



**sky BETTING
& GAMING**



Devops in a Data Warehouse – Inside Out



About me

Andy Burgin
Lead Devop Engineer
@andyburgin



Our Products

sky BET

sky VEGAS

sky POKER

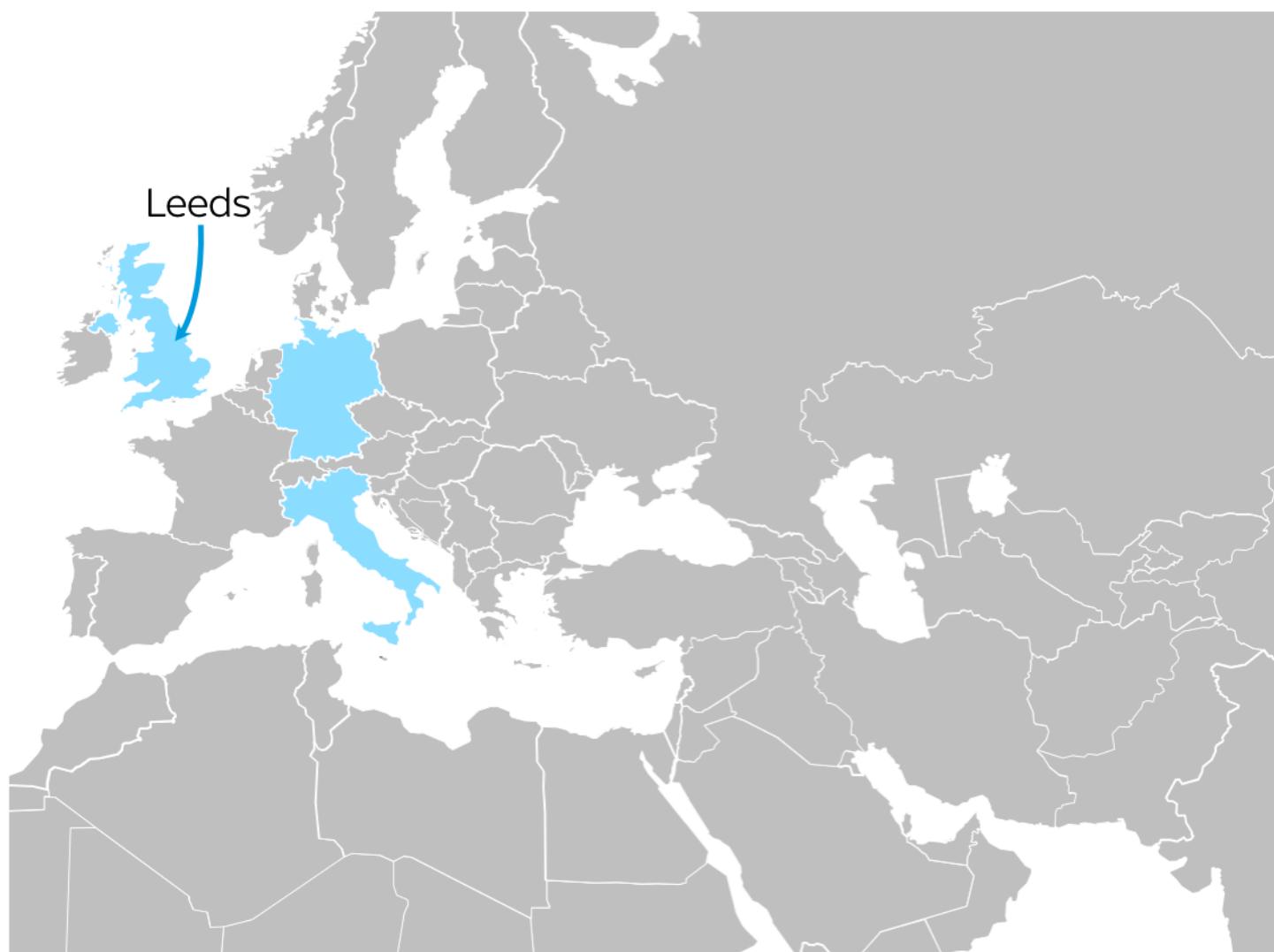
sky CASINO

sky BINGO

oddschecker.com

SOCER SATURDAY
SUPER 6

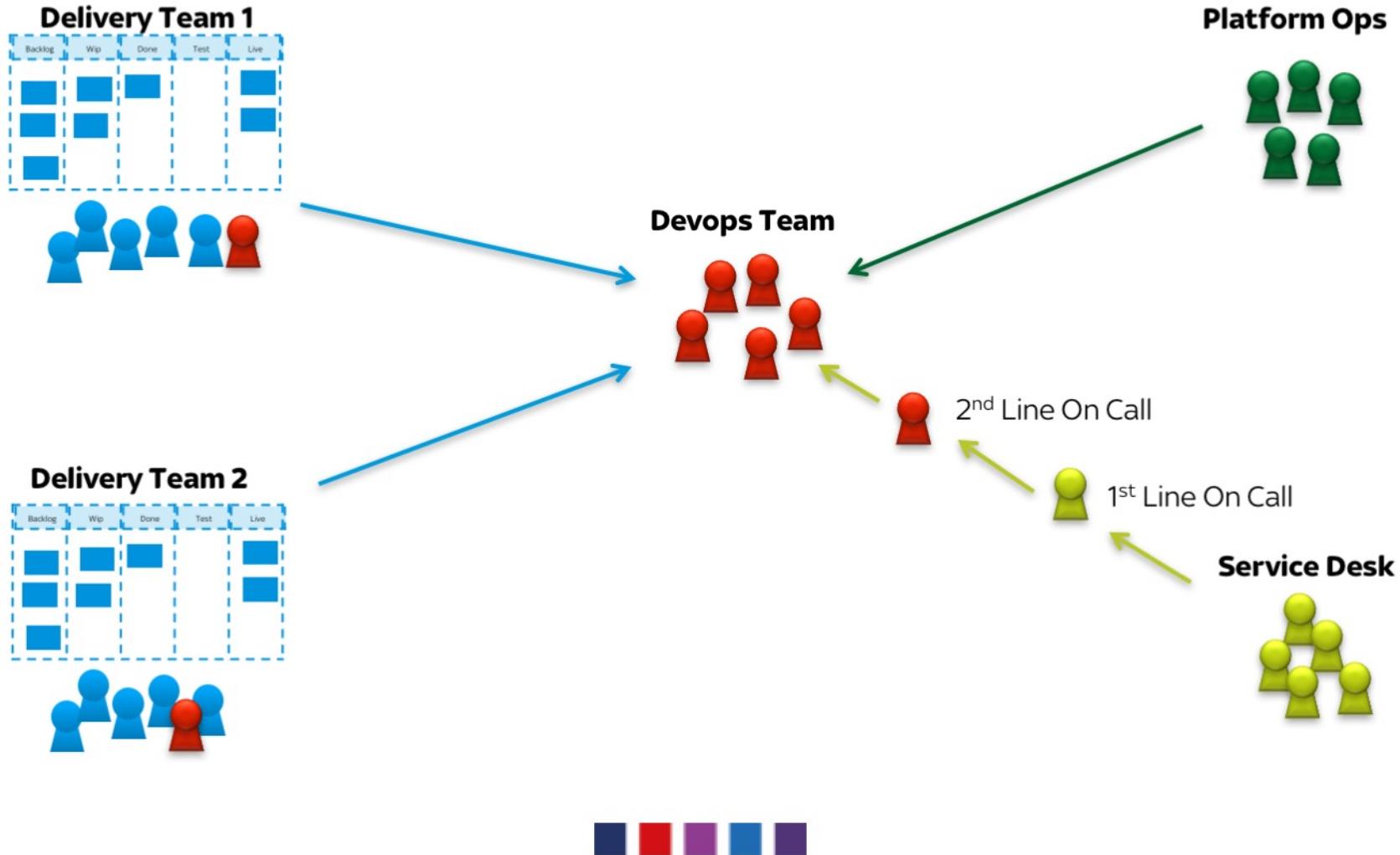
FANTASY FOOTBALL



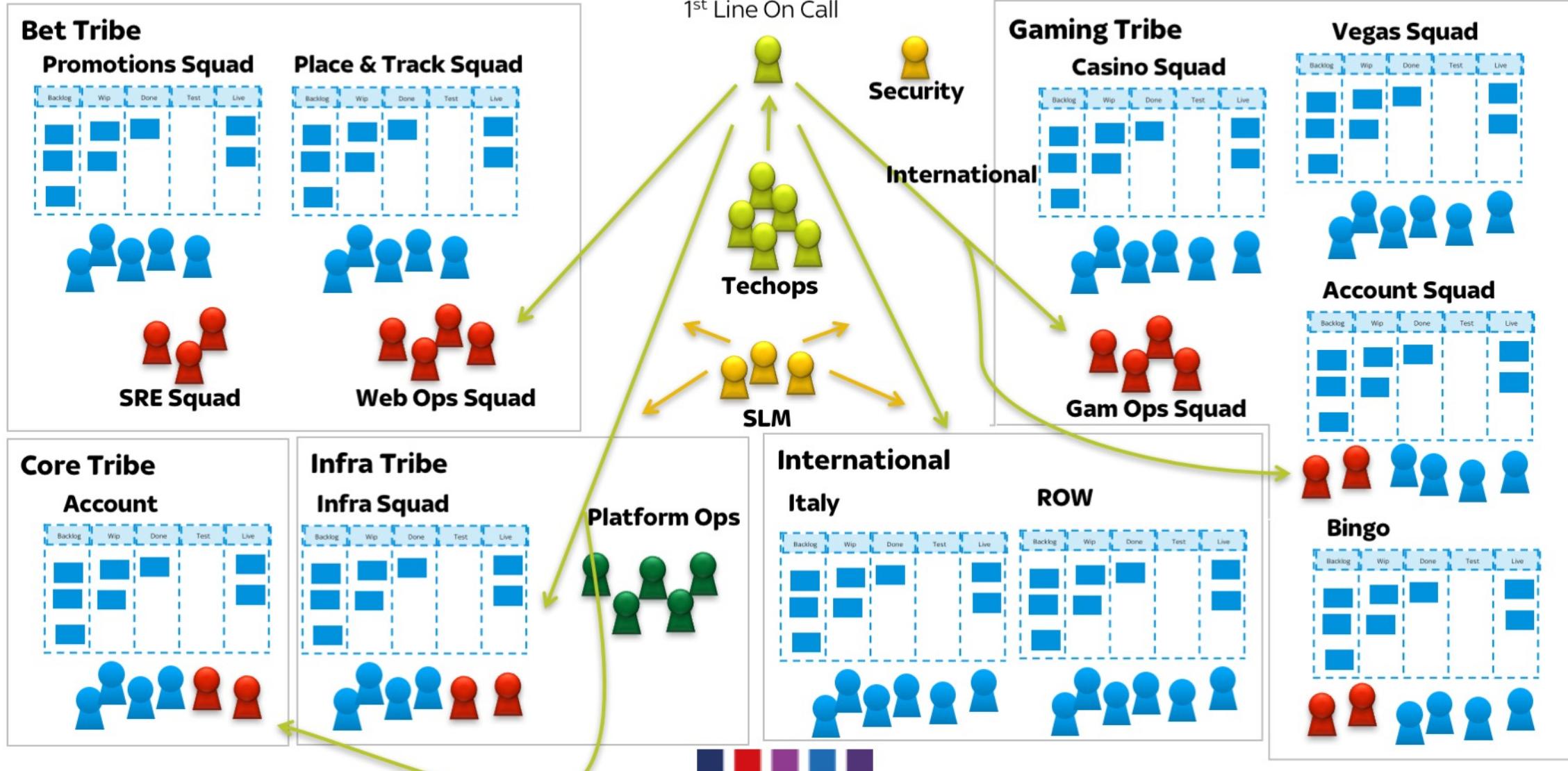
A Brief History of Devops at SkyBet



2011 - The Start of Something Big



2016 – Growing Up



Unicorn ?

30% YOY growth

Revenue ~£0.5bn

~1500 Employees

Sites – Leeds & Sheffield UK

The screenshot shows a news article from the Tech City website. The header features the Tech City logo and navigation links for About, Programmes, Reports, Customise your homepage, Sign In, and social media icons for Facebook, Twitter, YouTube, and LinkedIn. Below the header, the text "WE ARE TECH NORTH" is displayed, along with links for Business, Investment, Ecosystem, and Careers, and a search icon.

The main content area has a background image of a stack of British £100 bills. The article title "How Sky Bet broke loose and flourished into a Leeds unicorn" is prominently displayed in large white text. Below the title, the date "11 Nov, 2016" and the author's name "By Martin Bryant" are shown, accompanied by a small profile picture of the author.

Below the author information, there is a "Share" button followed by icons for Facebook, Twitter, Google+, LinkedIn, and Email. At the bottom of the article, there is a link to "Home / Business / How Sky Bet broke loose and flourished into a Leeds unicorn". A summary of the article content follows, mentioning Richard Flint of Sky Bet and Donald Trump's election victory.

On the right side of the article, there is a "Latest posts" section.

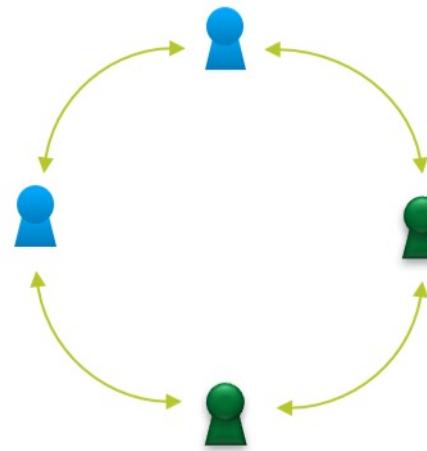




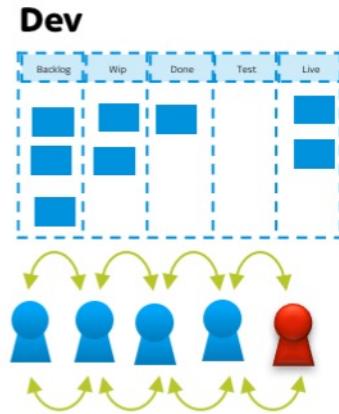
Data Tribe



Data Tribe 2011



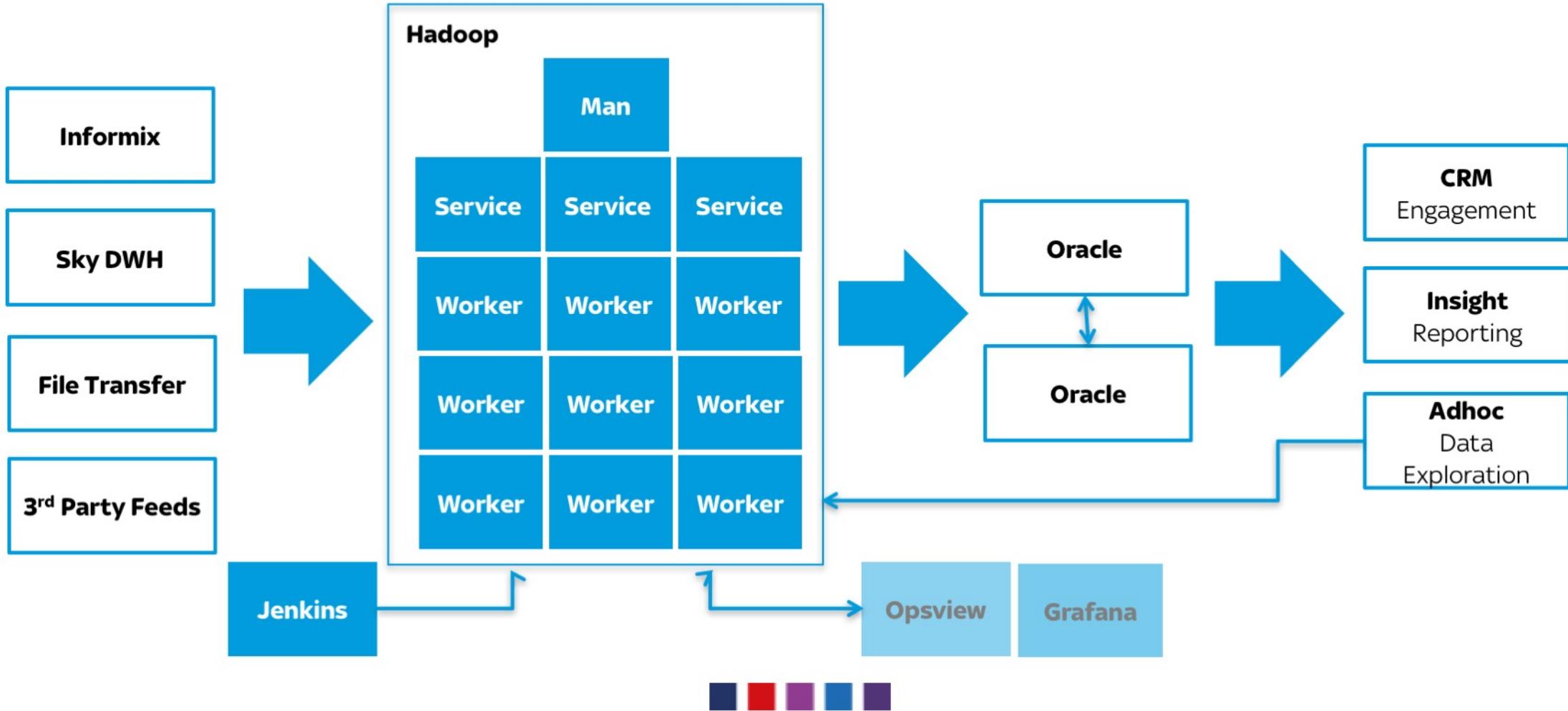
Data Tribe 2014



CRM, Insights and Reporting



Data Tribe ETL/ELT



MORE...



Data Tribe

Product evaluation

Fraud prevention

Customer profiling

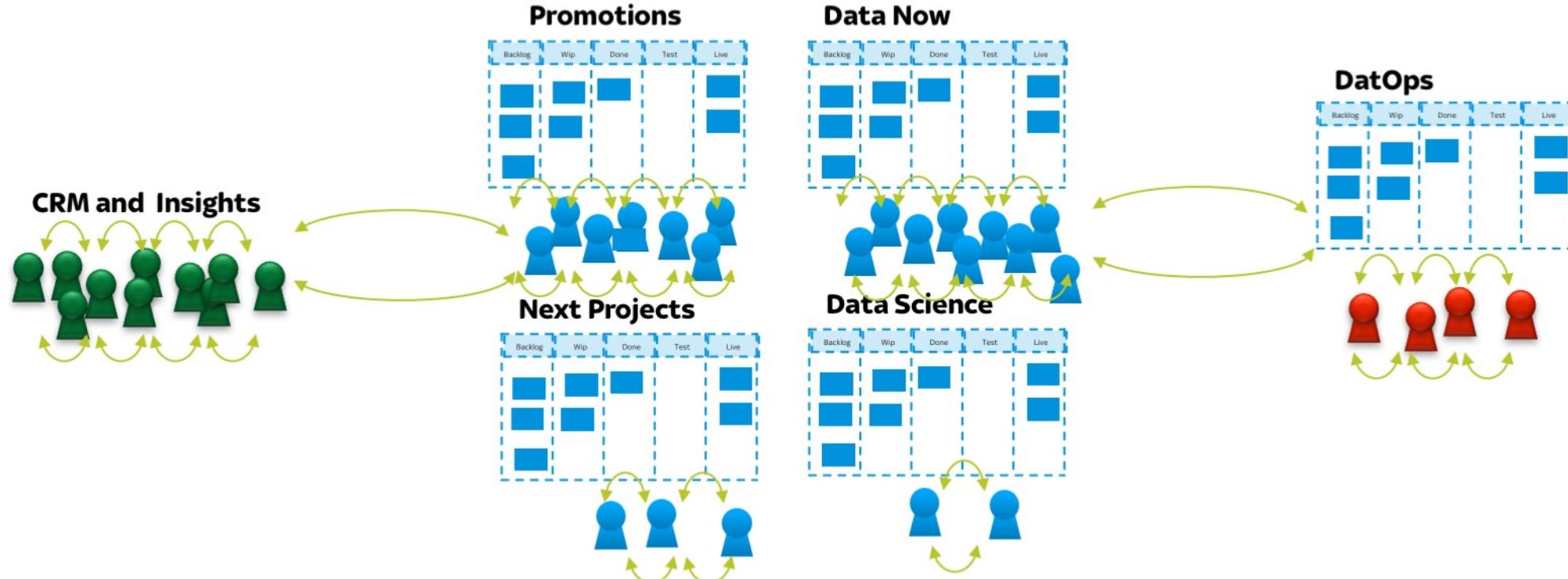
Customer engagement strategies

Price-based offer models

In-play and Real-time



Data Tribe 2016



Data Devops Squad



Datops Squad



Devops Squad (DatOps)



Datops Squad

Hadoop Upgrade

Data Center DR

Replace Legacy IAC

Replica Test Environments in cloud

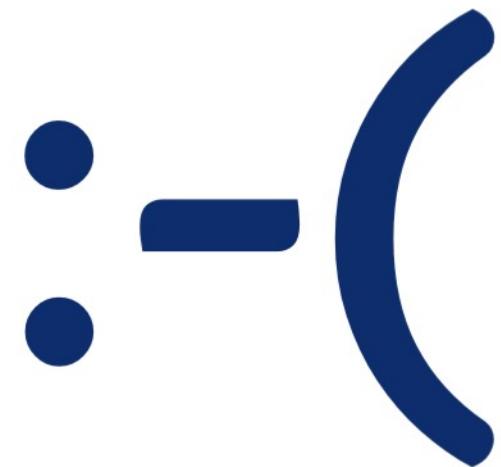
Squad Support CI/CD

Resilience/Performance

Tech Debt



Datops Squad

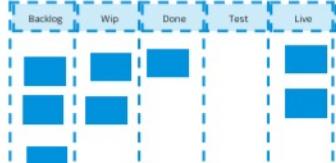


Datops Squad

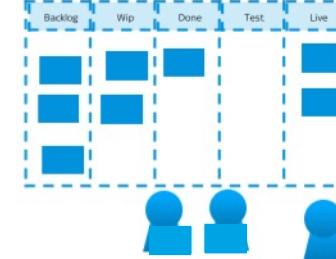
CRM and Insights



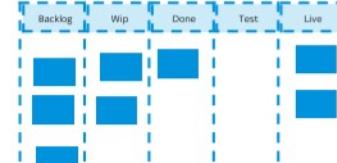
Promotions



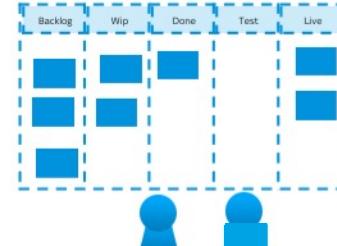
Next Projects



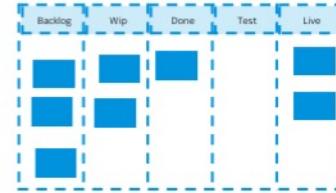
Data Now



Data Science



DatOps



Did Someone Say Devops ?

(Lets call it Lean Operational Change)



Devops

Hand off/Lead Time ->



<- Feedback



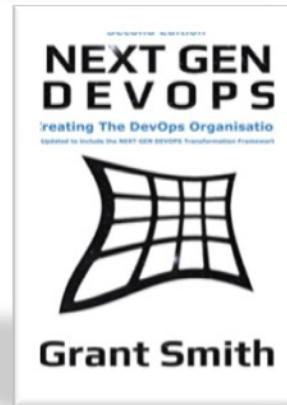
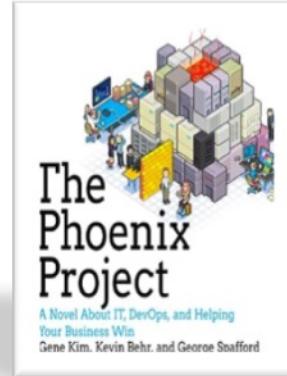
Devops

Devops Café

Arrested Devops

Conferences & Videos

Meetups



Devops

Three Ways of Devops

Projects vs Products

4 Types of Work



The Three Ways of Devops

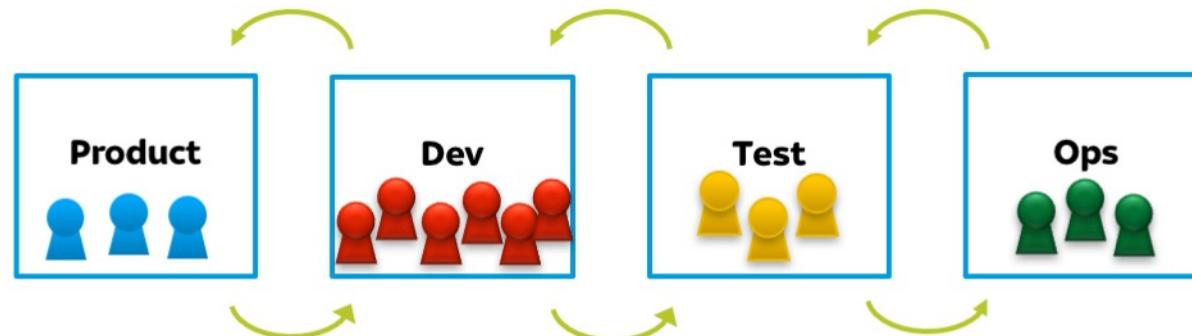


Devops – Three Ways

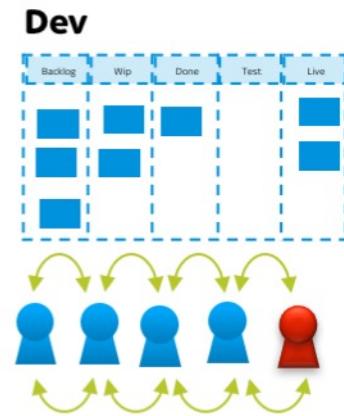
First – Maximise Flow Left to Right

Second – Amplify Feedback Loops Right to Left

Third – Culture of Experimentation, Learning and Risk



Devops – Three Ways



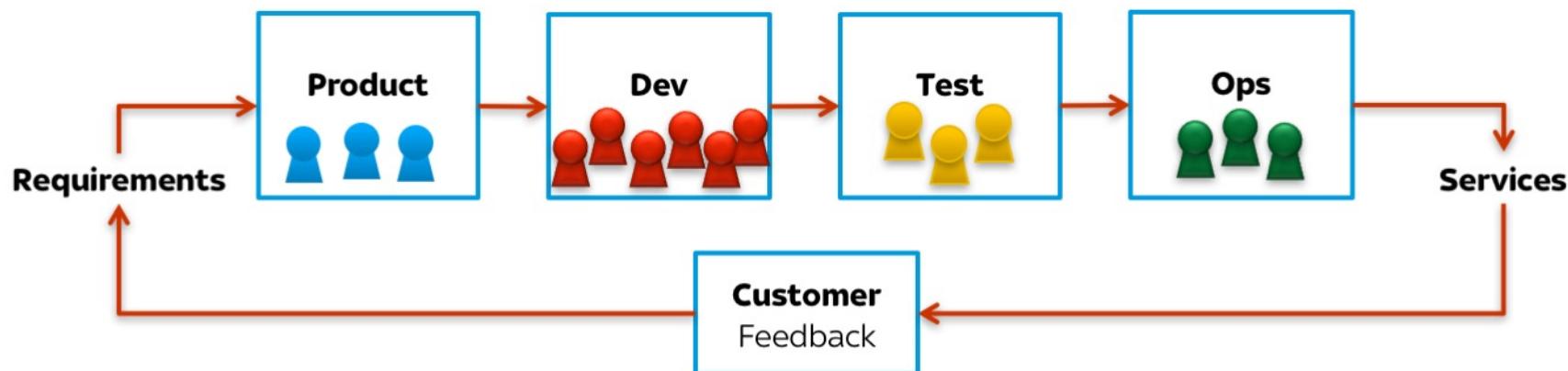
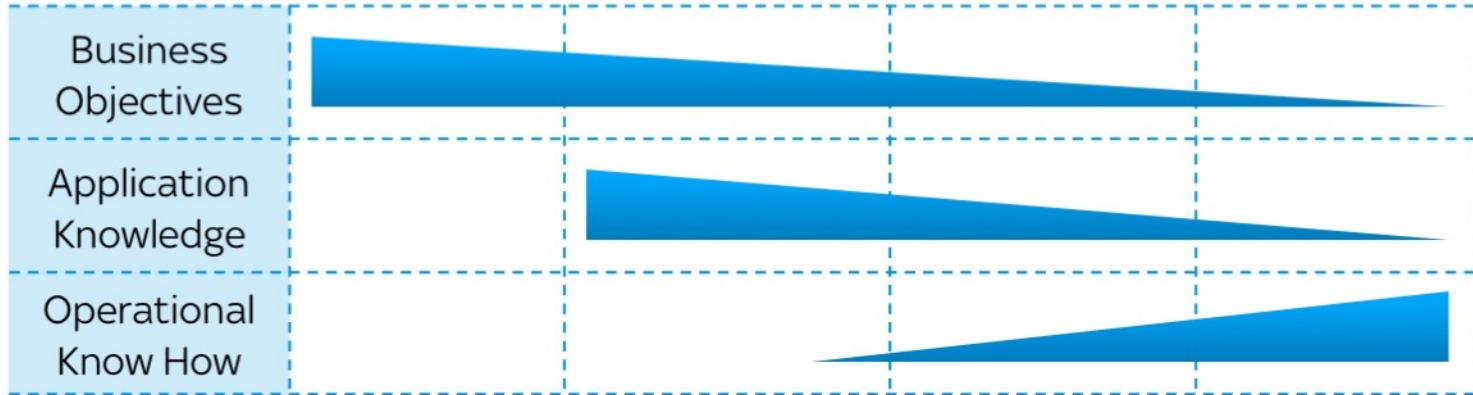
CRM, Insights and Reporting



Projects vs Products



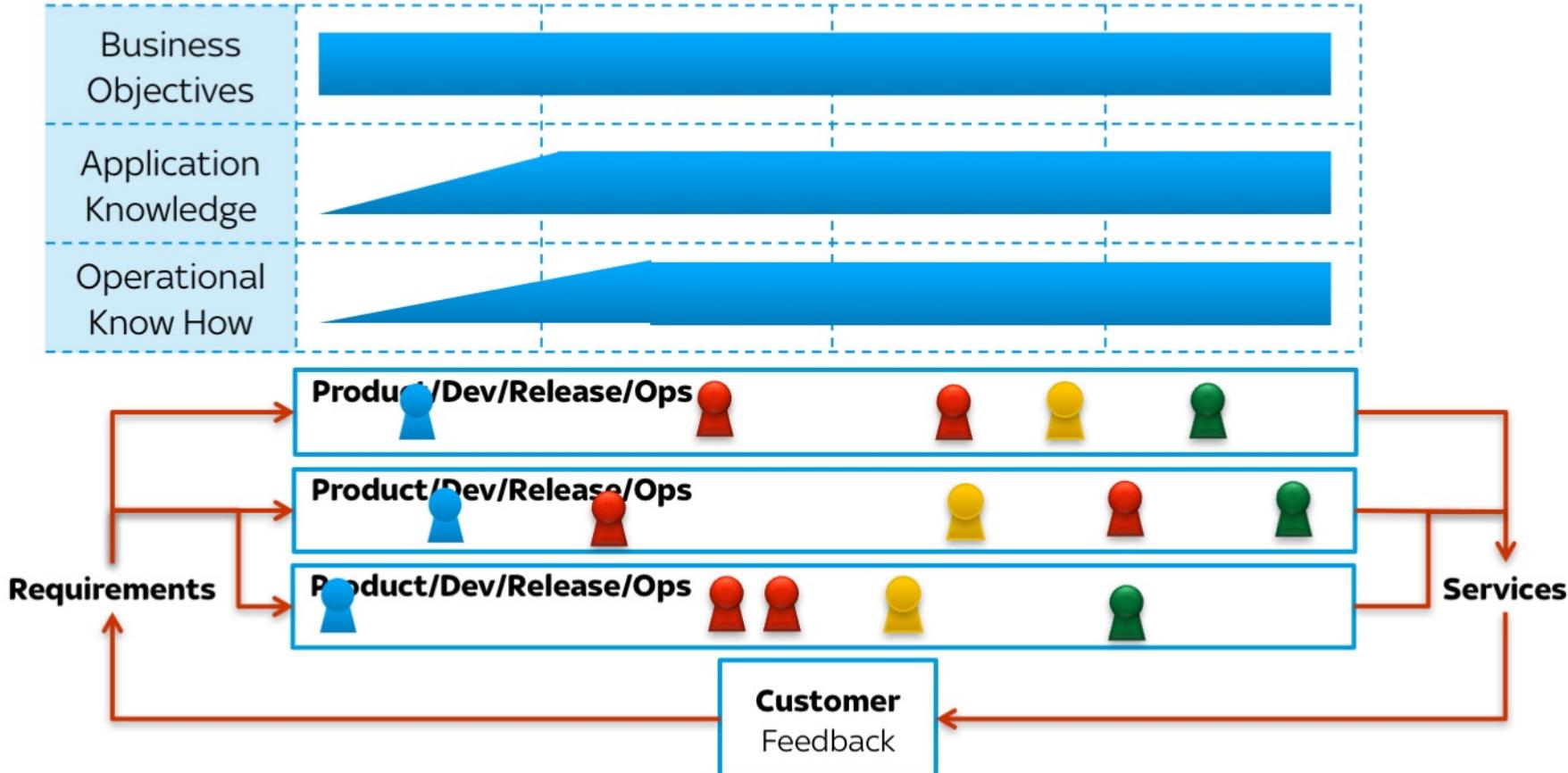
Projects vs Products



Damon Edwards DevSecOps RSA conference - <https://www.youtube.com/watch?v=G6CpgTM7Eys>



Projects vs Products



Damon Edwards DevSecOps RSA conference - <https://www.youtube.com/watch?v=G6CpgTM7Eys>



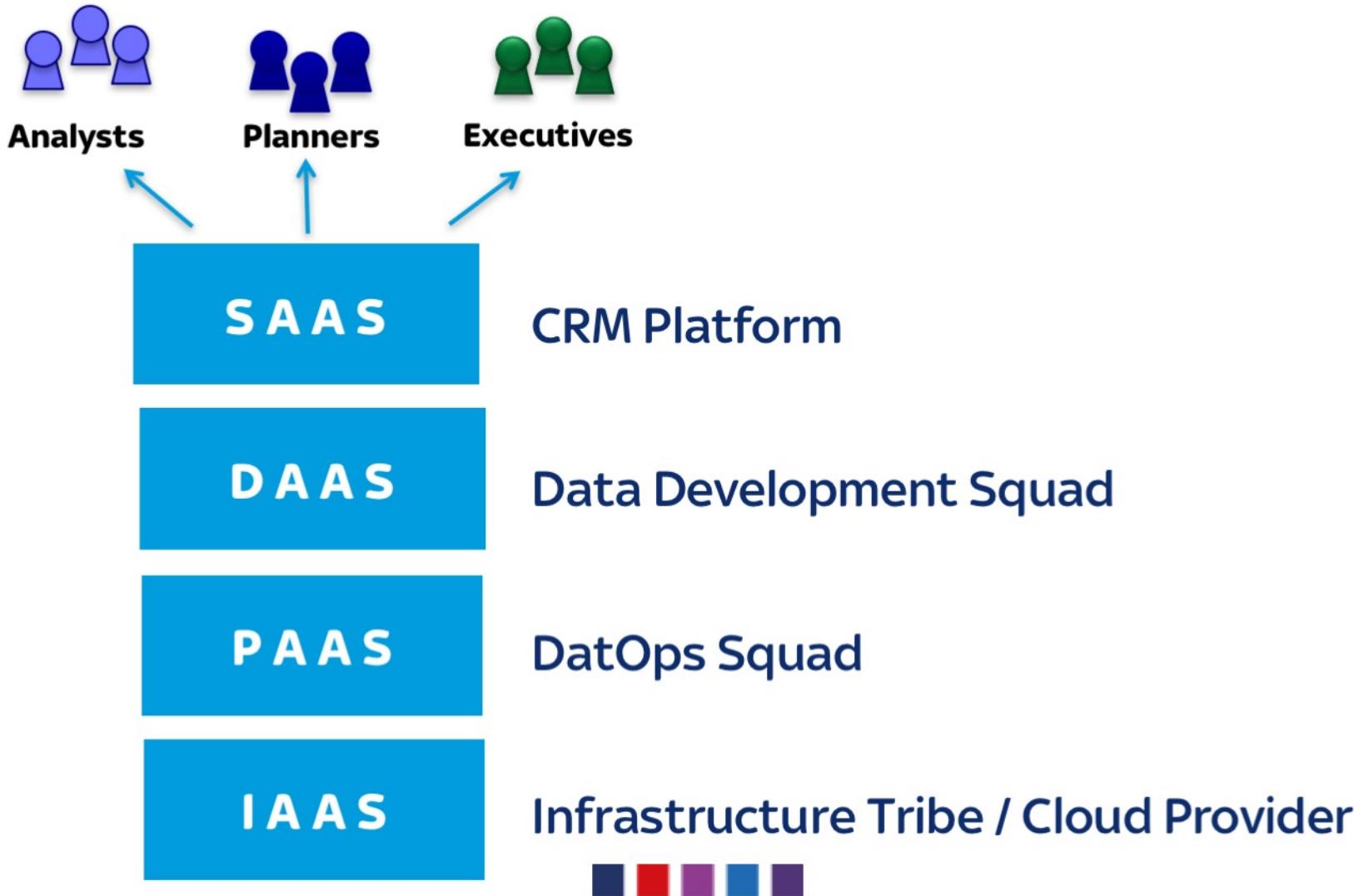
Projects vs Products

PRODUCT?

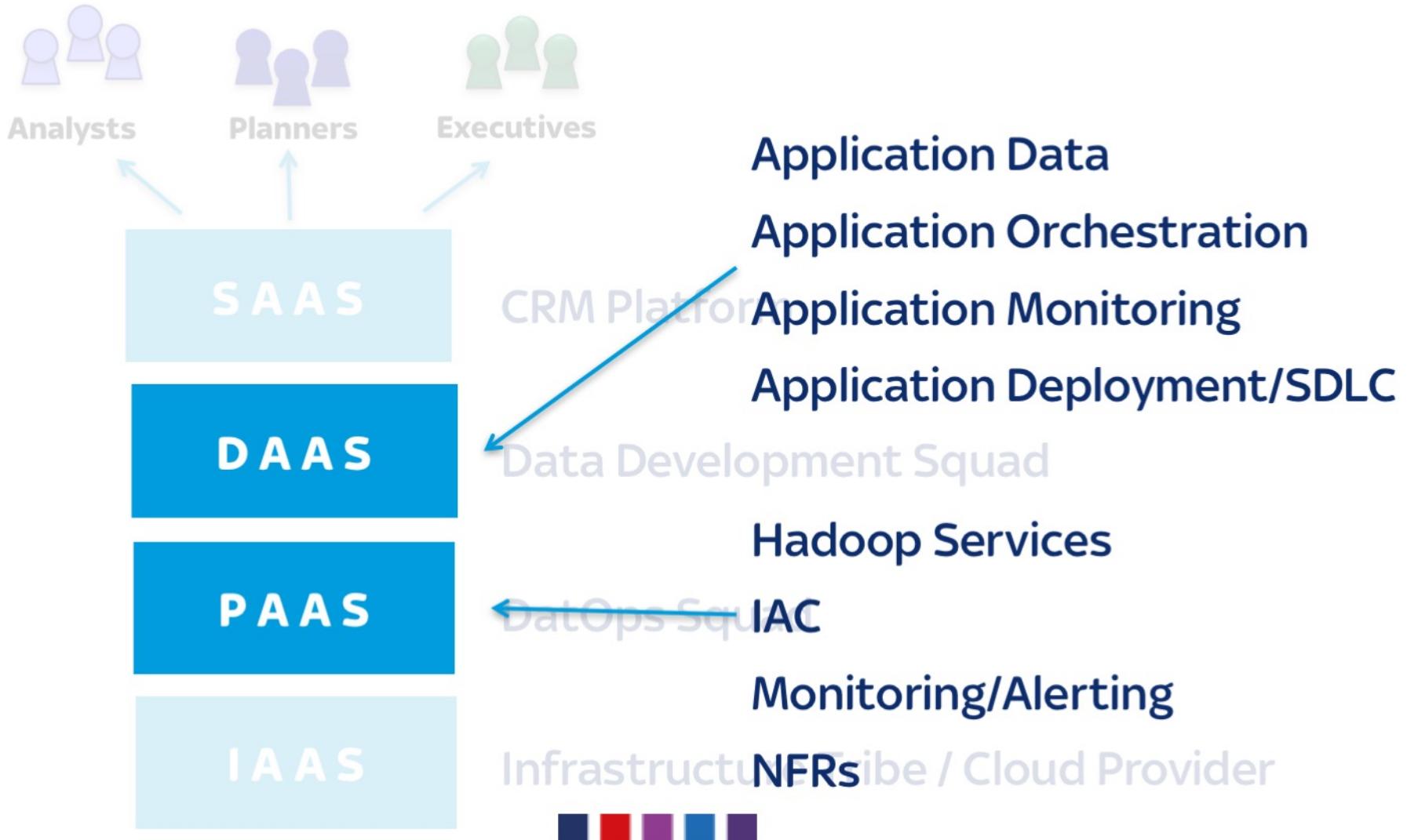
SERVICE?



Project vs Product



Project vs Product



Projects vs Products

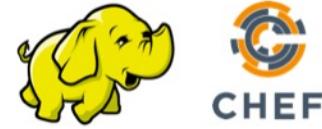
Provide services for the DAAS squads that :

- Empower – let squads embrace responsibility
- Empathy – they are created in a collaborative manner
- Educate – they are supported in using the new services
- Entrust – Datops have confidence in squads responsibilities



Project vs Product

PAAS- Physical Hadoop environments



HAAS - Cloud Hadoop environments



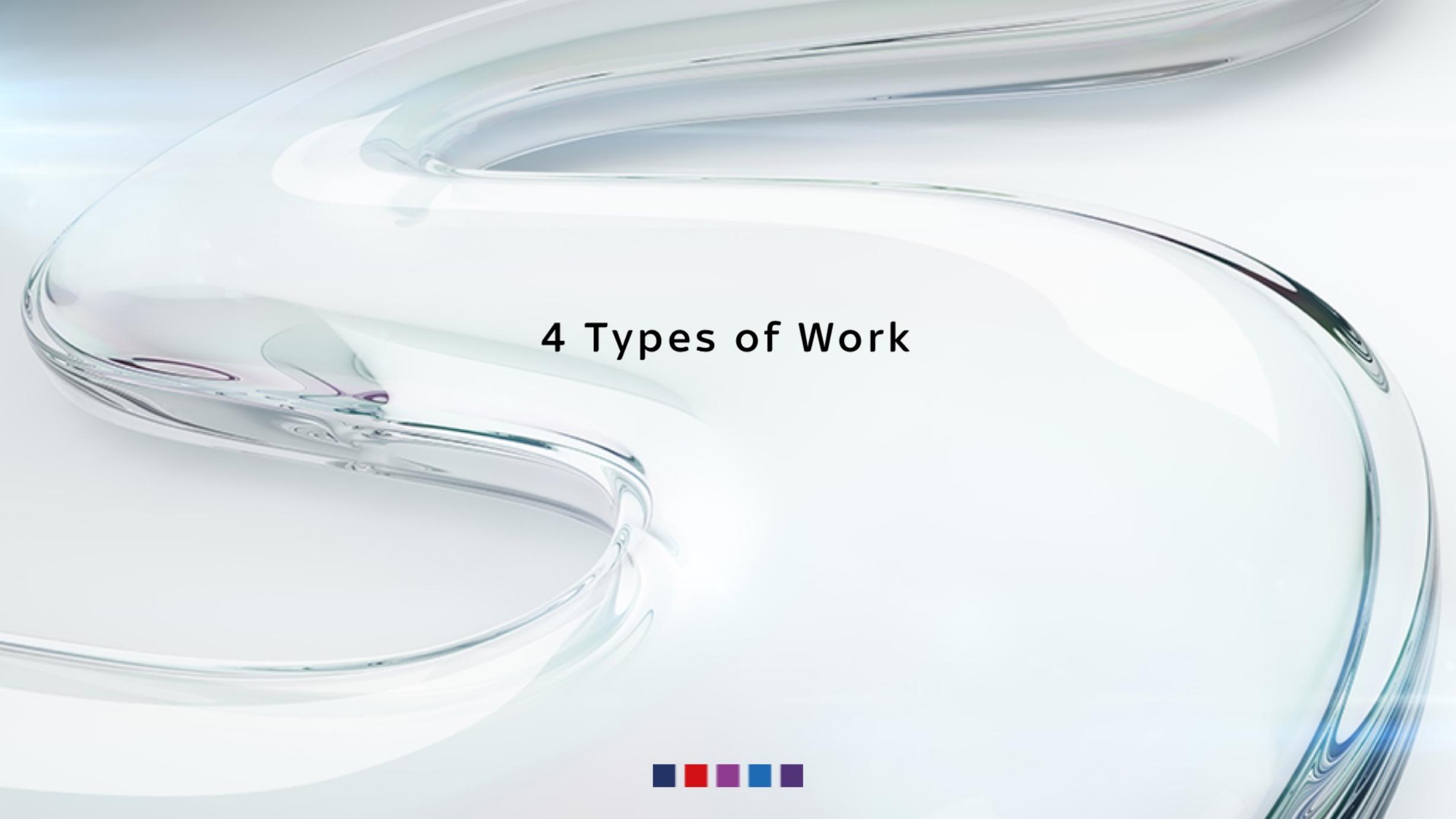
JAAS - Jenkins CI and Scheduling



Jenkins

CAAS - Container platform





4 Types of Work



Devops – Four Types of Work

Business Projects

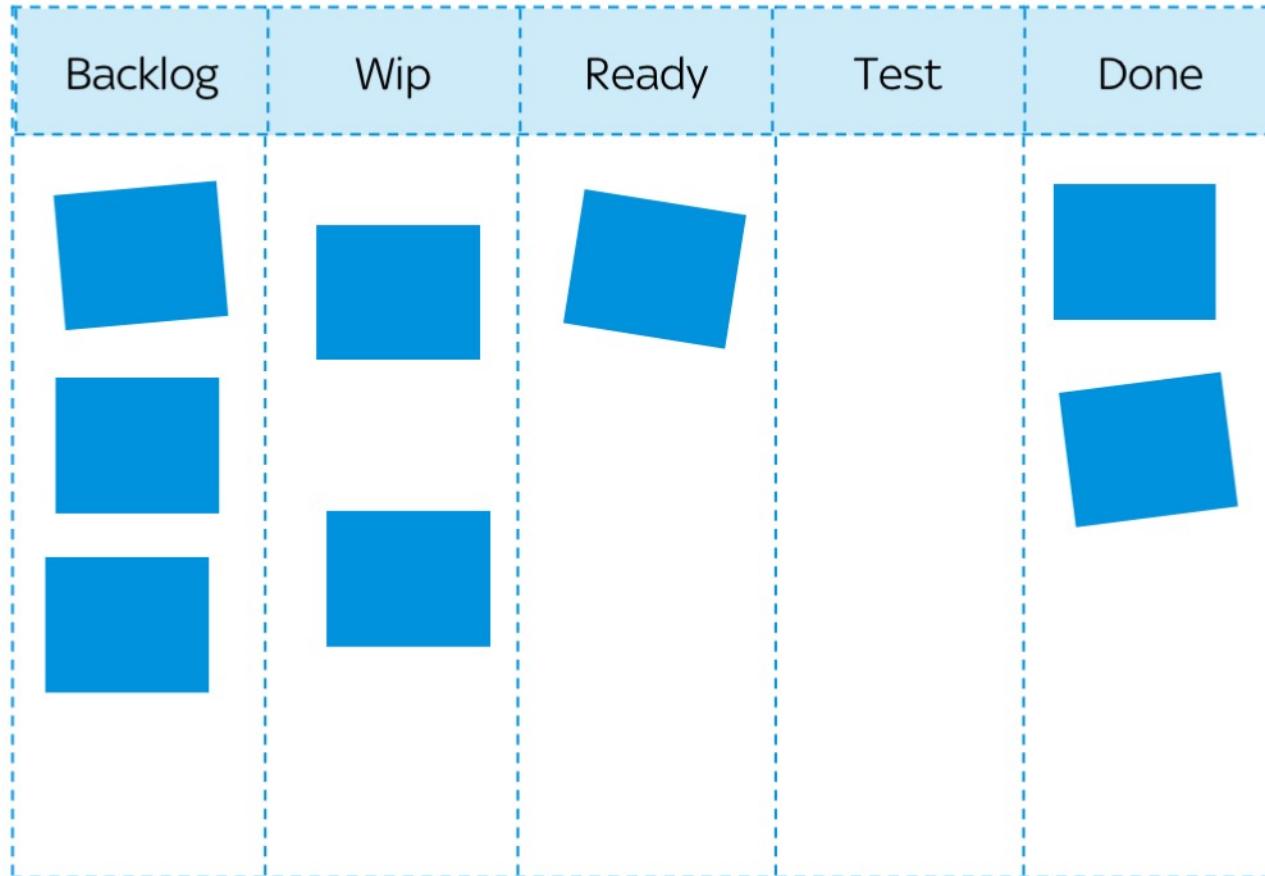
Internal IT

Changes

Unplanned



4 Types Of Work



4 Types Of Work







A close-up photograph of a person's hand gripping a shiny silver trophy. A red ribbon with the "sky BET" logo is wrapped around the handle of the trophy. The background is blurred, showing hints of a stadium and spectators.

sky BET

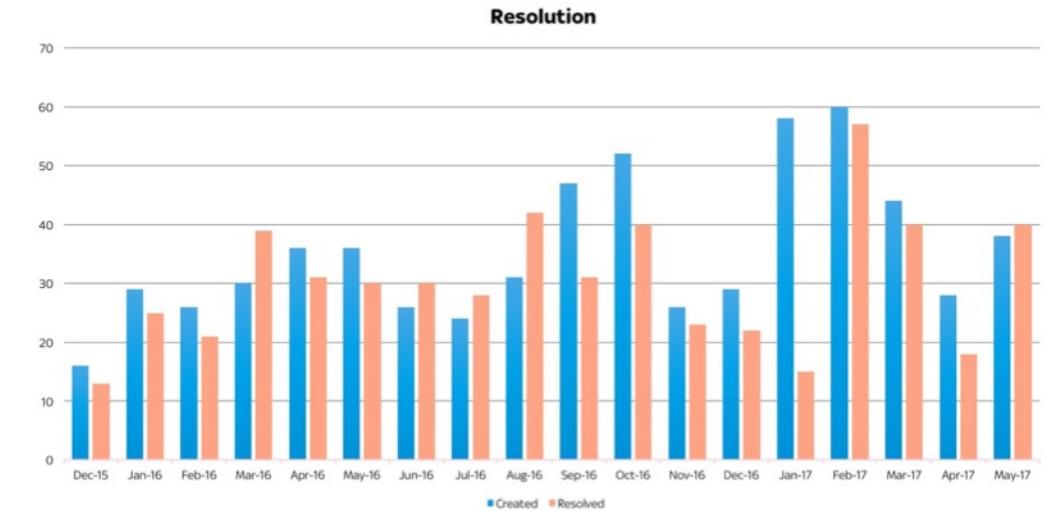


Outcomes

(So Far)

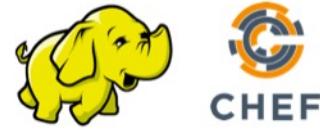


Successes

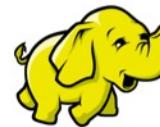


Successes

PAAS- Physical Hadoop environments



HAAS - Cloud Hadoop environments



JAAS - Jenkins CI and Scheduling



Jenkins

CAAS - Container platform



We delivered all the work, Kanban/Scrum split works for us



Challenges

Company already embraced Technology, Agile and Devops

Culture can be a form of technical debt – amplified by scale up

Optimise locally, but understand the impact on the wider system

Empowerment, Empathy, Education and Entrustment

Beware of urgent/large “projects”

Too easy to revert to being a ticket silo

Grass roots organisational change is still hard



Thank You

 Josh - Devop Engineer

 Katherine - Junior Devop Engineer

 Greg - Graduate Devop Engineer

 Leigh - Contactor

 Karol - Senior Devop Engineer

 Alice - Platform Architect

 Phil - Scrum Master

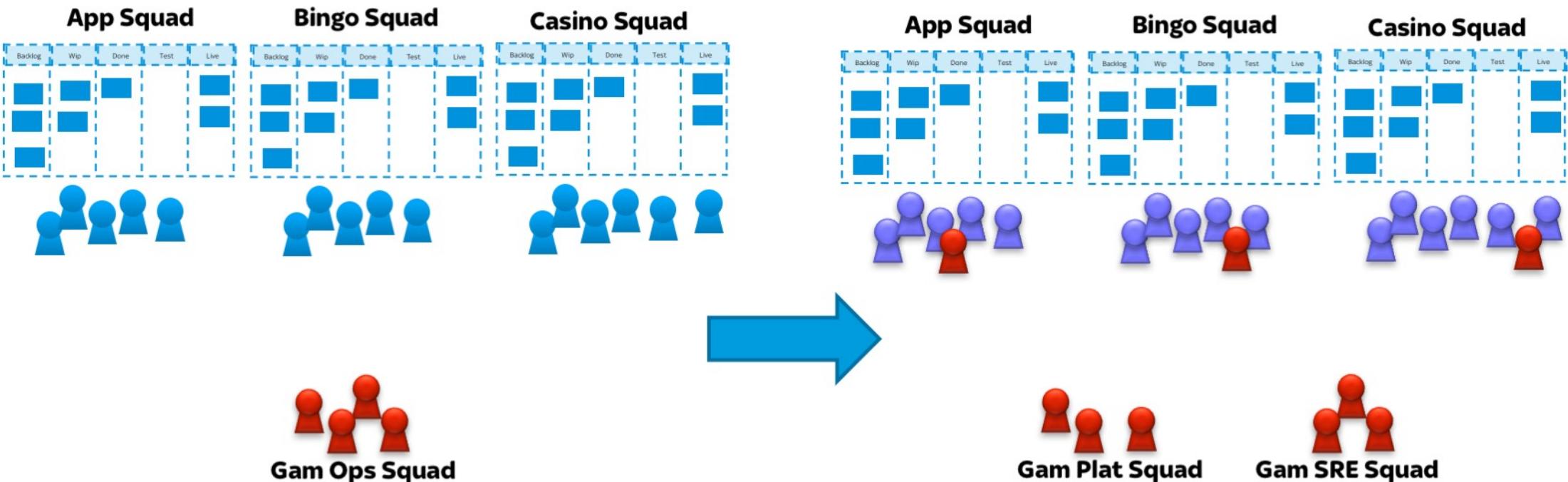
 Mark - Engineering Manager

 @andyburgin

<http://engineering.skybettingandgaming.com/>



Here's The Help I'm Looking For...



Thank You

@andyburgin

<http://engineering.skybettingandgaming.com/>

