ROBOTS AND SMMS (SMALL AND MEDIUM MANUFACTURERS) SUCCESSES AND CHALLENGES

Panel Discussion
Small Manufacturers in the US

<table>
<thead>
<tr>
<th>States</th>
<th>Total Manufacturers</th>
<th>% Less Than 500 Employees</th>
<th>% Less Than 100 Employees</th>
<th>% Less Than 20 Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>292,825</td>
<td>99%</td>
<td>92%</td>
<td>69%</td>
</tr>
<tr>
<td></td>
<td>38,532</td>
<td>99%</td>
<td>94%</td>
<td>74%</td>
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</tbody>
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SOURCE: [https://buffer.com/assets/sites/15036/graphics/us-map-small-manufacturers.png](https://buffer.com/assets/sites/15036/graphics/us-map-small-manufacturers.png)
Panelists

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CEO
Owens Design

Joseph Mayard
Special Projects Division
Dept. Manager
Walters & Wolf

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Advanced Robotics & Automation Practice
CMTC

Suzy Teele
Head of Marketing & Communications
Advanced Robotics for Manufacturing (ARM)
Enabling manufacturing for the world’s next generation technologies.
LOCAL
UNPARALLELED SHOP-TO-SITE RESPONSE
- Complete Local Fabrication
- Local Service
- In-house fabrication
- Employing from our community
- Create lasting jobs
- LEAN Manufacturing

SINGLE SOURCE SOLUTION
- Glazing
- Building Integrated Photo-Voltaics
- Stone & Precast
- Interior Carpentry
- Access Systems

Headquartered in: Fremont, CA
www.waltersandwolf.com
CMTC is California’s Manufacturing Extension Partnership (MEP) Center and is affiliated with the National Institute of Standards and Technology (NIST)

CMTC provides services to assist small and medium-sized manufacturers (SMMs) to generate profitable growth
ARM’s projects address these technical and education/workforce development challenges:

- Human-robot collaboration
- Dexterous manipulation
- Perception and sensing
- Mechanism design
- Scheduling, learning and control
- Mobility and navigation
- Testing, verification validation & security
- Little coordination between initiatives to advanced mfg.
- Regional skill gaps in manufacturing skills
- Negative perceptions of robotics and manufacturing
- U.S. education insufficient for advanced mfg., careers
- Manufacturing workforce not prepared for continual re-skilling
- SMEs have limited resources to prepare talent

ACCELERATING THE U.S. MANUFACTURING RENAISSANCE WITH PEOPLE AND ROBOTS. TOGETHER.

ARM’s Ecosystem:
- Research Institutions
- Large Manufacturers
- Academia
- Small & Medium MFGRs
- GOVT & Nonprofits
- Suppliers & Integrators

ARM’s Mission:

1. Assert U.S. leadership in advanced robotics manufacturing.
2. Empower American workers to compete with low-wage workers abroad.
3. Lower the technical, operational, and economic barriers for companies to adopt robotic technologies.
4. Aid in the creation and sustenance of valuable manufacturing jobs.
PANEL DISCUSSION