Industrial Products

Incumbents
Strike Back

The IBM Institute for Business Value, in cooperation with Oxford Economics, interviewed 1,023 CxOs from the Industrial Products industry. These conversations included both quantitative and qualitative responses. The analytical basis for this Industrial Products industry report uses 994 valid responses from the total data sample collected.

More than 12,800 CxOs, representing six C-suite roles, 20 industries and 112 countries, contributed to our latest research. We used the IBM Watson Natural Language Classifier to analyze their contextual responses and ascertain overarching themes. We also used various statistical methods, including cluster analysis and discriminant analysis, to scrutinize the millions of data points we collected.

Which way to the future?

The signals are utterly bewildering. As digital technologies transform the world, monopolies are winning big-time. Yet collaborative systems are also flourishing, and even in industries where the competition is shrinking there's still plenty of creativity. Little wonder top executives are puzzled.

Industrial Products CxOs are no exception. They're divided as to whether the focus will be on new or established markets (43 percent versus 41 percent, respectively). And where, previously, they told us that open innovation would predominate, a growing number now anticipate more internal innovation. But there are two points on which they broadly agree: how both value chains and value propositions are altering. A full 62 percent of Industrial Products CxOs anticipate expanding their network of partners. And 61 percent expect more emphasis on customer experiences than products over the next few years.

Industrial Products CxOs also say there's been a significant shift in the external factors most likely to affect their organizations in the near future. Market forces and technology continue to top their agendas (cited by 74 percent and 66 percent, in that order). But people skills have overtaken macro-economic concerns to claim the third spot at 65 percent. Respondents recognize, perhaps, how technologies are reshaping the industry, creating a shortage of people with skills like data visualization and applied engineering. Further, regulatory concerns moved up from dead last to fourth place, underscoring mounting safety and environmental regulations.

Reinventors race ahead

In the course of our research, we identified three distinct organizational "archetypes," each at a different stage on the road to Digital Reinvention™ (see Figure 1).

Reinventors focus on developing breakthrough products, services and business models; excel at extracting value from their ecosystems; and actively experiment. Their IT strategies are aligned with their commercial goals, and they're superb at managing change – all of which helps them stand out both financially and as innovators.

Practitioners are ambitious but haven't yet acquired the capabilities required to realize their ambitions. They're neither as focused nor as agile as Reinventors.

Aspirationals have even further to travel. They still need to devise a clear strategy, put the right processes and resources in place and develop the agility to seize new opportunities.

Reading the road signs

So what's actually going on? Four topics stand out from our conversations with CxOs and our work with academics:

Dancing with disruption

The path to personalization

The pull of platforms

Innovation in motion.

"The challenge is to speed up processes and shorten the time from new product announcements to mass production and promotion."

Chief Marketing Officer, Industrial Products, Japan

Figure 1

Industrial Products split

Industry archetypes have distinct characteristics that lead to differing vantage points

26%	**Reinventors**
36%	**Practitioners**
38%	**Aspirationals**
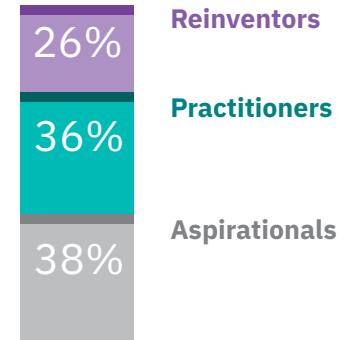
Dancing with disruption

Two years ago most of the CxOs we interviewed told us they were worried about digital giants and ankle-biters from other sectors invading their territory. Now, they're far more relaxed. Only 14 percent of Industrial Products CxOs say their sector is experiencing huge upheavals, and just 16 percent recognize an urgent need to transform their enterprises in response. Moreover, it's not outsiders they're most concerned about: 76 percent of Industrial Products CxOs report that the *real* disruption is coming from innovative industry incumbents – in particular, those enterprises that are reinventing themselves to thrive in a disruptive digital era.

Many Industrial Products CxOs have big plans to capture future profits, and they've targeted higher production efficiencies to do so. More than half aim to increase manufacturing throughput (57 percent) and a similar amount intend to increase automation (55 percent). They also want to see less inactivity: 47 percent plan to reduce production downtime to keep machines, and profits, chugging along.

The Reinventors in our sample lead the way. They plan to invest more heavily in cloud computing and industry-specific technologies for manufacturing processes and controls. They've also expressed interest in other technologies likely to support their goals, including the Internet of things (IoT) and artificial intelligence (AI)/cognitive computing. They also have a strong understanding of where their industry is heading (82 percent compared to 64 percent of Practitioners and 46 percent of Aspirationals). Lastly, Reinventors are better prepared for disruption: 79 percent have a strategy in place to fend off disruptive forces, compared to 50 percent of Practitioners and just 33 percent of Aspirationals.

The path to personalization

Connecting with the customer on a personal level is essential these days, but designing compelling personalized experiences is extremely difficult. It takes a profound understanding of what makes different customers tick, particularly in industries where the customer is typically another organization. Again, Industrial Products Reinventors are ahead of the curve: a full 74 percent claim their companies are highly effective at creating personalized experiences (see Figure 2).

However, Industrial Products Reinventors don't just trawl through vast quantities of data. They approach problems like design thinkers – by consulting with customers and partners to get a better picture of the customer experience and analyzing detailed journey maps. They're more open to engaging with customers at every stage, including the crucial product and design phase (71 percent of Reinventors, compared to 52 percent of Practitioners and 34 percent of Aspirationals). More of this group also expect to invest in technologies to help them reach customers more effectively: 76 percent plan to increase investments in industry-specific analytics to improve the customer experience.

"We plan to improve our customer experience through data-driven services that boost technical results."

Chief Information Officer, Industrial Products, Belgium

The pull of platforms

One of the most exciting recent trends is the emergence of the platform business model, which connects producers directly with consumers, enabling organizations to grow faster and generate higher profits. Within the Industrial Products industry, some organizations are already using platforms to remake their businesses. ABB, for example, created a platform that connects customers with nearly 200 digital industrial solutions, services, devices and systems, and serves as a rich vein of data.[1]

A quarter of all Industrial Products CxOs are engaging with platforms: 7 percent have an established platform business model and 18 percent are experimenting internally, piloting with limited external partners or currently implementing a platform business model. So what makes a platform work? We identified three "rules" for success: creating value from reciprocity, capitalizing on data and committing to innovation. Industrial Products Reinventors fit this profile particularly well. They're more willing than other industry CxOs to share resources and skills with partners, and more than half are even willing to share physical assets. They also collaborate more with competitors (see Figure 3). As traditional, linear supply chains evolve into ecosystems, Industrial Products CxOs recognize that competitors are also worthy partners, to the advantage of all.

Figure 2

Up close and personal

Industrial Products Reinventors excel at creating personalized customer experiences

Reinventors
Practitioners
Aspirationals

74%

61%

35%
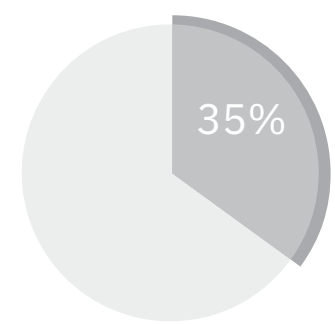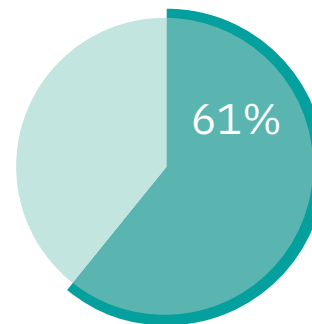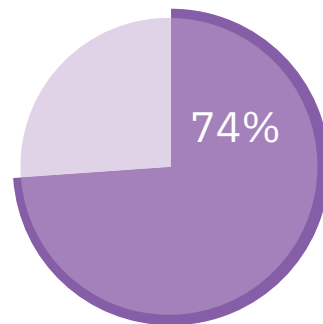
Q: How effective is your enterprise at creating personalized customer experiences?
(Percentage of respondents selecting "effective" or "highly effective.")

Innovation in motion

The organization of work is altering dramatically as enterprises collaborate to innovate, and ecosystems replace go-it-alone entities. The smartest C-suites are preparing for the future by creating teams that learn on the fly. A full 74 percent of Industrial Products Reinventors already solicit input from employees to develop new approaches, compared with 59 percent of Practitioners and 40 percent of Aspirationals. But many of them have gone much further: 65 percent are embracing fluid, cross-functional teams to stimulate continuous learning (versus 48 percent of Practitioners and just 31 percent of Aspirationals). Industrial Products Reinventors also empower their teams to decide on the best course of action. The CxOs who head these companies lead through trust.

There's more. Industrial Products Reinventors have C-suites that are consistently better than those heading Practitioners and Aspirationals at investing in their employees and putting in place the right resources, including the right people. They're also more proficient at fostering a culture of transparency and ongoing dialogue. In other words, Industrial Products Reinventors combine a dynamic vision with an open culture and agile operations – and these, as our research shows, are the three stepping stones to organizational dexterity.

Figure 3

Reinventors
Practitioners
Aspirationals

Better together

Industrial Products Reinventors are more willing to collaborate with competitors

68%
39%
23%
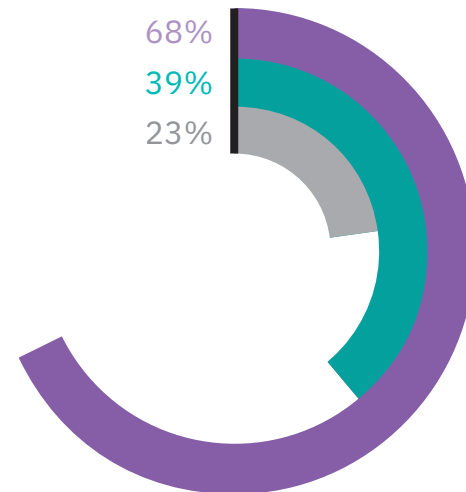
Q: To what extent do you collaborate selectively with competitors? (Percentage of respondents selecting "to some extent" or "to a large extent.")

Strengthening advantage: Actions to take now

Design and play a new offense. Fundamentally rethink processes to radically change the cost curve, enhance safety and deliver customer "orders of one." Adopt Industry 4.0 principles to generate a new era of production optimization, asset efficiency and integrated supply chains. Implement autonomous operations, powered by AI and other technologies.

Invest for new growth. Create market-shaping and capability-building partnerships that inject innovation, talent and technologies into your enterprise. Experiment and engage to your advantage. Tap external expertise to generate ideas. For example, use AI to discover new materials or apply solar energy to cement manufacturing.

Get ever closer. Capitalize on your data and analytics to anticipate customer needs and provide personalized digital experiences. Shift from products to services and outcomes, and create next-generation smart industrial products and services.

"We set up a consortium with other organizations that can compete for business that we can't."

Chief Information Officer, Industrial Products, USA

Related IBM IBV C-suite Program executive reports
To read the full report, "Incumbents Strike Back," please go to ibm.com/globalcsuitestudy. You can also find copies of our monthly insights and four related C-suite executive reports on IoT, AI and blockchain at the same location.

For more information
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Notes and sources

1 ABB website. "Writing the digital future takes ability. ABB
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