



# BT Business: Data Business revolutions, Customers & Unicorns

11<sup>th</sup> September 2018

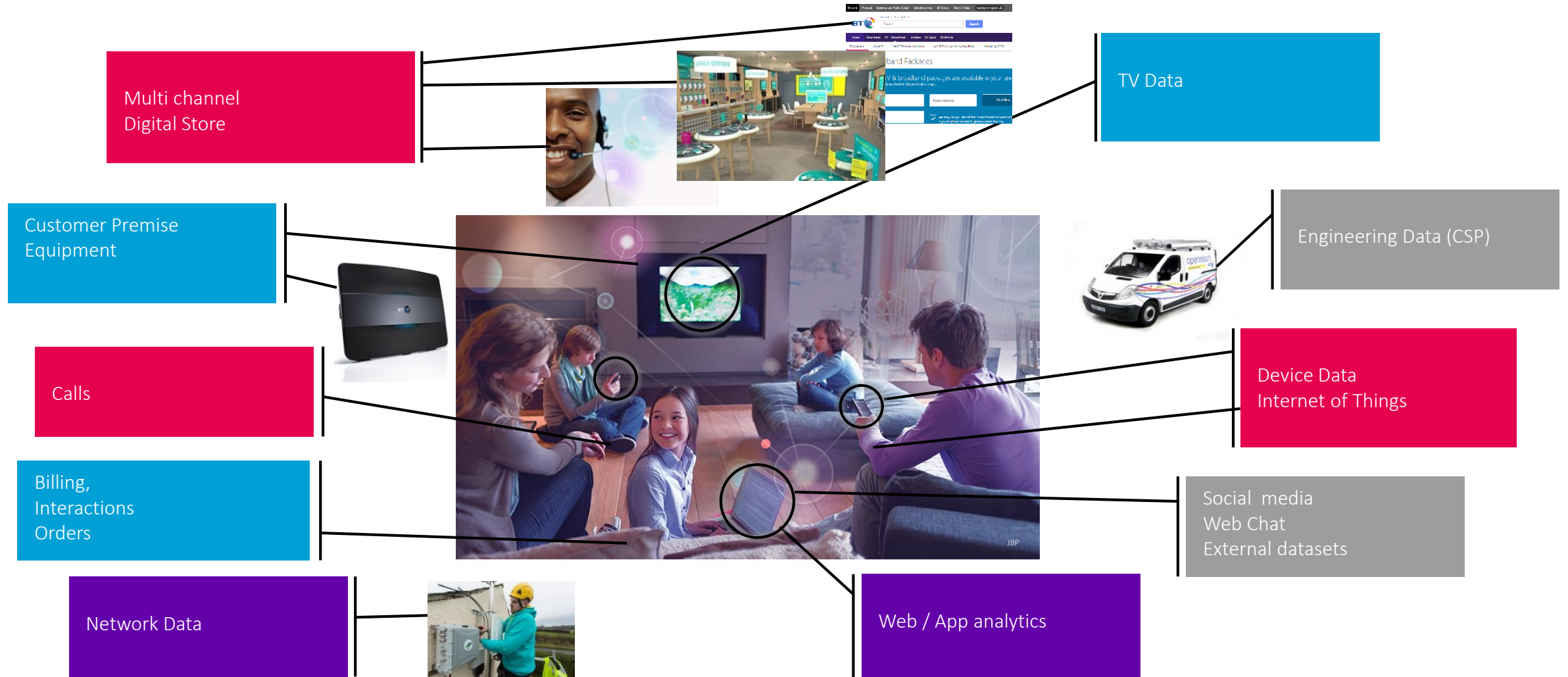
Jason B Perkins

Head of Data & Analytics Architecture



# A Connected and Converging World

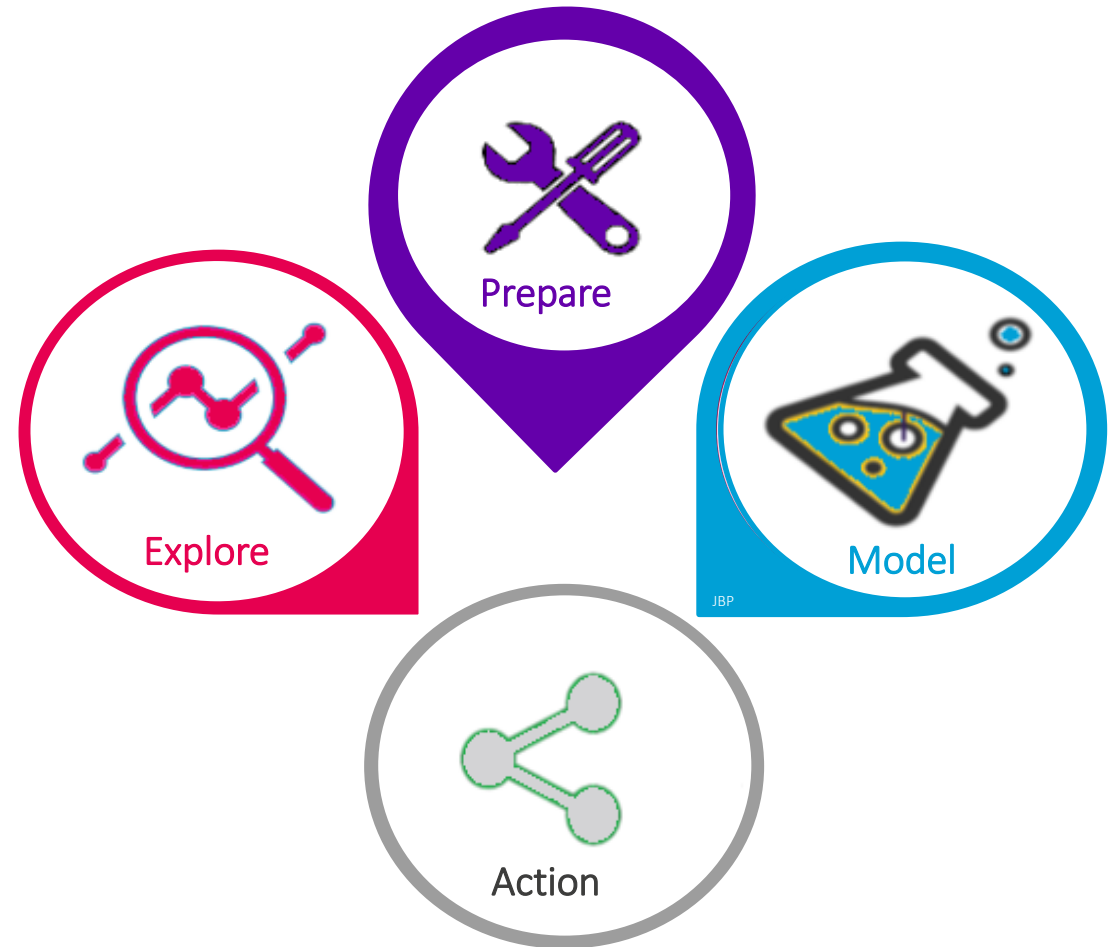
The amount of data being generated every day is increasing exponentially. Evolving technology can generate value & insight from that data



# Democratising Data & Analytics

Putting insight driven decision making at the heart of our customer experience and operational management

- We can use data & analytics to make higher quality & faster decisions
- **Why?** Data-Driven decision making has a significant performance impact on organisations\*
- **Data Democracy** is an attempt to unlock this value
  - How do we empower Data Citizens & grow the Data Community?
  - How do we build an Information Exchange?
  - How do we govern and secure?
  - How do we *scale out* access to Data Analytics?



\* "Find organisations that adopt Data-Driven Decision Making have output & productivity is 5-6% higher"

[Strength in Numbers](#), Erik Brynjolfsson, MIT

# Data Citizen Personas – Human Centered Design

Understanding our data audience, how do we grow and empower them with more analytical capabilities



Information Consumer	Information Analyst	Citizen Data Scientist	Expert Data Scientist	Cognitive Machines
Guided & Passive	Interactive & Iterative	Explorative & Assisted	Experimentation & Iterative	Learn & Adapt
Known Questions	New questions	Open questions	Big Complex Questions	Operational adaptive questions
Management & Monitoring	Visual interactive Analysis	Assisted Business recommendations	Bring your own via Data Science workbench	Decision automation
10,000's	1,000s	100s	10s	1

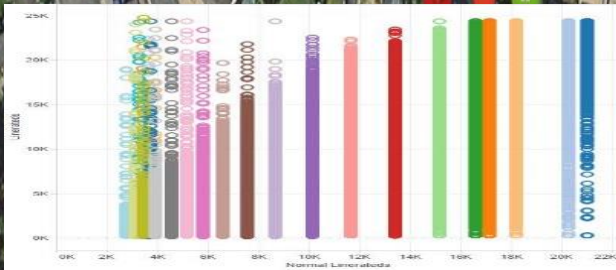
# Finding value in Big Data

Using data to transform customer experience, business efficiency & data innovation

## Big Data Diagnostics

- Transforming Customer journeys

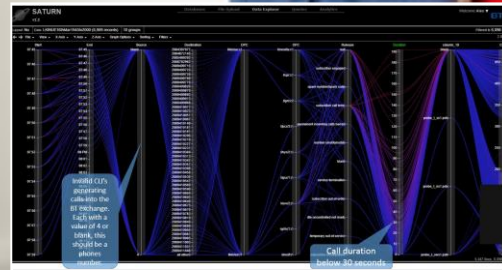
- Drive proactive action and inform improved assistance for advisors, engineers & customers
- Collect to understand "What is Normal?" for each of our customers gives us unparalleled insight into Broadband, Wi-Fi and TV performance
- A conversation with 7 million hubs every two hours.



## BT Call Protect

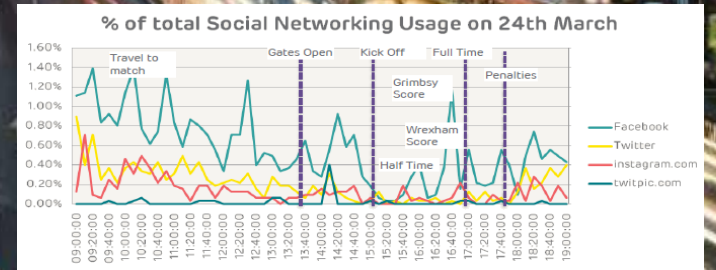
- Fight nuisance calls

- Research by Which shows that 75% of customers receive an unwanted call each month
- Created composite measure using weighted scores on 2bn calls for likelihood that an originator is generating nuisance calls.



## Data Analytics Suite - Unique customer insights for better business decisions

- Using mobile cell towers, passively observe mobile network traffic in the area.
- Collecting anonymous & aggregated statistics about the mobile usage & demographics of customers.



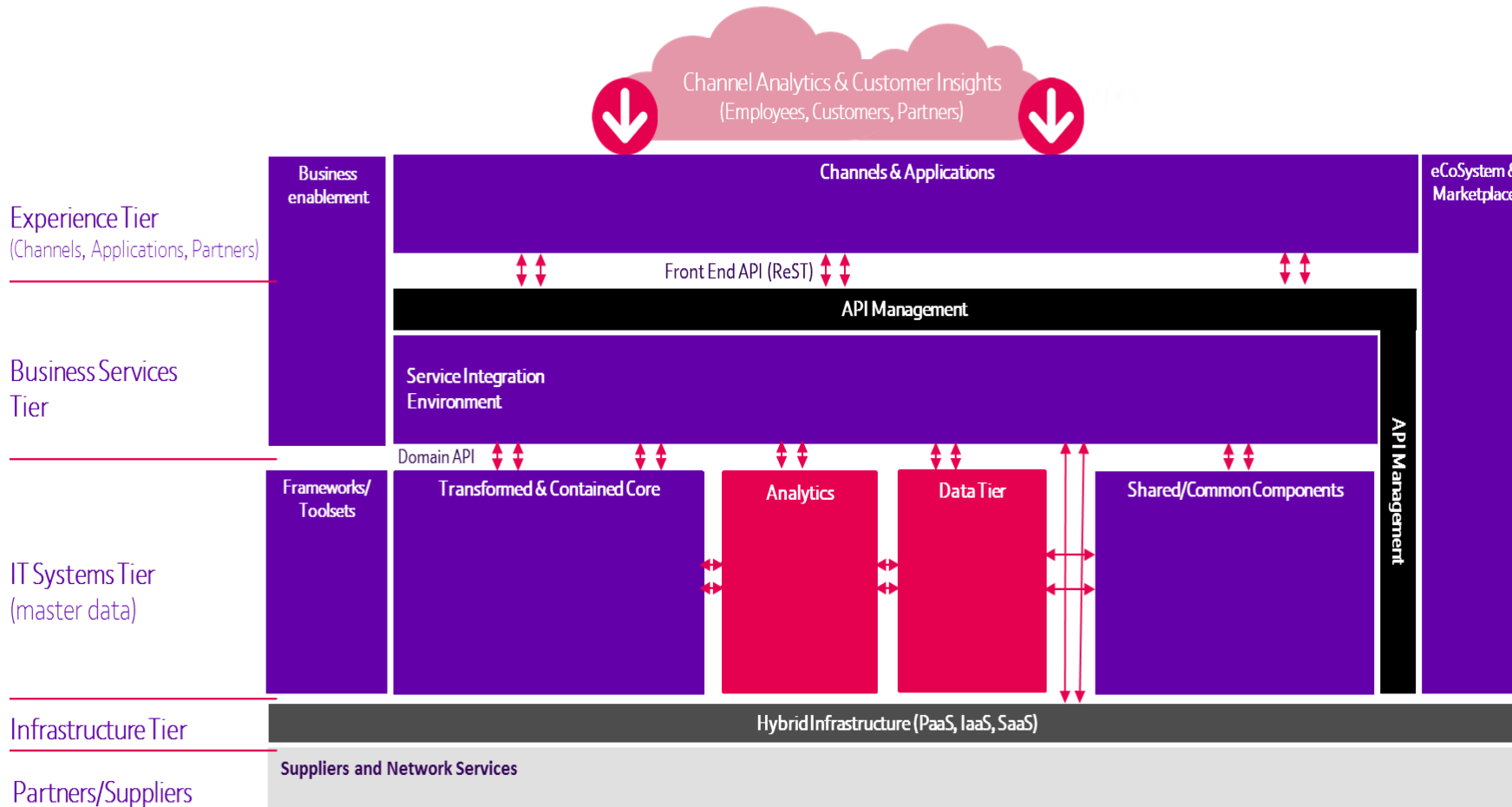
# IT Data Analytics Strategy

'Data & Analytics are the No. 1 priority in CIO survey 12 out of last 13 years.  
Capability expected to most help business differentiate from their competitors.'

Gartner DA Summit

# A Digital platform for a Converging World

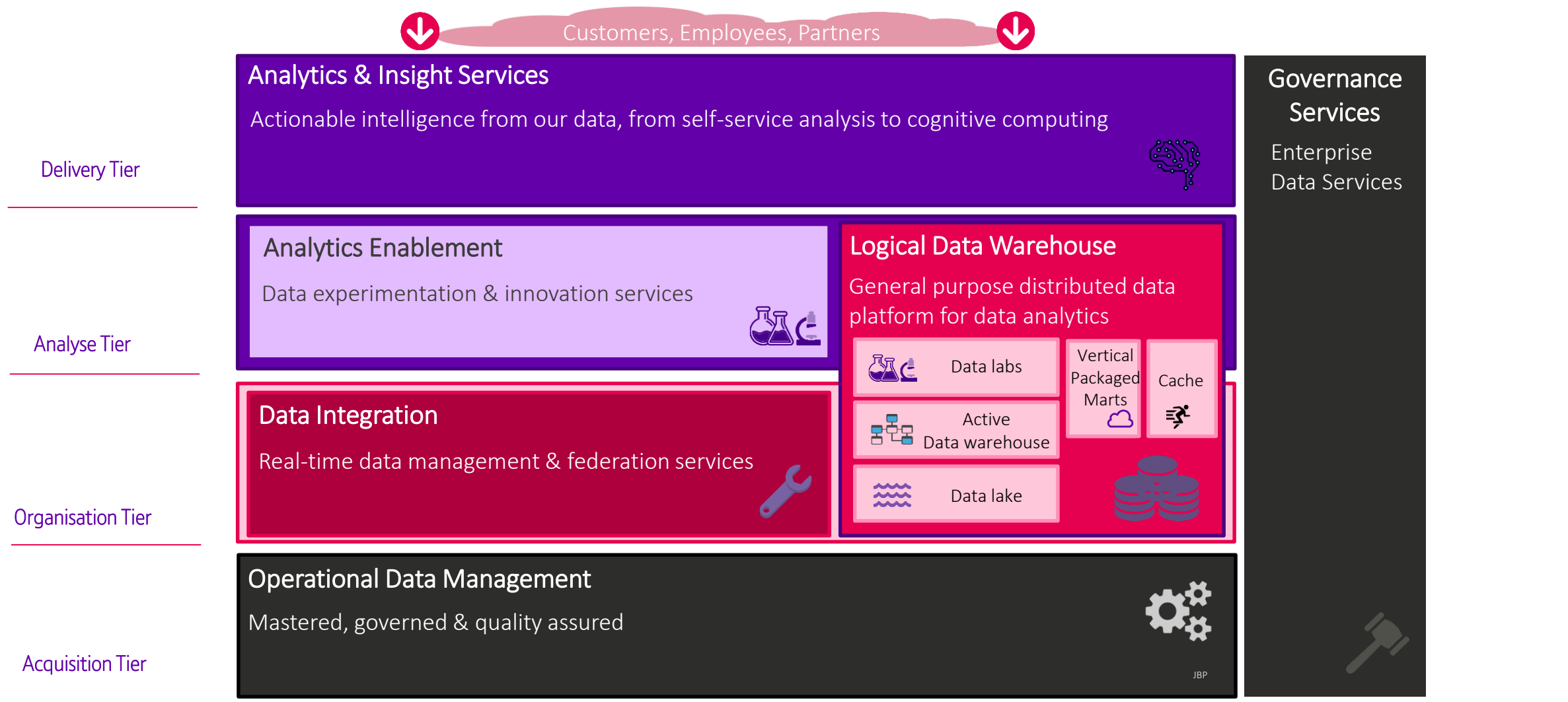
The DPRA is an architecture blueprint, a representation of BT as digital platform. Data is at the heart of our DPRA.



- **Digital** and **Mobility** are changing our customers lives.
- **Connecting Everything** - underpinned by Data Driven Networks and services
- **Data** is everywhere ... in every business & customer interaction
- **Convergence** is blurring traditional boundaries. Joining up data required to fully exploit

# BT Data & Analytics Reference Architecture – Version 2

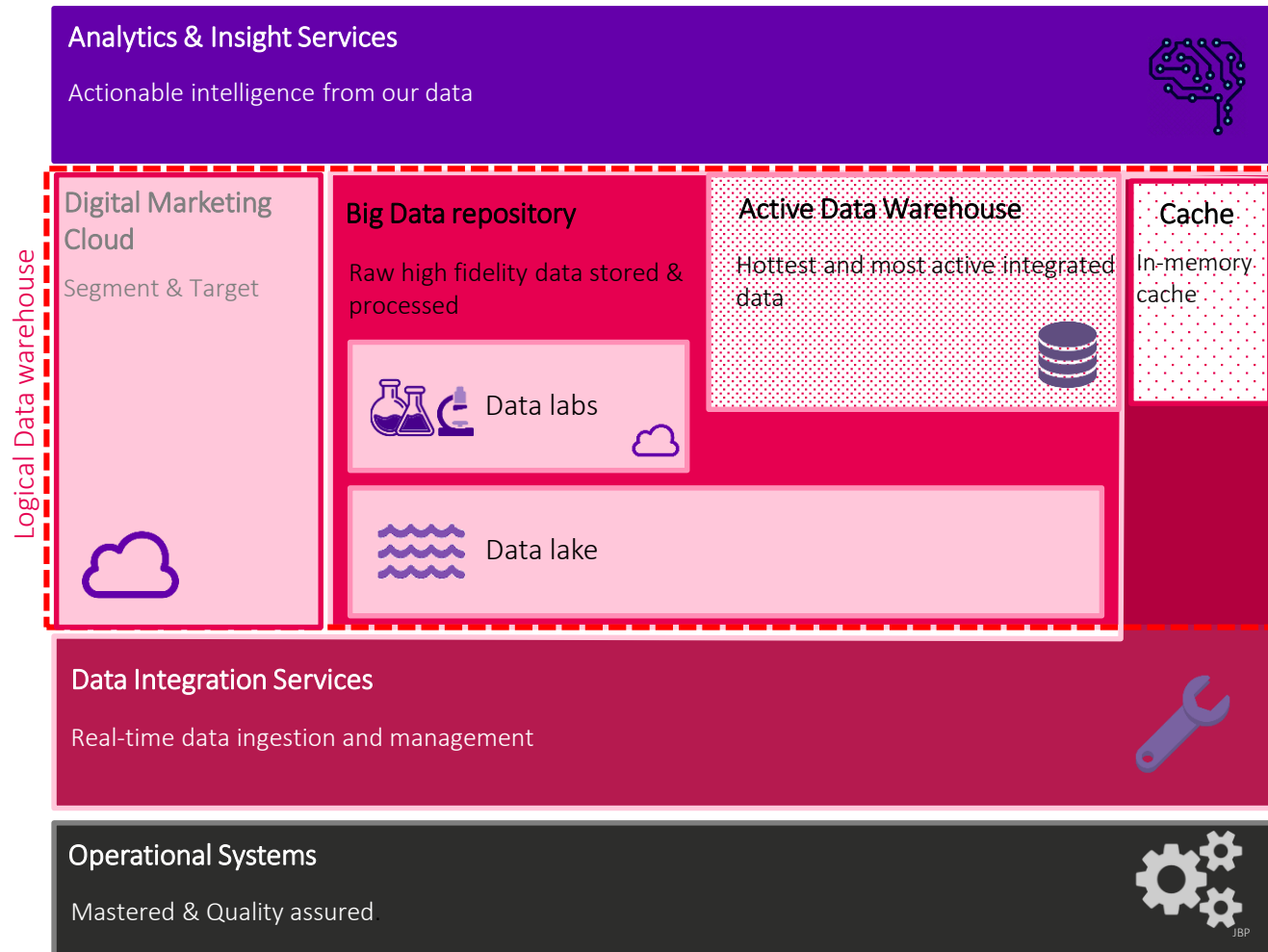
The DARA is an architecture blueprint, a representation of BT as a data platform





# Analytics Data Architecture

## Organise – Agile Data Platform



▪ The **Agile Data Platform** is part of our logical persistence layer (LDW) that provides a general purpose distributed platform service for data analytics.

- **Data Lake** – raw multi-tenant repository that can scale to handle the volume and variety for our digital business.
- **Data Warehouse** - provides consensus we need to run the business based on integrated view across our critical data assets.
- **Data Labs** – virtual data marts for tactical time boxed analysis.
- **Vertical cloud based marts** – mutually exclusive operational analytics marts.
- **In memory cache** – performance optimisation layer for joined up analysis on most demanded data with low latency response.

# Self-Service analytics with a Big Data Labs

Democratise analysis with experimentation & sandboxes on big data



- Register your sandbox request via our IT Marketplace with your business idea brief, hypothesis or experiment.
- Invited to present on the weekly Analytics Review Board call
- Analytics Review Board includes representations from
  - Architecture & Strategy Office
  - Data Analytics
  - Data Privacy & Security
- Approved requests get a sandbox account on HaaS where you can load and analyse data
- A set of standard analytics tools available for analysis on HaaS
- Successful experiments down streamed to enterprise applications.

The screenshot shows a news article from BT Today. The title is "Videos drive Glastonbury data surge". The article is dated 28 June 2017, 10:00 and has 37 likes and 21 comments. The main image shows a young woman with long blonde hair, wearing a yellow patterned top, looking at her smartphone. In the background, there is a yellow banner that says "SAY HELLO". Below the image, there is a caption: "We provided more capacity than ever to Glastonbury festival-goers". At the bottom of the article, it states: "EE supported a record amount of data traffic at this year's Glastonbury Festival."



# Business Data Revolution Summary

The important thing is to never stop questioning.”  
Albert Einstein

# Data Strategy

Developing a Data strategy with five key components:

- 1 A **vision** and set of principles driving the approach to data analytics
- 2 A data **use case catalogue**, sets out the opportunities to drive conversations on investments
- 3 A data analytics **reference architecture** (DARA), common data assets & technology strategy with a roadmap
- 4 Invest in **Data Culture** – A future skills plan for data
- 5 Data centric approach to **ways of working** – A refreshed governance, operating model, goals and financial approach

Strategy is tested (and adjusted) through a series of lighthouse cases.

# Want to know more? References

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# Biographies

## Jason B Perkins



I am the Head of Data & Analytics Architecture, in Technology, BT. I have spent 20 years in IT specialising in tackling some of the worlds most complex data challenges from the world largest health analytics platform, a national statistics open data service to transforming data & analytics at one of the world's leading communications services companies.

I am both a Certified Business Intelligence Professional and a Certified Data Management Professional. In my spare time I love to explore the world with my family.





Digital Transformation driven by Data & Analytics