

27TH - 28TH NOVEMBER 2023 SDF | Treviglio (Bergamo)

A Vision for Next-Generation Manufacturing Business Models

lan Gronin World Economic Forum



Resilient



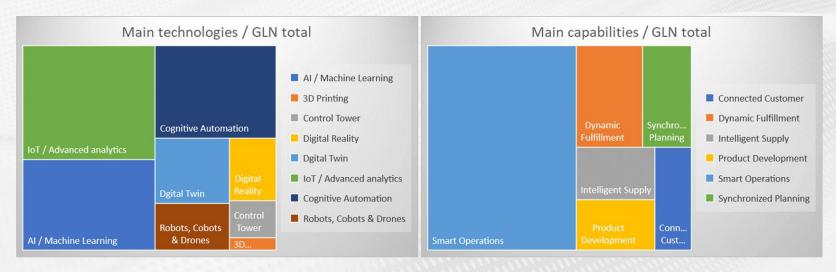
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The Global Lighthouse Network includes 132 sites where 4IR technology is successfully deployed at scale



To date, 132
Lighthouses, of which
13 Sustainability
Lighthouses, have
been identified from
across different industry
sectors and they have
all joined a unique
cross-company
learning journey to
share insights and
experiences, and
incubate new potential
partnerships

Overview of Lighthouse use cases



- Collected 650+ use cases
- **Global Lighthouse Network:**
- Al, Automation and Analytics cover 70% of applications
- Largest capability is Smart Operations



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Current global developments are triggering a rethink of global manufacturing systems

Emerging technologies

Climate change

Geopolitical tension

TECHNOLOGY STEP-CHANGES

ENVIRONMENTAL CONSIDERATIONS SHIFTING DEMOGRAPHICS

GEOPOLITICS SHIFTS

ECONOMIC UNCERTAINTY **CHANGES IN** GOVERNANCE















Adoption of Technology at scale has the potential to unlock sustainability. inclusiveness and resilience in supply chains

- Imperative to reach Net-Zero through pledges and regulation in scopes 1-3
- Advent of circular value chains to increase resource efficiency
- Shifts in consumer preferences
- Need for digital skills in the workforce and new value proposition to attract workers
- Re-building of trade blocs and increase in trade barriers affects availability of resources
- Government incentives for "local manufacturing'
- Commodity price volatility and inflation for manufacturing input factors Potential
- reduction of long-term investment in manufacturing assets
- Governments rethinking industrial policies
- Reduction of political stability for specific markets affects sourcing and investments



Five new priorities for manufacturing & supply chain leaders



Sustainability

Innovate around sustainability to drive end-to-end operations and supply chains – prioritizing energy and resource efficiency, gaining visibility on scope 1-3 emissions, considering carbon capture and storage solutions, and working with a supportive regulatory environment



Resilience

Improve the understanding and visibility of supply chains through a range of approaches and strategies – including building domestic and duplicate production capacity, trusted partnerships with nearby countries, strengthening international collaboration and coordination



Technology Readiness

Adopt and scale technology across end-to-end value chains – requiring new digital capabilities, suitable infrastructure and regulation, local research and training institutions, knowledge sharing and technical assistance



Skilled talent

Invest in skilling up talent and expertise to leverage digital technology as a key differentiating factor – enabled by strong training providers acting at the country level, on-the-job trainings and mentorships, reskilling and upskilling programs



New Customer Demand

Meet customers' expectations – driving unique value and prioritizing on-time delivery, innovative products and customization

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Sources: World Economic Forum, in collaboration with Kearney, A Global Rewiring: Redefining Global Value Chains for the Future; World Economic Forum, in collaboration with the University of Cambridge's Industrial

Innovation Policy Group, and the United Nations Industrial Development Organization The Future of Industrial Strategies: Five Grand Challenges for Resilient Manufacturing

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The "No Excuse" Framework to Industry Net Zero

Co-developed with our community to inform strategic decisions, and foster business collaboration around Industry Net Zero

Stage I Build the foundations



- Build the net-zero Corporate strategy
- 2 Set the capability for carbon footprint monitoring

Stage II
Change the game internally



- 3 Accelerate energy efficiency in operations and transport and decarbonize energy sources
- 4 Pursue material efficiency in operations
- 5 Re-think product design and business models
- 6 Develop carbon capture solutions and offset mechanisms

Stage III
Drive systemic collaboration



- 7 Drive scope 3 value-chain decarbonization (upstream and downstream)
- 8 Mobilize ecosystems for ne zero infrastructure and innovation
- 9 Address net zero data and digital standards

Stage IV

Make it simple, inclusive and exciting



10 Implement and drive net - zero culture and practices

To inspire leaders and inform decisions, the initiative will continue to:

- Collect & share practical use cases from industrial companies across Scope 1, 2 & 3 emission reduction
- Develop the initiative's digital knowledge repository where insights and use cases can be stored, accessed, and shared with community



What is needed and what will it deliver?

VISION

Unlocking new value and growth in a world of limited resources

IMPACT

Next Generation Resilience

THE **CIRCULAR** TRANSFOR-**MATION OF INDUSTRIES**

System-wide partnerships

Recycle 2

Remanufacture

Transform

Operating

Models

New Sources of Revenue

Resource Efficiency

Environmental Sustainability



ENABLERS

Data sharing Technology &

Infrastructure

Financina

Regulation & Policy

People & Culture

INCLUSIVE

EWORLD MANUFACTURING FORUM