2017-08-25
▼ RA: Protocols	🕒 In progress	Sum: 150 points	🔴 Very high priority	
IPv6	✅ Completed	100 points	🔴 Very high priority	Release 1.0 2017-08-25
Performance stats	🕒 In progress	50 points	🟡 Medium priority	Release 1.1 2017-09-08
▼ RA: Performance	🔴 Not done	Sum: 75 points	🔴 High priority	
Performance x10	🔴 Not done	75 points	🔴 High priority	Release 1.1 2017-09-08
▼ RA: Management	🕒 In progress	Sum: 60 points	🟡 Medium priority	
HSDPA	🔴 Not done	20 points	🟢 Very low priority	Release 1.2 2017-09-22
Configuration of cells	🕒 In progress	30 points	🟡 Medium priority	Release 1.2 2017-09-22
Improved upgrading support	✅ Completed	10 points	🔴 High priority	Release 1.1 2017-09-08



Product Backlog Items (PBIs)

Workitem = to do task



User Story – New Features

- User story = persona + need + purpose
e.g. **“As a [persona], I [want to], [so that].”**
- Acceptance Criteria

sherry.sy.xie@gmail.com

US-12201 Print items in proper format

Details Tasks 3 Issues Comments Attachments 2 History Dependencies

Description Edit

As a user I should have option to print any item with all the details, comments and other things. I should get printable view in browser and then should have option to print into different formats

Acceptance Criteria

- All the item information should be visible including title, ID, description, comments, attachment names, linked items tasks/issues/epics etc, associated items, dependencies etc
- On the preview page, I should option to print, download as
 - PDF
 - Word
 - XML(optional)
 - any other?
- All the items type should be printable
 - User Story
 - Epic
 - In case of Epic, we will show the related user stories and show only, ID, Title, Responsible, Status and priority
 - Tasks
 - Issues
- It should be possible to print the item details from almost anywhere, e.g.,
 - From boards widgets under context menu
 - In case of Epic or user story, from Epic or Backlog item context menu
 - From item detail view
 - From pop-up under context menu

Examples of Product Backlog Items

Technical Debt

As <technical debt>, I want <to be understood and prioritized appropriately> so that <we can maintain and improve the product without delay>.

Upgrading to the latest third-party libraries, making architectural changes to support better scalability, or refactoring the source code to prevent future maintenance issues.

Bugs

As a <bug>, I want <to be understood and prioritized appropriately> so that <problems are addressed early and the product is high quality>.

Research

As <research>, I want <to be understood and prioritized appropriately> so that <we can lower business risk and innovate>.

Research is instrumental when you know very little about how to implement a new feature or concept, or want to try something new. The output of these user stories, commonly called “spikes”, is not working code, but knowledge.

Practice Time



附: 提拉米苏制作步骤

- 制作手指饼干
- 调配提拉米苏糊
- 饼干上色灌浆
- 冷藏5小时

User Story

As a mother, I would like to have three tiramisus, so that I can feed my children.

Acceptance Criteria

- Lady fingers should be baked golden brown, not over cooked
- The cream mixture should contain custard, whipped cream, mascarpone cheese, sugar, espresso coffee and rum
- Tiramisu should be served cold
- Tiramisu should be served in plastic cups
- Spoons must be provided

Task

Can this user story be broken down into smaller tasks?

Planning Poker



Available on the
App Store



Practice Time

User Story

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Task

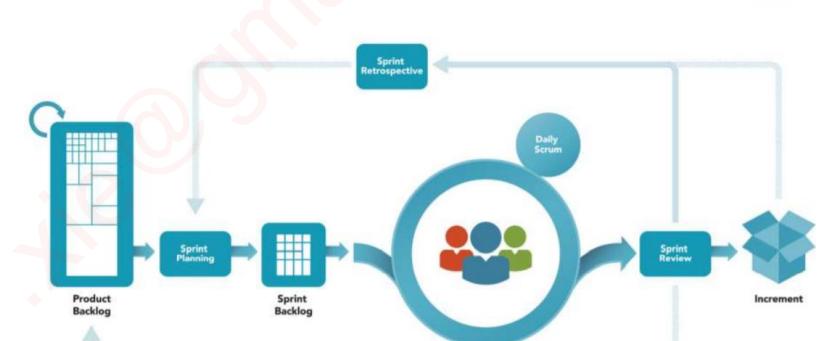
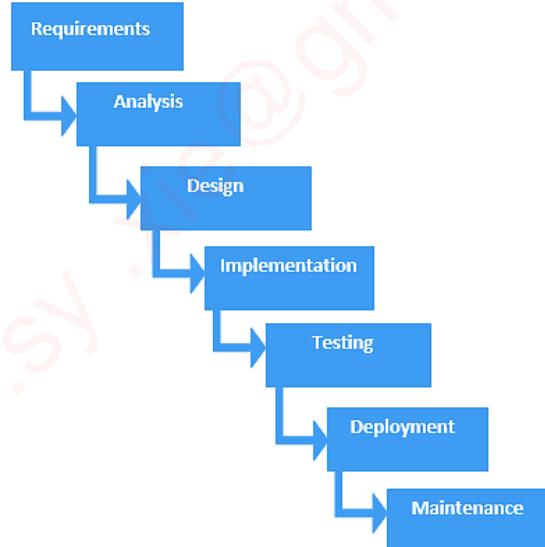
Use scrum poker, estimate the time for each task you have created.



附: 提拉米苏制作步骤

- 制作手指饼干
- 调配提拉米苏糊
- 饼干上色灌浆
- 冷藏5小时

Summary



AZURE DEVOPS



**Azure
Boards**

Plan, track, and discuss work across teams, deliver value to your users faster.



**Azure
Repos**

Unlimited cloud-hosted private Git repos. Collaborative pull requests, advanced file management, and more.



**Azure
Pipelines**

CI/CD that works with any language, platform, and cloud. Connect to GitHub or any Git provider and deploy continuously to any cloud.



**Azure
Test Plans**

The test management and exploratory testing toolkit that lets you ship with confidence.



**Azure
Artifacts**

Create, host, and share packages. Easily add artifacts to CI/CD pipelines.



<https://azure.com/devops>



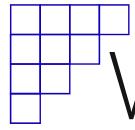


Agile Case Study



Agile @ Microsoft

Microsoft's journey to adopt an Agile mindset and DevOps culture.



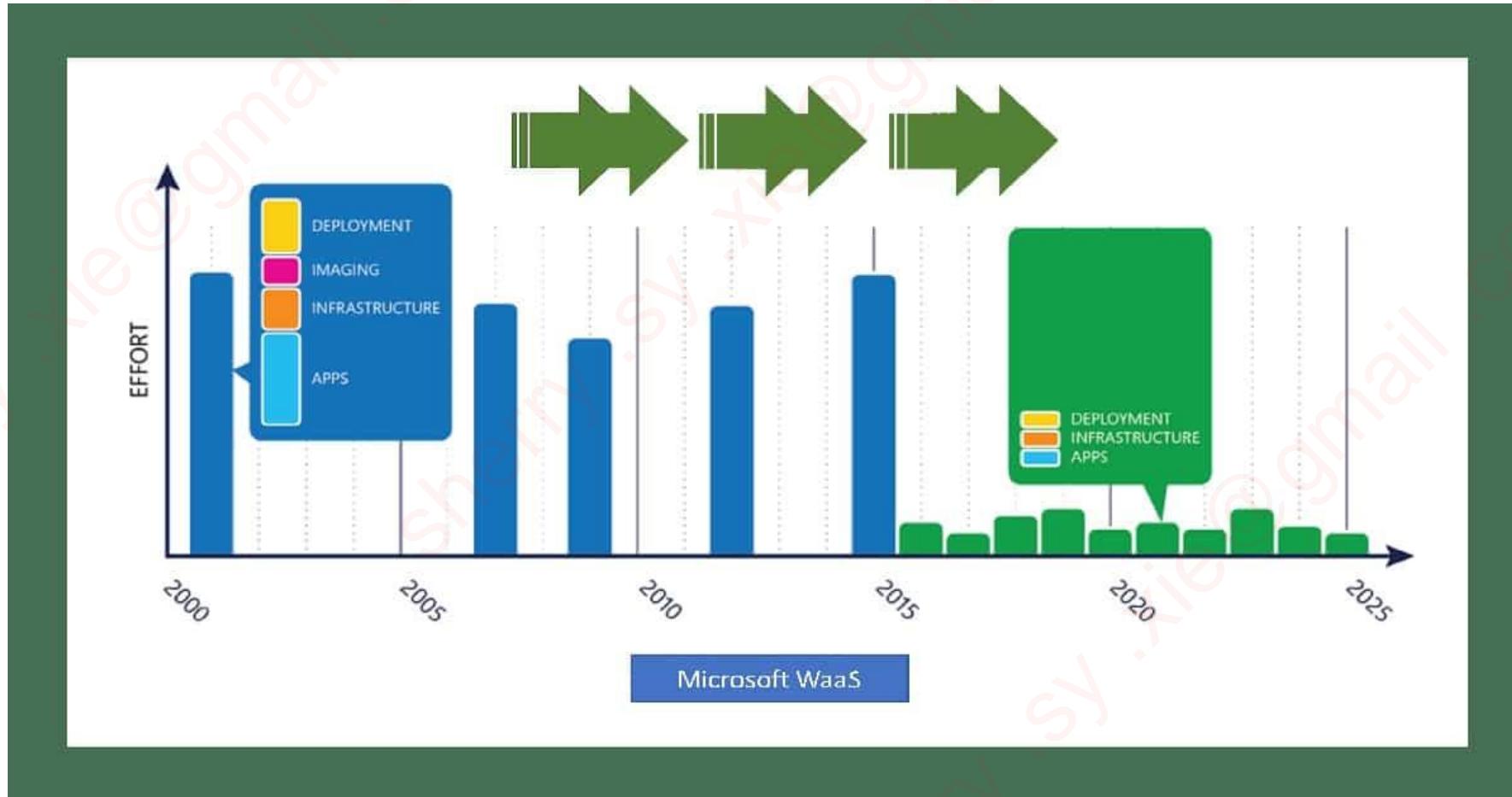
Windows Lift Cycle

Windows 10 version history	Date of availability	End of service for Home, Pro, Pro Education, and Pro for Workstations editions	End of service for Enterprise and Education editions
Windows 10, version 1909	November 12, 2019	May 11, 2021	May 10, 2022**
Windows 10, version 1903	May 21, 2019	December 8, 2020	December 8, 2020
Windows 10, version 1809	November 13, 2018	May 12, 2020	May 11, 2021**
Windows 10, version 1803	April 30, 2018	November 12, 2019	November 10, 2020
Windows 10, version 1709	October 17, 2017	April 9, 2019	October 13, 2020
Windows 10, version 1703	April 5, 2017*	October 9, 2018	October 8, 2019
Windows 10, version 1607	August 2, 2016	April 10, 2018	April 9, 2019
Windows 10, version 1511	November 10, 2015	October 10, 2017	October 10, 2017
Windows 10, released July 2015 (version 1507)	July 29, 2015	May 9, 2017	May 9, 2017

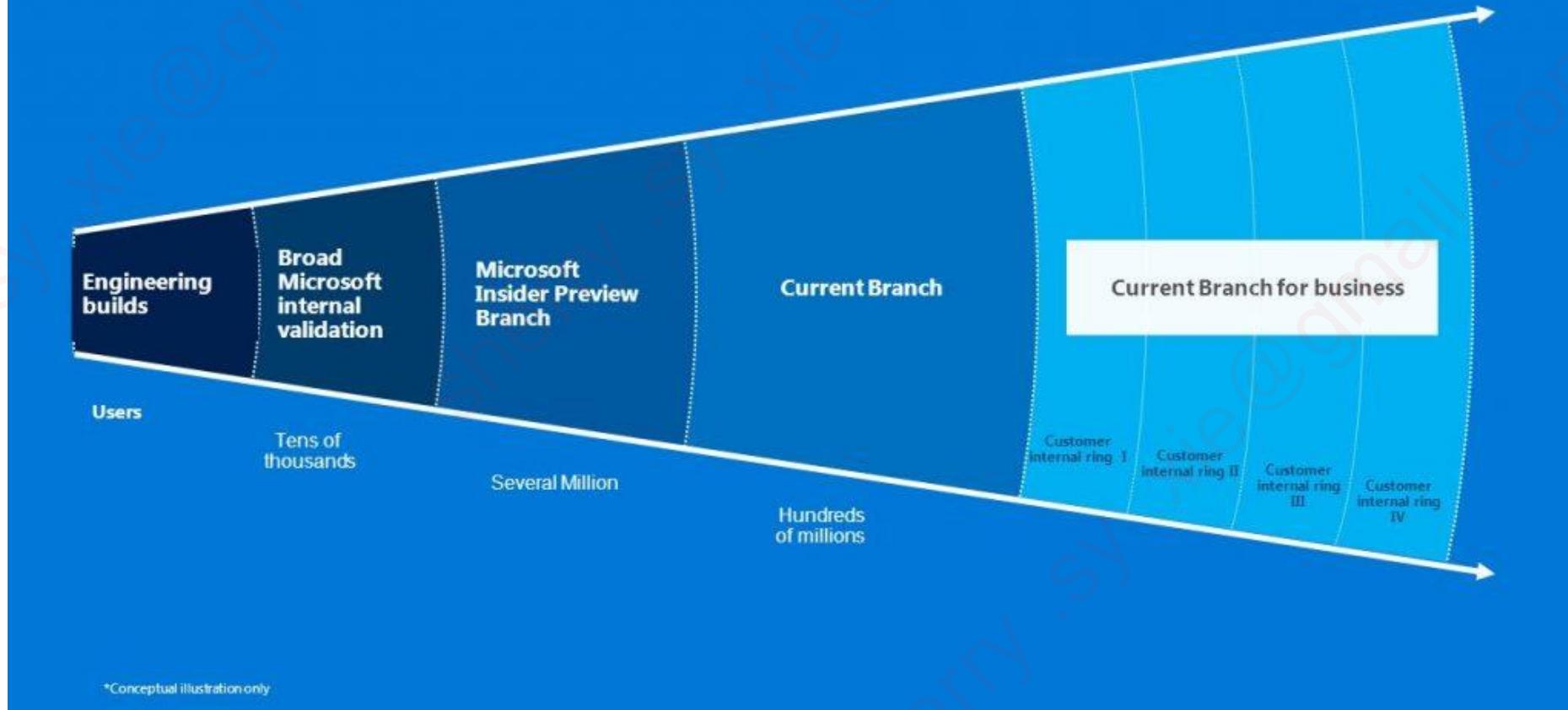
* Windows 10, version 1703 for Enterprise, Education, and IoT Enterprise editions were released on April 11, 2017.

** Serviced for 30 months from release date per policy updated at September 6, 2018.

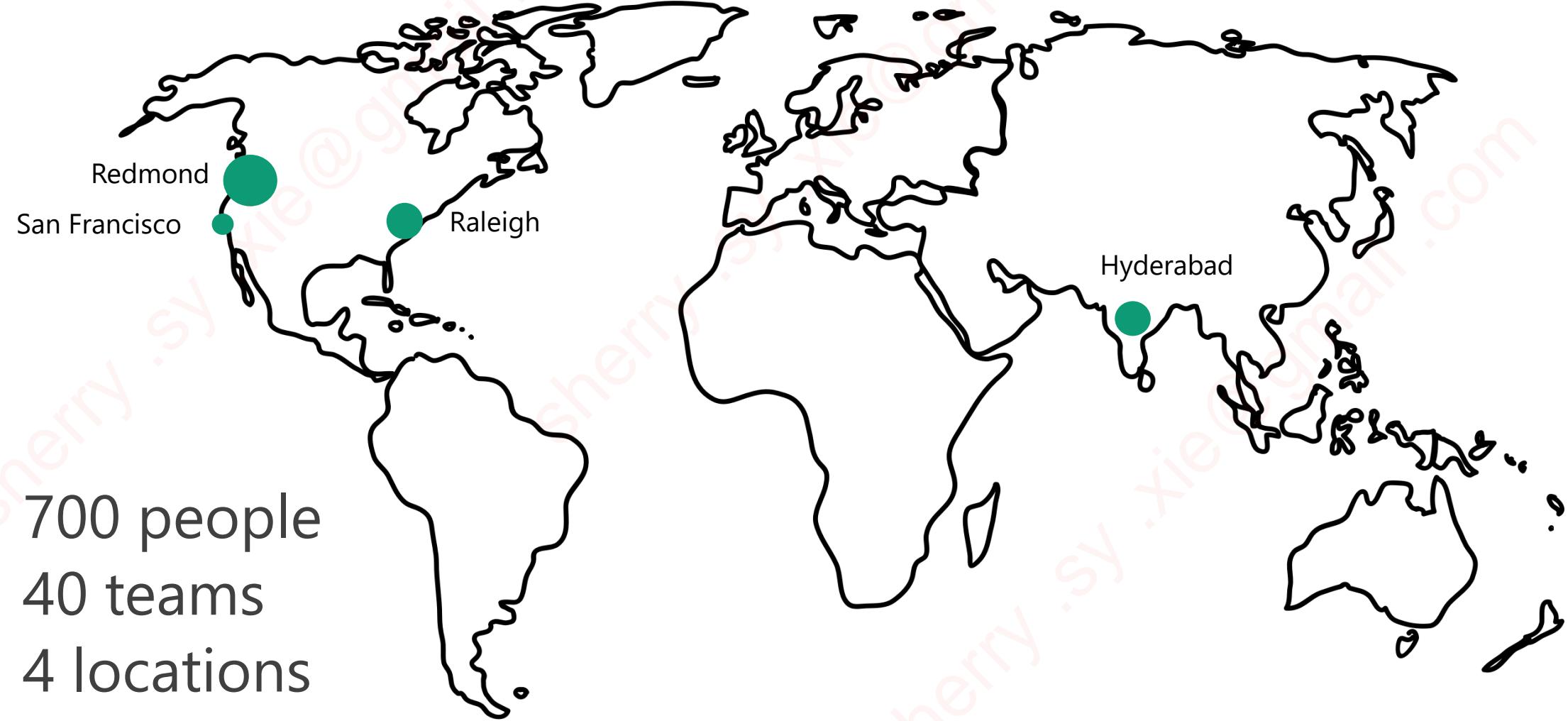
<https://support.microsoft.com/en-us/help/13853/windows-lifecycle-fact-sheet>



Windows as a Service – rings



THE TEAM



THE JOURNEY

Sprint 1
August 2010



2010

2011

2012

2013

2014

2015

2016

2017

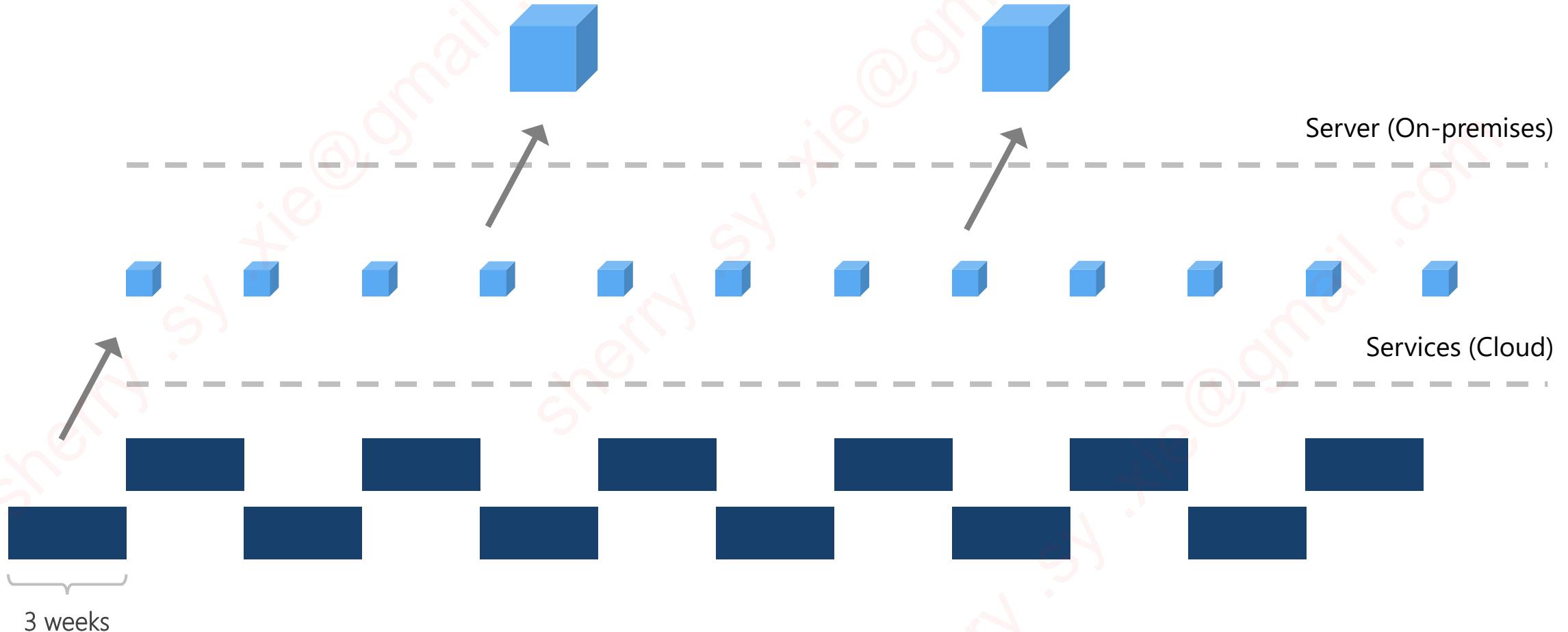
2018

2019

Sprint 147
January 2019



DELIVERY



LONG SCHEDULES



PRE-DEFINED MILESTONES

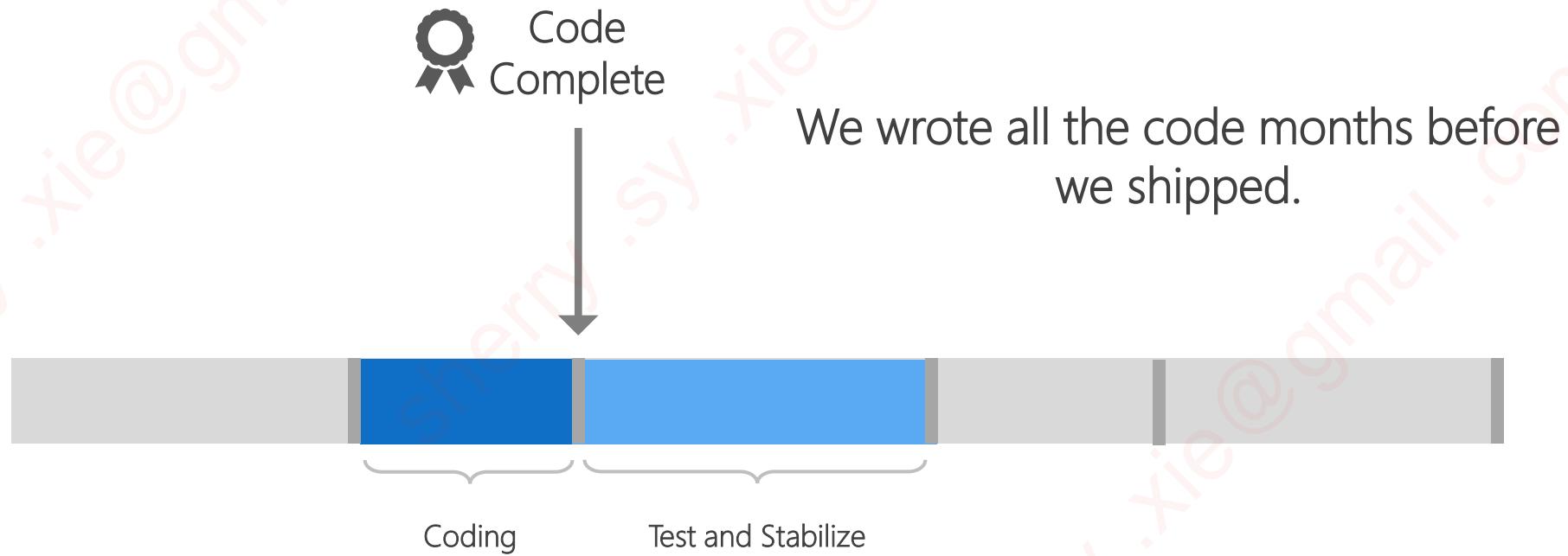


UP-FRONT PLANNING

We knew exactly what to build...
and we knew it was right!

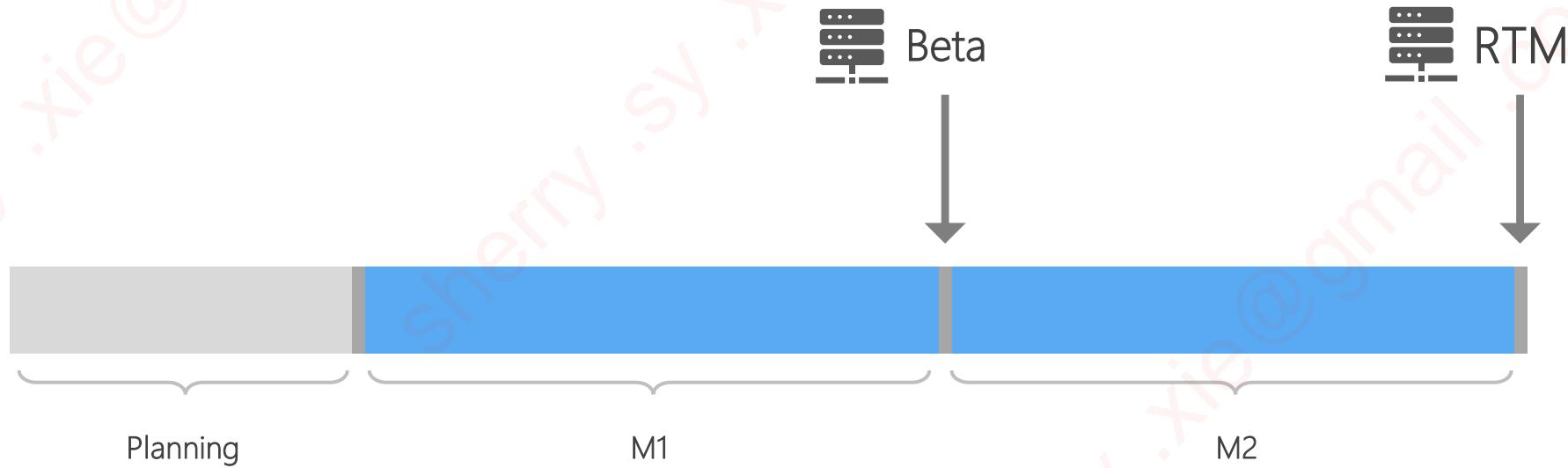


CODE, TEST, STABILIZE

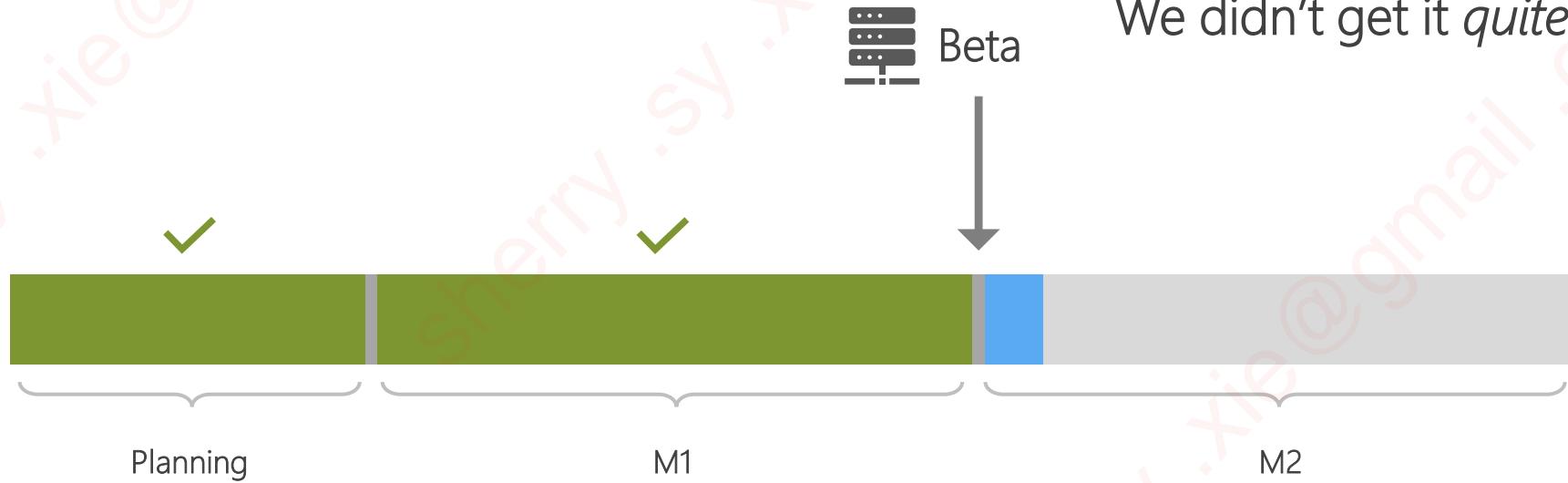


LONG RELEASES

We had a perfect schedule and knew exactly when the product would be ready.



FEEDBACK?



... IN THE NEXT RELEASE

"Great feedback. Thanks! We'll take a look in planning for the next release. We should get it to you... in a few years."



Q: How well did it work?

A: Very well in the era in which it was born. But ...

“Firms today experience a much higher velocity of business change. Market opportunities appear or dissolve in months or weeks instead of years.”

Diego Lo Giudice and Dave West, Forrester
February 2011
Transforming Application Delivery

What changed?

Before

4-6 month milestones
Horizontal teams
Personal offices
Long planning cycles
PM, Dev, Test
Yearly customer engagement
Feature branches
20+ person teams
Secret roadmap
Mountains of Bug debt
100 page spec documents
Deep organizational hierarchy
Success is a measure of install numbers
No concept of work in progress (WIP)
Features shipped once a year

After

3-week sprints
Vertical teams
Team rooms
Continual Planning & Learning
PM & Engineering
Continual customer engagement
Everyone in master
8-12 person teams
Publicly shared roadmap
Minimal debt
Specs in PPT
Flattened organization hierarchy
User satisfaction determines success
WIP Limits measured
Features shipped every sprint

“Culture eats strategy for breakfast.”

Peter Drucker
(maybe?)

KEY CHANGES

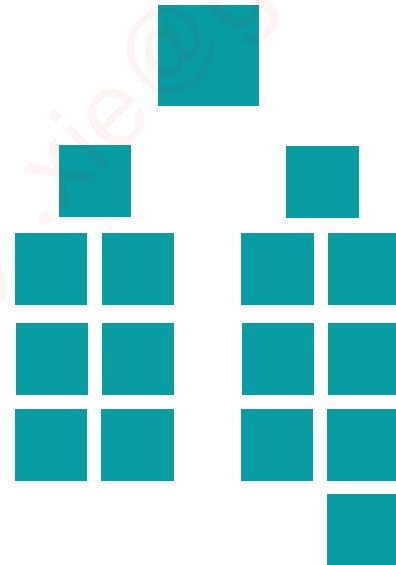
1. We changed our approach to people
2. We changed how we plan & learn
3. We created new ways to stay healthy
4. Our engineering evolved to align with our culture

“Individuals and interactions over...
processes and tools.”

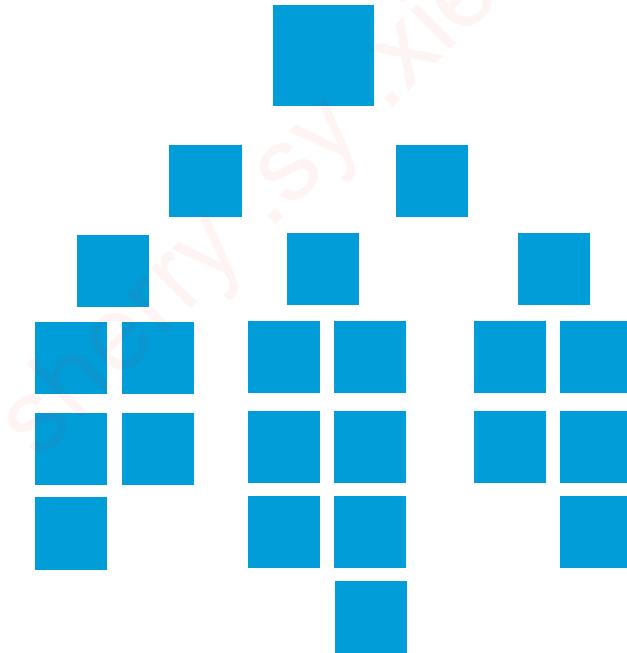
Agile Manifesto
2001

ROLES

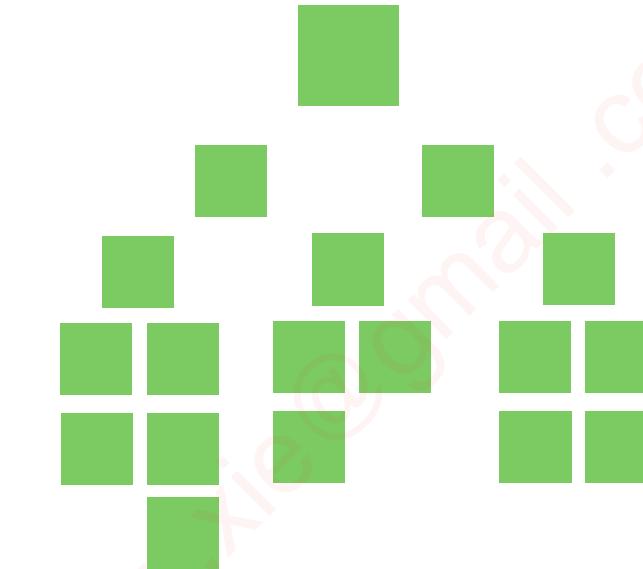
Program Management



Dev

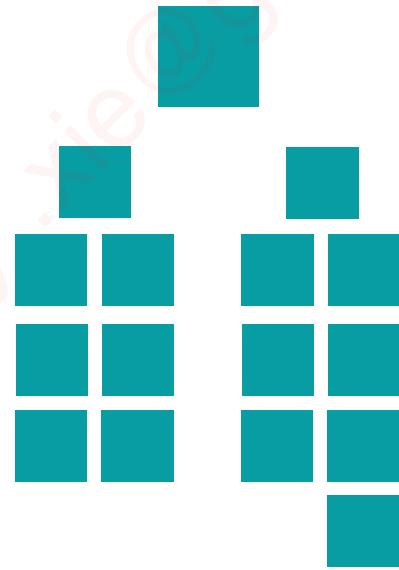


Test

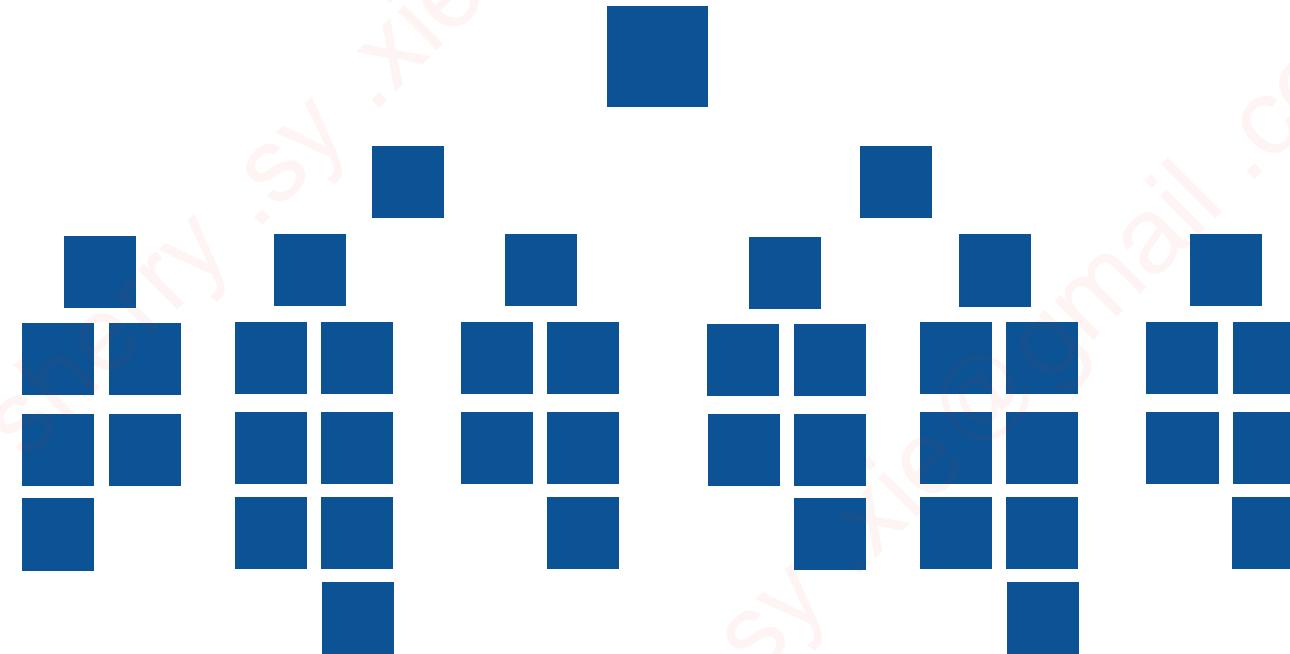


ROLES

Program Management



Engineering

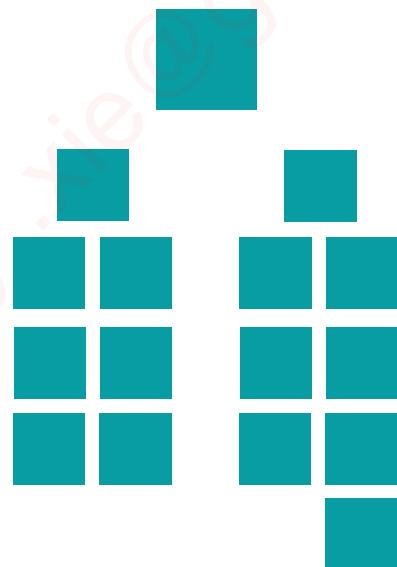


WHAT we're building
WHY we're building it

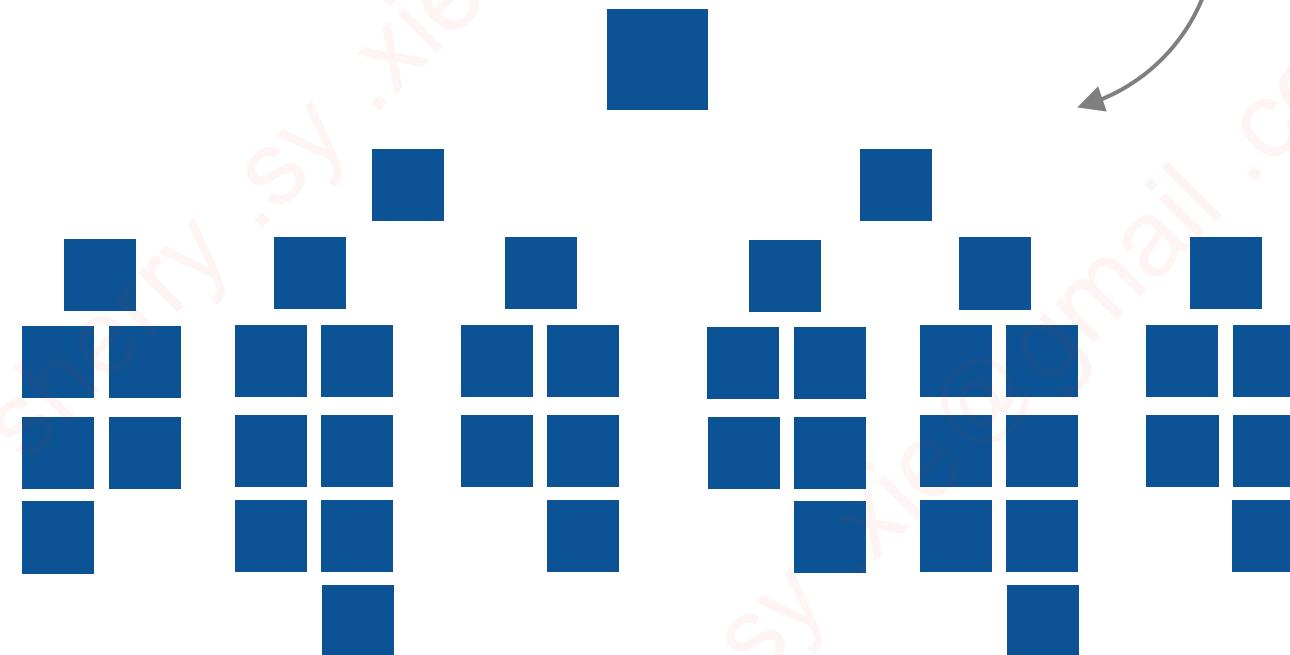
ROLES

HOW we're building it
Ensuring we're building QUALITY

Program Management



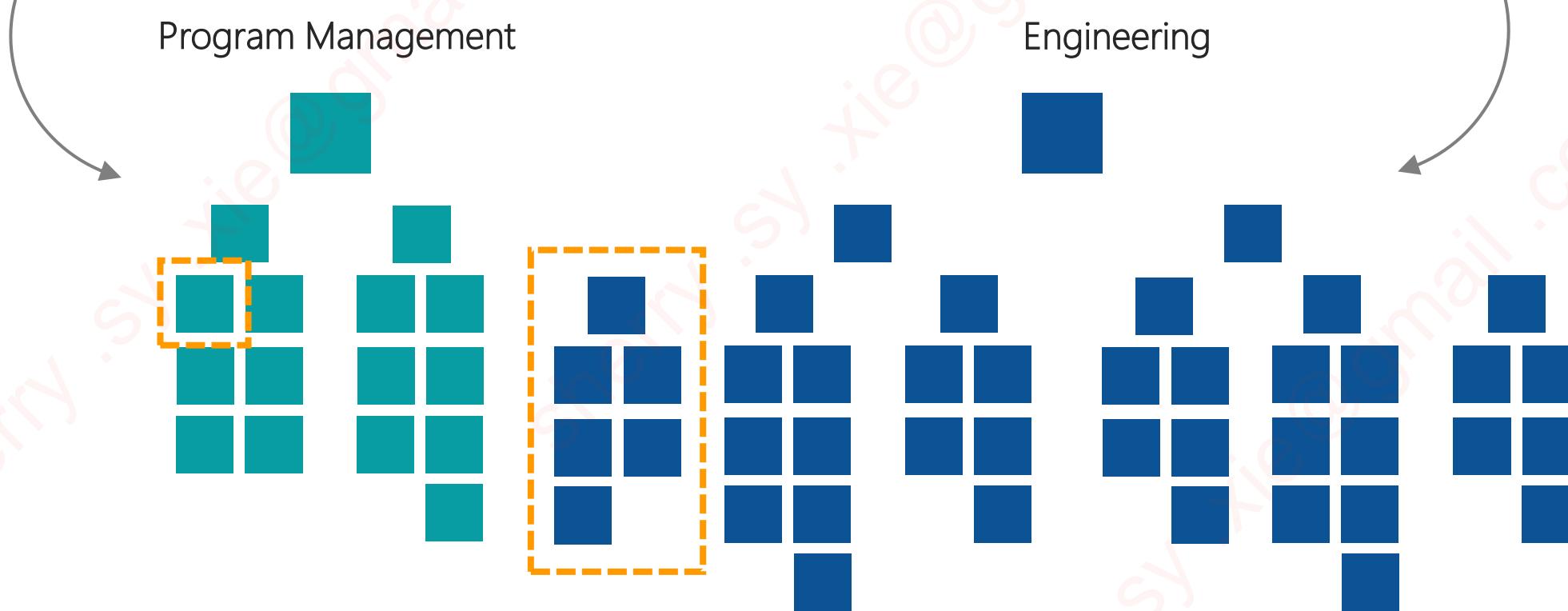
Engineering



WHAT we're building
WHY we're building it

TEAMS

HOW we're building it
Ensuring we're building QUALITY

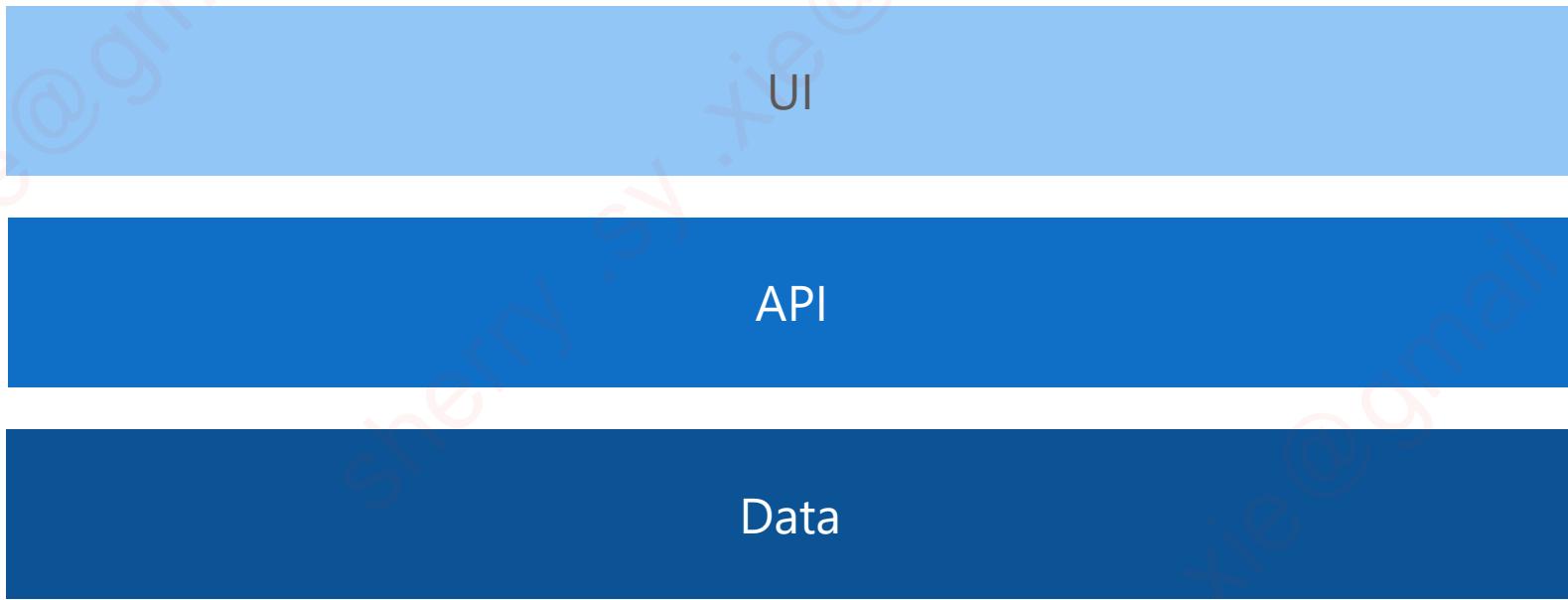


TEAMS

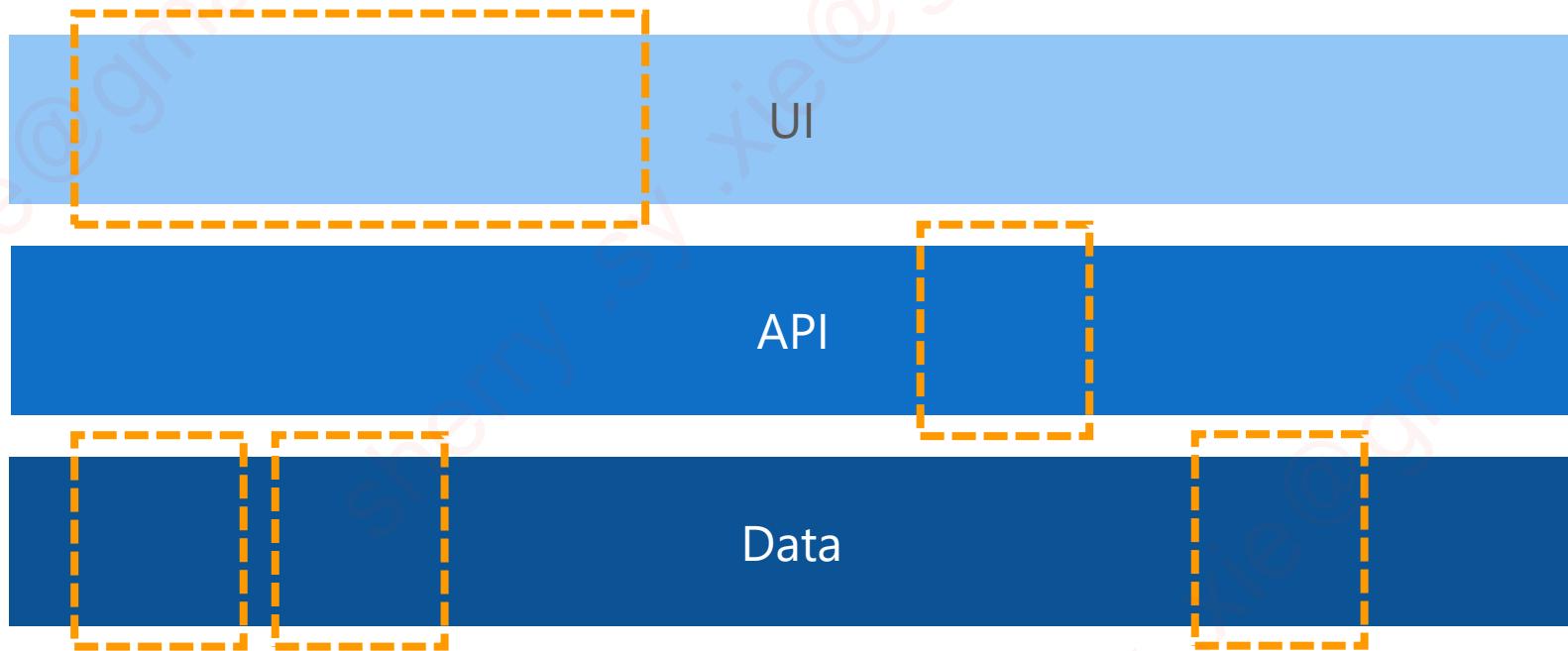
- Cross discipline
- 10-12 people
- Co-located (for the most part)
- Physical team rooms
- Self managing
- Clear charter and goals
- Intact for 12-18 months
- Own features in production
- Own deployment of features



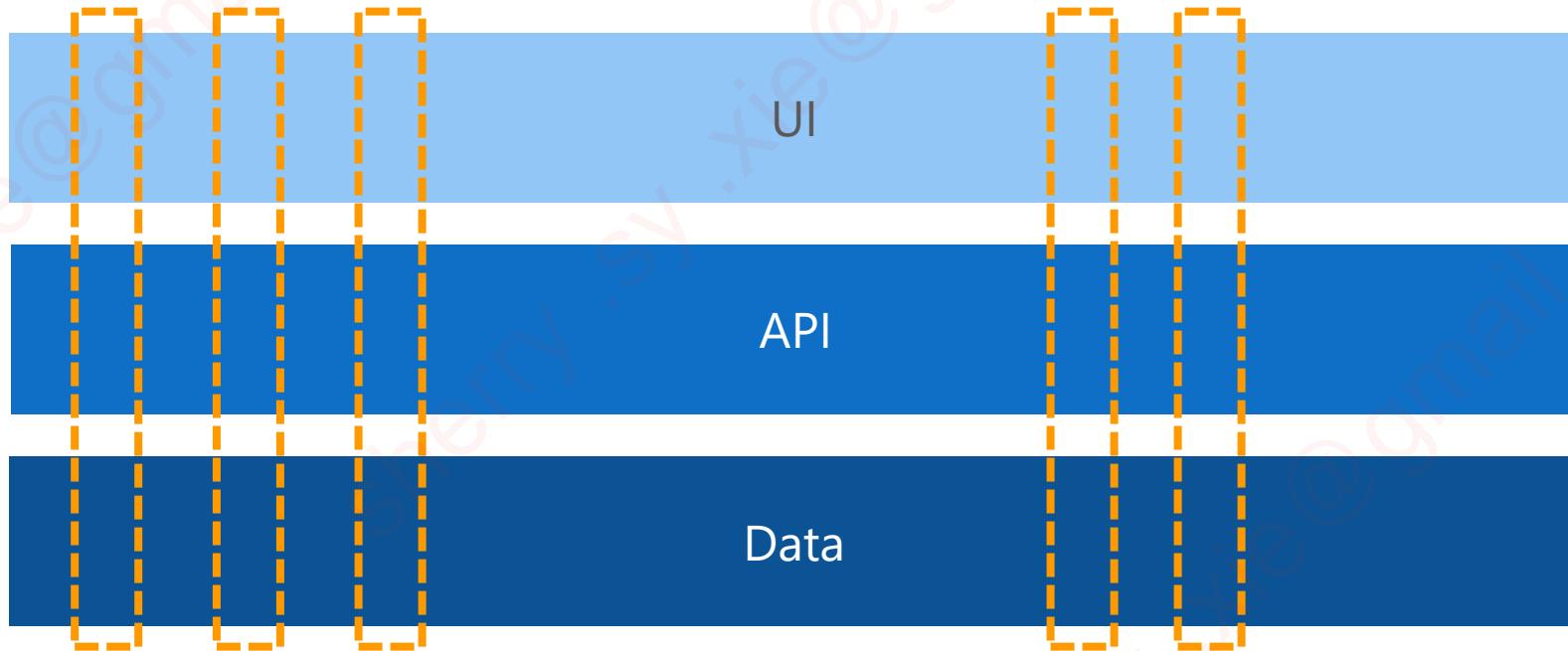
TEAMS



INSTEAD OF HORIZONTAL...



WE STRIVE FOR VERTICAL

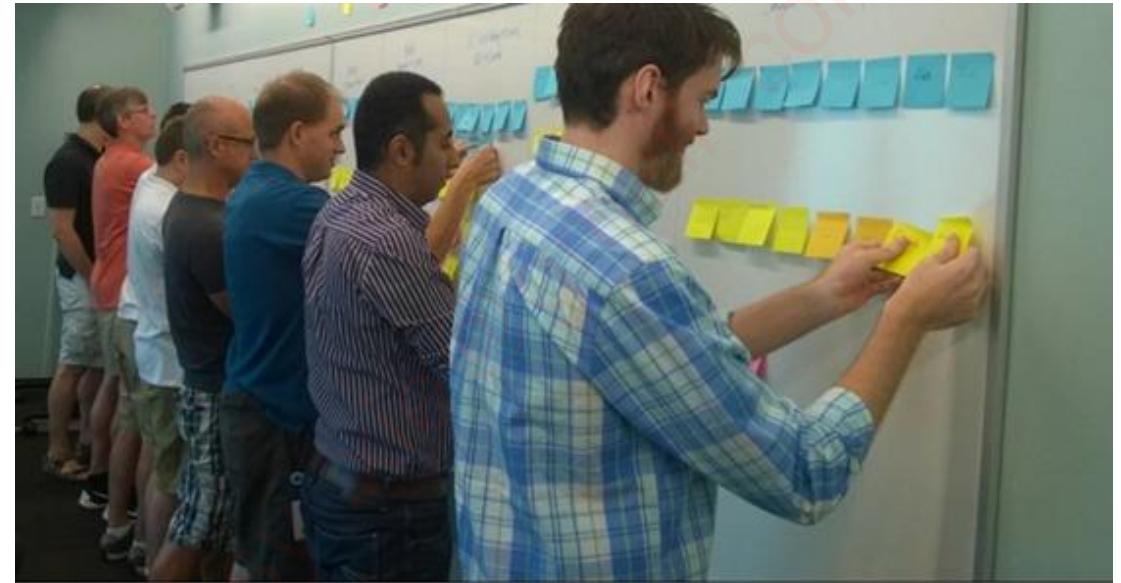


SELF FORMING TEAMS

We have chosen to re-think the charter and make-up of our teams at strategic checkpoints. This happen every 18 months (or so).

The “Yellow Sticky” exercise:

- Autonomy: Let team choose what they want to work on.
- Alignment: Ensure we've got the right balance across teams.



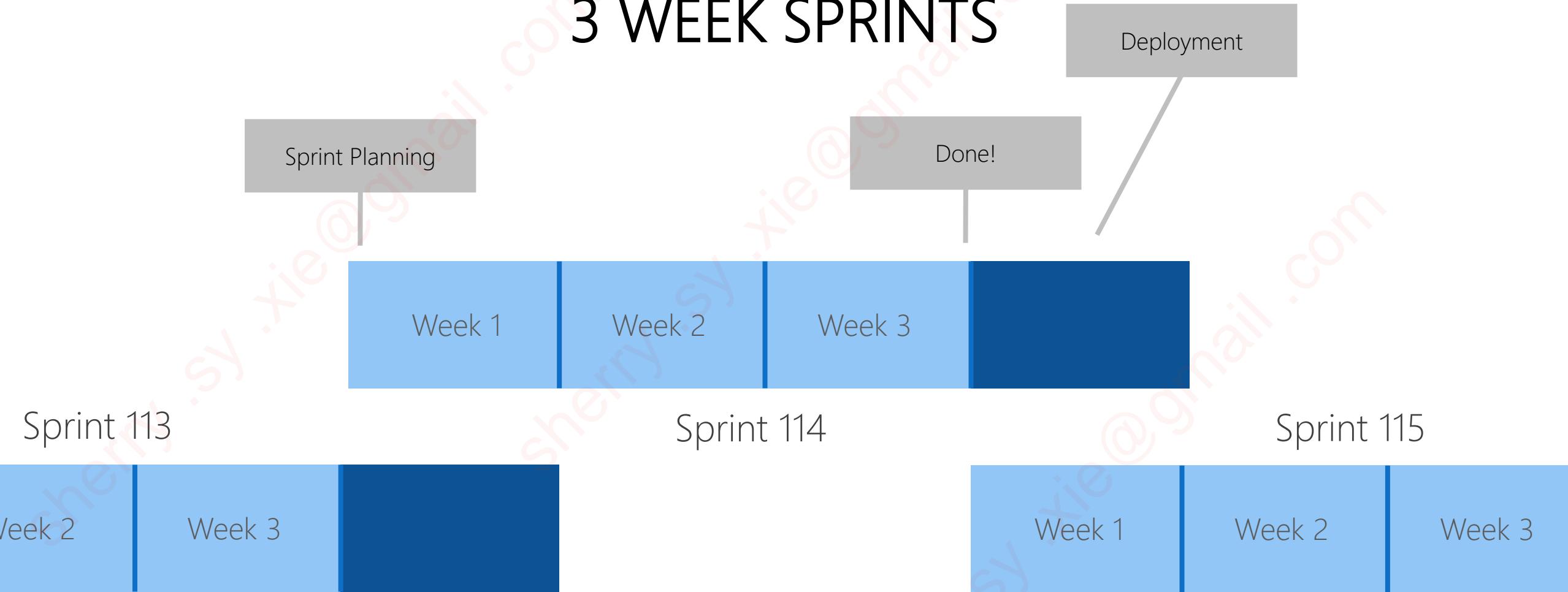
<http://aka.ms/sefformingteams>

Blog post from Brian Harry, Corporate Vice President, describing the process



How do teams stay connected?

3 WEEK SPRINTS



SPRINT MAIL

✉ Value delivered during the sprint

✉ Video demonstrating the value

✉ What the team is planning to accomplish in the next sprint

Sondra Batbold | VSTS Sprint Communication; VSTS Leadership; Blueprint | Blueprint S113 Summary/S114 Plan | Expires Never

You replied to this message on 2/14/2017 9:12 PM.

Sprint 113 Summary

Deliverables

- Updates to Plan settings no longer require full page refresh
- Fit and finish improvements to Delivery Plans:
 - Improved space and layout for team and backlog level
 - Added backlog links for quick access
 - Improved scroll behavior
- Field criteria allows users to tailor the plan view based on specific criteria (ex: only view cards with tag: Blocked) – will dogfood to Stage 0 with S113
- Addressed the bulk of the Accessibility bugs for the Kanban board as well as the Kanban settings experience
- Closed 45 bugs

Click to view video (audio, 2 mins)



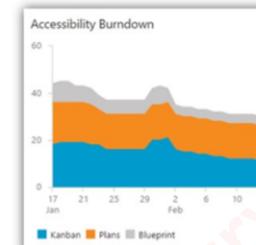
Blueprint - Sprint 113

By the numbers:

Agile - Blueprint ★

Team	Count
Blueprint Features	2 Feature
Blueprint Stories	52 Bug, 4 DTS Task, 20 User Story

Accessibility Burndown



Sprint 114 Plan

Deliverables

- Delivery plan: Field Criteria allows users to tailor their plans by applying query clauses to the plan data set. [Spec]
- Accessibility: wrap up Kanban settings and start Accessibility work for Delivery Plans
- Office Integration: Diagnostics troubleshooting for Office integration bugs on MSDN
- Dev14 Update 4: port over 3 DTS fixes and 3 Bug fixes
 - DTS Task 887828: DTS-TFS2015 @Today variable not working in French board styles
 - DTS Task 886428: DTS-TFS 2015.3 | Card styling rules doesn't apply on using @Heute (for @Today) in Deutsch (Deutschland) Locale.
 - DTS Task 878292: DTS: Work item Title Not Showing in Chrome version 55 and Multiple Tasks Added
 - Bug 619011: Board styles issue in German
 - Bug 599181: Macro Me alone is being evaluated and saved in localized format
 - Bug 797545: Title is not in edit mode when creating a new item from the board

New delivery plan

A delivery plan shows you when work will be delivered across your teams. The plan overlays each teams' sprint onto a familiar calendar view. You can view multiple backlogs and multiple teams across your whole account. Learn more ↗

Name: H2 Planning

Description: High priority items for the second half of 2017

Project: GoldPeak

Team: GoldPeak Team

Backlog: Stories

+ Add team

Customize your plan ↗

Field	Operator	Value
Priority	=	1
Tags	CONTAINS	2017 H2

+ Add new clause

Create

Customized plan showing priority and tag clauses

View our [Blueprint team Delivery Plan](#) for more details

BENEFITS

1. Dependencies between teams are minimized
2. Teams learn how to work together
3. We always have cross-discipline ownership
4. Teams have autonomy
5. Progress is shared continually



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Q & A