



# DevOps Transformation

A Case Of History Repeating

# Hi, I'm Andy...

- Sky Betting and Gaming for the last 5 Years
- Current role Platform Engineer.
- Proponent of grassroots DevOps.



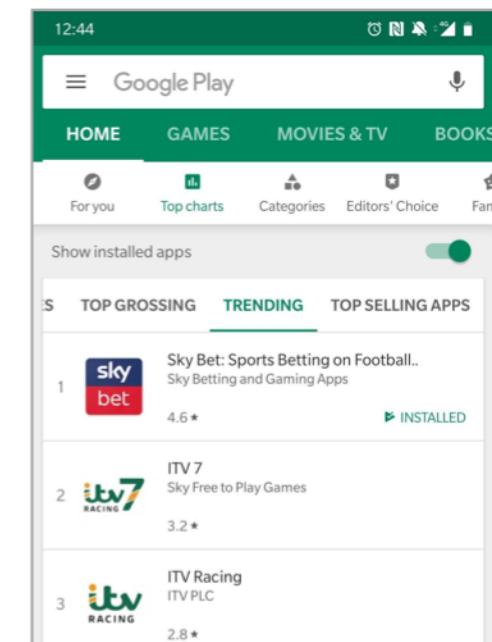
**LeedsDevops**

Supporting the DevOps community in Leeds since 2013

 @andyburgin - Pronouns He/Him



# Our Products



# Facts and Figures

1400 Employees



20% - 30% YOY growth for 5 years

June 2018 Revenue £670M



New Leeds 134000 sqft HQ opens 2020

<https://www.skybettingandgaming.com/en/media/company-news/2018/sky-betting---gamings-results-for-the-year-to-30-june-2018.html>

The screenshot shows a web browser window with the title "The Stars Group to Acquire Sky" and a "Not Secure" warning. The page features the The Stars Group logo and navigation links for THE STARS GROUP, BRANDS, CAREERS, OUR RESPONSIBILITY, PRESS CENTER (highlighted in red), and CONTACT. The main headline reads "THE STARS GROUP TO ACQUIRE SKY BETTING & GAMING FOR \$4.7 BILLION". Below the headline is the date "20 APR 2018". Navigation arrows for "Previous Article" and "Next Article" are visible. A sub-headline "LANDMARK TRANSACTION COMBINES TWO LEADERS IN ONLINE GAMING" is present, followed by a detailed paragraph about the transaction.

THE STARS GROUP TO ACQUIRE SKY BETTING & GAMING FOR \$4.7 BILLION

20 APR 2018

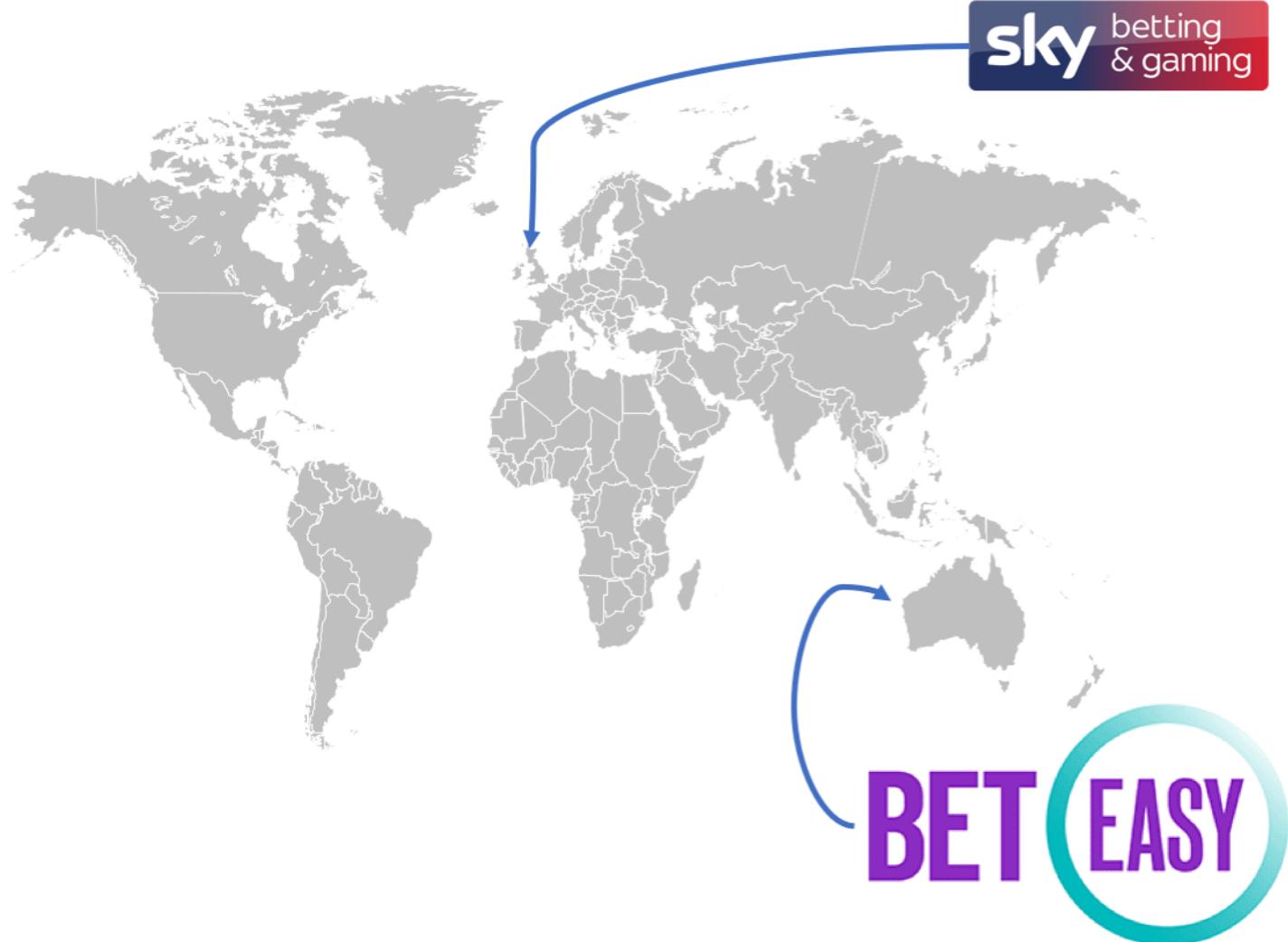
< Previous Article      Next Article >

LANDMARK TRANSACTION COMBINES TWO LEADERS IN ONLINE GAMING

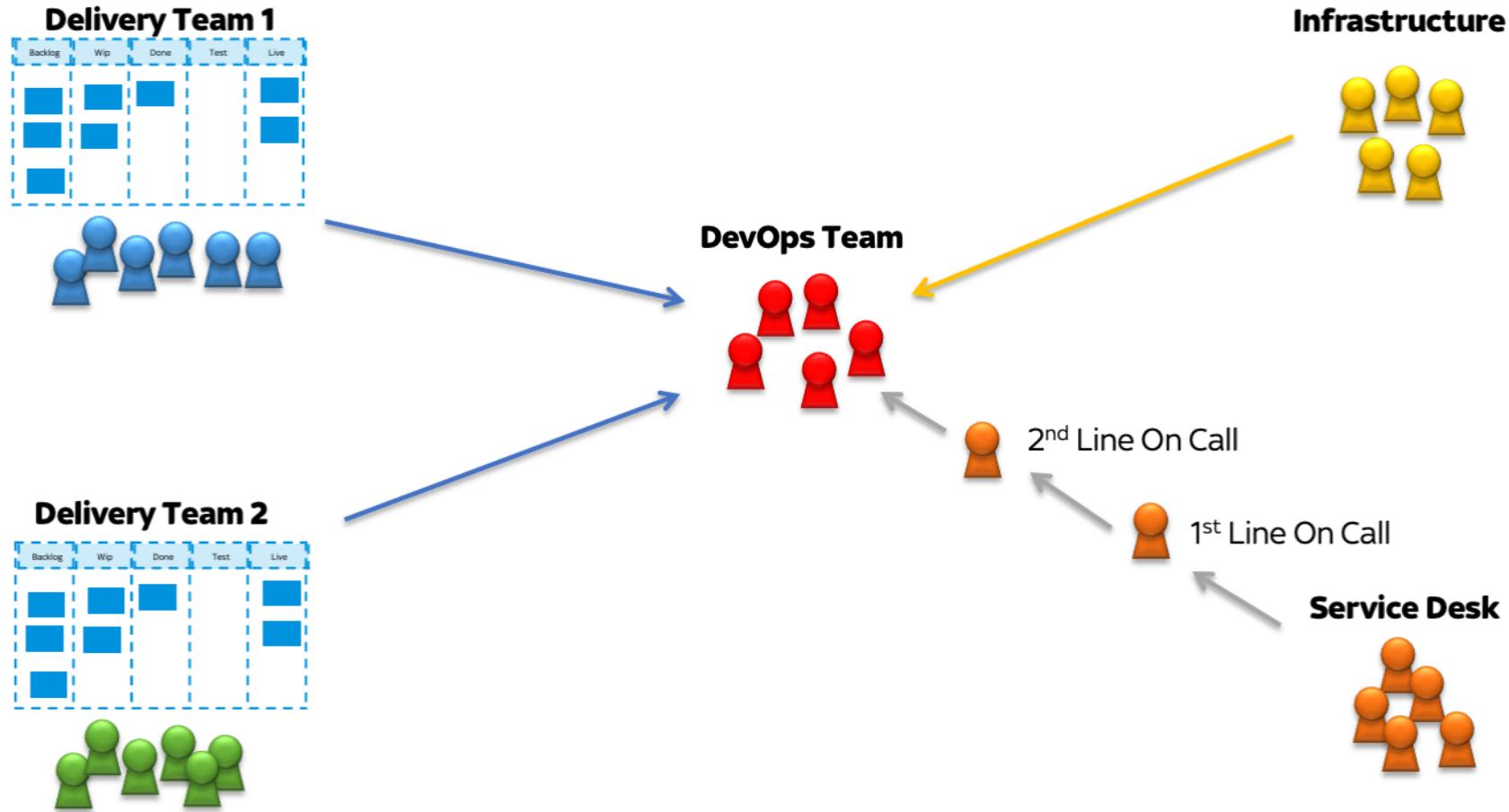
TORONTO – April 21, 2018 – The Stars Group Inc. (NASDAQ: TSG; TSX: TSGI) (“The Stars Group” or “the Company”) announced today that it has agreed to acquire Sky Betting & Gaming (“SBG”) from CVC Capital Partners (“CVC”) and Sky plc (LSE: SKY) (“Sky”) in a cash and stock transaction valued at \$4.7 billion. This combination will result in the world’s largest publicly listed online gaming company.

<http://www.starsgroup.com/press-center/the-stars-group-news/the-stars-group-to-acquire-sky-betting-and-gaming-for-4-7-billion->

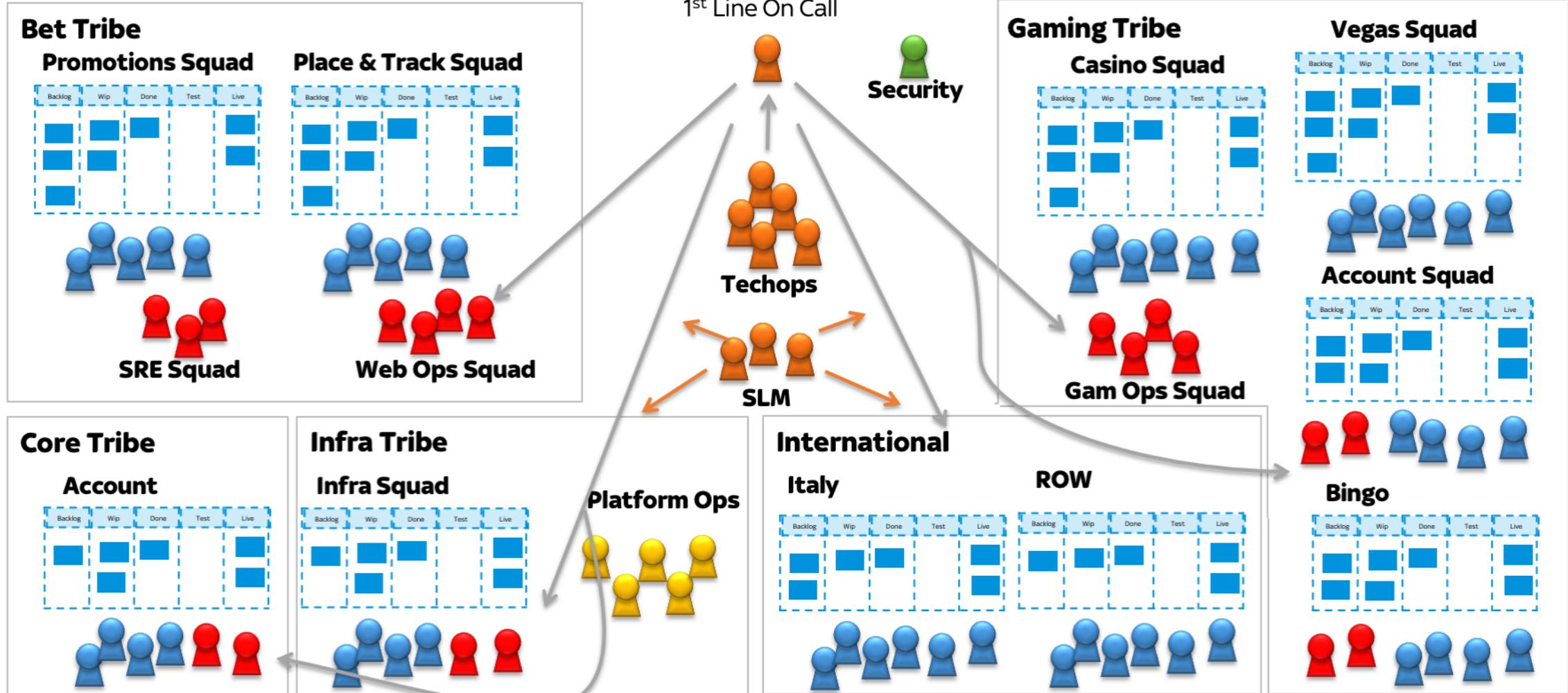
# The Stars Group



# DevOps 2011



# DevOps 2016

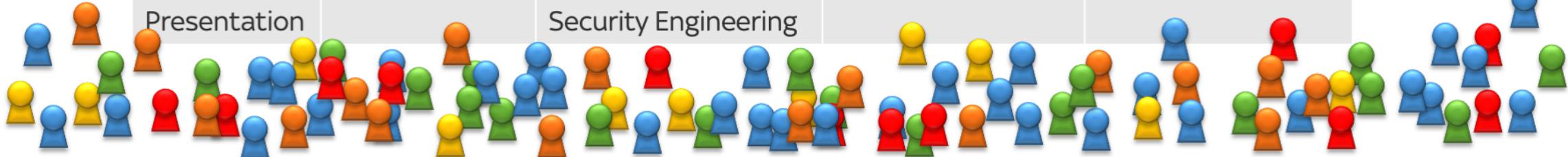


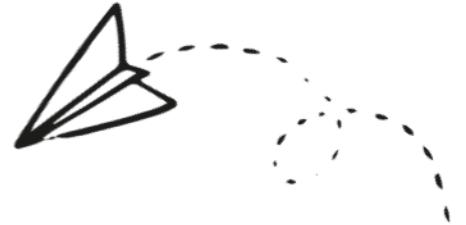
# DevOps 2019

Bet	Gaming	Infrastructure	Core	Data
Native	Vegas	Networks	Customer Account Squad	Bet
App Platform	Casino	Virtual Hosting	Payments Squad	Gaming
Campaign	Poker and Bingo	Database Services	Platform	Platforms
Promotions	Games Delivery	Storage		Science
Trading	Promotions	Platform Services		Compliance
Transaction	Platform Engineering	Delivery Engineering		
REP		Platform Engineering		
Presentation		Security Engineering		

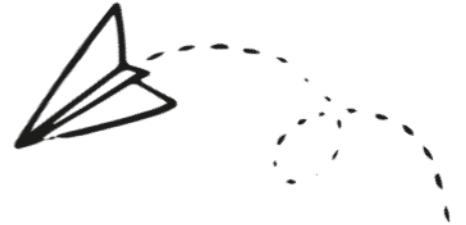


glassdoor  
2019 BEST PLACES TO WORK





**We are what we repeatedly do. Excellence, then, is not an act, but a habit – Aristotle.**



**The history book on the shelf Is always repeating itself**



My, my  
At Waterloo Napoleon did surrender  
Oh yeah  
And I have met my destiny in quite a similar way  
**The history book on the shelf Is always repeating itself**  
Waterloo  
I was defeated, you won the war  
Waterloo  
Promise to love you for ever more  
Woah woah woah woah Waterloo.

ABBA

# The Patterns

## Product



## Teams



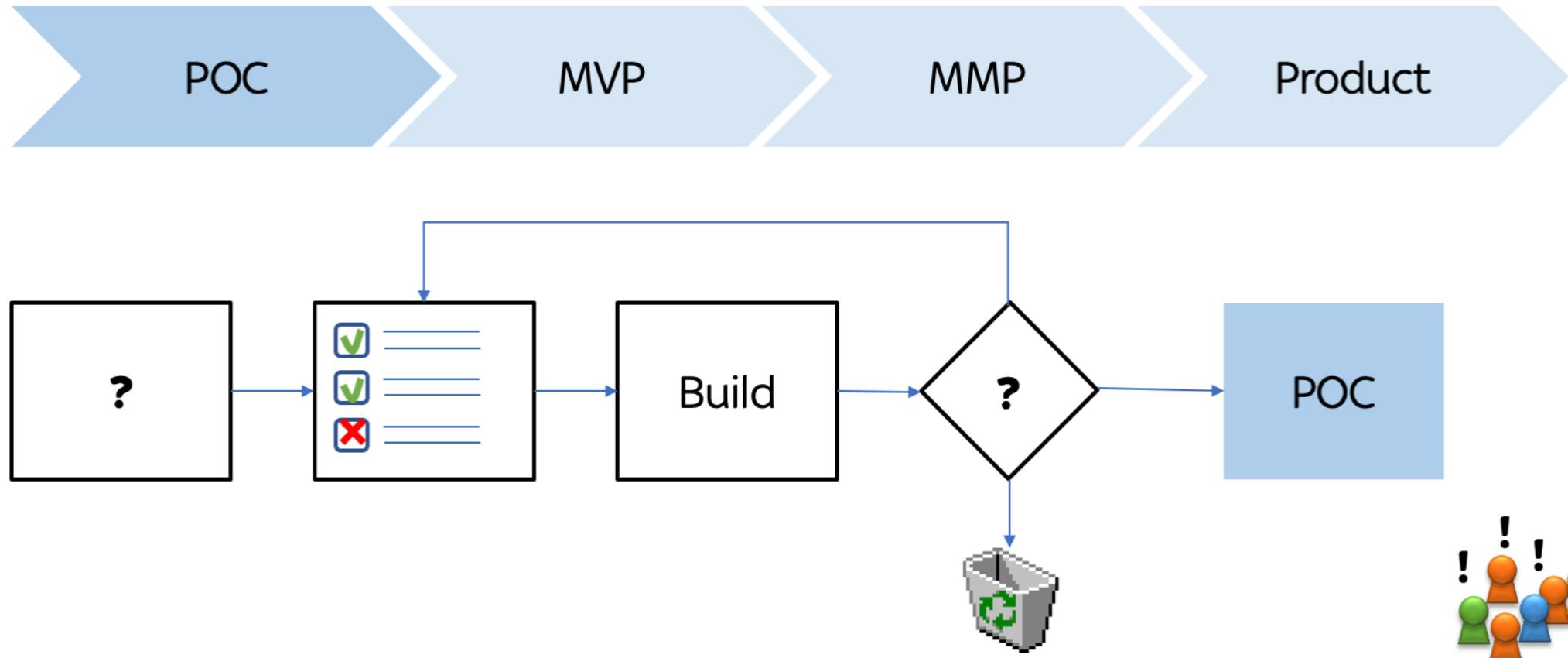
# Pre Requisites

- Autonomous Teams doing Agile software delivery.
- You Build It, You Run/Own/Support/Fix It.
- Products over Projects.
- Experimentation.

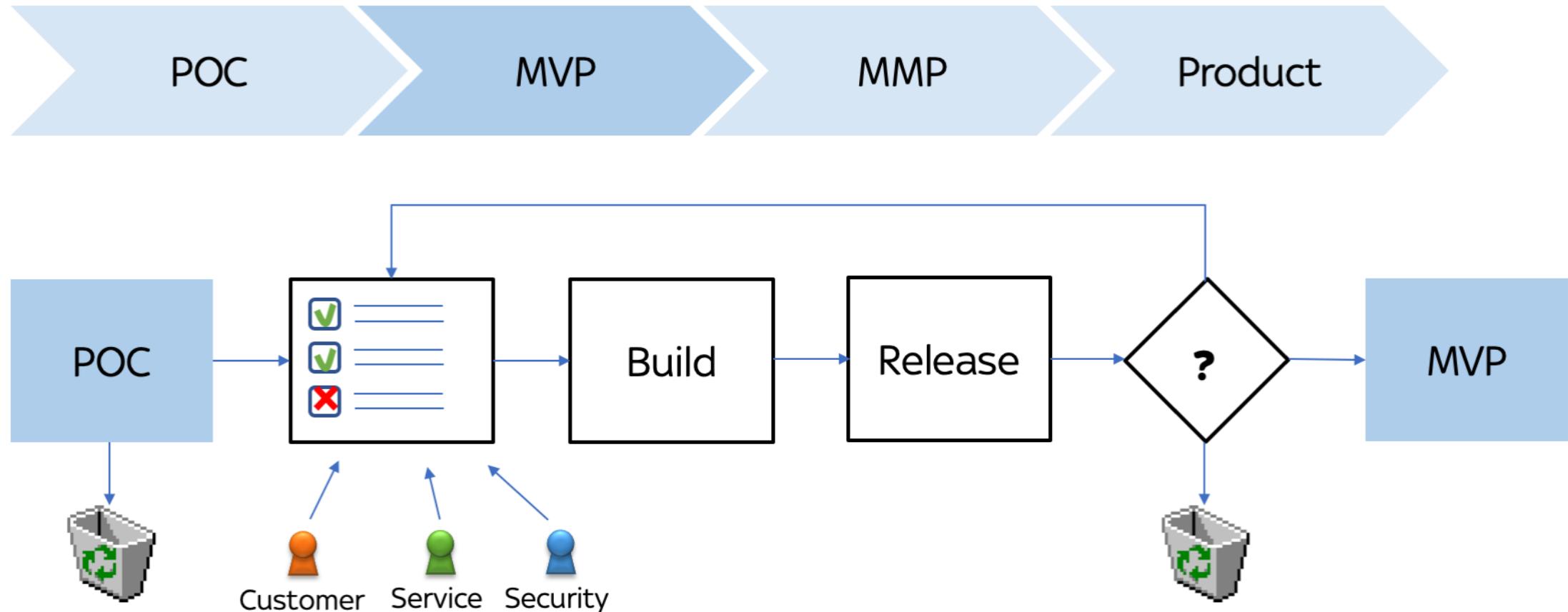


# Product Pattern

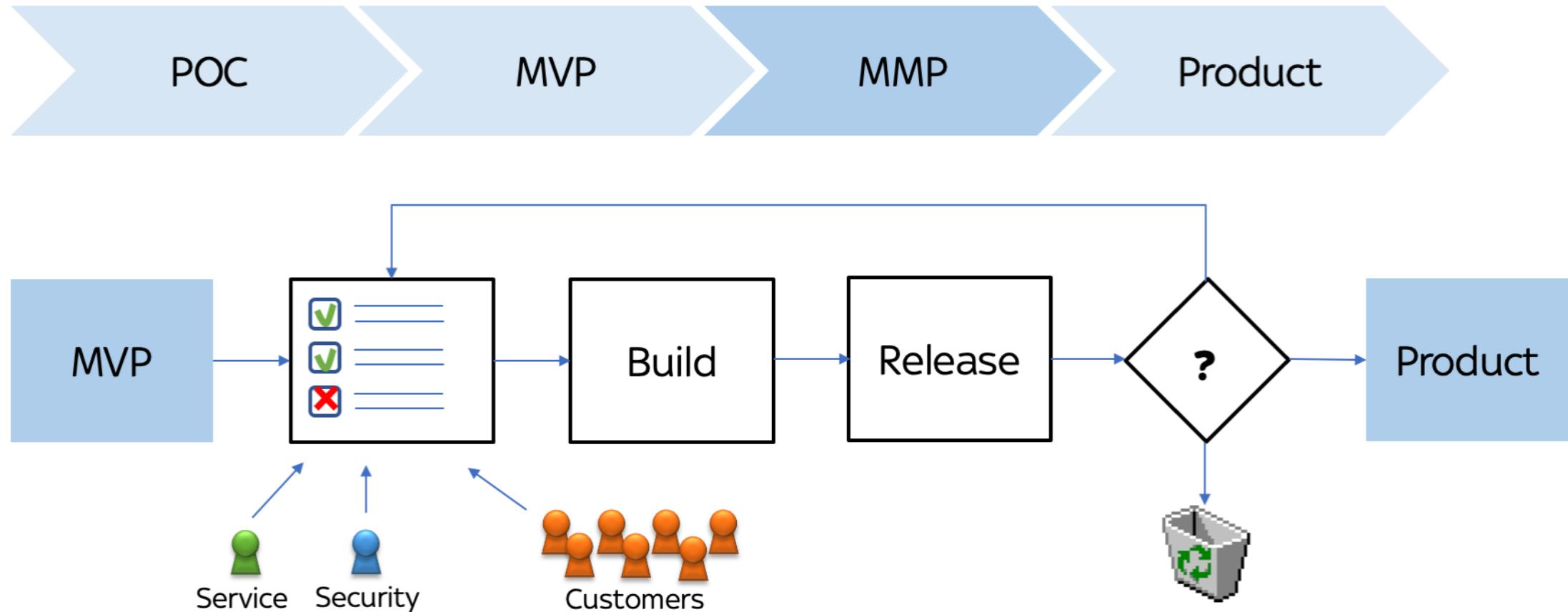
# Product Pattern



# Product Pattern



# Product Pattern



# Team Pattern

## Team Pattern



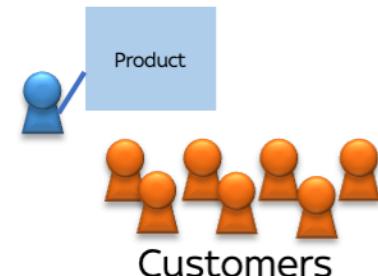
- New Team.
- Specialists for the POC
- Product Representation.
- The team will build and own POC > MVP > MMP > Product



# Team Pattern



- Expand team with T-Shaped engineers
- Run as a Product.
- Expand to multiple customers.
- Ensuring Operability and Non-functional requirements are met.
- Defined service boundaries and interactions.
- Support and Evangelise the product.



# Team Pattern



- Small team to run and iterate on Product
- Team may be merged into a service team.
- Some original team members may become SME in customer teams.
- Mature service boundaries and ownership.
- A service component.



# Example

# Platform Engineering – Container Platform

The screenshot shows a web browser window with the title bar "Next Generation Platform - Inf...". The address bar shows "https://". The header bar includes the "sky betting & gaming" logo, navigation links for "Spaces", "People", "More", "Create", "Search", and various icons for user profile, notifications (8), and help.

**Overview**

This is intended to deliver the next (2016) iteration of the Bet Tribe hosting platform, supporting the "Platforms fit for Growth" branch on the LVT.

**Vision Statement**

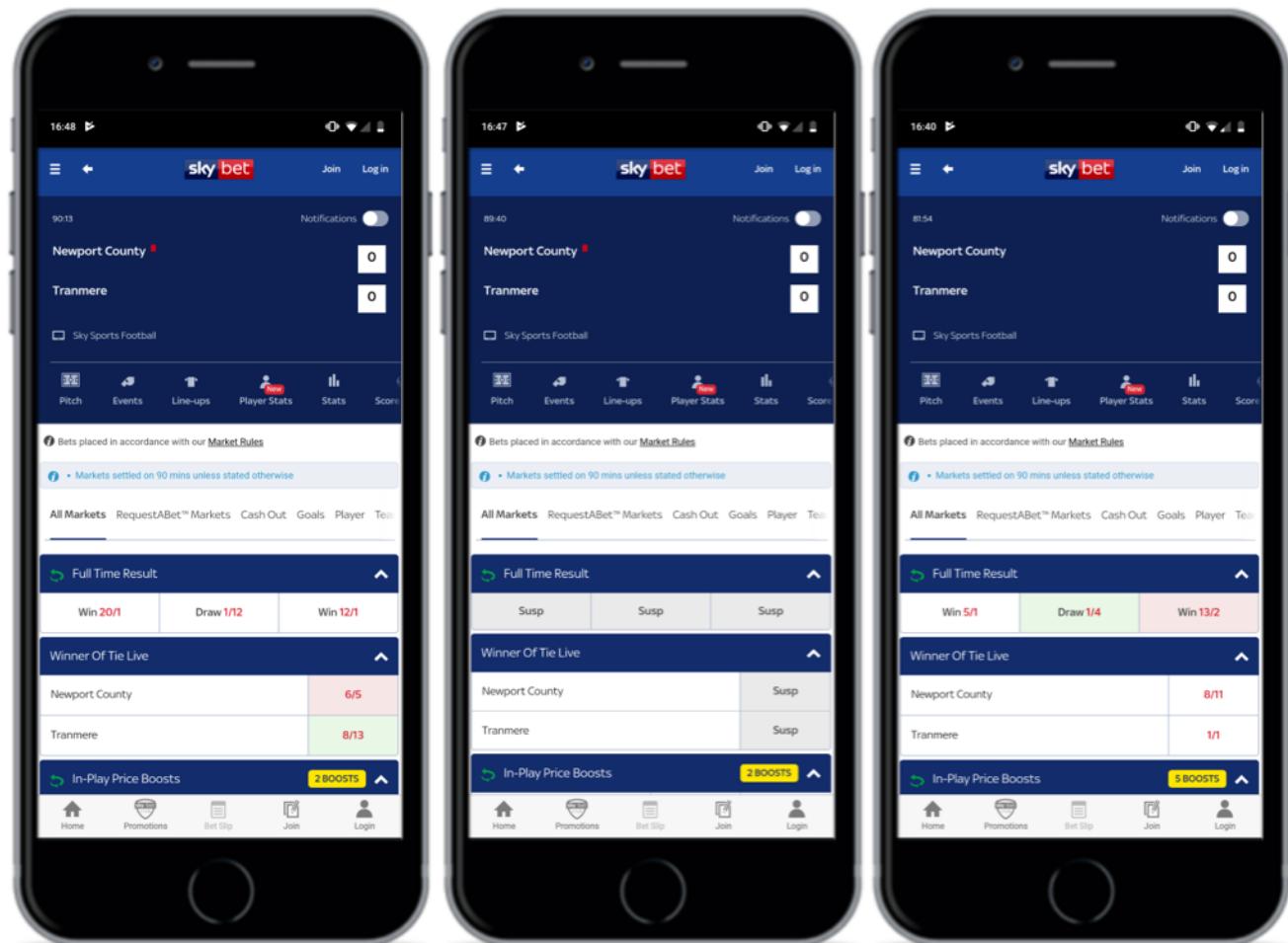
*Outside of the squad, there should be no humans involved in the value stream between "feature" and "customer"*

**Objectives**

1. Eliminate as far as possible out-of-squad actions at service launch / update

# Platform Engineering – Container Platform

- Solving scaling issues with updates.
- Peak half million connected clients.
- Peak 1000 messages per second.



## POC

Evaluated numerous container platforms including:

- Docker Swarm.
- Mesos.
- Rancher.
- Kubernetes.

Build POC, very excited PO.

## PILOT

Team which worked on Notification Services in AWS.



## MVP

Cluster built for one customer.

Key NFRs implemented.

Service and Security requirements/mitigations.

IAC and Provisioning pipelines.

AWS first.

Then rewritten for DC & AWS.

## X Functional

Team expands to include other skills.

Kanban Agile delivery.



## MMP

Multitenancy introduced.

Service Boundaries and tooling defined.

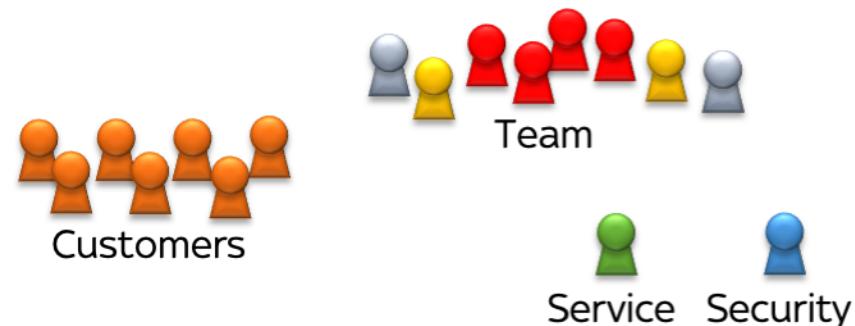
Full operability implemented.

Service evangelised and marketed.

Developer Experience.

## X Functional

Team evolves to accommodate new Requirements.

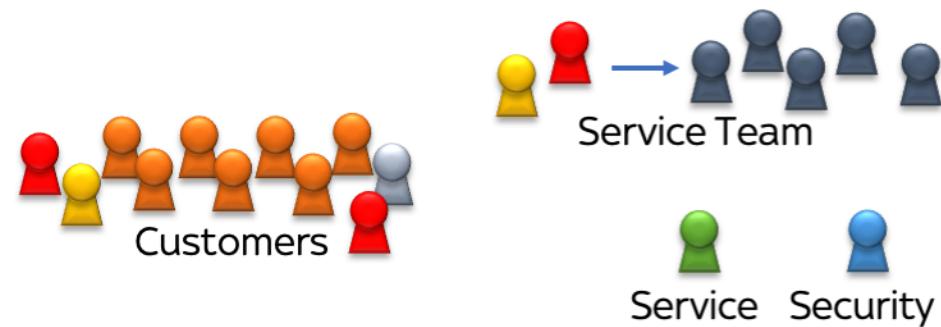


## Product

Service Iterated upon like other products.  
Clear service boundaries and tooling.  
Run and supported in production.

## PAAS

Service team runs, containing key members of original team.



## Outcomes

We started with a POC and PILOT team

We expanded the team to cross functional

We progressed onto MVP with a single customer

Then with multiple customer we created a MMP

We haven't finished, may or may not move to the PAAS model

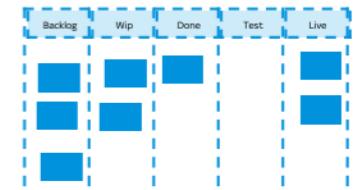
Live services running - Trading Models, Feed Ingestions, Promotions and Notifications



# Managing Work

# Agile

- The whole place is based on Agile.
- Mix of Scrum and Kanban.
- ONE ticket system – Dev, ITSM, Security and HR.



## Unplanned Work (2017)

- Cross tribe working.
  - Ticket silos a problem.
  - Long lead-times.
  - Adhoc/Covert queries.
  - Context switching.
- 
- Impacts planned work

**“Just ping Helpy McHelpFace on slack and ask for help” -  
Every techie at Sky Betting and Gaming.**

## ChatOps with MonkeyBot

- Creates and stores interactions in a Jira ticket.
- Only interrupts the engineer on the rota.
- Track time.
- Track the service/product affected.

## Thread

X

monkeybot, David, and

 **Philip** < 1 minute ago  
thanks!

 **David** < 1 minute ago  
[@monkeybot](#) component Platform  
Control

 **monkeybot** APP < 1 minute ago  
Added the component(s) Platform  
Control to your issue.

 **David** < 1 minute ago  
There is a syntax error on line 5

 **Philip** < 1 minute ago  
doh :(

 **David** < 1 minute ago  
[@monkeybot](#) log 5m

 **monkeybot** APP < 1 minute ago  
I have logged 5m for you

 **David** < 1 minute ago  
[@monkeybot](#) finish

 **monkeybot** APP < 1 minute ago  
Closed PLATFORM-2850

 **Philip** < 1 minute ago  
hero

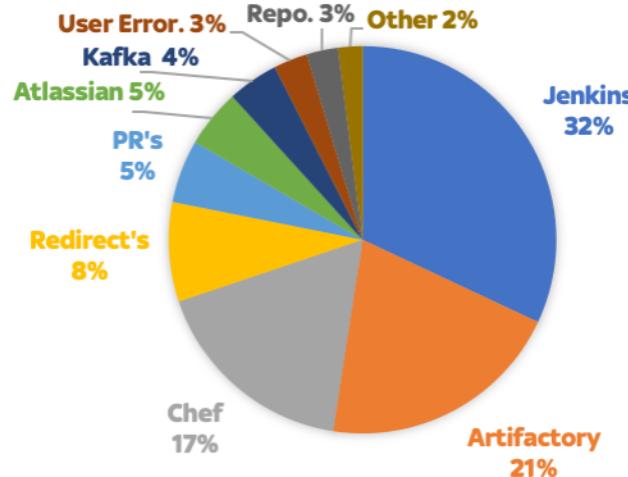


Reply...



# Unplanned Work Analysis

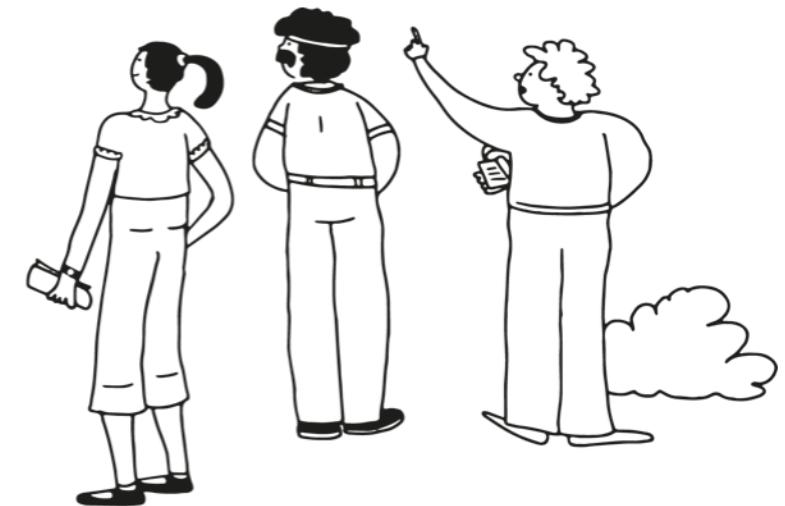
Tribe	Artifactory	Atlassian	Chef	Jenkins	Kafka	PR	Redirects	Repo	Other	User
Bet	28	6	31	52	9	7	17	3	5	7
Core	6	1	6	11		3	3			2
Data	6	2	4	4	3					
Enterprise	5	2	4	4		3				
Gaming	31	2	24	67	7	8	10	5	1	5
Infra	14	9	17	19	1	4	6	5	1	



Service	Tickets
Jenkins	158
Artifactory	101
Chef	86
Redirect's	41
PR's	26
Atlassian	24
Kafka	21
User Error	14
Repo	13
Other	10

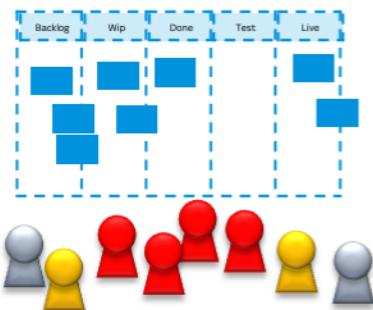
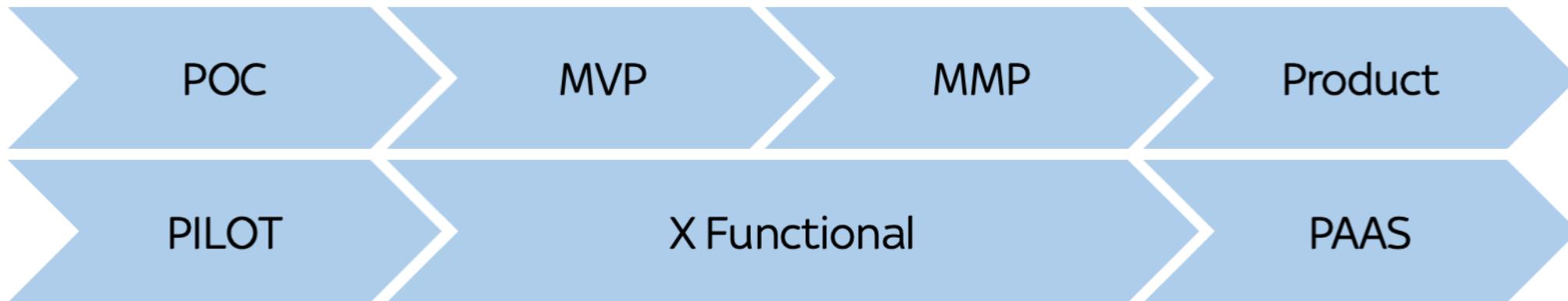
# ChatOps with MonkeyBot

- Fast feedback.
- Audit trail.
- Consistent way of interacting with many teams.
- Reduces ticket dwell.
- It works because it matches our culture of interaction.



# Summary

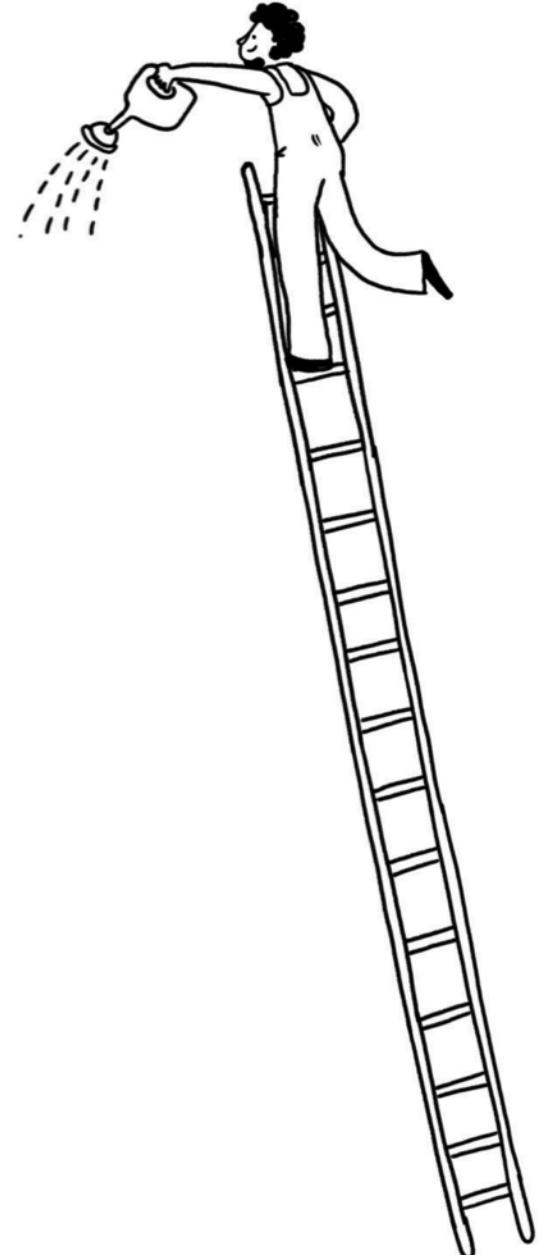
# Summary



**monkeybot** APP < 1 minute ago  
I've raised PLATFORM-2850 to log the request.

## Summary

- Last five years – 50% to completion.
- Our patterns work for us because we have the context and learnings.
- Our transformation will never finish.



## Can You Help ?

- Collaboration, Empathy, Experimentation are as important as velocity.
- How do you measure value of learnings from failure ?





# Thank You