The factory of the future

How discrete manufacturers are getting there
For discrete manufacturers, technology is a key component

From children’s toys to commercial aircraft, discrete manufacturing depends upon flexible manufacturing systems, inventory controls, and a seemingly infinite number of other parameters. They’re critical for the health and safety of consumers — and for your reputation in the marketplace.

AT&T Business and WBR Insights asked 57 leaders in discrete manufacturing about their technology priorities as they build the factory of the future. The companies surveyed range from mid-market to enterprise level; the responsibilities of respondents range from floor manager to corporate support.
Glitches, hitches, snags, and snafus
Pain points in discrete manufacturing

Keeping equipment running is the main challenge. As one mid-level OT Executive put it, “We have a wide range of products lined up for production on a daily basis; a single pain point is ensuring materials and tools are readily available to the workforce, along with the rest of the kit for assembly and verification lines.”

If equipment malfunctions, a “simple” error in measurement can result in scrap and rejects of lots, jeopardizing order fulfilment and customer relationships. IoT and other technologies can mitigate this risk, reducing pressure on both employees and your business.
Current priorities aim for future progress

Not surprisingly, discrete manufacturers have differing perspectives on how to prioritize their technology investments.

Here are their top three priorities:

- **Integrate design, operations, life cycle, and supply chain**  
  26%  

- **Build direct-to-consumer models**  
  25%  

- **Increase automation in factory operations**  
  18%  

The factory of the future will be built on practical applications that improve overall performance and long-term business value. Desire for direct-to-consumer models indicates that discrete manufacturers have greater financial incentives for building more personal, direct relationships with end consumers.
Making top priorities working realities

Less than half of our respondents believe they have the tech infrastructure they need to achieve their priorities. The most common items on their wish lists include:

25% **A Modern Network Infrastructure**
Especially when founded on cybersecurity, this enables adoption of new technologies, allowing the factory of the future to evolve as the business changes.

23% **The Internet of Things**
Though ranked second by discrete manufacturers, the industry as a whole considers IoT the #1 tech for the factory of the future.

18% **Cloud Virtualization and Related Tech**
Essential for the merging of IT and OT, many respondents recognize the cloud’s importance to their future network.

What’s on your *wish list*?
If you’re looking for global flexibility, actionable insights, and the ability to merge your information and operations, AT&T has the network, IoT, and cloud solutions to make it happen.
New infrastructure enables next-gen solutions

Our respondents named these as their three top priorities now, and for some time to come:

- **Big Data Analytics**: 81% now; 44% now; +37% over next 24 mos.
- **Digital Twin**: 68% now; 28% now; +40% over next 24 mos.
- **IoT Infrastructure**: 68% now; 21% now; +47% over next 24 mos.

For discrete manufacturers, efficiency is a priority. IoT makes it possible, with actionable insights from operations, product improvements through digital modeling, and agility in innovation. And that makes operational flexibility, new product lines, and new revenue streams possible, too.
Going forward, everyone needs to be on board

Lack of skilled labor. Slow ROI. They’re just two factors that can make justifying investment in new technology an uphill battle. But that’s not stopping some discrete manufacturers from building the factory of the future. While others hesitate, their expanded uses of IoT reap ever-greater benefits. Among these are better-integrated supply chains, and more customer-direct business models — all of which translates to a marked advantage in the marketplace.

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<th>Reason</th>
<th>Percentage</th>
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<tr>
<td>Won’t have skilled labor or training:</td>
<td>47%</td>
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<tr>
<td>Slow realizations of ROI:</td>
<td>47%</td>
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<tr>
<td>Too much cost / lack of funding:</td>
<td>46%</td>
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<tr>
<td>Lack of executive support:</td>
<td>46%</td>
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New opportunities
New solutions
New possibilities

Maybe you want to innovate your product line, move those products more efficiently into the supply chain, or streamline overall operations. To achieve sustainability and continued growth for their business, every discrete manufacturer has different priorities. Determining how to use technology to accomplish these goals is key.

AT&T Business is here to help you assess your business and make a plan to achieve your goals. We offer resources, solutions, and services that provide manufacturers with the information and collaboration needed to realize what’s possible in building the factory of the future today.

Some statistics were gathered from original source data that does not appear in “Realizing the factory of the future in manufacturing.”