

Partnerships and Opportunities for Growth

RAMPMD

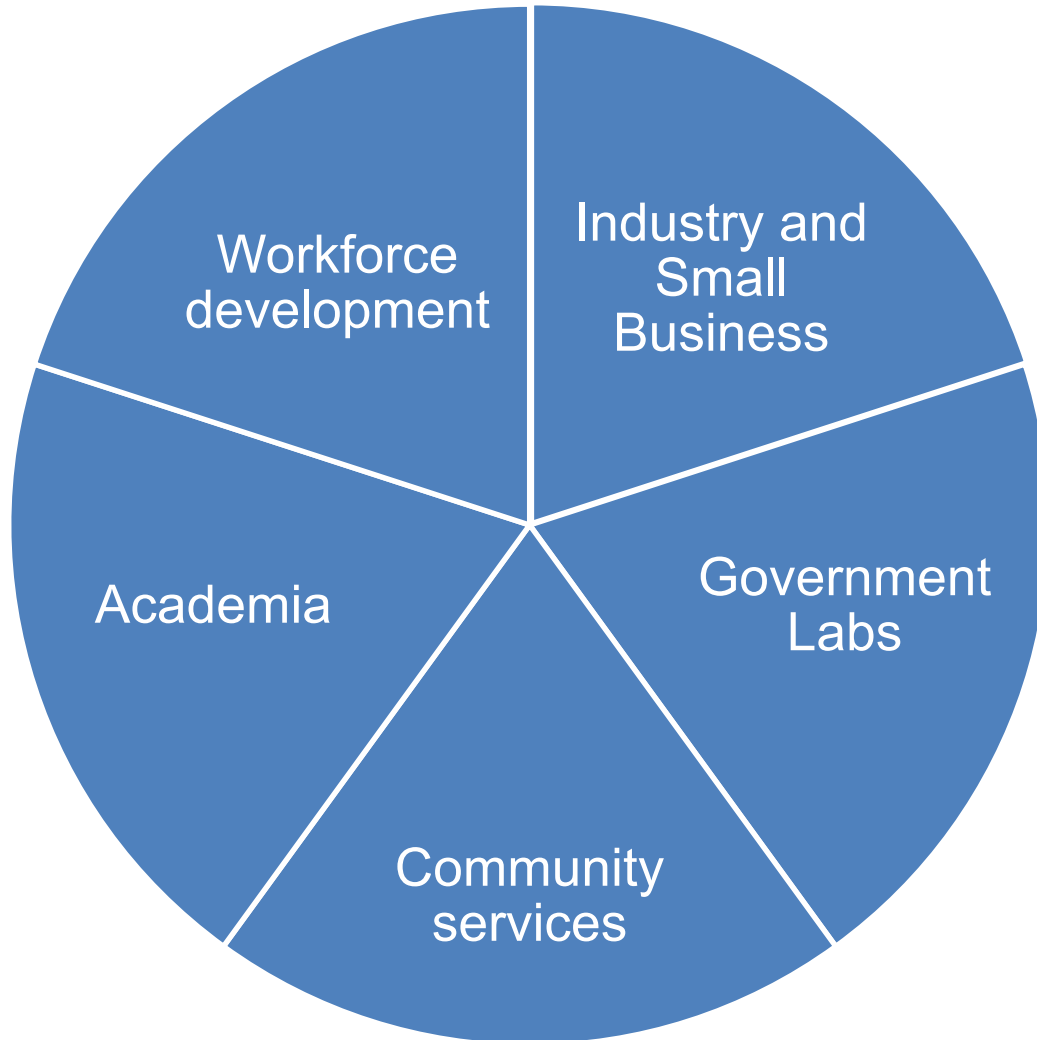
The logo for RAMPMD features the word "RAMP" in black and "MD" in green. Below the text is a red dotted line that tapers to the right, and several green rays emanate from the bottom of the logo.



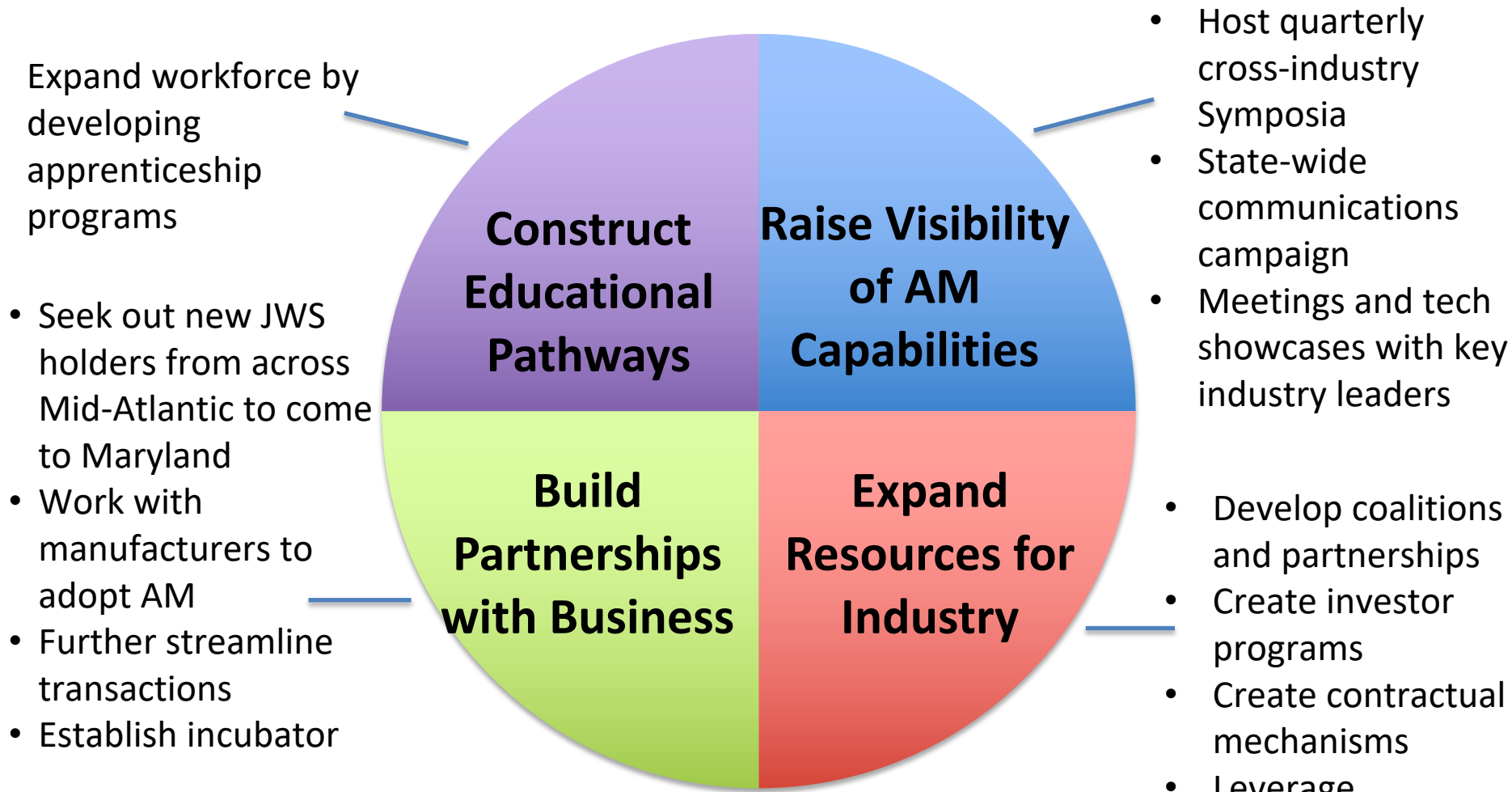
MAY 15 '14
MAY 15 '14

SB 889 HB 1060
SB 888 HB 1060

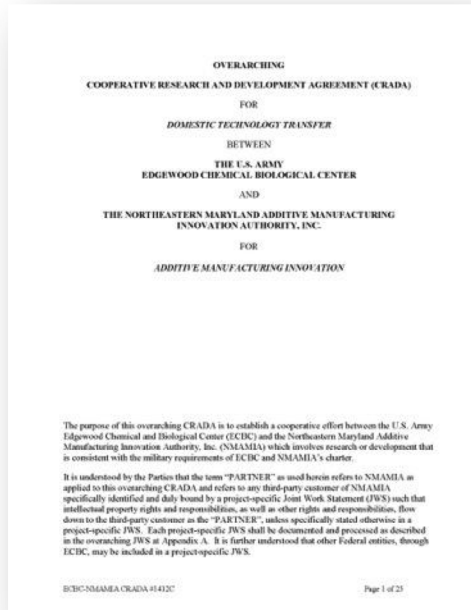
RAMP MD's All-Volunteer 25-Member Board of Directors



RAMP MD's Mission: Build AM Ecosystem



RAMP MD Provides Businesses Bridge to Federal Resources



Army

CRADA

RAMP MD

Industry Partners

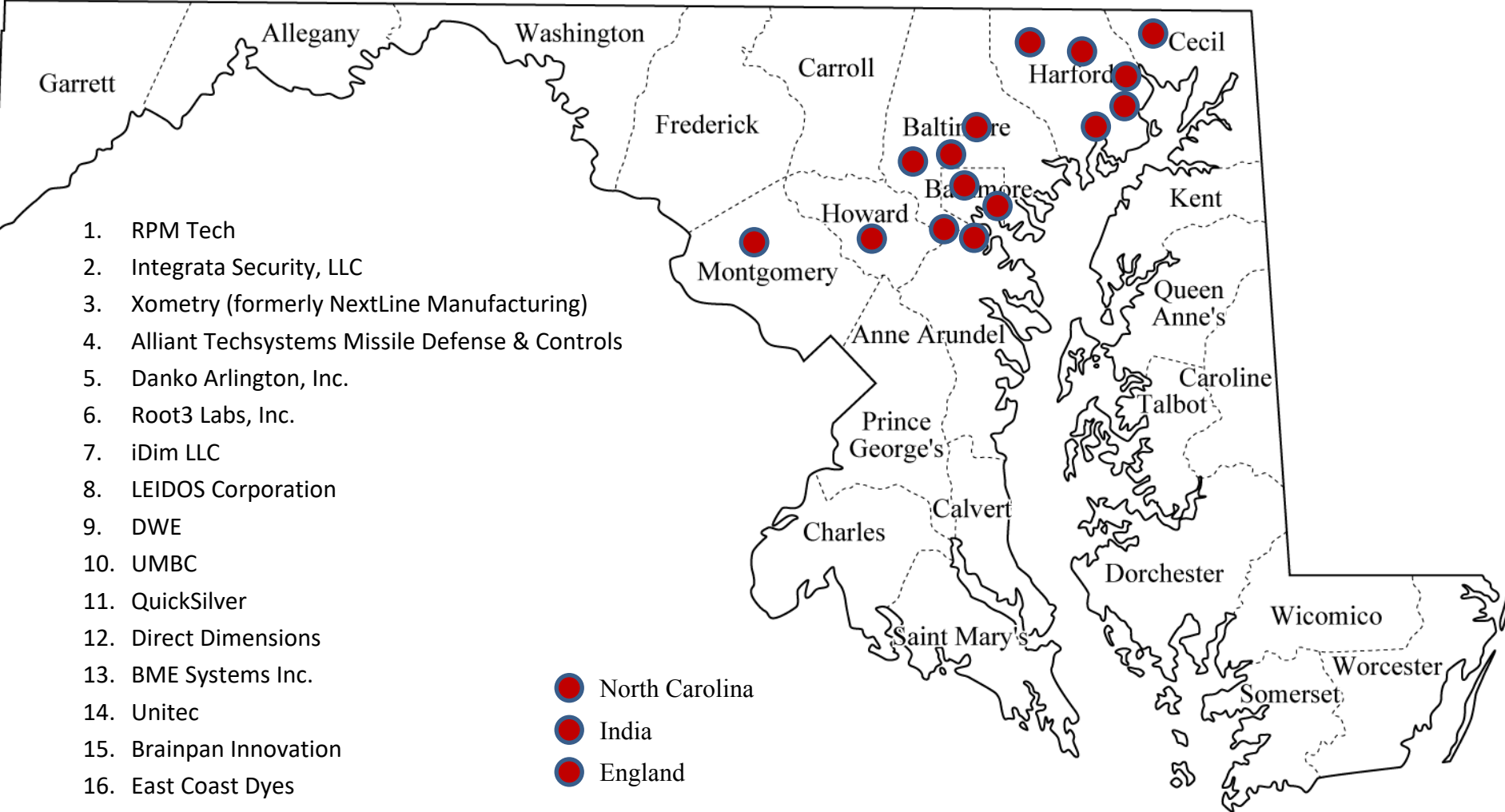
Joint Work Statements

Industry Partners

Overarching Cooperative Research and Development Agreement (CRADA) between US Army and RAMP MD allows streamlined process for industry to access federal facilities and expertise

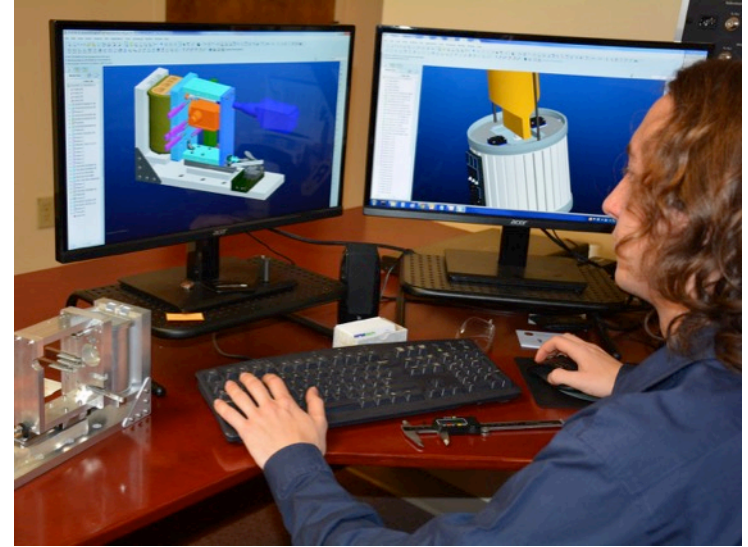
JWS Holders: County, State, Country

1. RPM Tech
2. Integrata Security, LLC
3. Xometry (formerly NextLine Manufacturing)
4. Alliant Techsystems Missile Defense & Controls
5. Danko Arlington, Inc.
6. Root3 Labs, Inc.
7. iDim LLC
8. LEIDOS Corporation
9. DWE
10. UMBC
11. QuickSilver
12. Direct Dimensions
13. BME Systems Inc.
14. Unitec
15. Brainpan Innovation
16. East Coast Dyes
17. Avon Protection Systems

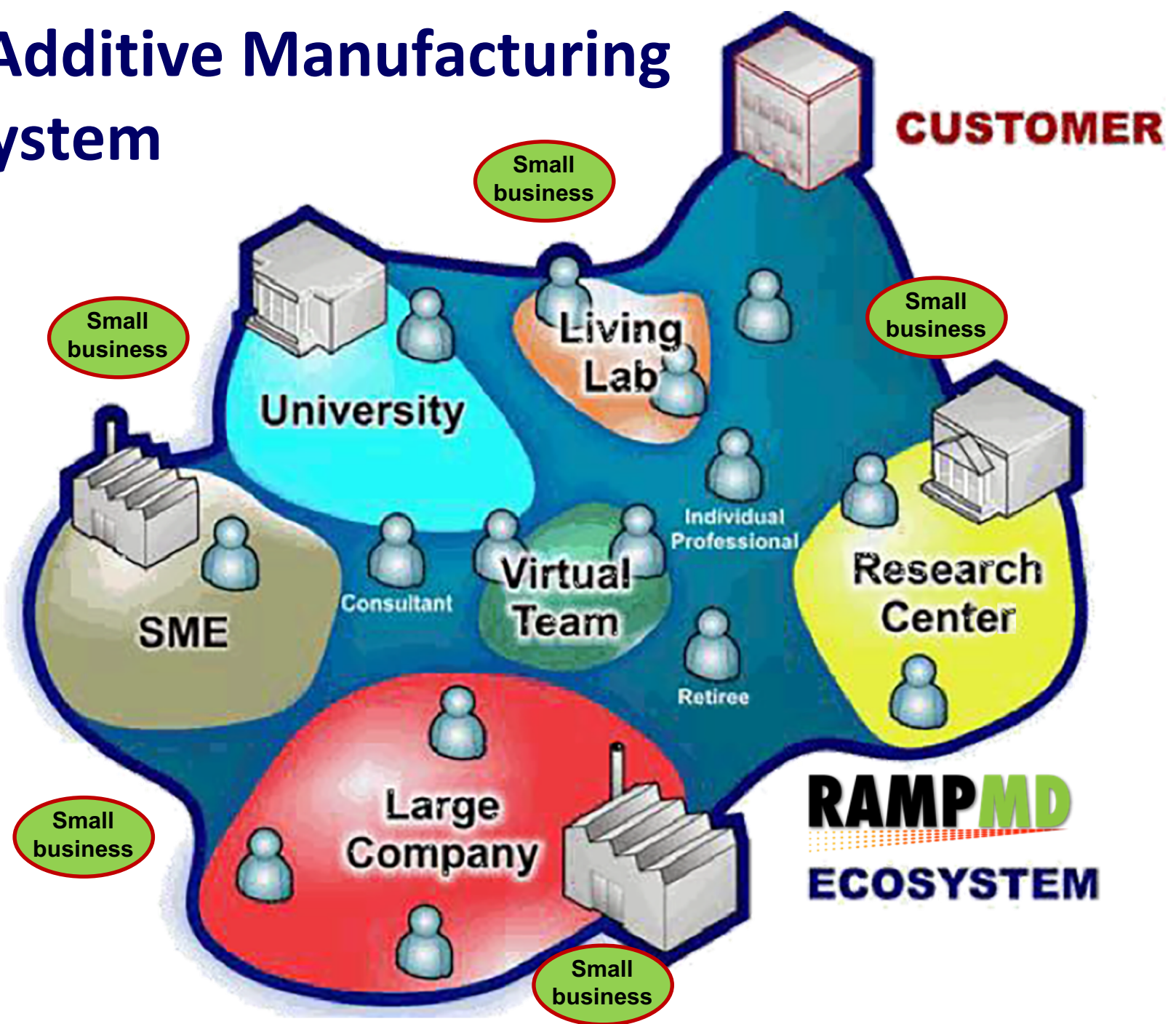


RAMP MD JWS Holders Created 244 New Jobs in Last Four Years

- Product Design
- Computer Aided Drafting
- Reverse Engineering
- Industrial Engineering
- Manufacturing Engineering
- Materials Science
- Modeling and Simulation
- Contract Manufacturing
- Prototyping
- AM / Print Bureaus
- Jig/Fixture Design and Production
- Finishing/machining
- Material Inspection
- Dimensional Inspection
- Acceptance Testing

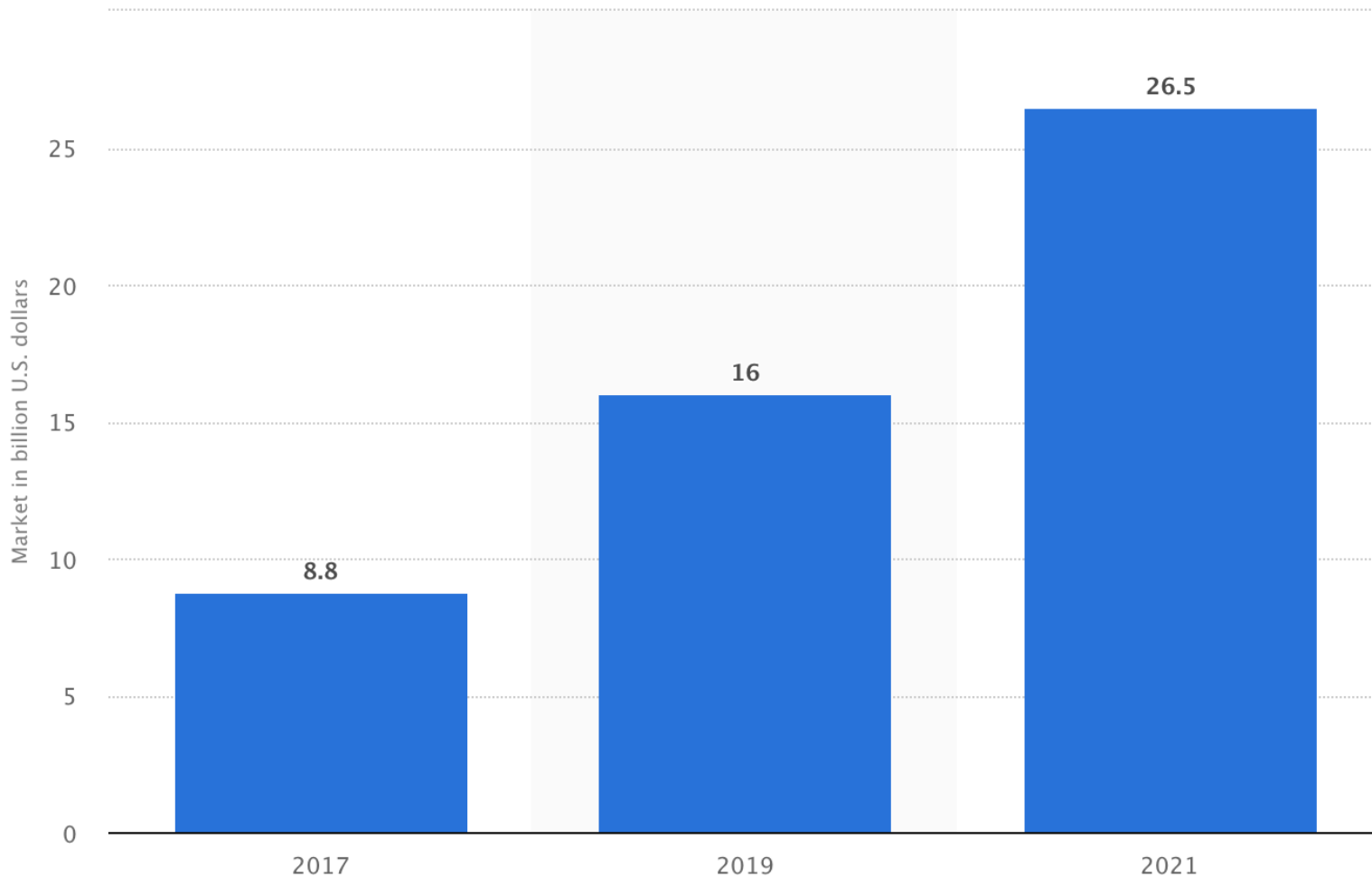


The Additive Manufacturing Ecosystem



Growing industry sector

This statistic shows the value of the additive manufacturing - more commonly known as 3D printing - market from 2017 to 2021. It is estimated that this industry will be sized at around 26.5 billion U.S. dollars in 2021. Source: Statista



Maryland poised to be epi-center of nation's additive manufacturing capability

What needs to happen next?

- Additional businesses from state, US added to CRADA
 - Expands industrial base
 - Brings new facets of AM to region
- Continue tying together education and workforce initiatives to create pathways into all additive manufacturing careers
- Expand visibility of additive manufacturing and of region's resources to national/international audience