

AGENDA

- Team background and origins
- Our big pivot
- Progression of manufacturing tech and why Cold Metal Fusion is important
- How the tech works
- Augmented materials are the future
- Applications
 - Embedded electronics
 - Functional Coatings
 - Augmented Materials
- Milestones and Future Financials



TEAM



CO-FOUNDERS



Deepak Atyam - CEO



Alex Finch – President



Jesse Lang - VP Operations





SPACEX













ORIGINS PT. 2

Challenged by
NASA to 3D
PRINT first
rocket engine
from a university



2013



2015



2016

PIVOT

Developing new 3D printing technique for rapidly producing rocket engines

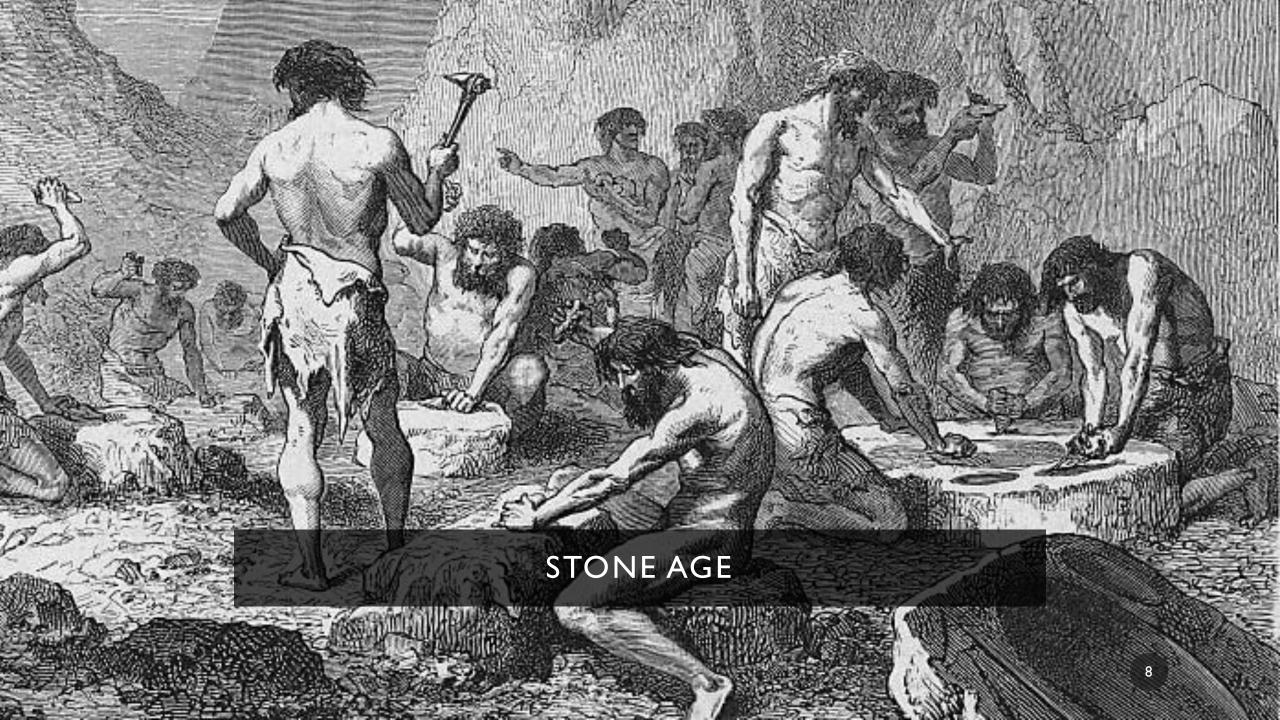


Over **250** customer interviews in industry



Market demand too risky
Scope of solution was smaller than expected







IRON AGE







COLD METAL FUSION

WHAT IS COLD METAL FUSION?

How it works:

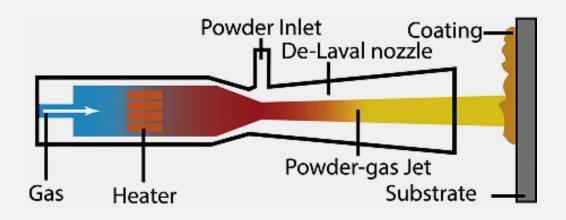
"spray" metal powder at supersonic speeds = impact & deposition onto substrate

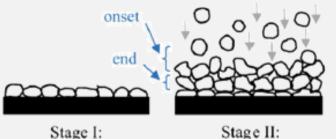




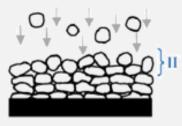
Slow motion

(video)

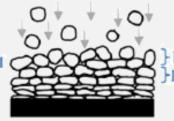






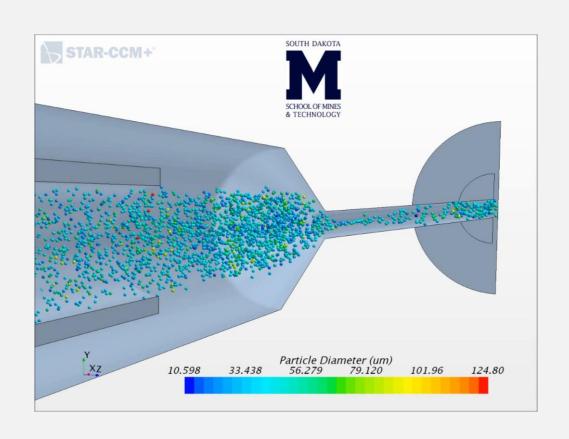


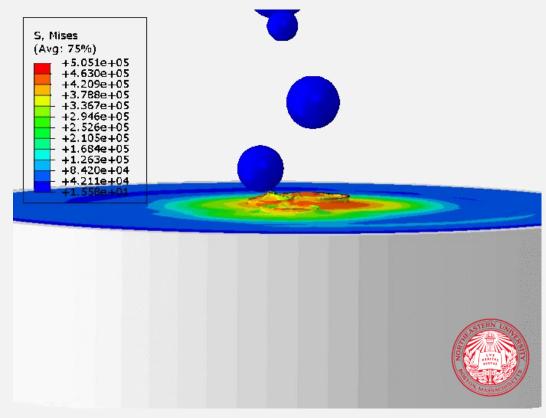
Stage III: particle bonding and void reduction

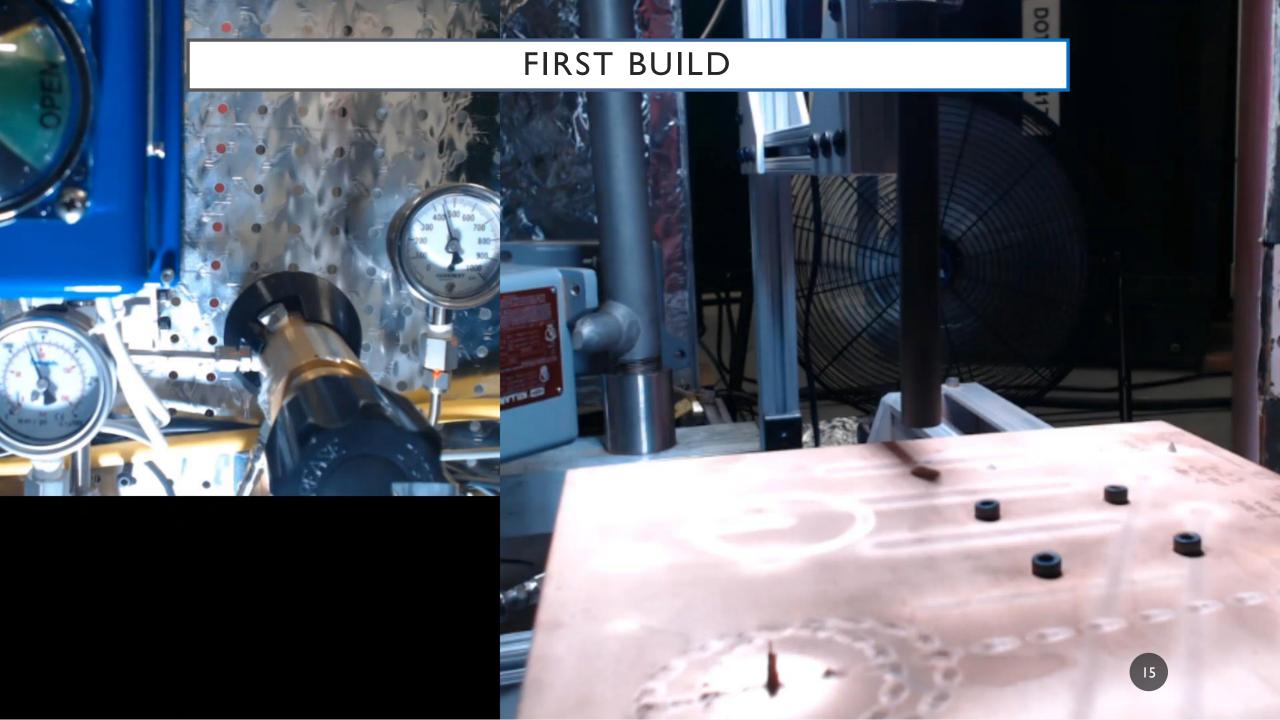


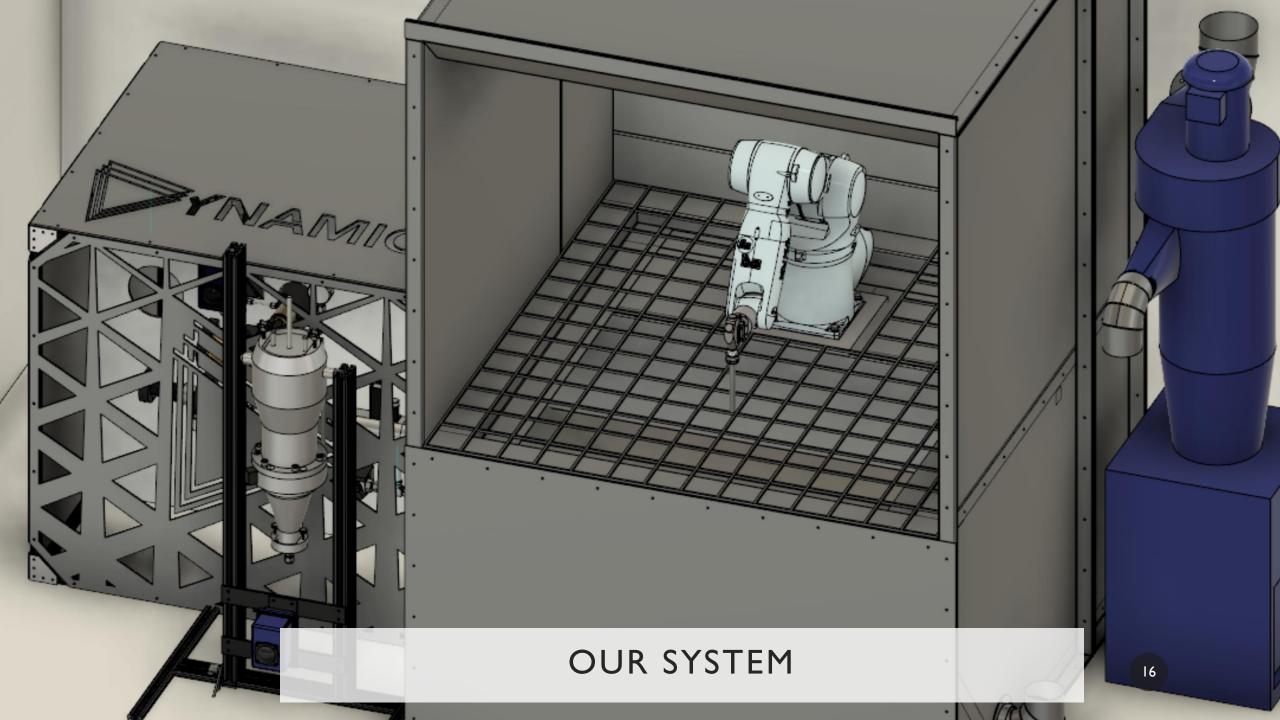
Stage IV: further deformation (hardening ...)

HOW COLD METAL FUSION WORKS











APPLICATIONS

EMBEDDED ELECTRONICS

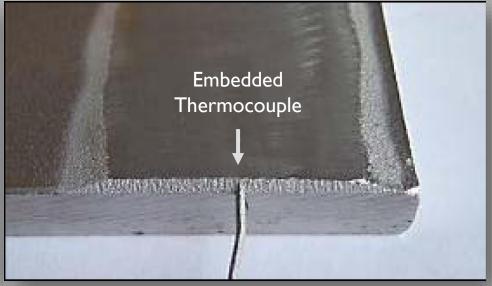
Value Propositions:

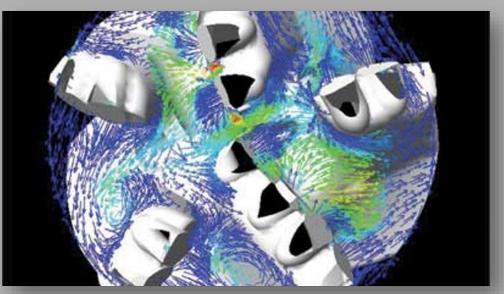
- Tamper/counterfeit supply chain
- Direct point sensing of part
- New aesthetic functionality
- EMP shielding
- Increased thermal usage range of electronics
- Electronic erosion protection
- Electronic corrosion protection
- Obtain data at point of interest within part

Market Size (Global IoT Sensors):

• \$27.4B by 2022







Simulation of Drill Bit



FUNCTIONAL COATINGS

Value Propositions:

- Part erosion resistance
- Part corrosion resistance
- Structural stiffness at optimized locations
- Increased thermal usage range
- Electrical insulation
- Magnetic insulation

Market Size (Metal Coatings + Functional Coatings)

• \$26B by 2026

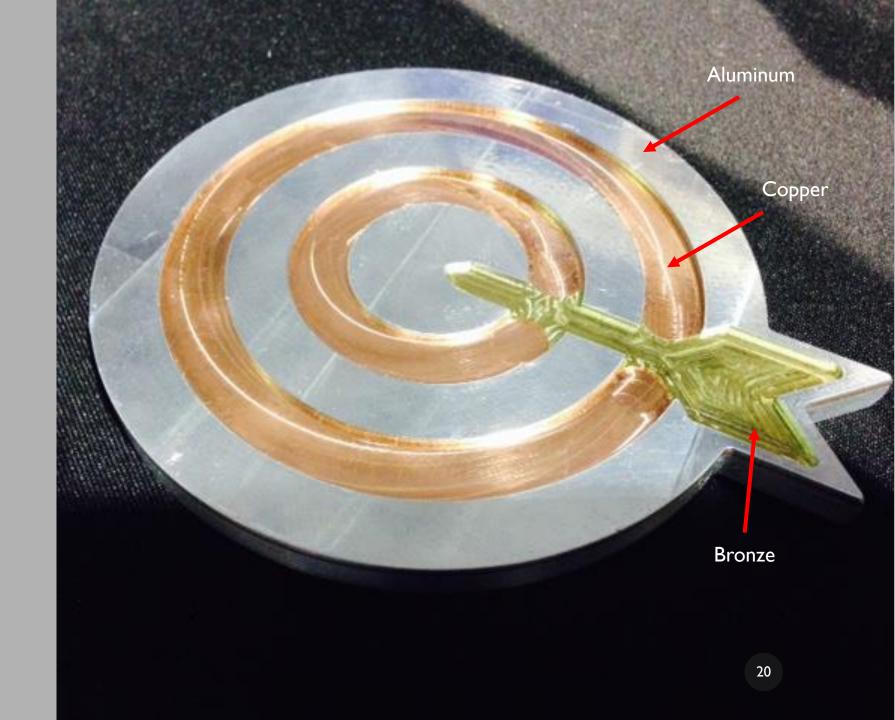
AUGMENTED MATERIALS FOR OPTIMIZED PARTS

Value Propositions:

- Speed the fastest method to add metal to any other metal or non-metal part
- Optimized part functionality
- Material cost savings
- Greater design freedom
- Greater aesthetic appeal

Market Size (Global Metal AM):

• \$23.3B by 2026



MILESTONES/FINANCIALS













Jul – 14 Phase 1 NASA STTR as RI

Dec - 16 6th patent application filed

Feb - 17

First paying customer

Mar - 17

Accepted into #1 Aerospace Accelerator (Starburst)

Aug - 17

1st Patent issued

2021

Series B: \$30M

Dec - 17 Completed NSF I-Corp program

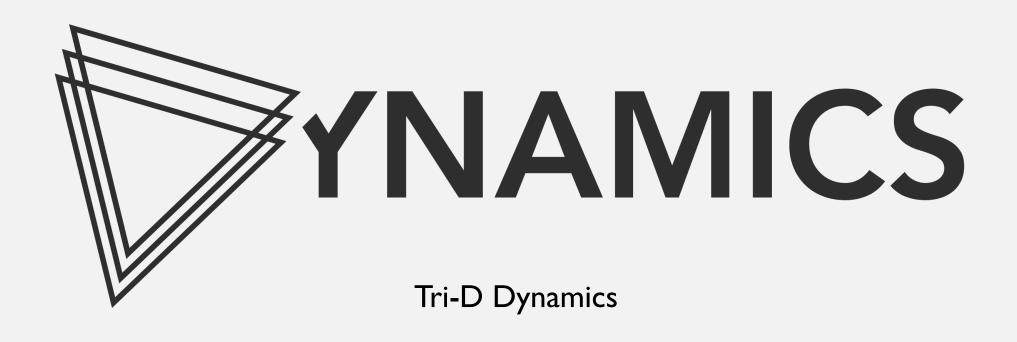
2018

Seed: \$IM ✓

2020 Series A: \$10M

- •Tech: Validate printing technology and start to create parts
- •Sales: Fulfill I+ pilot program
- •**Team:** Add manf. Engineer, machine learning/controls engineer
- •Tech: Create parts for customers and Ist full scale printer
- •Sales: Recurring revenue from part production and/or printer sales
- •Team: Add CFO, VP product, VP marketing, sales rep, manf. engineer (x2), software engineer (x2)

- •**Tech:** Multiple product lines optimized for customer applications
- •Sales: Established long term production contracts and printer sales pipelines
- Team: Add COO, CTO, VP engineering, VP Finance, accountant, HR director, sales rep (x2), sales engineer, industrial engineer (x2), manf engineer (x3), software engineer (x2), materials engineer (x3)



Help us usher in the meltless age for manufacturing alex@triddynamics.com

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