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# Is the Data Science bubble about to burst?

## Are businesses getting it wrong on their data centricity journey?

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## Data Science should help democratise data

**Our recent survey published in Marketing Week of over 80 C-suite executives revealed that 81% of businesses agreed data and analytics are critical to business growth.**

This is no surprise if you look across well-known brands like Amazon, Apple and Google – all link strong business performance to the role data plays.

Advances in technology have fueled the desire for Data Science. Not only have they increased the richness of data collected (digital, social etc.) but also their accessibility to the analyst and the breadth of tools available to interrogate the data.

However, what is worrying, is that most executives in the survey (54%) felt they didn't have a clear data strategy in place to leverage their data and become data-driven.

### Why are more businesses not using Data Science to its maximum?

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# 5 key considerations to enable Data Science

To achieve data-centricity, businesses need to consider more than just technology. Obviously, this is important, but it cannot deliver success in isolation. We believe there are 5 key areas that businesses need to embed within their change management data-centricity journey.

1. People

Do you have the right structure, skills and headcount in place to deliver your vision?

2. Data

Is data accurate, timely, complete and accessible? Is there a single version of the truth?

3. Systems

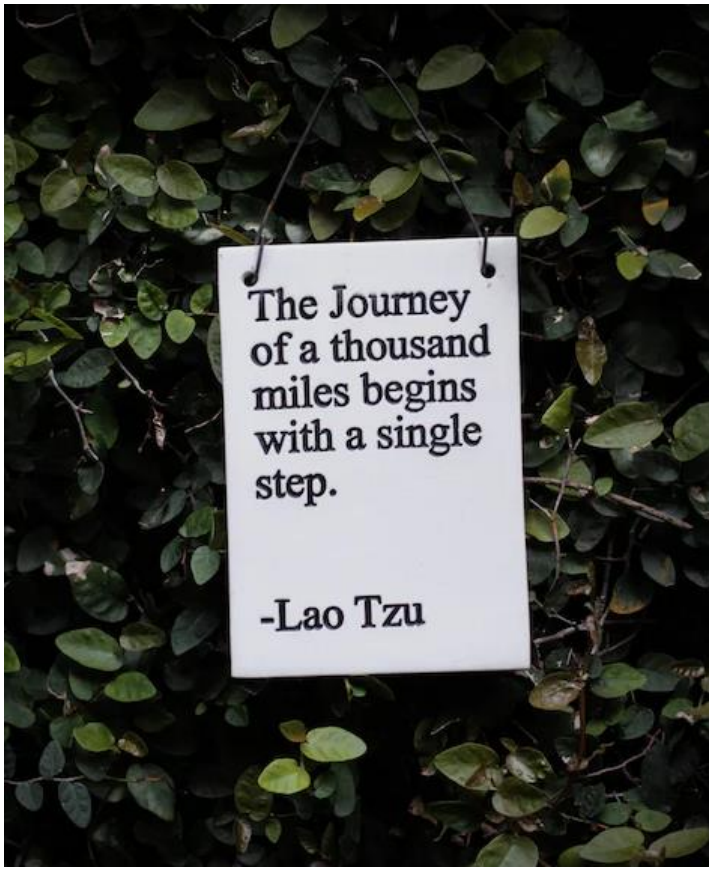
Are your solutions integrated, scalable, functional and stable?

4. Process

How do communication, ownership, prioritization & documentation support delivery?

5. Knowledge

Is the relevant knowledge available to key decision makers to make a difference?




We will be discussing each of these in our series entitled “Is the Data Science Bubble about to burst”? In each article, we will discuss the common watch-outs that cause data strategies to fail and how to avoid them.

The first article: “Everyone Loves a Data Scientist” can be found here!


## Is the Data Science bubble about to burst?

In our series entitled “Is the Data Science Bubble about to burst”? We will discuss the common watch outs that cause data strategies to fail and how to avoid them. Below is Part 1 of our 5 part series.

## Part 1 : People - Everyone loves a Data Scientist

### According to the Harvard Business Review, Data Science is one of the sexiest jobs of the 21st century.

From high-profile applications such as helping the World Health Organisation tackle COVID-19 to helping us play music and shop in our own homes, it cannot be argued that Data Science is having a major impact on our home and working lives.

This has led to a boom in the demand for Data Science skills with, for example, Indeed stating Data Science related job postings have jumped by 256% in recent years.

### So what is the problem?


# Will ‘People’ burst the Data Science bubble?

Below are a sample of quotes from businesses who are embarking on a data centricity journey:

*“I have data scientists coming out of my ears, I need people who understand the business and can democratise data”*

*“The cost of a data scientist is too high, I can recruit a bigger team elsewhere in the business.”*

*“This role has remained unfilled for over 12 months, we need to invest the money elsewhere”*

*“This team is failing to drive the expected business change”*

These anecdotes were supported by findings from our survey of over 80 C-suite executives where:

- 33.3% of executives said a lack of training of Data Scientists prevented delivery of value
- 24.7% struggled to recruit and retain staff
- 23.5% said getting investment was a challenge

## So why are businesses finding it so hard to recruit and build Data Science teams that will deliver change?

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# First let us consider what is a Data Scientist?

When Data Science first emerged as a discipline it was academically focused. Typically, it was delivered by strong PhDs who were tackling specific data-rich problems using advanced Artificial Intelligence and Machine Learning techniques.

However, even in these early days, a Data Scientist was described (by Harvard Business Review) as “a high-ranking professional with the training and curiosity to make discoveries in the world of big data.” This led to the term Data Scientist being quickly adopted by a range of more traditional professionals such as CRM analysts, pricing analysts, business analysts etc.

The role of a Data Scientist can now span a range of complimentary but disparate disciplines all of which are crucial to democratising data. This hard-to-find mix is well known as the Data Science Unicorn and is every recruiter’s nightmare.

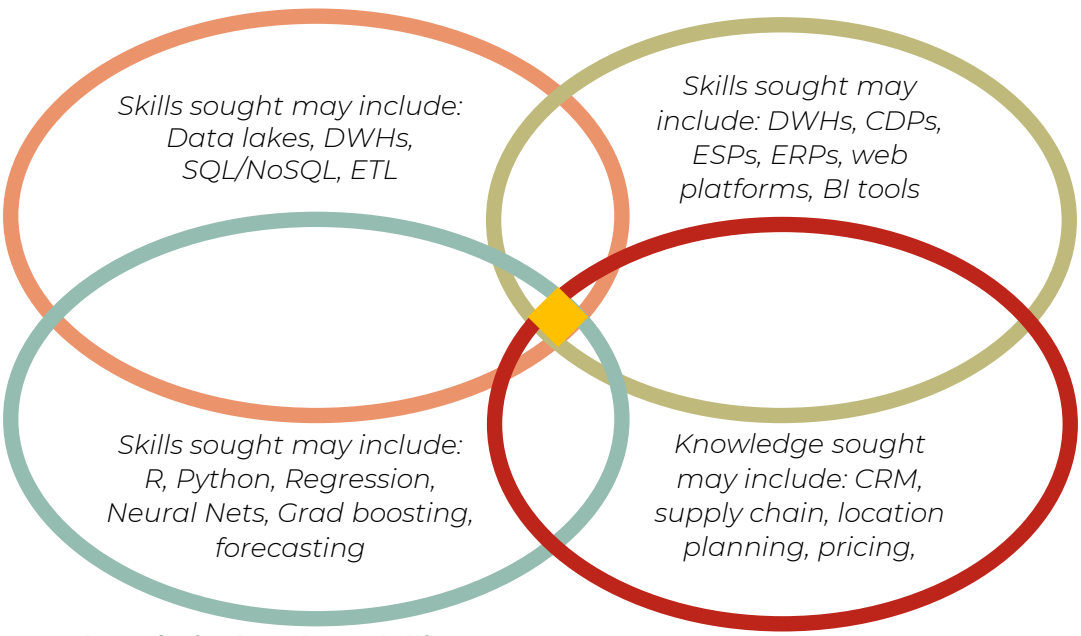
## The Data Science Unicorn

### Data engineering

The ability to pull and manipulate data from disparate data sources and bring together into a format that can be analysed.

### Technology

Understand the various business systems that a solution may be deployed within.




### Advanced statistical and modelling skills

Interpret and analyse complex datasets using advanced statistical techniques

### Business application

Understand how the data and statistical analysis relates to business process and be able to make ‘actionable, impactful business-led recommendations’.

# The challenges of building a Data Science function

## Role mix & Recruitment

Defining the role of each individual and balancing that across the team is critical to success. Asking too much of any role can lead to recruitment challenges. This means vacancies can be slow to be filled and strong candidates can have the pick of the marketplace. Businesses need to offer more groundbreaking work, engaging environments and leading software to stand out.


## The 'Doesn't Jane do that' syndrome

Within any organisation, recruitment and restructuring have to be business cased. Within the data scientist space, this can often lead to conversations with senior management about the specifics of each role and how they differ not just against each other but also from existing people/roles. It is not unusual for Finance teams to assume all roles/skillsets are similar and already exist in an organisation e.g. BI developer vs CRM analyst vs ML modeller.

## Training

Problems in recruitment might be tackled by relaxing skill requirements in the hope of upskilling once in post through coaching and training. In a lot of teams this may work but data science is highly complex and the overhead of coaching can be significant. This can lead to slower than ideal delivery and quality issues – damaging the team's trust across the business.

## Unfortunately it gets worse

### The technological landscape is fast evolving

From a business perspective in many ways this is an opportunity but if you are on a legacy system that is deemed to be 'behind the times' then candidates may feel they are not developing CV relevant skills.

#### Bleeding edge is not the answer

Investing in leading edge technological advancements may resolve this. However, this can lead to the opposite challenge where it is difficult to find and retain a team skilled enough to support the technology. This may cause an implementation to falter and possibly fail.

#### Very specialised skills can increase risk

Being dependent on specific individuals with very specialised skills and knowledge can make succession planning difficult and indeed replacement recruitment a challenge. A loss of such skills can have a serious impact on a business.

#### Value perception

The supply vs demand challenge has driven up the salary expectations of candidates with even those with little experience potentially able to demand a high salary. It is likely such candidates will still need relevant training and support and may be slow to deliver value into the business. This may lead to the business concluding that the business case no longer stacks up.

# Moving the problem

## Achieving data centricity with no data scientists

Some businesses are attempting to achieve data centricity by implementing new technologies that empower business users to drive value from data. This can range from enhanced train of thought slice and dice BI reports through to embedded ML methodologies in ESP and web platforms. Such technologies seemingly solve the Data Unicorn problem and ensure connectivity between the analysis and the business decision makers. However, this has its own challenges.

### Data whispers

Enabling different parts of the business to analyse, interpret and communicate data led conclusions and recommendations can lead to different versions of the truth which in turn leads to at  best confusion and at worst incorrect business decisions being taken.

Clear ownership of data and analytics is crucial


### Sub-optimal

Technologies with embedded capability in theory are great. However, in practice they may lead to a black box solution being operated by, possibly, non-data literate individuals. This leads to ‘solutions’ that are not fit for purpose or well understood.

Black box solutions can lead to a lack of performance

# So how do businesses avoid a burst bubble?

## Part 1 - People

### 1. Appoint a specialised owner

Leveraging data requires specialised knowledge. Ensure that the owner has a mix of leadership skills and those that understand how to define, build and deliver a successful data strategy. Often these skills are different to those required to run an established team.

### 2. Give your team time to breathe

Do not under-estimate the change management journey involved in becoming data centric and the time taken to build and embed a team. This needs clear expectation management and a realistic engagement plan.

### 3. Build a supportive, team-led environment

A good, skilled team is invaluable. Ensure you have a supportive environment in place (including good leadership) that encourages growth and engagement and most importantly contentment. Recognise and reward success and have succession plans in place. Recognise the challenges of any decentralisation or spoke and hub models.

### 4. Be realistic when designing job roles and structures

When designing a team, ensure you have a realistic opportunity to fill roles and in combination the overall team works synergistically. De-risk key roles within the team design and ensure there are no operational bottle necks.

### 5. Don't rely on training

Training and development are important but don't rely on them to deliver success. Be realistic as to the impact of any mentoring or coaching activities on all parties involved. Ensure good Quality Assurance practices and central to delivery when less experienced staff are involved.

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# We have helped significant numbers if organisations become Data Centric

We have a tried and tested 4-step process with particular focus on achieving success quickly – and without re-inventing the wheel.

**DISCOVERY**

Understand current capability and target state

**GAP ANALYSIS**

Identify strengths and opportunities using VERDAnt

**QUICK WINS**

Achieve some success quickly laying the foundations for the strategy

**CONSOLIDATED ROADMAP**

Defining the way forwards for your business

There are multiple parts to your data capability. We look across these areas to identify issues and opportunities and align them to the business plan. We have developed our own bespoke framework VERDAnt to give you transparency as to 'why' and 'how' things needs to change to ensure your data function is fit for purpose to deliver value.

# We can help!

We'd be happy to have a free consultation with you to talk through what data and analytics challenges you are facing and how we might be able to help.

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