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Solving Urgent
Manufacturing Challenges

A guide to address today's priorities

Do What Matters

Leading manufacturers are using [Industry 4.0](#) technologies to address today's biggest challenges

COVID-19 has accelerated trends already rocking the manufacturing sector, and manufacturers are responding in various ways. According to industry research form [IDC](#),

"58% of manufacturers are currently focused on business continuity and operational resilience, 23% are investing in targeted initiatives to facilitate growth and approximately 10% are investing in digital solutions for a future enterprise."

While many manufacturers are still dealing with the day-to-day impact of supply chain disruption, they're also focusing on bigger transformation initiatives to evolve the workplace, strengthen operational resilience, and create agile and adaptable enterprises.

To maintain that focus we're helping our manufacturing clients address three immediate challenges:

1. **How do you maximize hybrid working models** while keeping employees safe, productive and skilled for a modern workplace?
2. **How do you create resilience in your supply chain and operations,** and operate at peak effectiveness?
3. **How can you become more agile and adaptable** to enable enterprise-wide innovation and rapidly respond to the quickly evolving marketplace?

Let's look at how leading manufacturers are embracing solutions and technologies to address these challenges.

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Challenge 1:
Enhance the workplace experience

Manufacturers need to embrace a hybrid working model that enables remote working as well as ensuring the safe return to physical workspaces.

Digital workers need the required advanced skills and tools to be safe and productive in a digital world. Manufacturing workplaces must also focus on upgrading the employee experience in today's connected world, leading workers to expect consumer-grade applications and services in the workplace. Fail to adapt to consumer needs and you might be among the approximately 40% of leading brands that have declining sales.

It won't be easy. Manufacturers must adapt to accommodate working environments that have undergone a dramatic evolution: Supply chains have been significantly disrupted; product demand is rapidly shifting; holistic well-being, health and safety are top priorities; and sustainability and socially conscious manufacturing are the expectation. The modern manufacturer looks very different from the manufacturer of even a few years ago.

Typical modern manufacturing workplace scenarios

- **Protect:** Increase employee engagement and productivity with tools that support their ongoing health and well-being with workplace analytics, IoT, Computer Vision and AI for worker distancing.
- **Automate:** Engage and reskill workers to maintain successful operations that can quickly scale and adapt to changing needs; understand how your workforce could be redeployed or restructured to embrace automation platforms.
- **Collaborate:** Facilitate on-the-ground communication among employees, customers and partners with workplace collaboration platforms.
- **Commit:** Meet employee expectations with a strong, clearly communicated commitment to health, safety, well-being, training, sustainability and social impact.
- **Analyze:** Leverage data to monitor and maximize workplace analytics platforms to ensure employees are safe and secure, and quickly recognize client and market insights.

Business outcomes

Addressing the workplace experience challenge, can help manufacturers achieve 20% to 30% higher workforce productivity and up to 60% fewer IT errors and less rework. Boston Consulting Group.

Here are some additional benefits:

- **Enhanced employee engagement** improving attraction, retention, cultures, safety, productivity and knowledge transfer
- **Improved workflow and labor optimization** to develop new products and services
- **Remote and virtual workflows** with connected systems and collaboration tools ensuring distance is no longer a barrier to production
- **IT and OT teams aligned** to improve investments in business innovation and technologies for tangible business value
- **Flexibility** to provide new ways of working as required by market conditions

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Examples of **employee experience and workplace solutions**

Manufacturers are implementing solutions to protect their people and productivity, while managing costs.

- **Henkel** reinvented productivity with a new workplace solution.
- **Encory** attracted top talent with a modern workplace experience.
- **MP Filtri** improved management control and decision-making.
- **Lewa** engages global employees and digitizes processes to drive efficiency.
- **Continental AG** empowers new workplace experience with chatbot.

"Never has it been more important for manufacturers to look at ways of embracing Industry 4.0 technologies to advance their processes, systems and productivity," says Graham Howe, Principal Research Fellow for Advanced Manufacturing Industry 4.0 at the University of Wales Trinity Saint David

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Challenge 2:
Improve operational resilience

Manufacturers, already reeling from the impact of COVID-19, must build resilience within their operations and create a scalable foundation for the future.

This involves adopting new business models and tools, diversifying supply chains and optimizing existing investments and assets.

The challenge is tangible and an effective response is critical: 94% of Fortune 1,000 companies experienced supply chain disruptions due to COVID-19, and by 2027, half of all S&P 500 companies may no longer exist.

Typical modern manufacturing resilience scenarios

- **Productivity:** Increase machine efficiency and OEE (overall equipment effectiveness).
- **Automate:** Replace outdated and/or manual maintenance systems with a more intelligent solution without replacing existing back-office solutions. Augment worker value.
- **Collaborate:** Facilitate on-the-ground communication among employees, customers and partners with digital collaboration tools.
- **Predict:** Simulate disruptive events in your supply chain and operations and develop a preparedness plan before "Murphy" strikes.

Business outcomes

Addressing immediate resilience issues can help manufacturers achieve aggregated cost savings of 15% to 25%. Boston Consulting Group.

Here are some additional benefits:

- **Improved adaptability** to meet new challenges and manage risk from a dramatic shift in production
- **Increased business value** and return on investments. Reduce costs associated with lost production due to machine downtime resulting from unplanned or poorly planned maintenance
- **Minimized disruption** across supply chain and manufacturing operations. Data, AI and automation driving cost optimization, real-time decision-making, predictive maintenance, optimized scheduling and connected operations
- **Reduced technical debt.** Antiquated business on-premises systems are updated, with modern, flexible, cloud-based business applications driving improved insight into sales, marketing, production and supply chain operations.
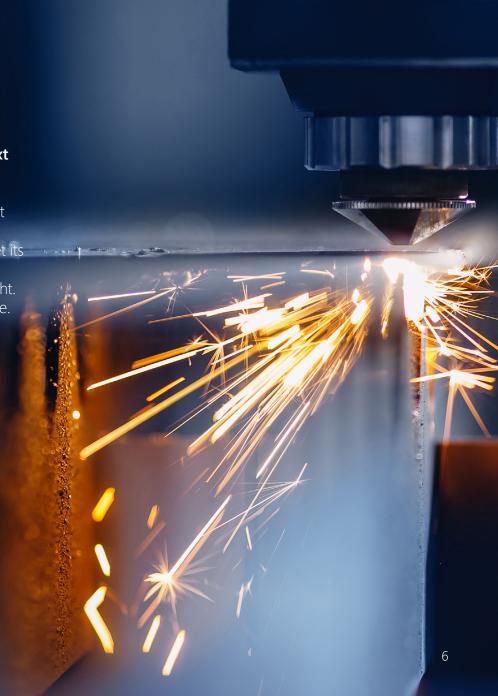
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Examples of
resilience solutions

Across the sector, manufacturers are gaining resilience to help embrace the next challenge and strengthen manufacturing operations.

- BDR Thermea used IoT and connected devices to better equip workers and predict failures of machinery – with a 98% accuracy rate.
- Theramex incorporated intelligent operations to build its business structure and get its finance, HR, supply chain and inventory systems up and running.
- Pernod Ricard used a cloud platform for improved automation and customer insight.
- Generale Prefabbricati unified its organization to increase ROI and production value.
- BMZ Group increased supply chain transparency and management.

"36% of manufacturing enterprises realize above-average business value from IT spending in digitalization (Industry 4.0) solutions when compared with peers." Gartner

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Challenge 3:
Increase agility and adaptability

Times change quickly, and consumer expectations change just as fast. You need to reduce your time to market and produce the products your customers want.

For this to happen, you need to identify product and service insights that can drive your opportunities, be an innovation catalyst, add customer value and keep you ahead of the competition. According to Forrester, "Manufacturing leaders cannot do it all at once and should prioritize their efforts. Identify the workflows most important to long-term business resilience and equip those for remote operation."

The COVID-19 pandemic forced manufacturers to accelerate their evaluation and adoption of Industry 4.0 technologies. At the forefront of these technologies is extended reality (XR). According to Avanade research, 54% of organizations are increasing XR testing or adoption in the wake of the pandemic and the shift to remote working. Augmented and virtual reality are enabling virtual worlds that help improve training efforts, deliver the right skills and expertise exactly when and where they're needed, and connect employees to one another in rich, previously untapped ways, increasing empathy and engagement.

Typical modern manufacturing agility and adaptability scenarios

- **Accelerated production:** New tools, technologies and working practices dramatically increase production.
- **Enhanced engagement:** Train and reskill workers to maintain successful operations that can quickly scale and adapt to changing needs.
- **Integrated supply chain:** New partner and supply chain ecosystems are integrated to minimize disruption.
- **New innovative production methods:** Mixed reality supports remote working for sustainable, safer, cost-effective production.
- **Analyze:** Advanced analytics tools handle end-to-end reporting, from supply chain to production operations.
- **Security:** Secure cloud environments ensure worker training systems are safe and accessible.

Business outcomes

Increasing agility and adaptability to improve innovation can help manufacturers achieve 40% to 50% faster speed to market. Boston Consulting Group.

Here are some additional benefits:

- **Increased efficiencies** and insight
- **Improved connections** with your partner and supply chain ecosystem
- **Enhanced training**, skilling and collaboration
- **Greater resilience** with accelerated and sustainable product development
- **Increased scalability** to rapidly launch new products/services
- **Rationalised portfolios** across your network

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Examples of
agile solutions

Innovative, agile solutions are helping manufacturers rethink their operations to drive differentiation.

- Manufacturers across different sectors partnered to produce medical ventilators for the NHS UK in response to the COVID-19 challenge and produced 20 years' worth of ventilators in 12 weeks.
- ABB Turbocharging enabled remote assistance to reduce downtime, speed time to repair, improve service-level agreement compliance rates and increase productivity.
- Baxi selected Avanade to help transform its digital customer experience through a comprehensive digital strategy and by using Avanade's digital marketing solutions.
- UWTSD is using applied innovation and integrated immersive technologies to rethink manufacturing.
- Linde MH leadership has greater insight into their company, with a new BI platform that allows them to act with increased agility based on the information they receive.

Gartner predicts that by 2024, 50% of factory work will be done remotely. Virtual teams will be a reality. As manufacturers move to more virtual environments, supply chain leaders will need to ensure the right mix of on- and off-site labor.

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Achieve your **business outcomes quickly**

We've designed the first step to help you resolve your challenges. We have the experience and expertise to help deliver your business outcome with the speed your business expects.

Challenge	Options	
Enhance the workplace experience	**Connected Worker/Return-to-Work Accelerator** Get up and running rapidly on a return-to-work solution to help you facilitate employee safety, no matter how simple or complex the requirements – from delivering a basic return-to-work platform to a state-of-the-art solution. Delivery timeline is approximately 14 days.	**Solution** • A mobile app that provides a simple self-service allowing employees to complete a health questionnaire to ensure they are safe to admit to the facility • An external-facing portal so guests and visitors can answer a health questionnaire • Tailored, automated workflows, advanced analytics and dashboards for leaders and facility managers that makes reopening locations and following safety protocols and guidelines safer and easier • Contact tracing and case management tools to enable improved operations if an incident does occur • A scalable platform that allows for expansion into additional capabilities, such as IoT, AI, wearables, computer vision, mixed reality and more
Improve operational resilience	**Smart Maintenance Accelerator** Conduct a rapid assessment of your operational systems with our one-day Smart Maintenance Accelerator assessment.	**Solution** Implement Microsoft Dynamics 365 with a preconfigured, modular solution that includes: • Solution and architecture blueprint • Integration and mobile templates • Preconfigured and embedded Power BI analytics • Six- to 10-week Minimum Viable Product (MVP) implementation This will enable a state-of-the-art asset management solution that improves equipment effectiveness, reduces unplanned downtime, increases production, reduces costs and improves client satisfaction.
Increase agility and adaptability	**Microsoft Dynamics (D365) Rapid Start for Supply Chain and Avanade's Mixed Reality QuickStart solution** Integrate Avanade's Microsoft Dynamics Rapid Start for Supply Chain with Avanade's Mixed Reality QuickStart solution.	**Solution** • Rapidly implement Dynamics 365 with preconfigured templates and identify priority areas with a fit-for-purpose assessment (using Microsoft Power Apps). Delivery timeline: 10 to 16 weeks (with remote delivery capability) • Develop a mixed reality proof of concept (PoC), with a solution that includes guides, remote assist and HoloLens 2 (mixed reality) devices to get you up and running quickly. Delivery timeline: three-phased PoC, delivered in two to four weeks Taken together, you'll have a tailored, agile supply chain solution integrated into the latest immersive technology to address immediate disruption and accelerate innovative transformation.

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Our **expertise**

We work with more than 50% of the world's largest manufacturers. We deliver the full suite of Microsoft technologies and have unique access to Accenture's global manufacturing expertise.

Avanade is here to help you address your urgent challenges at speed; we also have the experience and capability to be the trusted partner for your Industry 4.0 transformation initiatives.

Worker and workplace

We are helping manufacturers identify new operational best practices and opportunities to automate the workplace and are driving attention to the new Microsoft employee experience solution Viva, which links directly to existing solutions, like Teams.

Resilience

We help manufacturers create flexibility to scale and drive new resilient business models for resilient supply chains and supplier ecosystems. We can help you migrate to the right platform, supporting your automation and business application upgrade ambitions.

Agility

We're guiding forward-thinking manufacturers with investments in "Factories of the Future" and helping them assess their operational agility, activate remote working and rethink customer care.

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Contact us today to help your organization identify the best solutions to address your immediate manufacturing challenges or visit **www.avanade.com/manufacturing** for more details.

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About Avanade

Avanade is the leading provider of innovative digital, cloud and advisory services, industry solutions and design-led experiences across the Microsoft ecosystem. Every day, our 56,000 professionals in 26 countries make a genuine human impact for our clients, their employees and their customers. Avanade was founded in 2000 by Accenture LLP and Microsoft Corporation. Learn more at www.avanade.com.

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