Growing the Digital Business: Spotlight on the Internet of Things

Accenture Mobility Research 2015
Introduction
The Internet of Things is experiencing exponential growth fueled by decreasing costs in computing (especially sensors, bandwidth and processing), the proliferation of smartphones, ubiquitous connectivity, and the rise of cloud computing. Evidence of its expanding use abounds.

For instance, Caterpillar Inc. is using telematics to increase the productivity and effectiveness of equipment through the ability to monitor a range of performance indicators such as fuel consumption, hours of use and fault codes. Michelin is developing a suite of mobility-enabled, pay-per-use solutions that will help manage areas such as fuel efficiency, tire management and vehicle productivity. And Accenture is helping Fiat Chrysler Automobiles (FCA) in Europe to provide the latest range of in-car, internet-based services. Starting with the new Fiat 500X, the Uconnect™LIVE services, co-developed by Accenture, include a range of connected, internet-based services that have been designed to help drivers remain focused on the road.

As these and other examples show, the Internet of Things (IoT) not only provides opportunities for organizations to improve operational efficiency, it also offers rich potential for those that make equipment and products to introduce new digital products and services—thus creating entirely new sources of revenue.

Accenture explored the IoT in the most recent Accenture Mobility Research study, which provides insights on trends in how companies are using digital and mobile technologies. In surveying executives, we uncovered a number of intriguing findings related to companies' experiences with the IoT, as well as the progress they've made in deploying connected products. Highlights of those findings are as follows:

- Executives overwhelmingly agreed that IoT will have a major impact on their company and its offerings as well as on their broader industry.
- Virtually all companies in our survey are pursuing IoT capabilities, with nearly four in 10 indicating they have already started to deploy them.
- Those who described their company's profitability as better than competitors were more likely to already have developed IoT capabilities, as well as to believe it will have a positive impact on their business.

This year's study is based on a combination of online and telephone interviews, conducted in December 2014 and January 2015, with 1,925 senior decision-makers for digital strategy and technologies. Participating companies represented 15 countries and nine industries, and more than 85 percent had revenues of greater than $1 billion.
The Growing Impact of the Internet of Things
Executives participating in our survey globally agreed that IoT will have far-reaching effects on their company as well as on their broader industry.

For instance, within the next three years, an overwhelming majority of executives expect the IoT to produce a wide range of benefits for their company (Figure 1). The two most common benefits, cited by 87 percent of executives, were increasing levels of engagement with their solutions and enabling the company to enhance its portfolio with additional products and services. Nearly the same percentage of executives expect the IoT to help their company improve its supply chain or develop a new revenue stream. And just over eight in 10 executives believe it will empower employees.

Figure 1: Expected benefits of the IoT in the next three years.

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Increase levels of engagement with our solutions</td>
<td>87%</td>
</tr>
<tr>
<td>Enable us to enhance our portfolio with additional products and services</td>
<td>87%</td>
</tr>
<tr>
<td>Improve our supply chain</td>
<td>86%</td>
</tr>
<tr>
<td>Allow us to develop a new revenue stream</td>
<td>85%</td>
</tr>
<tr>
<td>Empower employees</td>
<td>83%</td>
</tr>
<tr>
<td>Compel us to partner with other organizations</td>
<td>71%</td>
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A pharmaceuticals company in Germany, is “actively using connected products for communication inside and outside the company,” explained a senior manager at the company who participated in our survey. “This helps us in our day-to-day environment and also enables us to meet client expectations. I think the IoT will help improve the performance of employees. It certainly will enable us to grow and offer additional services to our clients.”

Nine in 10 executives overall also said the IoT will have a major impact on their industry (Figure 3). Interestingly, that impact appears to be an industry-wide phenomenon, as executives’ responses were very similar regardless of their company’s industry. Geographically, executives in China were especially convinced the IoT will affect them, with 100 percent of them anticipating a major impact on their industry, compared with 81 percent of those in Australia (Figure 2).

These findings are consistent with advances Accenture is seeing in the market, especially in the automotive industry, where connected car capabilities are an increasingly important customer purchasing criteria; the connected home, on which companies from a range of industries are collaborating to deliver compelling new services; and connected health, which has experienced strong growth as payers, providers and technology companies converge to develop new solutions to transform healthcare.
Figure 2: Do you see the Internet of Things having a major impact on your geography? (percentage of executives agreeing)
Figure 3: Do you see the Internet of Things having a major impact on your industry? (percentage of executives agreeing)

- Automotive: 92%
- Electronics & Hi-Tech: 91%
- Retail: 90%
- Utilities: 90%
- Banking: 90%
- Communications: 89%
- Energy: 89%
- Insurance: 88%
- Healthcare: 85%
Use of the Internet of Things Is Growing
Our survey also found that virtually all companies polled are either evaluating or already using the IoT and connected products.

Figure 4: Progress to date

- We have deployed one or more connected products in our organization: 20%
- We have evaluated connected products and are starting to deploy them in our organization: 19%
- We are successfully deploying multiple connected products in our organization: 19%
- We are evaluating how we can use connected products: 18%
- We are evaluating connected products and engaging in pilot programs: 17%
- We do not have a clear strategy nor currently use connected products: 7%
Thirty-nine percent have deployed at least one connected product—such as the utilities company in the United Kingdom that is using the technology to monitor the vehicles in its maintenance fleet and the German healthcare company that has implemented wearable and mobile devices to streamline its operations and improve customer support.

An additional 35 percent are evaluating how they can use connected products (and in some cases, are engaging in pilot programs), while 19 percent have completed their evaluation and are moving to deployment.

Companies in China appear to be further along, especially when compared with those in the United Kingdom (Figure 5). Forty-seven percent of the former, versus 32 percent of the latter, said they have deployed at least one connected product. Organizations in France, the ASEAN region, Canada and Australia also trail the global average in deployment.

Regardless of progress made, however, challenges—especially budget—remain for all companies.

“We have not looked in detail, hence they have not been implemented," said the head of operations at a communications services company in Spain. “You could say it is a lack of vision—the management team have not looked into this because of budget. I’m sure these [connected products] will be implemented, but I just don’t know when.”

Budget also was cited as an obstacle by the IT director at a Canadian insurance company. “We have started but we are not fully enrolled yet. We need more time to look into it in more detail. We have skilled resources, but if we don’t have support or budget we can’t do anything.”
Figure 5: Progress in deploying connected products by country.

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>China</td>
<td>47%</td>
</tr>
<tr>
<td>Germany</td>
<td>43%</td>
</tr>
<tr>
<td>Japan</td>
<td>42%</td>
</tr>
<tr>
<td>Brazil</td>
<td>42%</td>
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<tr>
<td>US</td>
<td>41%</td>
</tr>
<tr>
<td>Spain</td>
<td>41%</td>
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<tr>
<td>Global Average</td>
<td>39%</td>
</tr>
<tr>
<td>France</td>
<td>37%</td>
</tr>
<tr>
<td>ASEAN</td>
<td>36%</td>
</tr>
<tr>
<td>Canada</td>
<td>35%</td>
</tr>
<tr>
<td>Australia</td>
<td>33%</td>
</tr>
<tr>
<td>UK</td>
<td>32%</td>
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*Percentage saying they have deployed at least one connected product*
The Link with Profitability
One of the most intriguing findings of our research is the correlation between a company’s profitability (relative to competitors in its industry) and its approach to and perspectives on the Internet of Things.

We compared the responses by executives who described their company’s profitability as “better than competitors” with those citing profitability as “worse than competitors.” Both groups tended to be similar in how they described their progress in adopting connected products—with the former being only slightly more likely to have deployed at least one solution. They also were consistent in their views on the impact it would have on their industry and the value and benefits the technology would generate for their business. And they were equally likely to report having a managed services platform in place to interface with connected products across the organization. But they differed in several important areas.

Those who described their company’s profitability as better than competitors were more likely to already have developed numerous IoT capabilities, as shown in Figure 6. Conversely, those describing their profitability as worse than competitors were more likely to believe that the IoT will not have any positive impact on their business (51 percent versus 31 percent).
Figure 6: Key capabilities already in place differed by company profitability relative to competitors.

- Analytics capabilities to use data generated by connected products: 68% more profitable, 46% less profitable.
- Dedicated Internet of Things budget: 62% more profitable, 52% less profitable.
- Resources and skills in house: 61% more profitable, 47% less profitable.
- Technology platform to securely exchange connected products data: 60% more profitable, 51% less profitable.
- Smart devices with the appropriate sensing, communication, size, power and cost: 60% more profitable, 48% less profitable.
- Unified Internet of Things strategy: 60% more profitable, 48% less profitable.
- More network bandwidth or lower-cost bandwidth: 54% more profitable, 40% less profitable.
Conclusion
It’s clear from our survey that executives around the world recognize the importance of the IoT and the impact it can have on their company and industry. Indeed, the IoT offers great potential in not only helping to improve a company’s operational efficiency and reduce costs, but also in spurring growth by enabling companies to penetrate new markets and develop entirely new offerings or businesses. In this regard, the IoT is truly transformational.

However, despite having made some progress in piloting or deploying connected products, many companies are not yet poised to capitalize on IoT’s full potential. As our survey found, allocating sufficient budget to IoT initiatives remains a major challenge for companies. In fact, according to a separate Accenture study*, only seven percent of participating executives said their companies are matching IoT strategy with investments. This failure to invest, in turn, is translating into a dearth of capabilities that are vital to using the IoT to boost profitable growth. Some of the most critical of these include analytics to make use of the rich data connected products generate; a technology platform to securely exchange data; comprehensive identity and access management security; and in-house IoT skills. Companies must address these shortcomings or risk being outmaneuvered by more innovative, nimble and aggressive competitors.

In the next few years, digital technologies—including sensors, the cloud, connected smart devices and real-time analytics—will converge to create a new level of “connected intelligence” that will revolutionize how companies operate and go to market. However, the Internet of Things is more valuable than the sum of its parts – being ‘connected’ is not enough. The goal is to be pervasive, transformative and intelligent. A key factor in achieving this, is to focus on scalability, openness and interoperability through the use of third-party software solutions that are available on the market today. Companies that figure out how to harness this power and monetize the IoT through operational efficiencies, and also through identifying new revenue streams enabled by the power of the IoT—will be the success stories of the next decade and beyond.

Overall, the IoT ecosystem is extremely complex and can be daunting for enterprises, however, it’s a misconception that businesses are required to know everything they want to achieve with the IoT from the outset. To really understand the potential benefits of the IoT for any specific business, organizations need to be willing to start with a small pilot use case from, for example, just one small production line or process in the business, and rigorously analyze the ensuing results. Small pilot projects can provide guidance and real data within weeks making it much simpler to build a business case for IoT in the context of a company’s unique operating environment.

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About Accenture

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