

Platform for Shaping the Future of Advanced Manufacturing and Production *Overview*

Anticipating how pioneering factory technologies, innovative business models and new partnerships are transforming business's ability to drive economic and societal impact.

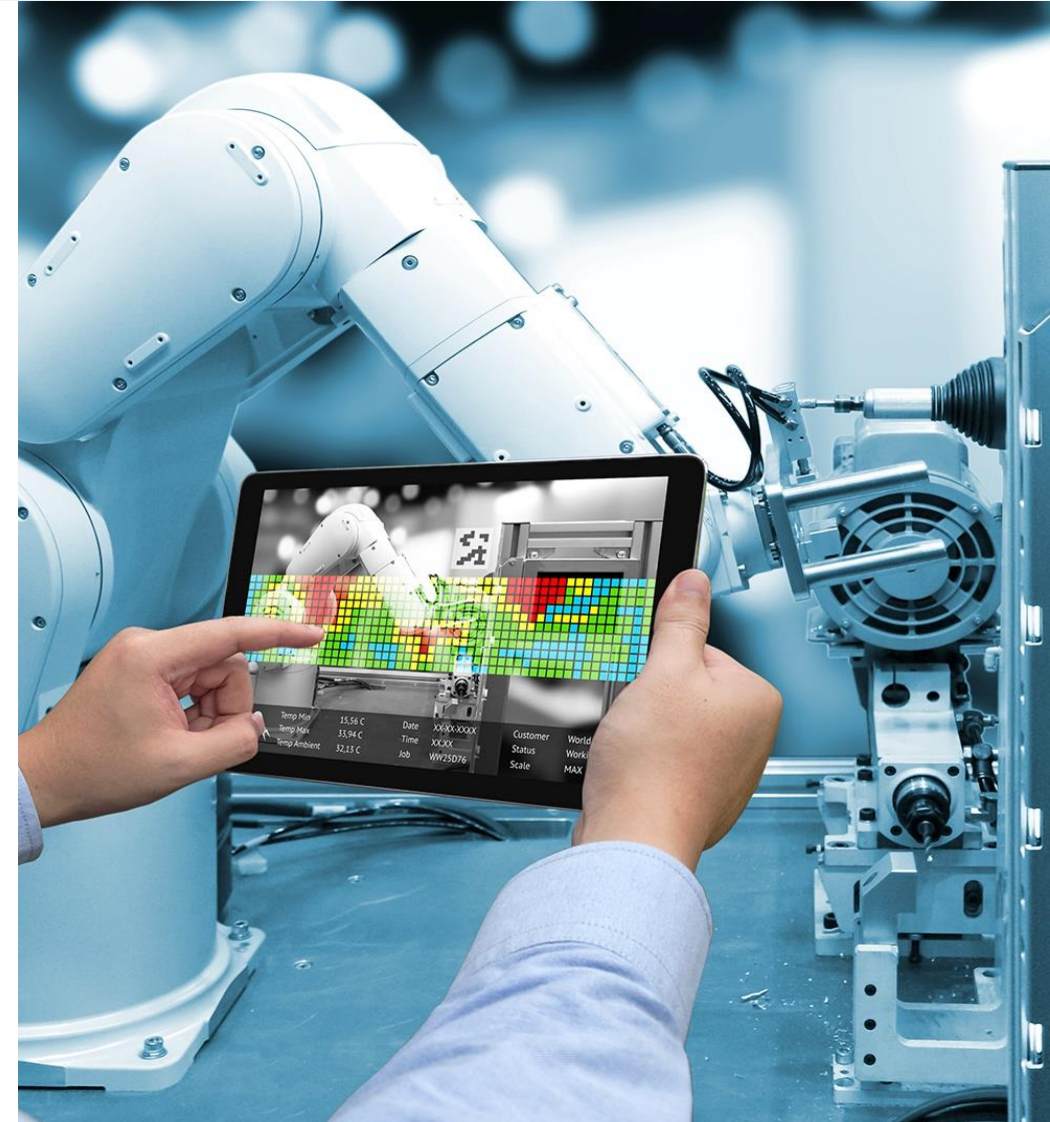
Platform for Shaping the Future of Advanced Manufacturing and Production

Production is more than manufacturing – it encompasses everything from research and development to design, consumer behavior and end-of-use cycles. It includes multiple industries as diverse as automotive, chemicals, electronics, healthcare and textiles.

While manufacturing has been the foremost source of growth, jobs and innovation globally, production also contributes heavily to CO₂ emissions and climate change. Emerging technologies are transforming the world of production, enabling more efficient processes and creating new value for industry, society and the environment.

Our Platform brings together a diverse community of 130+ organizations from more than 22 industry sectors, governments, academic institutions and civil society, to accelerate inclusive technology while stimulating innovation, sustainability and employment. The community evaluates and proposes pilots, examines the latest approaches in skills development, drives improvements in partnerships and informs business model transformations and next generation industrial development strategies.

Our Platform enables solutions to the industry's greatest challenges, accelerating the growth of advanced manufacturing while helping companies fulfil their social responsibility.



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➤ A few examples of our Platform in action...

Adopting and disseminating technology. Our Global Lighthouse Network has brought together the most advanced manufacturers exercising leadership in applying Fourth Industrial Revolution technologies to drive financial and operational impact. Members serve as beacons to guide other businesses to address challenges in upgrading production systems and apply cutting-edge technologies such as artificial intelligence, big data analytics and 3D printing.

Evolving manufacturing skills. Our Platform's coalition of chief human resources officers and leading experts from government, academia, civil society and international organizations has been established to identify and synthesize company-specific programmes for industry-wide collaborations that support the transition of the workforce to the future of production.

Establishing Regional Advanced Manufacturing Hubs. Our Hubs have brought together local leaders to address regional challenges affecting industry and society, facilitating engagement globally by the sharing of best-practices, lessons learned and experiences.

Launching a suite of new insights through [Platform papers](#). Collectively, our papers have been downloaded over 36,000 times, translated into multiple languages, and are being used to facilitate multistakeholder discussions at national, regional and global level.



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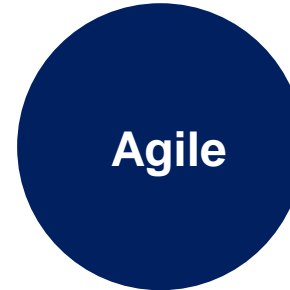
➤ **Our vision is to ensure a future that is:**



We engage companies of different sizes, from start-ups to large corporations, and governments, to help strengthen their competitiveness for the future of advanced manufacturing



We support production workers affected by new technologies to meet future jobs requirements across production value chains and to actively shape technologies in order to augment their capabilities



We encourage smart solutions to complex problems, combining pragmatic and flexible approaches for stakeholders to deploy technology at scale and maximize productivity, while achieving broad-based economic and societal impact



We enable manufacturers to accelerate their response to resource scarcity and climate challenges, adopting Fourth Industrial Revolution technologies across the production value chain to maximize their contribution towards the UN's SDGs



We bring together companies, governments, academia and civil society from all over the world to accelerate innovation, leverage the power of data and strengthen links across value chains from resource extraction to consumption

➤ **Our mission is to help stakeholder in the global production system prepare for the future, by:**

- Building a shared understanding and raising awareness of the unique challenges and opportunities brought by Fourth Industrial Revolution
- Incubating new collaboration and partnerships, and/or scaling existing ones to address challenges and capitalise on new opportunities

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➤ Main challenges to be addressed

Challenges identified and selected by our community for 2019 - 2020



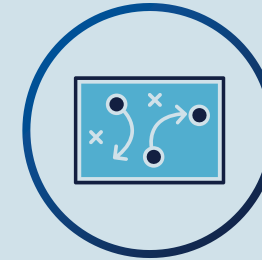
Support inclusive technology adoption and dissemination



Mitigate manufacturing workforce disruption



Accelerate transition to sustainable manufacturing



Upgrade industrial development strategies and policies



Unlock data to unleash innovation in manufacturing



Monitor consumer expectations and address changing demand



Cope with geo-political tensions, protectionism and shifting trade balances



Develop new standards and regulations for advanced manufacturing




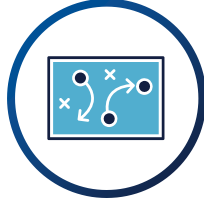



Reshape investments and changes in infrastructure

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➤ **Priorities identified by our community for 2019 - 2020**

	 Support inclusive technology adoption and dissemination	 Mitigate manufacturing workforce disruption	 Accelerate transition to sustainable manufacturing	 Upgrade industrial development strategies and policies	 Unlock data to unleash innovation in manufacturing
Projects	1 Global Lighthouse Network	2 Preparing for the Future of Work in Advanced Manufacturing	3 Accelerating Digital Traceability for Sustainable Production	4 Strategic Value Framework	5 Unlocking Value in Manufacturing through Data Sharing
	6 Advanced Manufacturing Hub (AMHUB) Network				
Insights	<ul style="list-style-type: none"> Supply Chain Collaboration in Advanced Manuf. (to be published) Fourth Industrial Revolution 	<ul style="list-style-type: none"> Guiding principles for lifelong learning in manufacturing (to be published) Leading through the Fourth Industrial Revolution 	<ul style="list-style-type: none"> Making Manufacturing Sustainable by Design (to be published) A New Era of Manufacturing Accelerating Sustainable Production 	<ul style="list-style-type: none"> Readiness for the Future of Production Reshaping Global Value 	

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➤ Our projects

Project 1: Global Lighthouse Network

Fourth Industrial Revolution technologies are transforming the manufacturing ecosystem and **more than 70%** of companies are stuck in “Pilot Purgatory”. The remaining have been able to adopt advanced manufacturing technologies at scale, achieving significant operational and financial benefits without increasing inequality and environmental impact. The [Global Lighthouse Network](#) project identifies these factories and connects them through a shared learning journey platform to foster inclusive dissemination of advanced manufacturing technologies

Key dimensions:

- 4IR technologies adoption
- New business models
- SME engagement/development

Project 2: Preparing for the Future of Work in Advanced Manufacturing

In collaboration with the Platform for Shaping the Future of Inclusive Economies and Societies, our [Platform's coalition](#) of chief human resources officers and leading experts from government, academia, civil society and international organizations is identifying and synthesizing company-specific programmes for industry-wide collaborations that support the transition of the workforce to the future of production.

Key dimensions:

- Manufacturing workforce disruption
- Inclusive innovation
- Pre-competitive collaboration

Project 3: Reshaping Global Value

[Global value chains](#) – which account for more than 80% of trade flows and provide one in five jobs – are rapidly transforming as flows of services and data play a more prominent role. This project builds on the [Readiness for the Future of Production Framework](#) and supports leaders of business and government to harness these disruptions to create future-proof, sustainable and inclusive global value chains.

Key dimensions:

- Technology innovation
- Climate change
- Global trade tensions

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➤ Our projects

Project 4: Advanced Manufacturing Hubs

Geopolitical volatility, resource scarcity and rising costs, in combination with regional complexities like workforce skill gaps and government policies, pose a tangible threat to manufacturing sectors around the world. This project engages regional manufacturing ecosystems to enable accelerated responses to these challenges, while simultaneously interconnecting these regions share learnings and showcase regional success stories.

Key dimensions:

- Pre-competitive collaborations
- Shared learnings
- Regional / global dialogue

Project 5: Unlocking Value in Manufacturing through Data Sharing

Throughout a product's lifecycle, the amount of data generated, captured and used is expected to grow five-fold until 2025. This project aims to maximize the value from these data sources by enabling mutually beneficial data sharing between companies. Companies in well managed data alliances can leverage new technologies to increase productivity and foster innovation for all.

Key dimensions:

- Data-sharing technologies
- Success factors and stories
- New frameworks and use-cases

Project 6: Digital Traceability for Sustainable Production

With today's complex and global value chains, lack of end-to-end traceability creates significant operational, social and environmental risks for every company. This project aims to help establish both the methodology and concrete parameters to guide transparent digital traceability that unlocks smarter, safer and more efficient global supply chains.

Key dimensions:

- Digital traceability tools
- Connecting design, materials, processes, tracking and remanufacturing