



# Cold Spray Transition

## Common Problems & Infrastructure Development



Rob Hrabe, CEO  
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Public Release: Distribution Unlimited

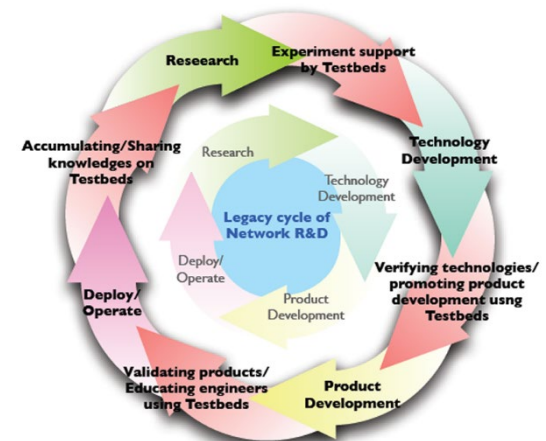
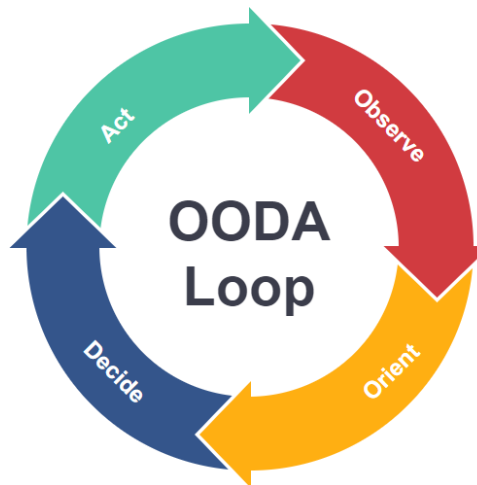


**Requirements Analysis**

**Process Development & Qualification**

**Environmental Health and Safety**

**Education and Training**

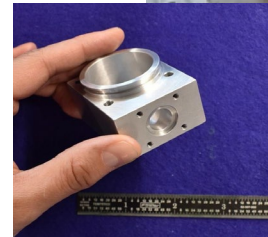




## Requirements Analysis

- What is Success?
  - ROI?
  - Efficiency?
  - Performance Enhancement?
  - Availability?
  - Antimicrobial Properties?
  - Throughput?
  - Development/R&D?

One size  
does **NOT**  
fit all





## Process Development & Qualification

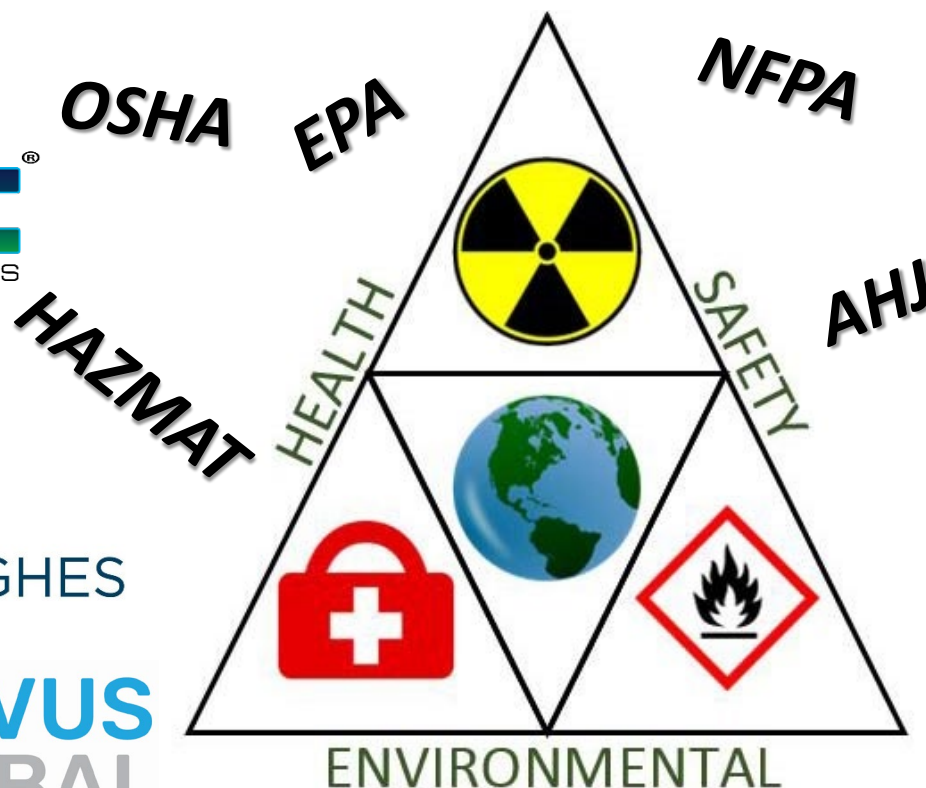
- Shorten the Cycle
  - Feasibility Analysis
  - Application Development
  - Qualification Testing





## Environmental Health and Safety

- Dust Hazard Analysis
- Dust Collection
- Fire Protection
- Cleaning and Maintenance





## Education and Training

- Operator vs Developer
- OEM Certification
- Workforce Development
- On-going training 1-2 years





**Supply Chain**

**Support Infrastructure**

**Field On-Site Support**

**Limited Production/Operations Support**





# Cold Spray Keys to Infrastructure Development



Supply Chain

Automation and Robotics

Cost

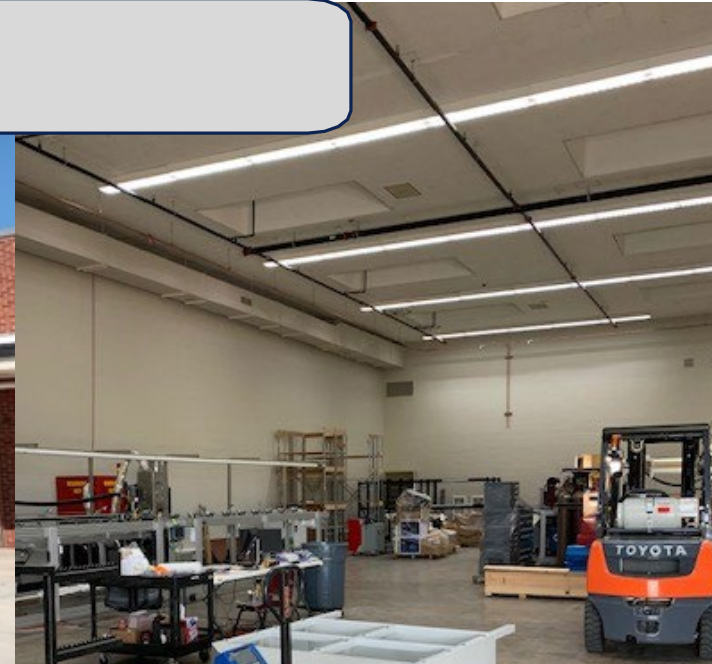




# New VRC Headquarters



## Support Infrastructure



- 55,000 Square Feet
- 10 Acres
- Designed for Cold Spray Ops
- High Bay Manufacturing
- Engineering/Lab
- 80,000 sq ft expansion option



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# VRC Satellite Facilities

- 15,000 Square Feet
- High Bay Manufacturing
- Engineering/Lab/R&D

Webster, MA



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Kostas Research Institute  
Burlington, MA



- 4,000 Square Feet
- Engineering/Lab/R&D



# Facilities with VRC Capability

## Infrastructure

- ★ VRC
- ★ Govt /Commercial Partner
- ★ Projected





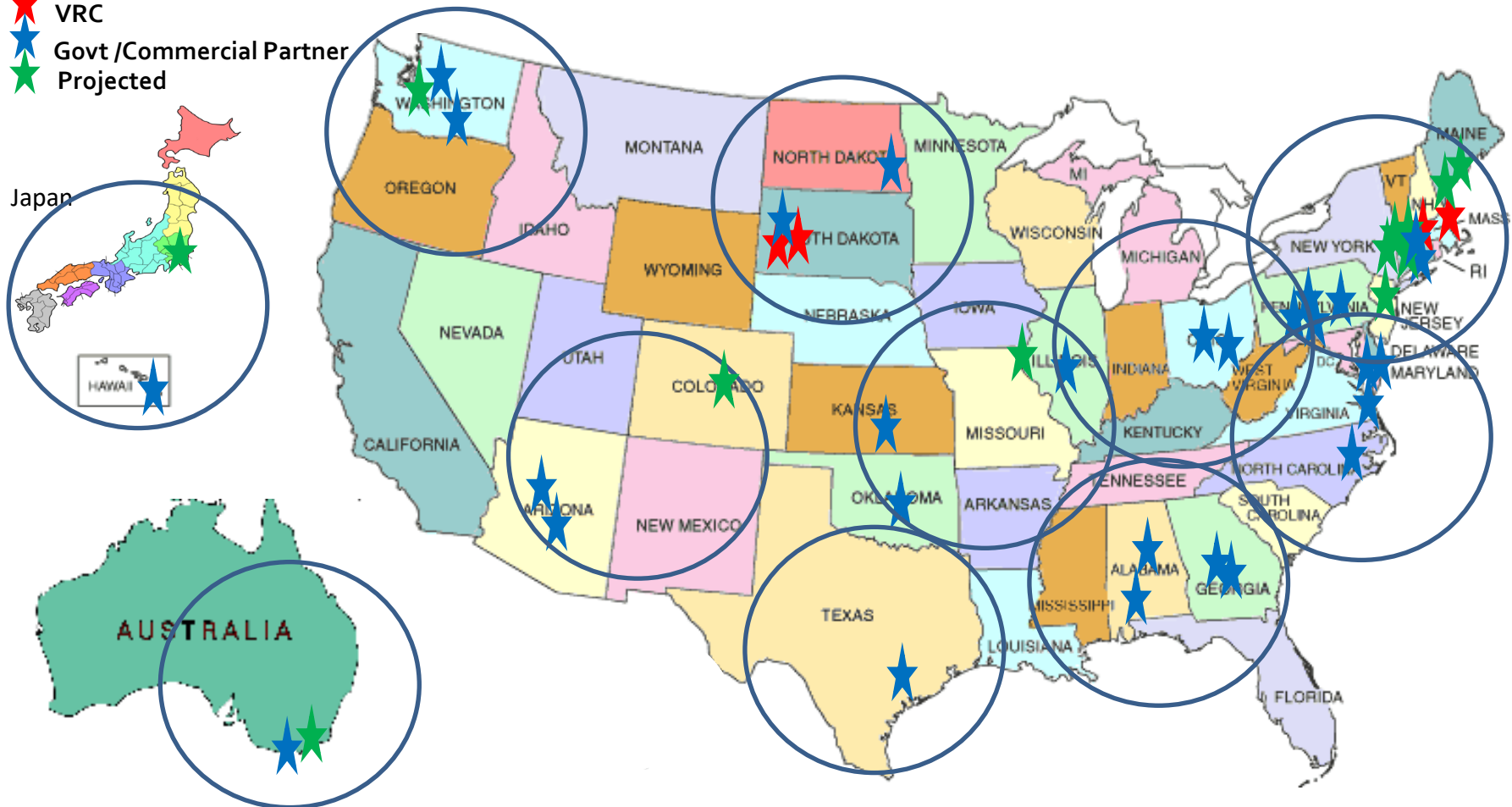
# Facilities with VRC Capability



## Regional On-Site Support



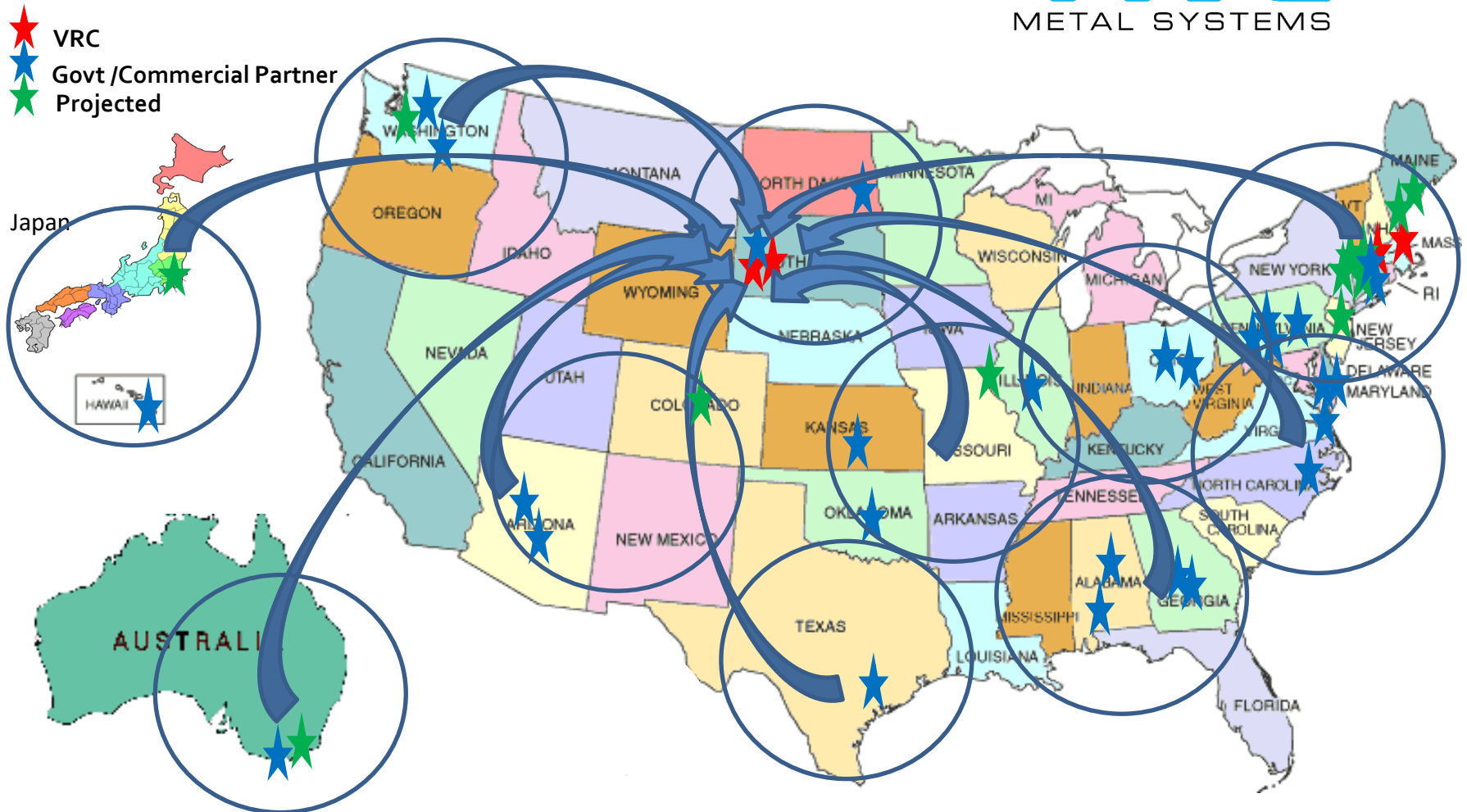
- VRC
- Govt /Commercial Partner
- Projected





# Facilities with VRC Capability

## Reach Back and Support





# Cold Spray Keys to Infrastructure Development

## Field/On-Site Support



Together  
ahead. **RUAG**

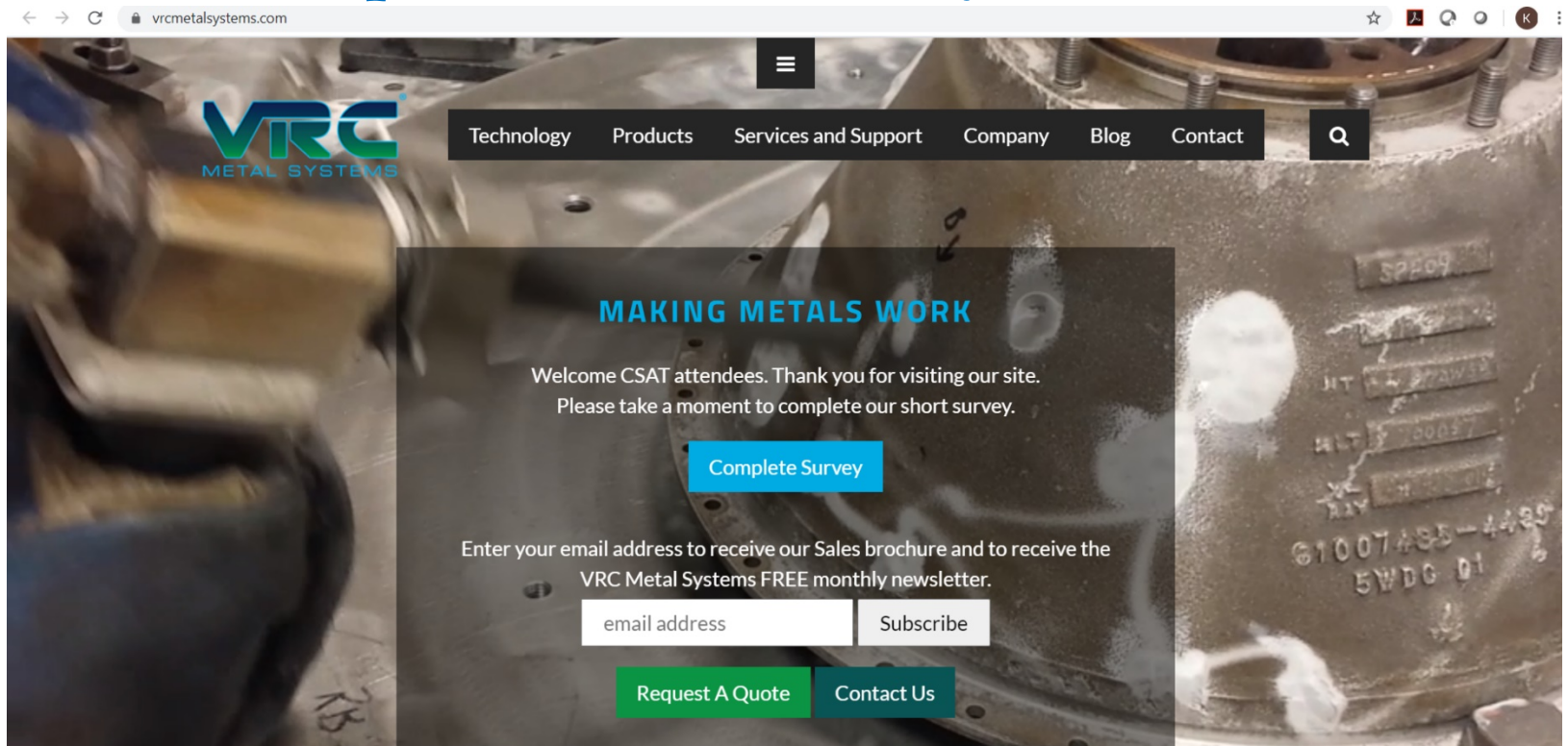




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Needs Survey at  
<http://www.vrcmetalsystems.com>



**Rob Hrabe, CEO**

[rob.hrabe@vrcmetalsystems.com](mailto:rob.hrabe@vrcmetalsystems.com)

605-209-5196

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