Advanced Manufacturing and the Smart Worker

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A Clean Energy Smart Manufacturing Institute
The NNMI

A National Network of Institutes focused on advanced manufacturing technologies
$70 Million in Matched Funding

CLEAN ENERGY SMART MANUFACTURING INSTITUTE
A Clean Energy Smart Manufacturing Institute

Intended to invigorate US global competitiveness
We represent 28 states, leveraging existing organizations including 75+ Institutions and 150 Facilities.
Governance
A Network of Networks

SMLC-SMI HQ
- Based in LA
- Institute Administration
- Central Platform and Marketplace Development and Management

Five Regional Centers
1. North East (NY)  2. South East (SC)  3. Gulf Coast (TX)
4. California (CA)  5. Pacific North West (WA)
CEMSII Smart Manufacturing Platform

Open Platform & Marketplace For Industrial Data, Modeling, & Metric Applications
- For contributors and users
- Accessible Affordable, Flexible to SMMs

SM Value Proposition
Data as the key asset
Shift dependency of application from Infrastructure to data-based outcome

Applications
Context
Mapping
Data

Event Data
- Production Models
- Calibration & Maintenance
- Sensor Data

Real-Time Data

Smart grid Interoperability
In-production performance
Smart machine operations

Value chain Interoperability

Sustainability & Safety
People

The ultimate manufacturing asset

Sophisticated on-board sensors
Ability to learn, think, and adapt
Powerful pattern recognition
Highly mobile and autonomous
Ability to troubleshoot
Contextual awareness
Ability to use wisdom and judgment
Ability to draw conclusions
Ability to make decisions
The ultimate manufacturing asset

- Embedded wireless computer
- Video imaging
- Thermal imaging
- Augmented reality
- Directional microphone
- Proximity sensor
- Advanced ear protection
- Ultrasound acoustic sensor
- ID beacon
Empowering the ultimate manufacturing asset
IoT can make it happen

Safe
- Advanced safety
- Health tracking
- Behavior check

Efficient
- Augmented sensory
- Interconnected
- Computer feedback

Productive
- Well trained
- Decision support
- Goal setting

Well
- Human-centric
- Balanced
- Health/wellness

Worker IoT
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