

## **Business Strategy: Cloud Computing in Manufacturing**

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IDC Manufacturing Insights: IT Strategies

BUSINESS STRATEGY

#MI228939

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### **IDC MANUFACTURING INSIGHTS OPINION**

Manufacturers need a directed and informed strategy for cloud investment. This strategy should focus on communicating benefits to senior executives, aligning with line-of-business objectives, and recalibrating personnel. Cloud computing will have a very positive impact on IT performance for those firms that take a well considered approach to investment. Drawing on the manufacturing-specific responses from a broad IDC survey, this report details the trends surrounding cloud computing in the industry. Key findings include:

- 44.3% of manufacturing firms are either implementing or currently evaluating cloud deployments; more than 22% have already implemented.
- All of the key characteristics of cloud computing scored above 4 (on a scale of 5) in importance, which was consistent with results of the overall population. Manufacturers did put more of an emphasis on the ability to support standard IT services.
- Consistent with the overall results, manufacturers ranked reducing hardware costs as the number 1 benefit more frequently than any other choice by a wide margin. Manufacturers are looking for software savings as well.
- Manufacturing IT budgets will shift away from internal management of infrastructure over the next 24 months. According to the survey, some of that shift will go to traditional outsourcing, but there will also be a healthy mix of private and public cloud spending.

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## **IN THIS STUDY**

Drawing on the manufacturing-specific responses from a broad IDC survey, this report details the trends surrounding cloud computing in the industry. The report looks at adoption rates, important characteristics, and business benefits and how those factors will impact manufacturing IT budgets in the next two years.

## **SITUATION OVERVIEW**

In our 2011 predictions for manufacturing, we discussed the growing business need for dealing with complexity. We noted that survey work indicated that CEOs wanted to "capitalize on" complexity rather than simply reduce it. This wording provided a nuanced but important distinction between unnecessary complication or waste that must be eliminated and the unavoidable complexity of sophisticated products produced in elongated supply networks and sold into global markets. The impact of complexity was further magnified by the volatility of macroeconomic conditions, raw material costs, and consumer confidence.

Capitalizing on complexity in a volatile context requires sufficient information and adept analysis — normally good news for IT investment. However, manufacturing IT organizations established an excellent track record of improving IT productivity in the decade from 2000 to 2009, when IT spending as a percentage of revenue improved some 25%. So the need for new IT capabilities in the complex context is couched in an expectation that productivity improvements will continue. And cloud computing is the most important productivity platform for the next decade.

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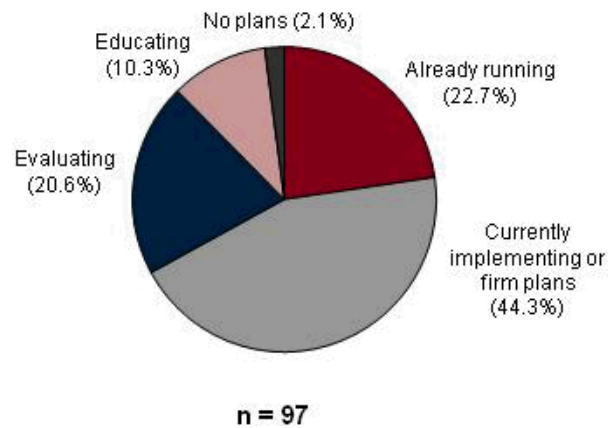
### **The State of Current Investment in Cloud Computing**

Using data from a recent IDC survey on cloud computing, we looked at the data for the manufacturing industry specifically (see Figure 1).

More than 22% of the companies surveyed were already running cloud services, a slightly higher percentage than the overall results. The largest proportion went to those implementing or with firm plans to implement, which made up more than 44% of the manufacturing sample. These findings demonstrate a market segment that has an immediate appetite for cloud.

**FIGURE 1**

Cloud Adoption in Manufacturing



Source: IDC's *Cloud Survey*, 2011

**Critical Characteristics of the Cloud**

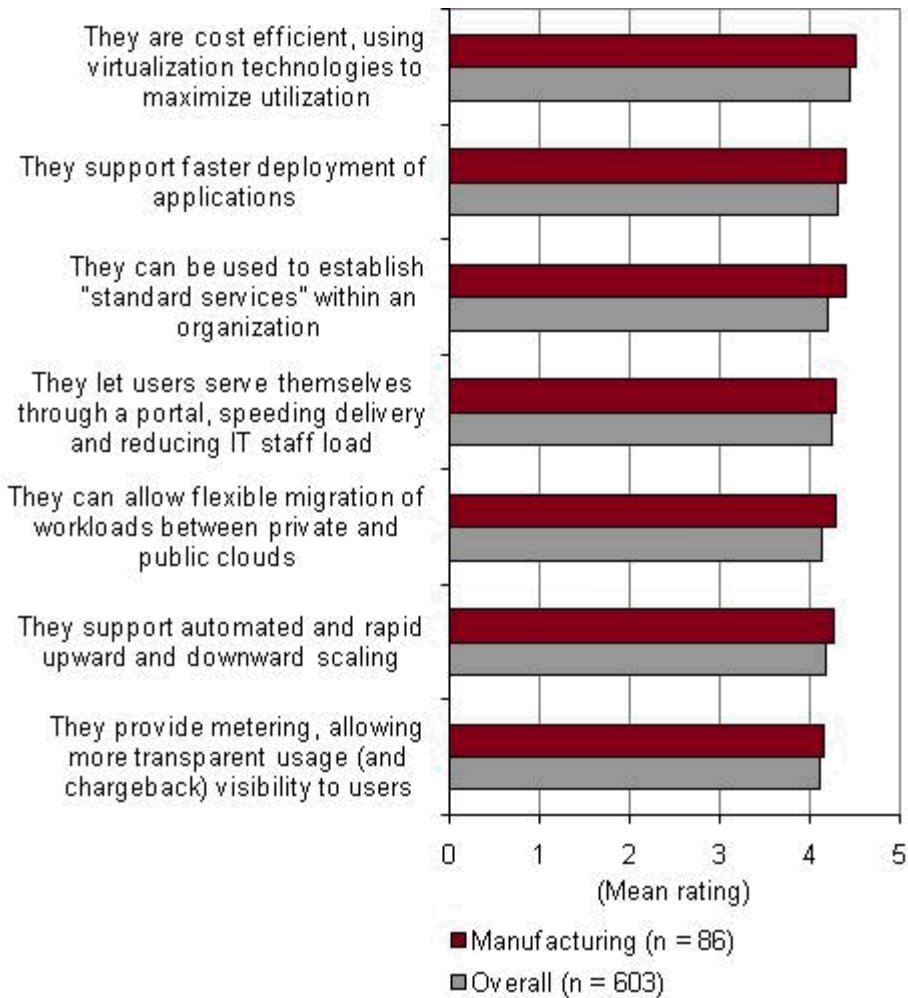
The survey also looked at what was driving new investment. Cloud computing brings some new and unique elements to infrastructure, and we looked at how IT buyers evaluated those characteristics (see Figure 2).

The manufacturing results, showing strong scores with all characteristics above 4, mirror the overall results in the survey. However, in every case the manufacturing scores are higher, reinforcing the premise that the industry is taking a more optimistic view of cloud.

The characteristic with the highest difference to the overall population was the importance of using cloud as a basis for providing standard services. This result may be indicative of the widespread application of ITIL v3 principles around service catalogs. It would be a logical tact to think of cloud services, especially as they relate to infrastructure, as turnkey resource services allowing IT to focus on user-facing services such as delivering business processes and support for better decision making.

**FIGURE 2**

**Benefits of Cloud Investment**



Note: Mean scores are based on a scale of 1–5, where 1 = not at all important and 5 = extremely important.

Source: IDC's *Cloud Survey*, 2011

***The Business Benefits of Cloud in Manufacturing***

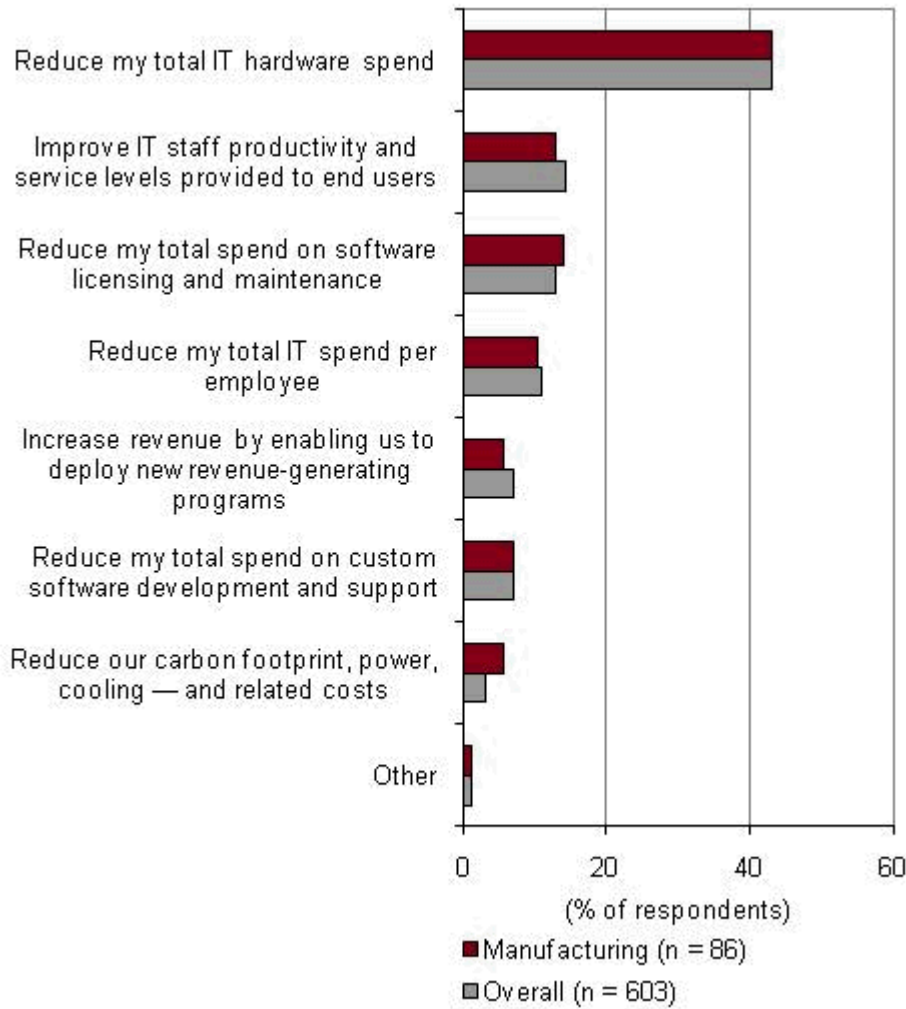
Another important question addressed in the survey was how companies were justifying their investment (see Figure 3). By far the biggest factor for manufacturers, which is consistent with overall results, is to save on hardware spend.

Although hardware cost reduction is the dominant factor, the data in Figure 3 shows the percentages for what was top ranked, and the differences in the secondary factors provide an interesting perspective

on the manufacturing industry. For example, the second-most-frequent choice as the top business benefit was reducing software license costs, which switches positions with IT staff productivity in the overall sample.

**FIGURE 3**

Top Ranked Business Benefits of Cloud



Source: IDC's *Cloud Survey*, 2011

The elevation of software costs may be a consequence of the number of unused licenses and associated maintenance that many manufacturers have to deal with. The scalable consumption models of cloud are seen as a potential mitigating factor to overlicensing. An area



with a fairly low percentage as the first choice but a notable higher frequency than the overall sample is reducing carbon footprint and cooling costs. This result may be because of the industry's overall higher awareness of environmental issues.

## **THE APPROACH**

To evaluate the industry's appetite for cloud computing, we drew from a large survey conducted by IDC. The survey went into the field in late 2010 and was completed in early 2011. The number of overall responses range from 603 to 658 for the overall sample and from 86 to 98 for the manufacturing industry.

## **FUTURE OUTLOOK**

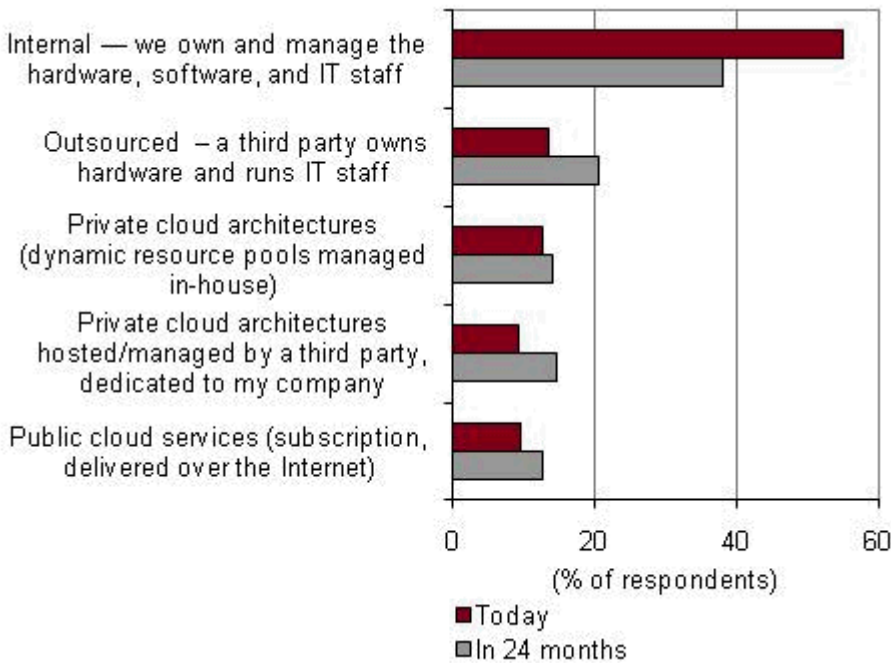
The survey established that there is pending demand for cloud computing, that cloud's unique characteristics are well understood, and that there is confidence that the investment can be justified. These findings inevitably lead to the question of how big an impact cloud will have on IT budgets in the industry, and the survey explored this as well (see Figure 4).

Survey results show that the industry will be shifting large portions of their budget away from traditional infrastructure management. The percentage of companies managing infrastructure internally will go from 54.8% to 38.1%. Part of this nearly 17 percentage point shift will be absorbed by an increase in traditional outsourcing, which has its share of budget going from 13.7% to 20.5%. This differs from the overall results where we saw a bit less dramatic shift from internal management (from 48% to 36%) but the use of traditional outsourcing staying flat (16%). IDC Manufacturing Insights is of the opinion that once the perception of cloud risk is abated, manufacturers will use more cloud approaches and the move to traditional outsourcing will not materialize.

As for cloud deployments, the use of private clouds that are externally hosted seems to carry the most interest, growing to 14.6% of the budget (from 9.4%) in two years. This result, along with the sizable increase in traditional outsourcing, shows that the industry wants to move infrastructure out of IT but maintain a modicum of control in terms of sharing that infrastructure with other companies. That said, public clouds will also gain share, going from 9.5% today to 12.7% in two years. Ultimately, IDC Manufacturing Insights expects companies to take a blended, hybrid approach that can optimize business outcomes and IT costs.

**FIGURE 4**

Cloud Share of Infrastructure Wallet in Manufacturing



n = 86

Source: IDC's *Cloud Survey*, 2011

**ESSENTIAL GUIDANCE**

**Actions to Consider**

The important thing to keep in mind when formulating an investment approach to cloud computing is that it is likely to be the single largest factor in continuing to improve IT productivity at your company. Productivity is a well chosen word as it indicates that it is not just about lowering costs but also about scaling to support increased business demands. Cloud computing can certainly lower hardware costs, but just as important is the strong alignment with the business capabilities needed to support complex value chain orchestration.

To fully realize the potential of cloud computing, IDC Manufacturing Insights recommends the following:

- Publish a cloud computing position paper for your company that integrates with near- and long-term planning. The paper should provide a clear definition of cloud computing to inform line-of-business leadership, including the operating characteristics,

deployment models, and business benefits. The paper should also articulate the associated risk related to security and business interruption.

- Set specific goals for how much of the business demand for infrastructure (CPU cycles, storage, and network bandwidth) will be handled via cloud computing platforms. Application portfolio allocations should also have cloud delivery model goals.
- Perform an honest assessment of existing personnel involved in managing infrastructure and their ability to shift to a cloud centric strategy. Skills will move from being centered on technology and capacity planning to more of a relationship and service-level audit set of capabilities. If changes are necessary, start the process as soon as possible.
- Align key business strategic objectives with cloud investment. Cloud technology can provide a degree of flexibility in scaling resources, shift costs from fixed to variable and, perhaps most importantly, provide a set of capabilities critical to meeting business objectives for profitable growth.

Cloud computing isn't the only productivity platform that should draw investment in manufacturing, but it will be the most important. A business-led cloud investment strategy will deliver the dual benefits of greater business capability and lower IT costs.

## **LEARN MORE**

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### **Related Research**

- *Worldwide Manufacturing 2011 Top 10 Predictions* (IDC Manufacturing Insights #MI226362, December 2010)
- *Perspective: Infor Leverages Azure in Its Cloud Strategy* (IDC Manufacturing Insights #MI224865, September 2010)
- *Perspective: IT Productivity Challenge for Manufacturers in the Coming Decade* (IDC Manufacturing Insights #MI223196, April 2010)

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### **Synopsis**

This IDC Manufacturing Insights report, drawing on the manufacturing-specific responses from a broad IDC survey, details the trends surrounding cloud computing in the industry. The report looks at adoption rates, important characteristics, and business benefits and how those factors will impact manufacturing IT budgets in the next two years. According to Bob Parker, group vice president of Research

at IDC Manufacturing Insights, "A business-led cloud investment strategy will deliver the dual benefits of greater business capability and lower IT costs."

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