



# 'Budget-Friendly' New Tech

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## Director of Technology Design and Engineering

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Masters in Leadership at Henley Business school and Chartered Manager awarded by CMI

Been leading teams and Technology transformations for many years across multiple sectors including Retail, IT, Utilities, Legal, Public Sector – Central Government and Not for Profit.

Background in Enterprise Architecture and Infrastructure domains and currently overseeing end-to-end technical capabilities of all technology and business change at BHF.



# What's "new" in the tech world?



AI

Big Data

Robotics

RPA

GCP  
Kubernetes  
Engine

Digital  
Twins

Machine  
Learning

Blockchain

Azure AKS  
serverless

Drones

AWS  
Fargate

iPhone 14  
Pro Max  
(with 7  
cameras for  
super zone  
depth! 😊)

# What makes something "budget-friendly"?





# What to ask to make sure it is budget friendly?

## Some straightforward 'budget' questions:

- Has it been included in the annual budgeting process?
- Will it bring business value?
- Will it bring in revenue?
- What is the total cost of ownership?
- Will it increase simplicity?
- Might it increase productivity?
- Is this a tactical procurement (point solution)?

## Some straightforward 'business' questions:

- Will it increase simplicity?
- Does it drive customer adoption?
- Will it align with our mission / strategic priorities?
- Does it give us competitor advantage?
- Do our architectural principles and standards get met?
- Can data integration be achieved?
- What are the risks or known issues?



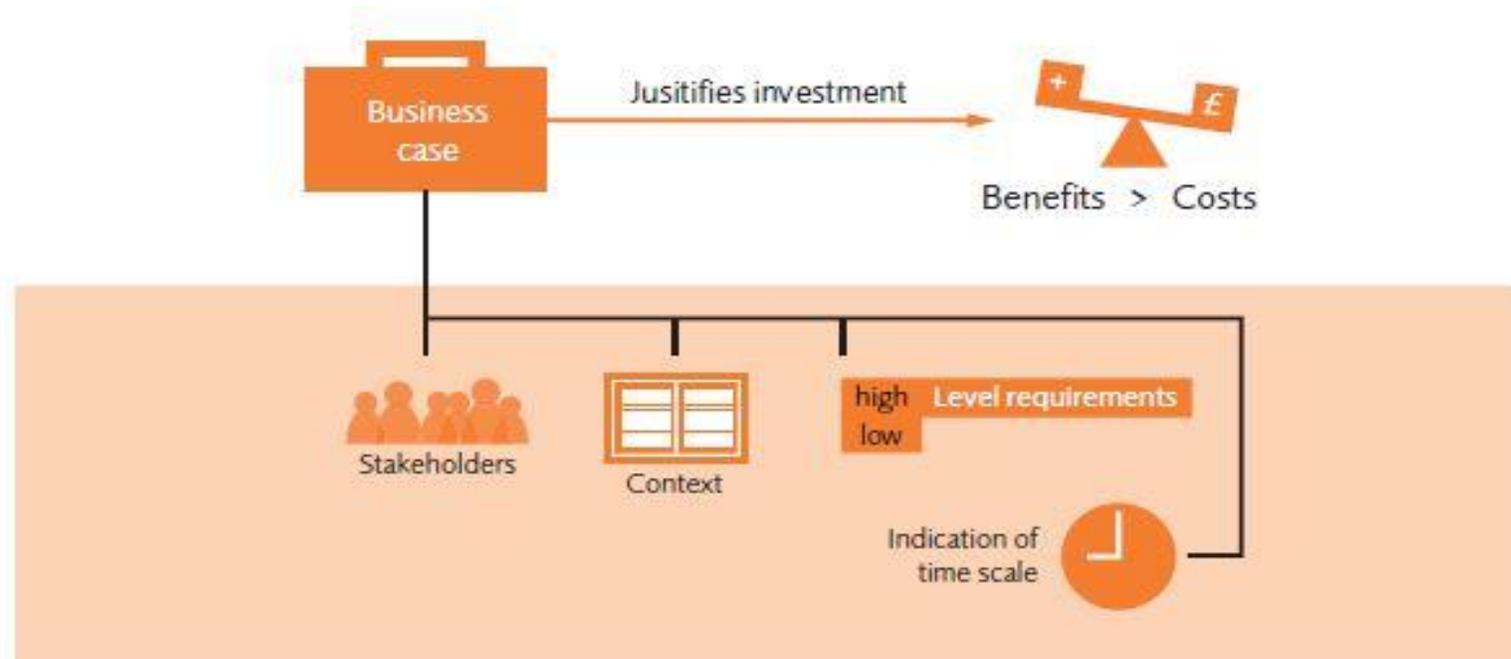
# Business case

Every solution needs a good and solid business case.

A good business case will:

- **Explain the problem or opportunity**
- **Identify and analyse the possible options and provide evaluations**
- **Create the implementation strategy**
- **Provide a recommendation - Allowing decision-makers to decide what will be best for the organisation**

It's important to note that a business case will present multiple solutions.



# So is it budget friendly?

If the business case is financially sound and approved,  
then for you,

# YES!

'Budget friendly' is NOT necessarily cheap,  
it means it meets your  
specific organisational needs!



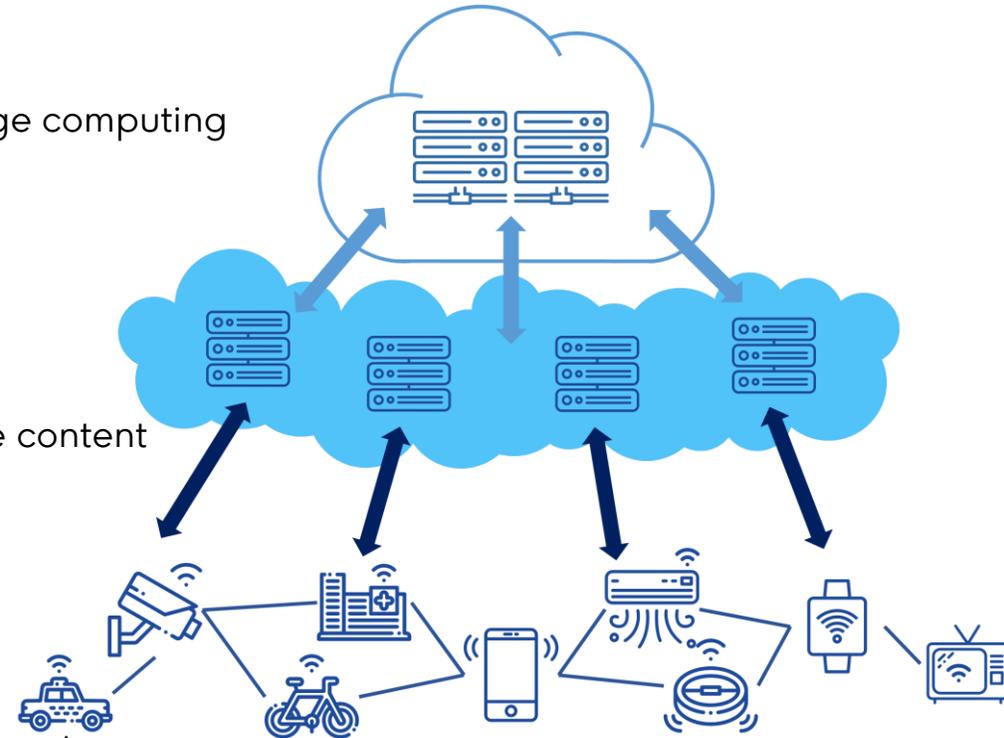
# Interesting new(ish) tech for me (1)

## Edge computing



### Edge computing

- Most people think IoT as soon as Edge is mentioned but that is just a type of edge computing
- Edge brings the compute and storage closer to the source of data collection
- This is the opposite of Big data and is 'instant' or 'real-time' data
- Processing takes place in the apps on the edge of the network (last mile)
- Decentralised data processing is happening now but with Blockchain and Edge content caching on Edge nodes this is only going to increase
- Introduces low latency within services especially gaming but think bigger:
  - Smart cities
  - Connected and smart cars
  - Industry 4.0 - the joining of technologies like artificial intelligence, gene editing, to advanced robotics that blur the lines between the physical, digital, and biological worlds
- This will be delivered by Cloud providers but there will be an increase in Cloud DC's closer to where tech is consumed and this is what we need to be thinking about when creating decoupled systems



# Interesting new(ish) tech for me (2)

## Digital twins

IBM state:

“A digital twin is a virtual representation of an object or system that spans its lifecycle, is updated from real-time data, and uses simulation, machine learning and reasoning to help decision-making”

- Initially used by NASA in 2010
- Currently being used in hospitals, aerospace and many other engineering spaces
- It's a matter of time before we have a digital twin of every [product](#)
- This is huge as testing is virtual, before product launch, process failures are identified and whole life-cycles are reviewed
- Digital twins in Healthcare! 
- Plenty of players: Autodesk, SAP, Oracle, IBM, GE Digital and many start-ups



# Interesting new(ish) tech for me (3)

## Mixed reality

– Immersive, Augmented and Virtual reality

Microsoft state:

“Mixed reality is a blend of physical and digital worlds, unlocking natural and intuitive 3D human, computer, and environmental interactions. This new reality is based on advancements in computer vision, graphical processing, display technologies, input systems, and cloud computing.”

- Consumers are buying Oculus Quest and HoloLens headsets and are already playing with Virtual gaming experience
- We've seen Augmented reality when a QR code brings a poster to life
- Mixed reality adds to what is really around you – this is very Hollywood studios!
- 3 years ago, I saw a prototype for surgeons, for operating on a broken leg – Amazing!



[bhf.org.uk](http://bhf.org.uk)

**Questions?**

**Thank you!**