Digital Transformation Survey
Creating Products and Services in a Digital World
Germany Report
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Digital Transformation in Germany

Despite the clear benefits of digital PLM, IoT (Internet of Things) and the cloud, some German companies are letting the digital revolution pass them by. The 2018 CorporateLeaders and PTC Digital Transformation Survey findings suggest that German manufacturing could soon lag behind globally if it fails to keep up with digital trends.

PLM: Exceeding Customer Expectations

Digital PLM offers less engineering hours per product, more efficiency, faster turnaround, reductions in cost, increased yield, drives down warranty costs, and allows engineers more time to innovate. These benefits are well known amongst German companies. The top benefits cited by the German respondents were improve new product introduction throughput (47%), meet changing customer expectations (41%), followed by increase design re-use and faster time to market (both cited by 29% of respondents).

Operational efficiency is already high within German manufacturing. However, customer expectations and new product design are clearly changing and demanding a digital model.

Interestingly, while improved operational efficiency came top in the global survey, cited by 40% of all respondents, it is only picked by 18% of German respondents. This suggests that operational efficiency is already high within German manufacturing. However, customer expectations and new product design are clearly changing and demanding a digital model. Digitalization was cited by the vast majority of German respondents (74%) as being the top strategic digital trend in the next three years.
However, despite the new market opportunities offered by a common digital product platform, German firms remain tied to traditional processes. When asked what stage their organization is at in adopting a digital model for PLM, over a quarter (27%) said they had no plans at all – this is five percent higher than the global survey. A significant minority of 7% were also looking far out, with plans to do so in 3-5 years – by which time the benefits may have already accrued amongst their competition. More reassuringly, over half (54%) had either completed their move to digital PLM or were planning to complete within the next 12 months.
IoT offers both market-facing and internal benefits. The top two benefits cited by German survey respondents – gain competitive advantage (53%) and create new business models (47%) – are the same as the global survey. However, the third and fourth most cited benefits differ, with stimulate innovation (40%, compared to 26% globally) and enable agility and responsiveness (33%, compared to 29% globally) – suggesting that sustained innovation and outpacing the market is of utmost importance to the German manufacturing mindset.

German firms are not moving fast enough to realise the benefits of IoT.

Unsurprisingly, when asked how important IoT is for their organization’s products and services, nearly half (47%) said either very or extremely important. Only 13% chose not important at all. It’s hard, then, to square this with the 27% of respondents to the question ‘at what stage is your organization in integrating IoT functionality into your products?’ who admitted to having no plans. This suggests there are senior figures within German organisations who recognise the importance of IoT to the future of their business, yet have no formal strategic plans for adoption in place. Another 34% only plan to do so in 2-5 years time. These findings suggest that German firms are not moving fast enough to realise the benefits of IoT.
The biggest barriers to enabling IoT initiatives, however, are clear — there is a distinct skills shortage, with 67% citing a lack of internal knowledge and skills (far higher than the global survey average of 38%). There is also a problem of creaking legacy systems, cited by 40%. Cost, however, is less of a barrier for German firms, cited by only 20% as a barrier, compared to 36% in the global survey. Within Germany, outdated systems and skills are getting in the way of the IoT revolution more than the availability of capital.

**Benefits of adopting IoT - Germany**

Select top 3

- Gain competitive advantage: 53%
- Create new business models: 47%
- Stimulate innovation: 40%
- Enable agility and responsiveness: 33%
- Increase revenue: 27%
- Meet changing customer expectations: 27%
- Improve quality: 27%
- Remove inefficiency: 20%
- Reduce time to market: 13%
- Reduce costs: 13%

**Image Descriptions**

The image contains a chart illustrating the benefits of adopting IoT in Germany. The top three benefits, according to the survey, are:

1. **Gain competitive advantage**: 53%
2. **Create new business models**: 47%
3. **Stimulate innovation**: 40%

Other benefits include:

- Enable agility and responsiveness: 33%
- Increase revenue: 27%
- Meet changing customer expectations: 27%
- Improve quality: 27%
- Remove inefficiency: 20%
- Reduce time to market: 13%
- Reduce costs: 13%

The chart visually represents the percentage of respondents selecting each benefit as significant for adopting IoT technology.
The theme of being too slow, and being held back by legacy systems and skills, is perhaps most stark when it comes to moving to the cloud. Again, the benefits are well known: scalability (67%), easier deployment (60%) and faster implementation speed (40%) appear in the top five, as they do globally. However, a worrying 40% of German respondents have no plans to move applications or infrastructure to the cloud, compared to 27% globally. And only 34% have already done so or will do so within the next 12 months, compared to 47% globally.

A worrying 40% of German respondents have no plans to move applications or infrastructure to the cloud, compared to 27% globally.
The reasons for this reticence, however, are made clear in the answer to the question, ‘What are the biggest barriers for moving to the cloud?’ Here, 8 out of every 10 German respondents cited security (80%), and almost 7 in 10 (67%) chose data security – both far higher than the global average of 60% and 47% respectively.

**Goals for moving to the cloud - Germany**
Select top 3

<table>
<thead>
<tr>
<th>Feature</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scalability</td>
<td>67%</td>
</tr>
<tr>
<td>Easier deployment</td>
<td>60%</td>
</tr>
<tr>
<td>Pay-as-you go subscription model</td>
<td>47%</td>
</tr>
<tr>
<td>Faster implementation (speed)</td>
<td>40%</td>
</tr>
<tr>
<td>Automatic updates</td>
<td>27%</td>
</tr>
<tr>
<td>Efficiency in total lifecycle costs</td>
<td>20%</td>
</tr>
<tr>
<td>Real-time visibility</td>
<td>20%</td>
</tr>
<tr>
<td>Companywide data tracking</td>
<td>7%</td>
</tr>
</tbody>
</table>
Conclusion: Germany is Taking its Time

Despite their clear concern with competitive advantage, shifting customer expectations, and the need for agility, German respondents convey a clear lack of speed when it comes to adopting digital platforms that will realise those benefits.

The 2018 CorporateLeaders and PTC Digital Transformation Survey finds companies moving towards digital processes to discover new business opportunities through digital PLM, IoT and the cloud. However, the move in Germany is slow compared to the global average.
Corporate Leaders and PTC surveyed 128 executives in product development, engineering, production, corporate management, IT and marketing between April and May 2018.

The survey is international in scope, with respondents from Europe, North America, the Middle East and Asia. Most respondents come from industrial sectors, including manufacturing (23%), automotive (13%), healthcare and pharmaceuticals (9%), aerospace and defense (9%) and energy (8%). Over a third of companies (39%) surveyed are €1 billion-plus revenue businesses, 19% have revenues between €200m and €1b, 14% between €50m and €200m, and the second largest cohort of respondents, at 28%, are emerging businesses with revenues below €50m. The majority of respondent are senior within their organization, with 24% at director or C-suite level, 34% at manager level, and 11% are specialist industry consultants.
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