

US Center for Advanced Manufacturing C-Suite Strategy Series: Sustainability

Takeaways and Next Steps



The Voice of the Leaders



“Workforce is a sustainability agenda”
Jackie Jung –Western Digital



“We are at an inflection point at which US manufacturing is changing – to truly realize this change we need to have a complete ecosystem. Without this support framework we won’t be successful in bringing manufacturing back”.
Rashmi Rao – Rubic Cubed Ventures



"The emergence of a vibrant Advanced Manufacturing ecosystem will require multidimensional collaborations between academia, public sector and industry. Such impact-driven partnerships will accelerate innovation, entrepreneurship, and development of a diverse and skilled workforce."
Ali Hassan – Santa Clara University



“We have to lead and influence the dialogue on manufacturing and show how advanced and interesting it has become.”
Chris Spadaccini – Lawrence Livermore National Laboratory



“Togetherness made us become greener”
Surjit Gill - Amyris



“Today’s sustainability is tomorrow’s compliance”
David Buck - HP



“Using Lithium Valley as an example, how do we get the workforce excited before it is actually there, creating a cradle to career landscape”
Michael Karavolias – Governor’s office of Business and Economic Development



“Walking the shop, most frontline workers in manufacturing have not heard the term "ESG ". We need a bottom-up approach just as much as a top-down approach, those workers can really push strategy and investment to the leadership”
Yasmin Zarabi – Parsable

Welcome Reception



Keynote by:
David Hochschild
Chair, California Energy Commission

Theme of the moment:
“Climate change is making it hard to fight climate change”

Key Takeaways

- Chair Hochschild emphasized the symbiotic relationship of industry and climate policies and provided an overview of organizations and projects pushing the boundaries of the sustainability landscape in California, highlighting the state’s “Long and beautiful history being the world’s incubator for new business.”
- He presented the key priorities of action for the energy commission:
 - California’s Lithium Valley to scale battery manufacturing
 - Transitioning away from fossil fuels in houses
 - Tribal energy micro-grids
 - Direct air carbon capture funding
- “Climate change is making it hard to fight climate change,” he said. The 9-billion-dollar budget of the energy commission and the Federal Government’s Inflation Reduction Act provided significant tailwinds for companies to leverage.

Panel: Sustainability Driving Innovation in Value Chains

Jackie Jung
Vice President Strategy
& Global Operations
Western Digital



Tom Clark
Supply Chain Executive

Moderated by
Memia Fendri
Community &
Initiative Lead
World Economic Forum



Key Takeaways

- The sustainability imperative calls for transformative partnerships across value chains to exchange best practices and lessons learned, build visibility across supply chain emissions and pioneer the implementation of innovative practices
- Driving the sustainability agenda requires a leadership level mindset shift, acknowledging the interdependencies between business efficiency and sustainable models of production
- Practices of sustainability stretch beyond the products in supply chains to those who manufacture them. Retaining a future ready workforce involves investing in a sustainable model for upskilling
- Successful upskilling and reskilling techniques involve equipping workers with data and innovative tools that enhance their capabilities, allowing them to make intelligent decisions quicker with more time to develop new ideas

“There needs to be a leadership level mindset change to bring progress into the sustainability journey”

Key Takeaways



Accelerating Technology Adoption

- The adoption of technologies to achieve sustainability targets can be accelerated by creating partnerships between manufacturers and academia
- Incremental wins build critical momentum in the scale up of new technologies furthering sustainability
- The sharing of best practices and case studies is key to highlight the potential of 4IR technologies in agile manufacturing



Upskilling and Reskilling the Workforce

- Starting to educate students early combined with rotational internships will help to engage and share the vision for sustainability in manufacturing across industries
- Successful innovation is driven from the top-down and bottom-up. Access to tools such as data can empower people across all levels of an organization to make more informed decisions
- ESG training including clearly outlined sustainability goals has become a leading aspect of attracting and retaining talent



Disruptive Innovations & New Business Models

- Innovation can be expediated by addressing knowledge gaps between leadership and front-line workers
- Events like the pandemic and geopolitical shifts have led manufacturers and regulators to reevaluate, leading to opportunities for funding sustainable innovation
- Communication between regulators and manufacturers is important to ensure that innovation grows in tandem with policy

US Centre 2023 Projects

Key challenges the US manufacturing and supply chain community its currently facing include:



Workforce shortage and inadequate use of technology on shop floors



Unlocking the full potential of technology and innovation across factories and value chains



Global disruptions generating an unprecedented need for change

The Centre is focusing on a set of projects to address key industrial challenges:



Upskilling the US Workforce



Accelerating Technology Adoption in the US



Disruptive Innovations and New Business Models

Next Steps

Join one of our three core project communities (details in appendix)

- Upskilling and Reskilling the US Workforce
- Accelerating Technology Adoption
- Disruptive Innovations and New Business Models

Connect with us:

Cynthia Hutchison, CEO:
[*cynthia.hutchison@usc4am.org*](mailto:cynthia.hutchison@usc4am.org)

Stephanie Wright, COO:
[*stephanie.wright@usc4am.org*](mailto:stephanie.wright@usc4am.org)

Alison Trumble, Program Director:
[*alison.trumble@usc4am.org*](mailto:alison.trumble@usc4am.org)

Upcoming C-Suite Strategy Series

Hosted by GE HealthCare
Carrie Uhl, Chief Procurement Officer



Join us May 15-16th at our next C-suite Strategy series focusing on **supply chain** transformation



Appendix

1. Accelerating Technology Adoption in the US



Context

- A select group of US manufacturers, including 9 sites from [the Global Lighthouse Network](#), have deployed advanced manufacturing technologies at scale, generating new value within the factory and/or across value chains
- To build a more competitive US manufacturing sector, US manufacturers need to gain a deeper understanding of how they can apply these technologies and accelerate the pace of adoption



Deliverables

- Build a multistakeholder community of representatives from private sector, public sector and academia committed to accelerate technology adoption across US manufacturing sector
- Develop a learning journey including workshops, webinars and events hosted throughout the US minimum quarterly with experts from industry, government, academia and civil society



Objectives

- Sharing insights from the front runners in digital transformation including factories already identified in the Global Lighthouse Network
- Create a geographically diverse series of learning opportunities across the US to unlock new partnerships that drive technology adoption



How to Engage?

- Appoint your US executive driving operations to join the learning journey, connect with peers and provide insights for the yearly report
- Host a segment of the learning journey by opening up the doors of your facility to the US community
- Submit one of your production sites to be designated as a Global Lighthouse

2. Upskilling the US Manufacturing Workforce



Context

- An estimated 13M workers in the US are currently employed in manufacturing. As technology transforms factories, US executives are recognizing how critical it is to have priority in upskilling workers
- To unlock productivity and empower the workforce, US manufacturers must focus on understanding upskilling from the worker point of view to build a robust plan



Objectives

- Identify current manufacturing workforce trends across the US to document the current state of upskilling through technology and people on the factory floor while using our collective community to drive sustainable solutions in inclusion
- Collaborate with key manufacturers to enhance the worker experience by improving the upskilling process and ways to promote empowerment and engagement of the workforce



Deliverables

- Insights on upskilling practices in the US consisting of takeaways from interviews with workers on the shop floors, summaries from executive roundtables and excerpts from US universities
- A series of roundtables to discuss output from workforce interviews, specific strategies and potential solutions for upskilling the workforce in the US with participants from technology, academia and manufacturing



How to Engage?

- Be a part of the conversation by joining the steering committee and host a roundtable or workshop to discuss workforce trends and define new upskilling strategies and create potential pilots
- Raise the voice of your workforce by volunteering to participate in the Global Initiative with worker interviews and research on current upskilling practices in collaboration with US universities
- Submit one of best practices as a use case or white paper to share with community

3. Disruptive Innovation and Business Models



Context

- US companies are faced with unprecedented change and disruption including geopolitical shifts, trade tensions, climate change and new technologies
- Leaders need to rethink not just the way in which their factories operate, but the way in which they innovate while creating value for customers and the manufacturing ecosystem



Objectives

- Provide thought leadership on how to unlock new business models in manufacturing, share success stories, guides to avoid common pitfalls, and best practices around establishing an innovation mindset in manufacturing environments
- Create a common language and understanding to enable the sharing of learnings around innovation and business models for manufacturers
- Identify disruptive innovation and new business models emerging within the manufacturing ecosystem across the US while enabling companies to take concrete actions to reimagine their processes, operations and business models



Deliverables

- Playbook to help organizations identify and act upon their latent potential for disruptive innovation and new business models, focusing on current capabilities and key enablers for disruption with concrete opportunities to unlock value through digital transformation
- Repository of real-world use cases, success stories and best practices to establish an innovation mindset in manufacturing environments
- Collaborations and partnerships to accelerate sustainable and inclusive business models through a collection of change stories on how different manufacturing organizations successfully take steps to innovate in their manufacturing operations



How to Engage?

- Join the interview series to contribute to and help shape this initiative's deliverables, and to shed light on key needs and implementation hurdles for unlocking innovation in manufacturing
- Appoint your US executive driving operations to join roundtables on transformational innovation stories to accelerate potential disruptive solutions
- Submit your change stories, case studies and frameworks to help educate manufacturers on potential areas of innovation

Next Steps

- Appoint your US executive driving operations to join the learning journey, **connect with peers and provide insights**
- Host a segment of the learning journey by **opening up the doors** of your facility to the US community
- **Submit** one of your production sites to be designated as a Global Lighthouse
- Schedule a discussion for further **collaboration**

US State of Manufacturing Report

- Join the community through:
 - Attending a **regional roundtable**
 - Join our next **Go & See**
 - Highlight an **SME's** within your supply chain to join the conversation and share their insights
-

