Delivering intelligence in the moment

Data and Analytics

How can you harness Data and Analytics to deliver more value for your business?

#analyticsmeansbusiness

pwc

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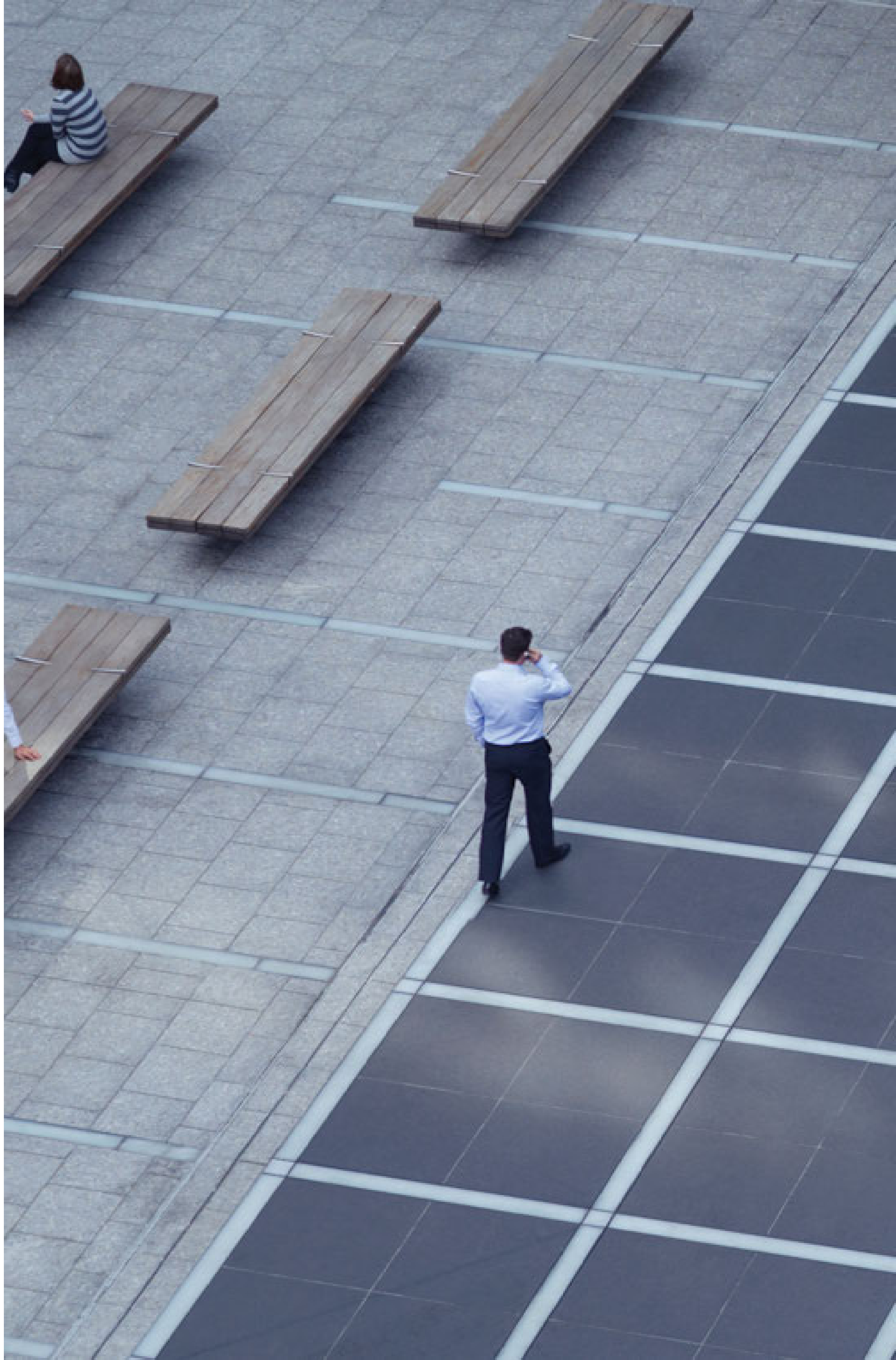


"The data is great, the information is better, but how you use it as leaders is the most important thing"

Dr Marc Harrison
Chief Executive Officer, Cleveland Clinic Abu Dhabi, UAE

The shift to intelligence in the moment

Extracting insight from an organisation's data is nothing new – it's long been seen as important in supporting forecasting and business planning. But data analytics has now become a top priority issue, seen as critical to unlocking future growth, managing cost and decreasing risk.

The main catalyst of this change is the digital revolution. The rapid rise of mobile smart devices and social media has revolutionised consumer-to-consumer and consumer-to-business interaction. Networked sensors have created digital data flows from operational processes and supply chains. And cloud computing and data visualisation tools have opened up new opportunities to apply advanced analytics to big data.

The flood of digital data is revolutionising business – and business decision-making.

The data explosion

The amount of data in the digital universe is doubling every two years.[1] Equivalent to approximately:

2013

131 DVDs per person on the planet.

2020

1,232 DVDs per person on the planet.

x 50

The enterprise's data volume will grow 50 times each year between 2014 and 2020.

85%

85% of this data is coming from new data sources.[2]

Key drivers

Social

500 million tweets are sent every day. 100 hours of video are uploaded to YouTube every minute.

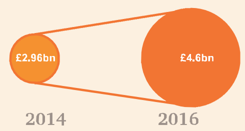
Connected

The Internet of Things (IoT) will include 26 billion units by 2020.[3]

Mobile

The percentage of mobile things in the IoT will be over 75% by 2020.[4]

Big opportunities



The global data analytics services market will grow over 50% between 2014-2016 (£2.96bn - £4.6bn)[4]

$325 billion

Big data will add up to $325bn to the US economy by 2020 which represents 1.7% GDP[6]

New sources

2/3 of the IoT will be other kinds of things such as sensors, actuators and newly invented intelligent devices that monitor, control, analyse, and optimise our world.[5]

[1] International Data Corporation (IDC)
[2] Hadoop Summit 2014
[3] Gartner
[4] International Data Corporation (IDC)
[5] McKinsey Game changers: Five opportunities for US growth and renewal
[6] PwC 6th Digital IQ Survey

From informed to reliable insight

The rise of data analytics represents a shift from informed to reliable insight. Until now we've taken decisions based on incomplete information, using our own commercial acumen and experience to fill in the gaps. These informed insights are seen as directionally correct, which may be 'good enough' for the job.

But is directionally correct always good enough? If the underlying information is wrong or interpreted incorrectly, the insights drawn may be misleading – resulting in a poor decision.

Data and analytics bring reliable insight, based on the trust and confidence held in the critical information across the organisation.

Business leaders recognise the critical importance of data and analytics to successful modern business. Analytics has transformed the ability of companies to access and use information from their customers, suppliers, employees and other stakeholders. And evidence suggests that the companies that most effectively use analytics to inform supply-side decisions about business processes outperform those that can't.[1]

[1] strategy&, The demand analytics premium: Getting the most out of your data, 2014

> 80% of CEOs say that data mining and analysis is strategically important to their business.
>
> PwC's 18th Annual Global CEO Survey

The challenge for organisations lies in gathering, managing and using wisely the data that's available. And that means breaking data analytics out of its organisational confinements. Typically, data analytics has been limited to small, siloed teams serving pockets of the organisation. While some business functions – such as credit risk in banking – have long built data analytics into the heart of their operations, many others have used analytics only sporadically or not at all.

> 72% of business leaders see their organisation's inability to gather, understand and act on all the data about customers, products, company and employees as a threat to their company's growth prospects.
>
> PwC's 6th Annual Digital IQ Survey

Tangible benefits

Enhanced customer experience

71% of executives believe that harnessing data will give their organisation a competitive edge.[2]

Productivity **Profitability**

Companies that characterise themselves as data-driven and are in the top third of their industry are 5% more productive and 6% more profitable than their competitors.[3]

Challenges remain

Intuition

30% of executives admit that intuition is what they most relied on when they made their last big decision.[4]

Talent

Only 51% of executives believe they have a sufficient pipeline of talent to undertake deep analysis of their data.[5]

[2] PwC's 18th Annual Global CEO Survey 2015
[3] Harvard Business Review
[4] PWC Gut and Gigabytes survey 2014
[5] 2014: 6th Digital IQ Survey 2014

Data, data everywhere

The digital revolution is creating an explosion of data, both qualitative and quantitative. As a result, organisations have begun to look more closely at what data they collect, how they need to manage it, and what insights the data can produce to support both strategic and operational decision-making.

More data...

Large new streams of qualitative and quantitative data are continually being created as customers buy, consume and interact digitally (using tools such as mobile smart devices and social media) and operational processes are tracked and monitored digitally (using networked sensors).

Collected at lightning speed...

Speed of data collection is making some time-critical applications viable that have never been viable before. The real-time monitoring of manufacturing processes to manage safety programmes and reduce supply-chain disruption has become a reality. So, too, have real-time customer recommendations influenced by new customer information.

From more places...

Until recently, corporate analytics focused on financial and operational data, sourced from Enterprise Resource Planning(ERM) and other corporate systems, supplemented by a limited amount of customer data from Customer Relationship Management(CRM) systems. This has been almost exclusively structured data, stored in traditional relational databases.

Digital advances have created a much greater variety of data sources, many of which are unstructured and relatively sparse – requiring processing capacity to identify and extract the hidden nuggets of insight.

... and the tools to analyse it

This data explosion has coincided with a revolution in the technologies available to create insight from it – from low-cost cloud computing and storage capacity, through to easy-to-deploy, highly intuitive data visualisation tools. This has put analytics into the hands of a much wider group of business users than was previously economically viable or technologically possible.

Organisations of every type are now expecting their business decisions to be based on robust data analytics as opposed to intuition and experience – and decision-making is expected to be close to real-time.

So, how best to use it?

The power of data-led insight today is its ability to add business value to every part of the value chain and to every area of business decision-making.

Grow your top line

Better insight means better decisions: Organisations are increasingly using data and analytics to seek out new revenue opportunities. The management of customer relationships and delivery of customer experience is being transformed by rich customer-level data on interactions, transactions, consumption and sentiment. Product development, proposition design and pricing decisions are being informed by real-time data on customer reactions and preferences. Greater volume of customer data and improved access to this data, combined with improvements in the ability to extract meaningful insights from it, leads to more customer-centric decisions and better demand forecasting and planning.

Innovative business models

Delivering value through operational efficiencies: Data analytics generates business value by improving operational efficiency. Every operational process can be understood, simulated and refined – from optimising the use of fixed assets to anticipating variable demand patterns and optimisation of procurement. There's huge potential for value creation in most organisations.

Delivering value through more effective risk management: It's important for all organisations to understand and manage risk, in their day-to-day operations and strategic decisions. Big data makes it possible to assess risks that were previously seen as unquantifiable. This creates an opportunity for organisations to better manage their risk and make sure that an appropriate return is being achieved for the risk taken.

That said, it's also critical to understand the power of data when things go wrong. Mistakes are made faster and the sheer volume of data creates new challenges around security and fraud. Organisations must be able to minimise risk, comply accurately with regulations, respond promptly to incidents and have trust in their data at all times. Trust in data is required across the whole digital value chain – spanning technology, data, process and people.

Better business decisions

Delivering greater confidence for business leaders: The cost of technology is falling, opening up many more sources of data, synthesised from both internal and external sources (market, government or proprietary). This gives company executives real-time confidence around what's going in their organisation. Individuals can use data to connect the grass-roots of an organisation to the boardroom in a quicker, more effective way – with confidence. This enhanced visibility means that strategic decision-making becomes more proactive and less reactive.

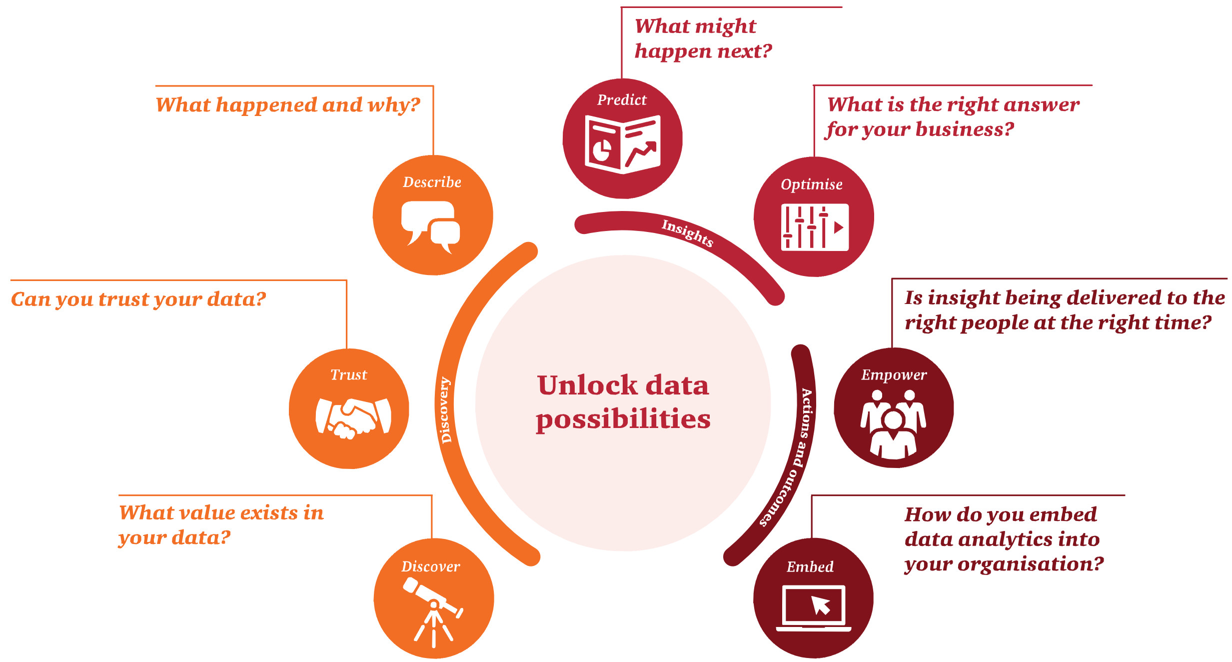
Creating a successful data analytics capability within your organisation

Companies that are using data and analytics successfully are quick to spot opportunities, quick to assess ideas and quick to test and learn from these experiences.

They innovate continuously. They understand and embrace new business models. They use data and analytics as a core enabling capability.

They exploit the latest technologies to deliver better digital experiences for their customers and integrate digital channels and operations into the fabric of their businesses.

They use data and analytics to understand how their customers are actually using their products and services, how their operations and supply chain are performing, how to manage their workforce and how to identify key risks – and then they act upon these insights.



Read a detailed description of each circle on page 7

Discover

What value exists in your data?

We can help you set your data and analytics priorities by:

- Evaluating the quality and potential business value of the data you currently use.
- Supporting you with data collection, preparation and cleansing.
- Assessing the potential of your data, for example around profiling, segmentation and benchmarking.
- Identifying and utilising new and innovative sources of data.

Trust

Can you trust your data?

We can help you improve trust and confidence in your data, systems and processes through:

- Reviewing your data sources, data management, security and privacy practices.
- Reviewing your business systems to ensure the right controls and monitoring practices are in place.
- Re-performing your business processes to check the accuracy of information being reported.

Describe

What happened and why?

We can help you discover hidden insight within your data through:

- Designing and delivering business information output with user-friendly interfaces to show what is happening in your business.
- Combining data sets to reveal trends, patterns, triggers and causal relationships to begin to explain the important 'why' questions.

Predict

What might happen next?

We can help you anticipate opportunities and risks more effectively through:

- Combining past data patterns with industry and company knowledge, to more accurately anticipate the future.
- Building an automated and embedded solution that updates as new data comes in and so constantly improves predictive outcomes.
- Identifying and predicting very specific hidden activities – such as fraud and market manipulation – if these are considered potential risks.

Optimise

What is the right answer for your business?

We can help you discover the best solutions to your business challenges by:

- Evaluating insights and completing incremental analysis.
- Reviewing aspects of your strategy or operations, the balance of risk and cost efficiency, or tactics at an individual customer level.
- Identifying every opportunity to monetise and make the most of data as a strategic asset via the launch of innovative new business models.

Empower

Is insight being delivered to the right people at the right time?

We can help you empower the right people at the right time by:

- Understanding who needs access to data and insight.
- Developing relevant visual outputs to help different users quickly interpret and take action on the insights they receive.

Embed

How do you embed data analytics into your organisation?

We can help you embed data analytics into your organisation by:

- Designing the integrated set of capabilities you'll need to be effective at data analytics.
- Advising on how best to integrate data analytics systems into the broader organisational eco-system.
- Providing managed outsourced services and supplying ongoing solutions – data hosting, analytics and business recommendations to your organisation.

Why we can help

We understand the challenges our clients face and we believe strongly in bringing the power of data and perspective to existing problems to help us take on new challenges that, before, seemed insurmountable.

Data and analytics is in our DNA

This isn't a new field for us – we've been working at the leading edge of data and analytics for years. We've always put data and analytics at the centre of our work with clients in helping them achieve their goals, and we always will.

We speak your language

Analytics is a technical field but let us make it intelligible and relevant to your business. We will be your trusted translator. We turn a specialist, technical discipline into a powerful capability that's understood and used with confidence at all levels of your organisation.

We search for real results

Data and analytics bring greater insight, but we want to make sure that those insights bring real, tangible results for our clients.

We believe that the successful application of data and analytics is ultimately about people. It's a means to help executives, employees, customers and suppliers to make the right decisions, and create more transparent and trusted relationships; whether that's to drive new growth opportunities, operate more efficiently or identify and manage risks. Get your data and analytics right, and get your business right.

Introducing our team

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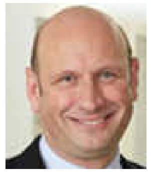

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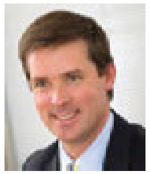

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