

EXECUTIVE SUMMARY

IoT & the Data Analytics Challenge

Are European organisations ready to take advantage of the data potential in IoT?



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December 2016

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INTRODUCTION

The Internet of Things (IoT) has exploded into life as organisations across all industry sectors look to take advantage of the proliferation of smart, connected devices.

Yes, there has been hype. But the level of investment and new project activity in IoT has reached new peaks in the last 12 months, as businesses explore how they can gain new insight into operational performance or create new business models.

At the heart of all IoT initiatives is the potential to harness huge and increasing volumes of data generated from sensors. This means that the success of all IoT projects depends on the ability of organisations to convert this flow of data into valuable business information.

But effective analysis of IoT data poses a series of new challenges. The data generated by sensors and sensor-enabled devices is different to the transactional data at the core of most organisations. It tends to be less structured, less processed and more real-time, which means that it requires a new set of tools and processes to run effective analysis.

Developing platforms to support the analysis of IoT data with the required scalability can be hugely challenging. Meanwhile, the storage of rapidly escalating IoT data is also posing new challenges in terms of cost and agility.

The landscape of technology suppliers targeting IoT-related data analytics is huge and fragmented and buyers face a major challenge in identifying the partners that can best support their requirements.

At a crucial time in the development of the IoT market, this study explores what European businesses are looking to achieve through their current projects and strategies, and the approaches that they are taking to generating real business value from their data.

Based on interviews with 200 senior IoT and data analytics decision makers at large enterprises, this is the first major study on what is set to become a crucial area in the success of European IoT investment.

The success of all IoT projects depends on the ability of organisations to convert the flow of data into valuable business information.



KEY FINDINGS

- 
Only one third of European organisations are currently analysing data generated from their IoT initiatives

This is a missed opportunity, with the real business value of IoT initiatives depending on converting raw data into insight.

- 
10% of organisations claim to be at an advanced stage in their approach to IoT

Consistent group-wide strategy underpinned by standard architectures and best practice.

- 
77% see cost savings as the key goal for their IoT initiatives

Results show that it remains easier to build a business case for IoT investment based on increased efficiency, rather than potential top line benefits.

- 
88% see ensuring data security as an important challenge for their IoT analytics strategy

Security tops the list of major obstacles, ahead of building the right technology stack and developing a business case.

- 
95% see cloud-based platforms and tools as important in enabling their IoT analytics strategies

This is an overwhelmingly positive response, and interest in is driven by a need for scale to support and process rapidly increasing data volumes

IOT ADOPTION IS AT AN EARLY STAGE

IoT is very much a work in progress for most European businesses, but the fact that a quarter state they have live initiatives that are generating business impacts shows that this is a market that has progressed beyond hype.

A core group of 10% claim to be at an advanced phase with their approach to IoT, which we categorize as having an organisation-wide strategy supported by consistent architectures and best practice.

A core group of 10% of European organisations claim to be at an advanced approach to IoT



Fig. 1: How would you best describe the current status of your IoT strategy?

It is intriguing that at an overall level, more respondents see IoT as a way to drive cost benefits, rather than top line growth opportunities. This reflects a lot of the current project activity in the market that is focused on leveraging smart sensor technology to gain a better and more current understanding of operational performance.

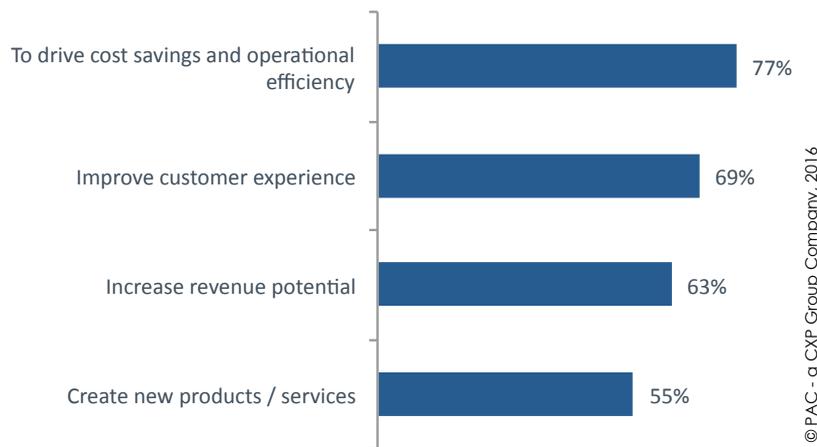


Fig. 2: What are the main goals of your IoT initiatives?

IIOT ANALYTICS STRATEGIES

How are European organisations currently using the data generated from IoT projects? The study found that just one third of respondents currently analyse their IoT data. Without analysis of the data, how can organisations track the performance of their connected assets or assess the impact – positive or otherwise – of their IoT investments?

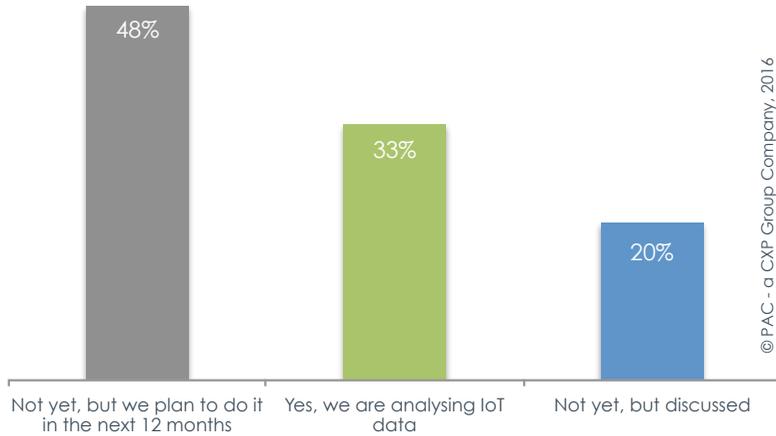


Fig. 3: Are you currently analysing your IoT data?

What are businesses looking to understand through the analysis of their IoT data? The large majority (82%) want to focus the lens on gaining greater understanding of how their business performs.

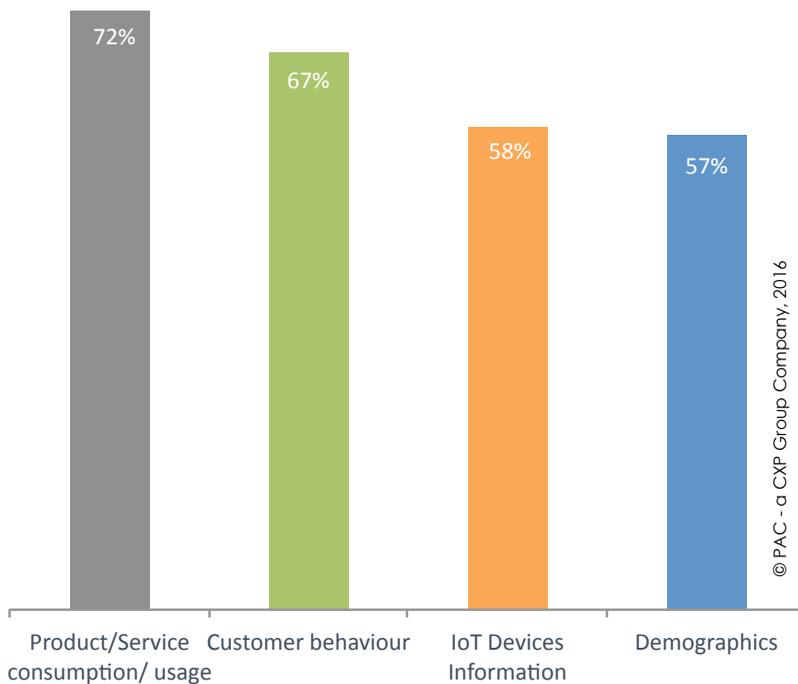


Fig. 4: What type of data are you currently analysing?

Demographics data is of particular interest to transport companies, telcos and retailers, while data on customer behaviour is a focus for public sector organisations and utilities in particular

LAYING THE FOUNDATIONS FOR IOT ANALYTICS

One of the most important steps in enabling effective IoT analytics initiatives is to implement a central development platform to act as a bridge between edge devices and the corporate applications landscape. Only 15% of respondents state that they have already implemented such as platform, but the market is moving fast with 52% planning to deploy in the next 12 months.

52% of businesses plan to implement an analytics platform in the next two years.

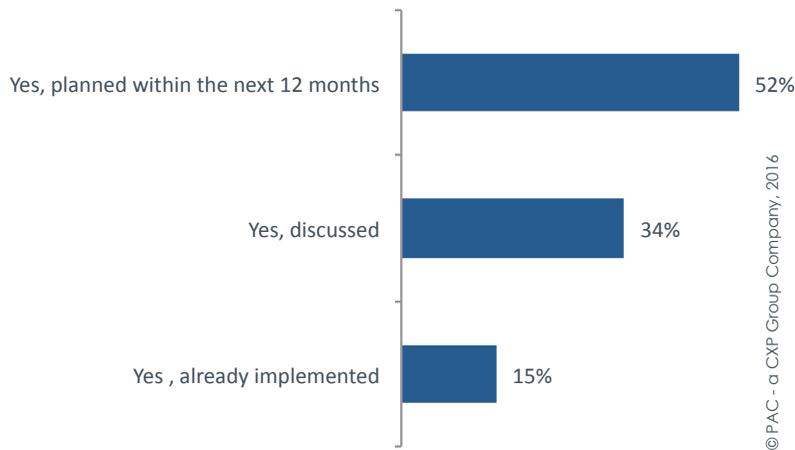


Fig. 5: Have you implemented a central development platform to act as a bridge between edge devices and corporate applications

Another crucial building block for a successful IoT data analytics strategy is the deployment of a central data analytics platform that is able to process the often different types of generated from sensors and smart devices. Traditional analytics platforms were designed to handle transactional data such as customer purchases, which may occur a couple of times an hour or minute. Some 52% of businesses plan to implement an IoT analytics platform in the next two years.

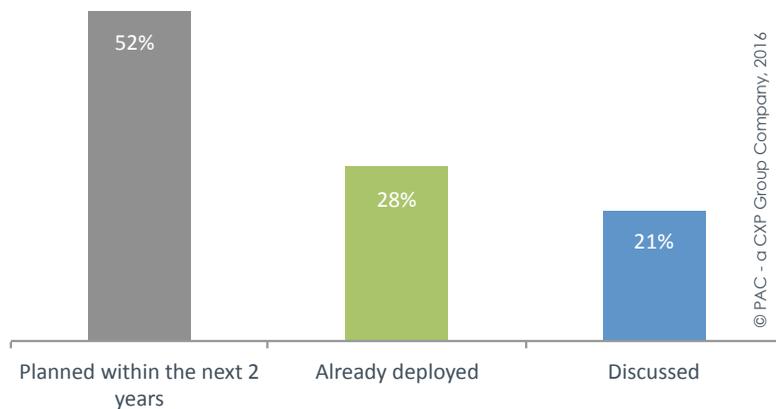


Fig. 6: Have you already deployed a central data analytics platform to process IoT data?

WHERE IS IOT ANALYTICS INVESTMENT HEADING?

More than three quarters of respondents expect to invest in data security technology in the next 12 months as part of their IoT analytics strategies. While there is an important strand of investment going towards securing the IoT infrastructure (networks, devices), there is a growing focus on protecting the data garnered from IoT devices that is held and managed centrally.

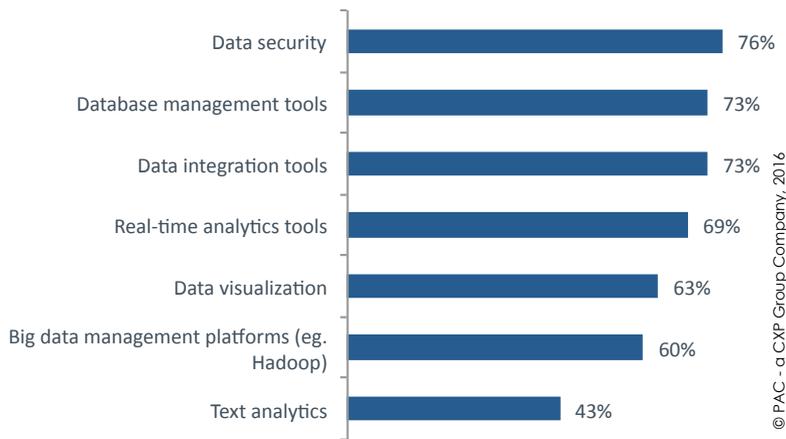


Fig. 7: In which areas of IoT analytics do you expect to invest in the next 12 months?

Many of these areas are increasingly underpinned by cloud delivery models, be they Infrastructure-as-a-Service to support big data management tools such as Hadoop, or SaaS-based data visualisation tools. While Europe is often perceived to be reluctant to embrace cloud computing due to concerns over data sovereignty, it is clear that the majority of organisations in the region see cloud playing an important role (with 54% saying it as "very important") in supporting their IoT data analytics strategies.

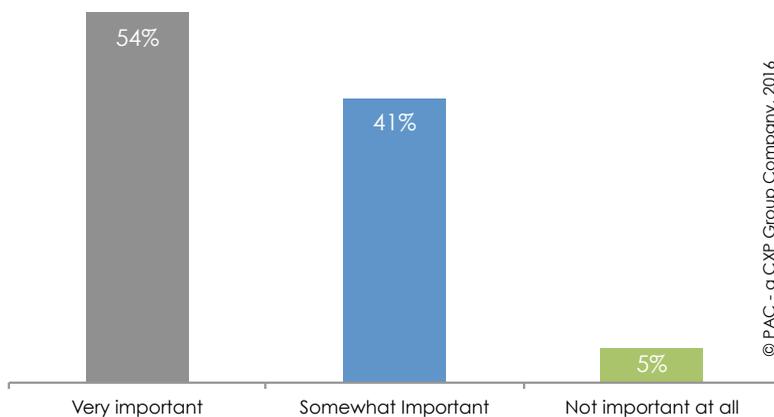


Fig. 8: Are cloud-based platforms and tools important in supporting your IoT analytics strategy?

Organisations are looking for external support in a number of key areas, with key data management platforms highlighted as focus for collaboration

CONCLUSIONS

One of the key takeaways from this study is that the next 12 months is going to be a pivotal time in the development of IoT data analytics strategies across European organisations.

While a small core of businesses can claim to be at an advanced stage in their IoT analytics roadmaps, a much larger group are moving fast to put in place the analytics and development platforms, as well as the organisational structures to gain full advantage from the growing volumes of IoT data.

One of the big challenges facing businesses will be to make the transition from their early pilot initiatives, which are driven on a projects basis within different silos, to a more strategic, organisation-wide approach. This will have an impact on skills, technology and organisation, and it is encouraging to see the willingness to engage with external partners as this will be a very tough journey for organisations to take on their own.

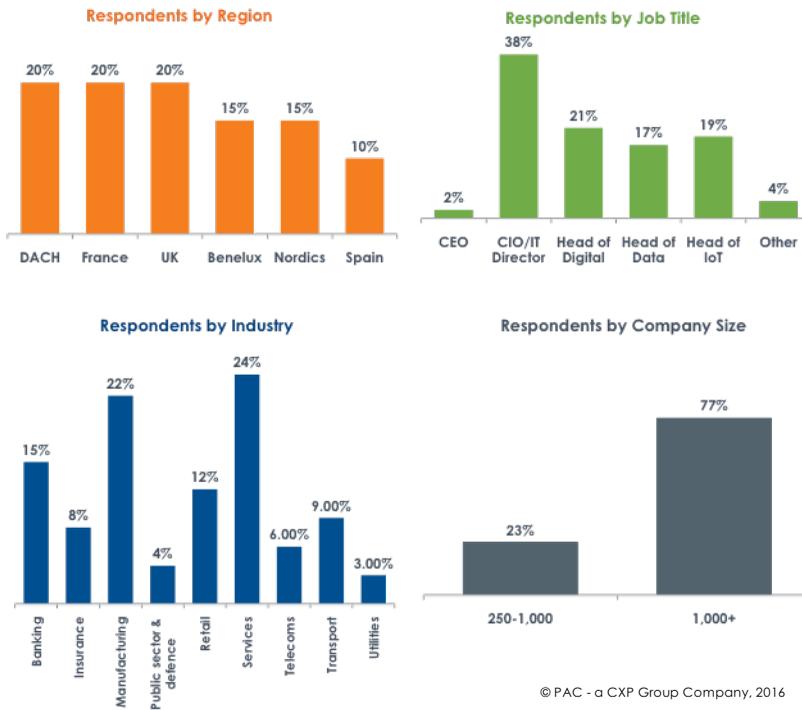
While data security remains the top and overriding concern for IoT analytics executives, it is interesting to see that the majority see cloud based solutions as playing a crucial role in enabling their IoT analytics strategies. With areas such as real-time analytics and big data platforms flagged up as key focus for future investment, cloud offers a cost-effective way to deliver this functionality at scale.

IoT has progressed beyond the early stages of the hype cycle, and European businesses across most major industries are starting to see real impacts on their business from their IoT initiatives. Without an effective data analytics strategy, the potential business value from IoT initiatives is close to zero. So it is encouraging to see that the majority of organisations are moving at speed to put the critical building blocks in place.



METHODOLOGY

This study is based on interviews with senior decision-makers with responsibility for driving IoT and data analytics strategies at large European organisations. The study was completed during the fourth quarter of 2016. Here is a more detailed breakdown of the participants in the study:



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