

**Digital + Data: the twin imperatives** 



First, let's consider some core stats and headlines:

- "Whoever becomes the leader in Data and Artificial Intelligence will rule the world"
- -President Vladimir Putin
- -"China has made supremacy in AI a strategic goal and has announced plans to dominate global AI by 2030"
- -Financial Times
- -"The internet economy in China is forecast to hit US\$1 trillion in 2019"
- -Center for Retail Research
- -"Amazon.com revenues are close to US\$ 250bn and 40% of all US e-commerce"
- -USA Today
- -"In China, e-commerce is reaching towards 25% of all retail sales, in the UK it's getting close to 20%, South Korea is at 16%, Denmark at 12% and USA at 9%"
- -Statista
- -"5 billion videos each day are watched on YouTube"
- -BrandWatch
- -"More data was created in the two years 2017 and 2018 than in the previous 5,000 years of humanity"
- -Forbes
- -"Annual data creation today is approximately 16 Zettabytes (that's 16 trillion gigabytes or 16,000 exabytes), by 2025 that is expected to increase 10-fold" *-IDC Survey*

- -"We live in a world where we now take for granted immediate global connectivity, immediate interaction and response and we accept no limits on availability, service and supply"
- -Marc Andreessen
- -"Data is expanding across every industry from biotech, healthcare and pharma through to all forms of social media and entertainment and the emerging "internet of things" will be a new tipping point"
- -PA Consulting

Data and Digital have now become the twin imperatives most impacting companies. Research is suggesting that the winners in 2025 will be those who best master them both.

We have all been acutely aware of how Digital generally is transforming the way companies do business and how customers prefer to interact and purchase. Now, Data has come to the fore and whether it's Machine Learning or AI or real time predictive analytics, companies are facing major competitive pressures to gain new insight into the ways they operate and engage with customers and drive new sources of advantage.

This chapter looks at these key pressures, examines best practices and how some companies are managing to respond successfully and learning how best to move forward and be one of those next decade winners.

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The consulting firm BCG has described the new Digital + Data dynamic as "a question of life or death in most industries". In their most recent survey, BCG found that 72% of senior company execs felt that successfully mastering these two challenges would be the key to their survival. Most talked about significant change and transformation programmes under way. Most acknowledged that there were substantial market share and profit gains to be had if they could better their competitors in these areas. Most were spending increasing amounts of time and investment \$ on transformation processes, structures, technology infrastructure, ways of working, company culture, skills training etc. But, most also said that they had yet to see the results coming through, that it as taking much longer than they thought, that they worried new disruptors would emerge who could undermine their business model, that perhaps some of the investment was not being channelled or deployed or implemented in the right way, and that it was leading to growing frustrations in the ranks.

Most also looked at what had already happened in Publishing, Music, Consumer Electricals, Education, Stock trading, Travel, Payment systems, small component Manufacturing (through 3D printing); they envied how quickly the likes of Uber or Airbnb, or SimplyBusiness or DirectAsia or challenger banks (eg Aldemore, Monzo) or others had arrived on the scene and totally changed the industry dynamic, levels of profitability and future opportunities. Most worried about: *how can we pull off our own transformation?* 

What's clear is that the next decade winners will be the digital and data transformation masters. We can just see that from this chart below; how the most valuable companies of today are now typically those regarded as digital and data leaders and while market cap will fluctuate, the overall dominance of these sort of corporations is compelling.

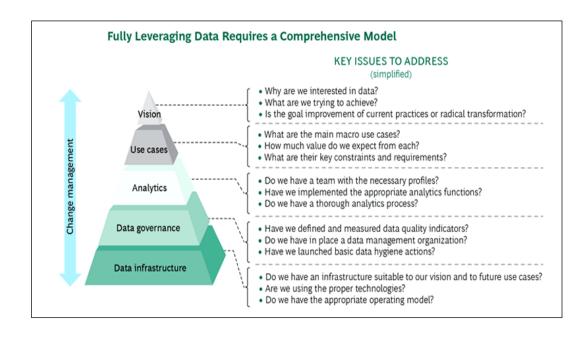
## **Data-Driven Companies Have Become the Most Valuable**

Company: Market Capitalization (\$billions)			
Rank	2018	Q4 2011	Q4 2006
1	Apple: 1,000	Exxon Mobil: 406	Exxon Mobil: 447
2	Alphabet: 800	Apple: 376	General Electric: 384
3	Microsoft: 800	PetroChina: 277	Microsoft: 294
4	Amazon: 860	Royal Dutch Shell: 237	Citigroup: 274
5	Facebook: 440	ICBC: 228	Gazprom: 271
6	Berkshire Hathaway: 545	Microsoft: 218	ICBC: 255
7	Exxon Mobil: 545	IBM: 217	Toyota: 241
8	Johnson & Johnson: 380	Chevron: 212	Bank of America: 240
9	JPMorgan Chase: 370	Walmart: 205	Royal Dutch Shell: 223
10	Alibaba Group: 400	China Mobile: 196	BP: 219

Data-Driven Company

[Source: S&P Capital IQ, "Top 10 Companies with Highest Market Capitalization Worldwide." Note: Market capitalization figures have been rounded and are in \$billions.

What emerges from the research into best practice is the need for the whole organisation to buy into this wholesale transformation need. If there is a burning platform, for example as we can see among high street retailers, then the drive, the energy, the need for change can act as a tremendous catalyst. Where there is no such urgency, then it does require a significant communications exercise to engage the whole workforce on this journey.



In another survey, this time by Altimeter, they also found that the majority of companies reported they are undergoing some form of digital and or data-led transformation. 85% of that group said they had a time frame of less that 3 years to make a success of that or suffer financially. But, only 25% of the surveyed companies felt they had a clear understanding of what the path to success would be.

Against this backcloth, with companies clearly identifying the need for change, what then is the biggest hurdle to success. What is the key ingredient that can make the difference, that can turn that 25% stat into 100%?

A recent survey from Forrester suggests that a key factor is "talent and leadership". And a new report from MIT/Cap Gemini concluded that 87% of companies "have a critical skills shortage in digital and data transformation". Have we got the right people in the right place with the drive and energy and talent to drive through these changes? Do we have a CEO who sees this as his No. 1 priority? For example, at Aviva, the successful insurance group, it's said that the Leadership Exec there set up Digital teams to deliberately challenge and gamechange the core business, be a competitor to it, establish the "digital first" model as the preferred way for customers to interact and in effect make the traditional business model redundant. Who else has that bravery, that willingness to challenge and change all the formerly established ways of doing business?

At Bupa, another insurer, they are just at the beginning of their true digital transformation. And one potentially highly successful initiative is their Customer Lab. Set up at the Group Centre, its remit is to define and design the Bupa digital and data business model of the future. To take certain core parts of the business and do a stand-alone rebuild as if they were starting from scratch, as a pure play, and to leave behind all legacy and hierarchy and traditional process and ways of working. This "Customer Lab" is centre stage at Bupa, reports direct to the CEO and has the mandate to rebuild the company.

Finding the key talent to lead the digital and data transformation is not easy, but in the "war for talent" there is in fact a strong talent pool who do have the necessary skills. Research from Gartner identified the 5 key attributes of successful transformation leaders:

- (i) Exceptional stakeholder management skills.
- (ii) Ability to listen
- (iii) Technical knowledge (though not necessarily a Techie!)
- (iv) Stature, maturity, years of experience
- (v) Have the clear CEO and Board mandate and authority to act and make decisions

Gartner found that in 64% of companies surveyed, the transformation leaders did not meet these criteria. In more than 80% of situations there was no dedicated transformation person in that role on the Board or ExCo, and frequently that key change leadership role was "buried" in the hierarchy and often had no real power or authority to change.

If that's the case then perhaps no wonder there is so much frustration and disappointment around the change agenda.

Let's look at some companies who are bucking the trend and getting it right.

Adobe has developed a track record for consistent annual profits and earnings growth and often at double digit levels. Adobe CEO Shantanu Narayen commented: "Our strong business momentum is driven by the market-leading solutions we provide to empower people to create

and businesses to digitally transform and by our own continued digital and data transformation"

Adobe has evolved from a traditional desktop software provider of multi-media products to now a Cloud-based services provider, changing its business model to a subscription-base and a focus on digital design and data analytics. Shantanu Narayen has been very much the driver of the Adobe business transformation. He is well-known for stopping people in the corridor and asking what working on /what have you contributed today to our transformation agenda, focus on that priority and not on other things. That has sent a clear message to everyone about what is critical. In addition, there have been monthly all-company updates on progress and quarterly group "town hall" meetings to update and share best practices.

Alongside the very personal and direct involvement of the CEO, it's been made clear that this is the No.1 priority of the management team. There has been some restructuring of the senior leadership, a new dedicated Transformation /Change team put in place reporting direct to the ExCo and substantial across-the-company training programs to upskill in change management and to reinforce the value of what's been targeted.

"Developing a "digital first" mindset has been key for us, we are modernising the way we develop our software and the applications and tools around that. It enables us to reduce productions costs, speed time to market and move services across different cloud platforms. Also, because we now have real time data insights on customer usage we can evolve and introduce new features fast. We can now better monetise our assets and customer services".

As the Adobe CEO said: "if we don't reinvent, then someone will reinvent us out of business".

Some other snapshot examples: *Sprint* is looking to its future success on the back of building a true data leadership capability versus the likes of Verizon and AT&T, and this led by CIO Scott Rice: "we are redesigning the whole customer journey experience based on our new understanding of the data...and this data transformation, based around Agile methods of working, is now reaching out across all aspects of the business". *StubHub* is looking at a total redesign of its data and technology platform, moving to Cloud-based solutions that can handle the huge amounts of data and "can scale elastically...it's required a major upgrade of our change leadership group". *Target*, the US retailer, is another undergoing a major transformation, with ex Tesco CIO Mike McNamara to build a new tech and digital capability team. Retailer *Best Buy* has brought in new Chief Digital Officer Brian Tilzer to work alongside CMO Barry Judge to drive digital transformation and establishing a core digital innovation lab to be at the heart of all future product /service development. Others like UPS, ING Bank, Saint Gobain, Aviva, Elsevier, SAP, Syngenta...these are all emerging as leaders in their sectors with a transformation momentum and culture which is ongoing and establishing a strong platform for future success.

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Achieving this transformation success is not easy. GE, as already referred to, has for example been on a long and much-discussed transformation journey but has struggled to deliver the breakthroughs and targets it had planned. The company has worked tirelessly to train its workforce in a "digital first" mindset but has also been struggling with shifts in its core

energy division where technology has rapidly changed what customers are looking for. In addition, it is grappling with a huge and globally distributed workforce of more than 300,000 and operates across a wide number of industry sectors from aviation to financial services to healthcare. It seems like the further away the workforce are from GE HQ now in Boston, the harder it has been to instill that change mindset.

Nevertheless GE insiders remain optimistic. "We are still among the largest global companies in terms of revenues (>\$120bn and 13<sup>th</sup> largest on the Fortune 500). Yes, we started the change journey some years ago but we are even now transformed from a traditional industrial company. Industry 4.0 with all its focus on digital and process automation and supply chain connectivity is something we wholeheartedly embrace". A new CEO Lawrence Culp arrived with a remit to turbo charge the transformation process, all the 300,000 workforce have been retrained, again, the GE Global Research Center is now an innovation hotbed trialling new revenue streams leveraging eg blockchain technology and advanced robotics, there's been a new announced partnership with Apple to develop apps together, there's a big push to embrace Cloud-based solutions enabling GE to close most of its own data centres, it has embraced product internet connectivity and IoT, the "internet of things", eg equipping its MRI scanners with sensors to develop a digital trail of data on machine performance and remote monitoring...it's looking more and more to become software and data analytics-led. That's a wrenching change of company culture, investment and priority and some commentators are now pushing for splitting up the company and its major divisions, demerge parts and give them perhaps more freedom to develop the necessary agile change mindset. And at the time of writing, GE had sold off its Commercial Lighting, Aircraft Systems and Power Conversion businesses, with more business unit sell-offs being discussed.

The jury is out on whether GE will succeed but they do offer a very good illustration and example of a company that recognises the need for change, brings in new leadership, changes its senior team, and has the desire and ambition led very personally by a well-rated Exec team to engage the whole organisation in its change journey.

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