SIGMA LABS

May 2021

Setting the Quality Standard for Additive Manufacturing

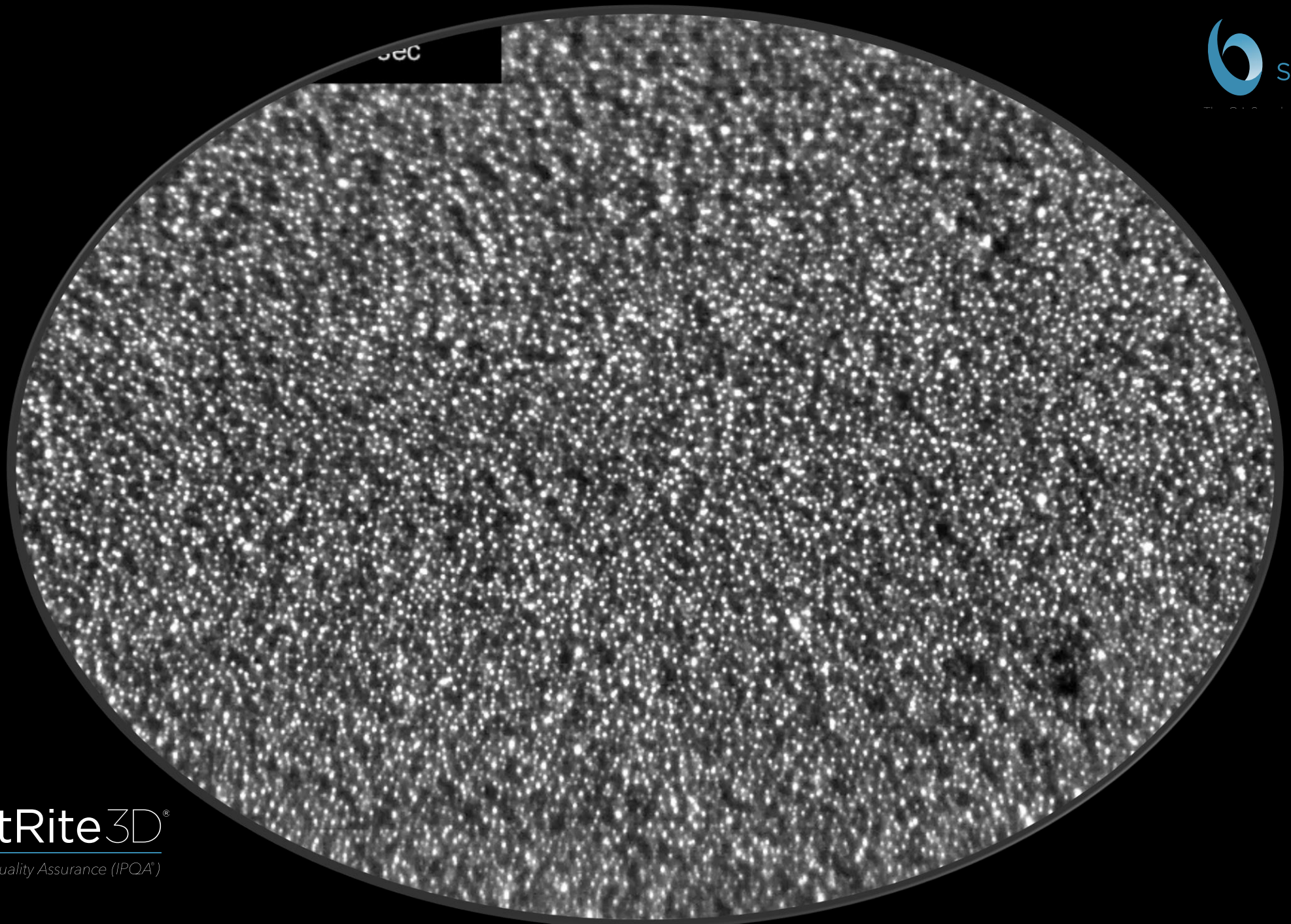
PrintRite3D®

In-Process Quality Assurance (IPQA®)

SIGMA LABS

Forward Looking Statement

This presentation contains “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (which Sections were adopted as part of the Private Securities Litigation Reform Act of 1995). Statements preceded by, followed by or that otherwise include the words “believe,” “anticipate,” “estimate,” “expect,” “intend,” “plan,” “project,” “prospects,” “outlook,” and similar words or expressions, or future or conditional verbs such as “will,” “should,” “would,” “may,” and “could” are generally forward-looking in nature and not historical facts. These forward-looking statements involve known and unknown risks, uncertainties and other factors, including, but not limited to, the uncertain effect of the COVID-19 pandemic on Sigma Labs' business, results of operations and financial condition, which may cause the Company's actual results, performance or achievements to be materially different from any anticipated results, performance or achievements. The Company disclaims any intention to, and undertakes no obligation to, revise any forward-looking statements, whether as a result of new information, a future event, or otherwise. For additional risks and uncertainties that could impact the Company’s forward-looking statements, please see the Company’s Annual Report on Form 10-K (including but not limited to the discussion under “Risk Factors” therein) filed with the SEC on March 24, 2020 and which may be viewed at www.sec.gov.



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Variables Impacting Quality and Consistency

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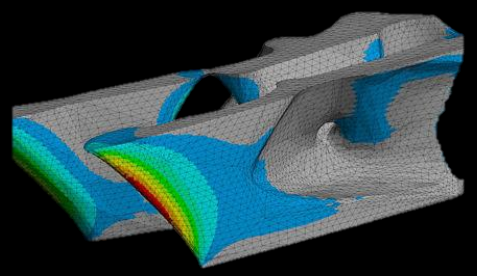
The QA Standard for Additive Manufacturing

Varying degrees of competency and lack of standards resulting in lack of consistency and quality

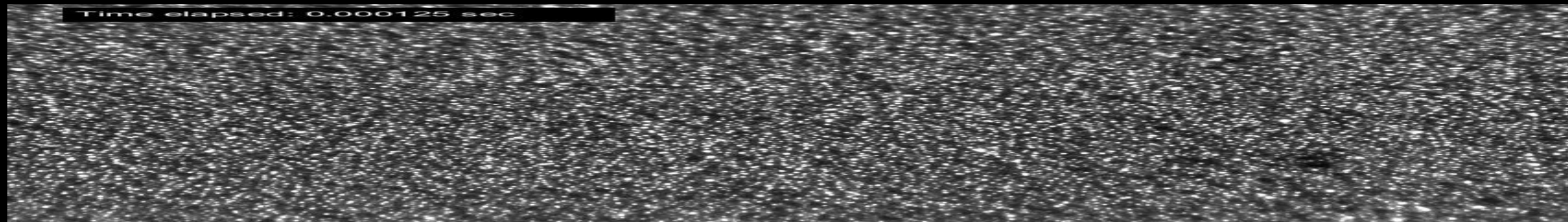


Virtually unlimited design possibilities

More metal powders and metal alloys

Over 50 3D metal printer OEMs
Multiple generations, multiple processes.
Single, dual and quad laser machines

Post processing techniques and issues.
Cost & time of inspecting after the fact



How Important is Quality?

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Mission Statement

To accelerate the adoption of Additive Manufacturing by setting the standard for In-process Quality Assurance for 3D Metal Printing

Promise of 3D Metal Printing

- Design freedom
- On-demand manufacturing
- Increased agility
- Increased customization and personalization
- Stogner, lighter and more durable parts
- Location agnostic

Throttling the Growth of 3D Metal Printing

51 per cent of respondents, the challenge lies in a lack of consistency.

(*PostProcess Technologies,*)

"Assurance of print quality and repeatability is essential to the critical missions that we support."

Kristi Farley, Vice President Spacecraft and Missile Engineering at Lockheed Martin Space.

The industry needs to collaborate more vigorously on developing standards and best practices to ensure repeatable processes and high-quality results

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The QA Standard for Additive Manufacturing

PrintRite 3D®

In-Process Quality Assurance (IPQA®)

PrintRite 3D®

In-Process Quality Assurance (IPQA®)

PrintRite3D® - Detects and Classifies Defects

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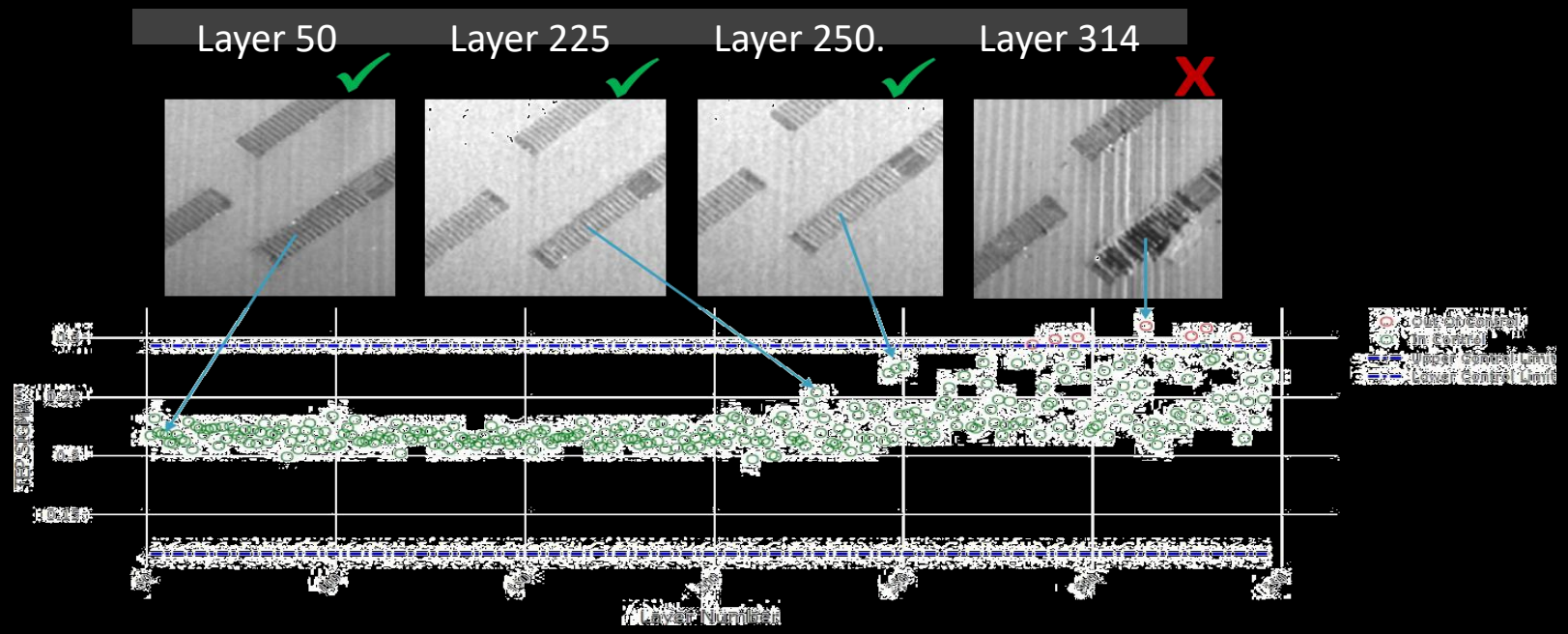

- Lack of fusion
- Spherical porosity
- Key holing
- Inclusions
- Gas flow variation
- Re-coater interaction
- Short feed
- Insufficient support structure

PrintRite3D®

In-Process Quality Assurance (IPQA®)

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The QA Standard for Additive Manufacturing

PrintRite3D 7.0

- Temperature Monitoring and Calibration
- Neural Net Machine Learning
- Recoater Interaction Detection
- User Facing Machine Learning Predictive Models
- Multi-Laser Quality Metrics
- Production Framework
- 3D Visualization Diagnostics
- User Roles and Login

PrintRite3D®

In-Process Quality Assurance (IPQA®)

PrintRite3D® - Major 3D Metal Printers

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IPQA®

Providing a consistent standard of quality across 3D printers

3D SYSTEMS

DMG MORI

COHERENT

Sodick

CONCEPT LASER

Additive Industries

eos

SLM SOLUTIONS

PrintRite3D®

In-Process Quality Assurance (IPQA)®

Go To Market Strategy

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International Standards Organizations

3D Printer Manufacturers
~50 metal printer manufacturers with new entrants in Asia and Latin America

Largest 250 Worldwide Manufacturers
Aerospace, Medical, Oil & Gas, Automotive, Contract Manufacturers

AM Software Vendors
Over 50 from design, simulation, AM digital threads

R&D Institutes and University Programs
Undergraduate and Graduate AM programs and industry research

International Standards Groups
Work closely with to establish best practices and standards

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End User Validation

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Baker Hughes

AIRBUS

LOCKHEED MARTIN

Northwestern University

KIT Karlsruher Institut für Technologie

materialise innovators you can count on

mtc Manufacturing Technology Centre

STATE

ANSYS

DARPA

Fraunhofer

ISO

NIST

ASTM INTERNATIONAL

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Leveraged Model

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GKN AEROSPACE

APWORKS
by Airbus Group

Additive Industries

'The integration of the PrintRite3D Melt-Pool Monitoring solution in our MetalFAB1 is an important addition to our product portfolio. The PrintRite3D solution matches very well with our focus on quality,'

Mark Vaes, CEO and CTO , Additive Industries

PrintRite3D® Ready

PrintRite3D®
In-Process Quality Assurance (IPQA®)

Leveraged Model

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Preferred Monitoring Solution

- PrintRite3D Ready
  - Single and dual laser machines
  - Certified by DMG MORI and Sigma Labs engineers
- DMG PrintRite3D interface
  - Sold and supported by DMG
  - Printer accommodates our optics
- Joint sales activities in process in USA and Europe

DMG MORI

COVID-19 Impact

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Short-term, continued negative impact on capital budgets

Long-term, accelerate adoption of Additive Manufacturing

- Manufacturers rethink complex supply chains
- Mitigate risk of mission critical product or part shortages
- Move of manufacturing source closer to where the part is needed
- Lessen dependence on other countries

'Use of 3D printing will explode.'

Thomas Friedman

Author, NY Times Columnist

and Pulitzer Prize Winner

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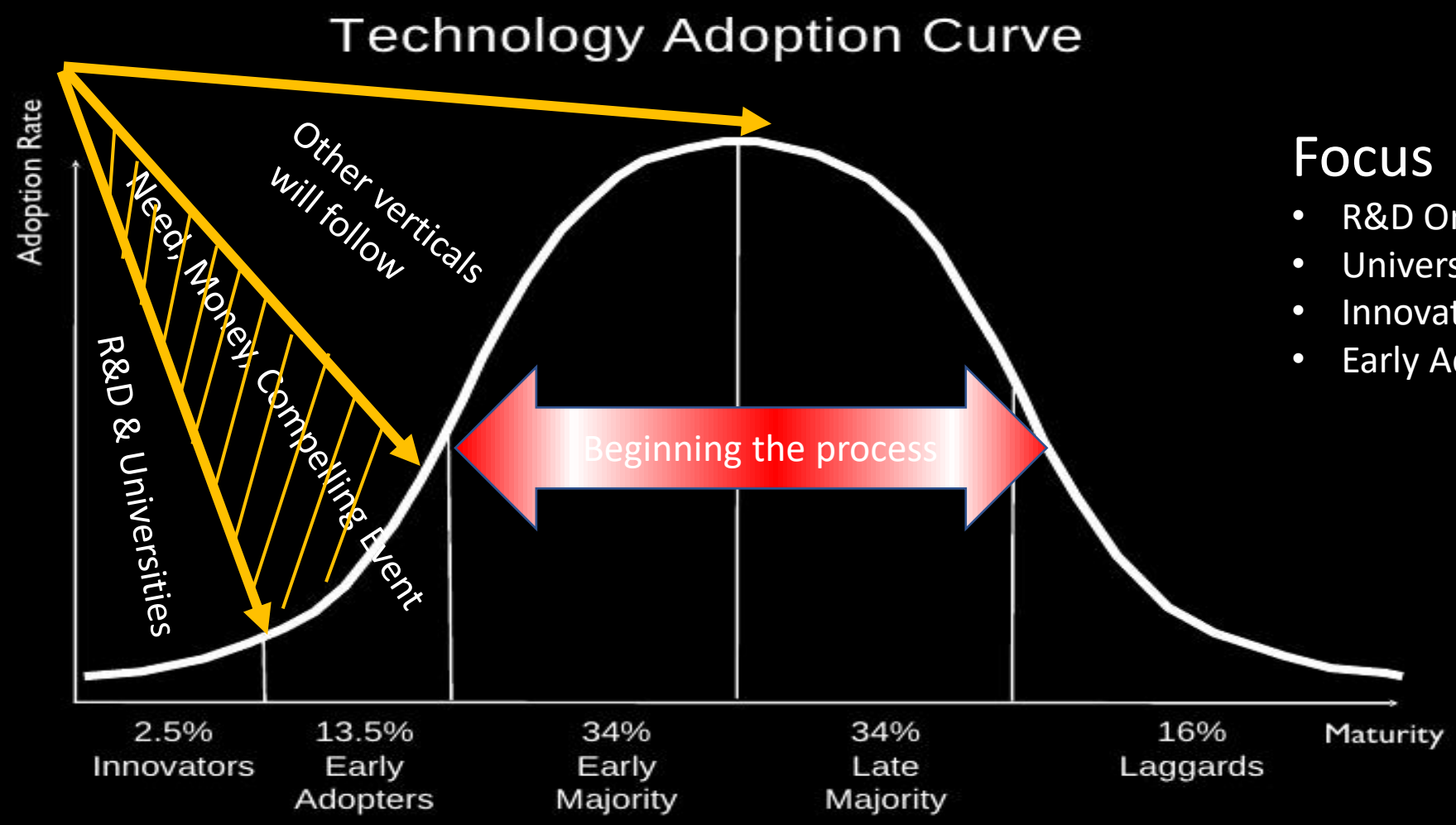

Focus

- R&D Organizations
- Universities
- Innovators
- Early Adopters

Industry Adoption? Taking so Long?

The Biggest Opportunity for Sigma Labs

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AEROJET ROCKETDYNE

SAFRAN

AIRBUS

LOCKHEED MARTIN

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"What if you you could use temperature to calibrate your 3D printers and print a heat exchanger that conforms to quality requirements, with non-destructive inspection?"

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"What if you you could print a part made with Inconel and do a real-time virtual CT scan with 85% correlation to a post-process CT scan?"

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“What if you created something that was truly amazing?”
In space!

Sigma Labs, Enabling the Amazing!

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Sigma Labs Overview

- Develop In-Process Quality Assurance solutions for the Additive Manufacturing industry
- Headquartered in Santa Fe, N. M
  - Roots of the company go back to Los Alamos Labs engineers, scientists, statisticians, etc. that did project and grant work
- Patented technology that detects and identifies defects and anomalies real-time during the 3D printing process of metal parts
- Significant lead with formidable barriers of entry to impede competition pursuing us
- Business Model that will accelerate both in revenue and profitability with the growth of the industry

NASDAQ: SGLB	
Share Price[1]	$ 3.75
Market Cap[1]	$ 37.8m
FY 2020 Revenue	$ 807.5K
Net Debt[2]	$ 0
Cash[3]	$ 16.8m
Patent Portfolio[1]	43
Outstanding Shares[1]	$ 10.49M

1) As of May 24, 2021
2) As of December 31, 2020
3) As of March 30, 2021

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In-Process Quality Assurance (IPQA®)

What This Mean to Sigma and our Shareholders

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The QA Standard for Additive Manufacturing

Eye on the opportunity

Continue to build the foundation for success

Go where the need, money and risk is highest

For Sigma, the opportunity is as big, or bigger, than we expected!