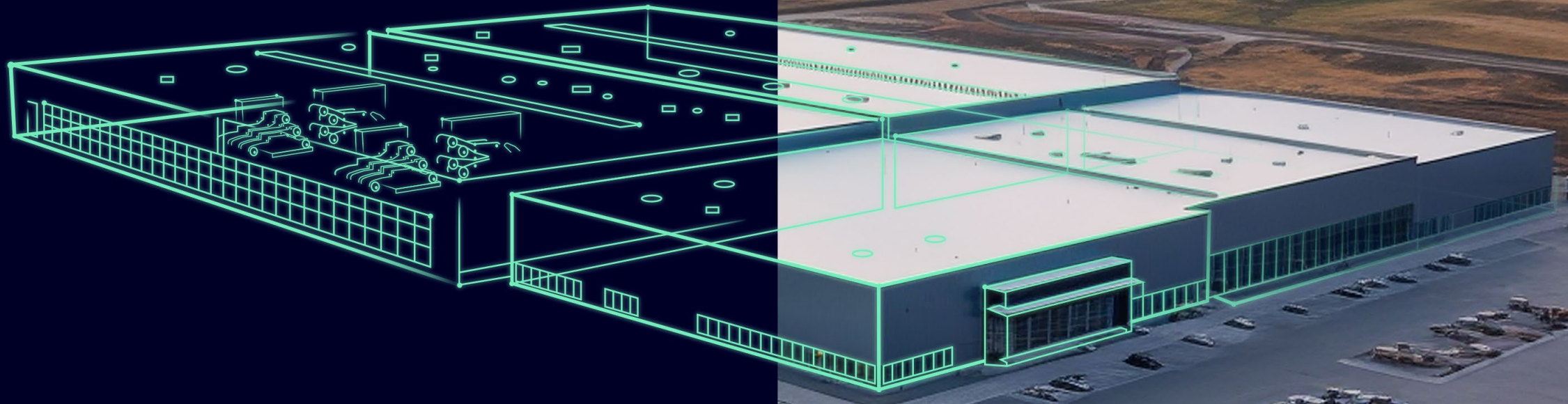


Making Battery Manufacturing Equipment in North America

NAATBatt 2024



Siemens Panel Discussion

Carlsbad, California – February 21st

Meet the Panel

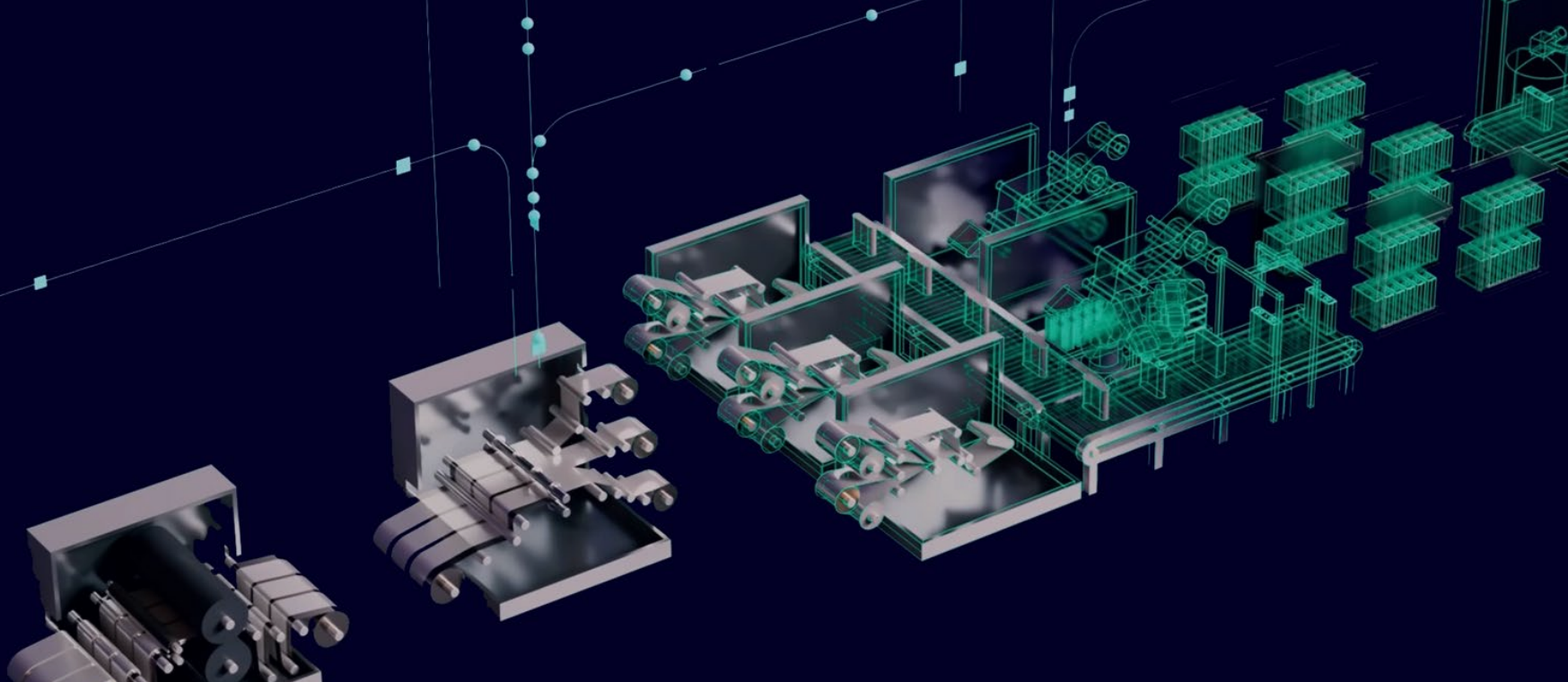
Moderator

Kyle Veugeler

SIEMENS

Technical Account Manager
System Engineer

Digital Enterprise
Batteries US



Chad Shafer

SIEMENS

Director of Business
Development

Digital Enterprise
Industrial Software



Industrial Software &
Automation

Sam Jaffe

ADDIONICS

Senior Director

Business
Development



Battery Analyst, Production,
& Supply Chain

Bennet Resnik



Senior Vice President

Critical
Infrastructure



Advocacy, Policy, & Strategy

Joern Tinnemeyer



Senior Vice President
Chief Technology Officer



Energy Storage, Charging,
and Infrastructure

David Ventola



Director of Business
Development

Clean Technology
Systems Division



OEM Tool Builder &
Manufacturing Automation

Moderator

Kyle Veugeler

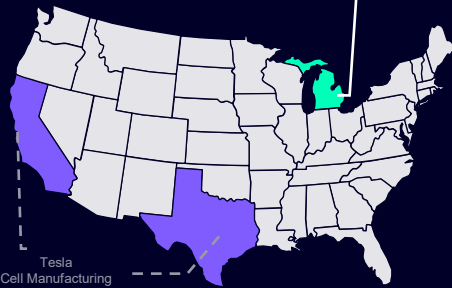
SIEMENS

Technical Account Manager
System Engineer

Digital Enterprise
Batteries US



Siemens Battery
Troy, Michigan



Tesla
Cell Manufacturing

Fremont, California
Lathrop, California
Austin, Texas
Corpus Christi, Texas

SIEMENS **Siemens**

- Recently started with Siemens – I am a new face!
- Engineering pathfinder, technical advisor, shoulder to cry on, for the industry at large having been through this the past few years.



Tesla

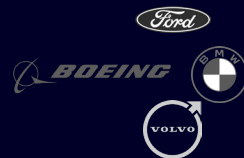
California, Austin, Berlin – Design, Commissioning, Production Ramping of the Tesla 4680 Cell Production.

- Manager, Advanced Automation Engineering – Cell Manufacturing
- Staff Controls Development Engineer – Cell Manufacturing



ABB

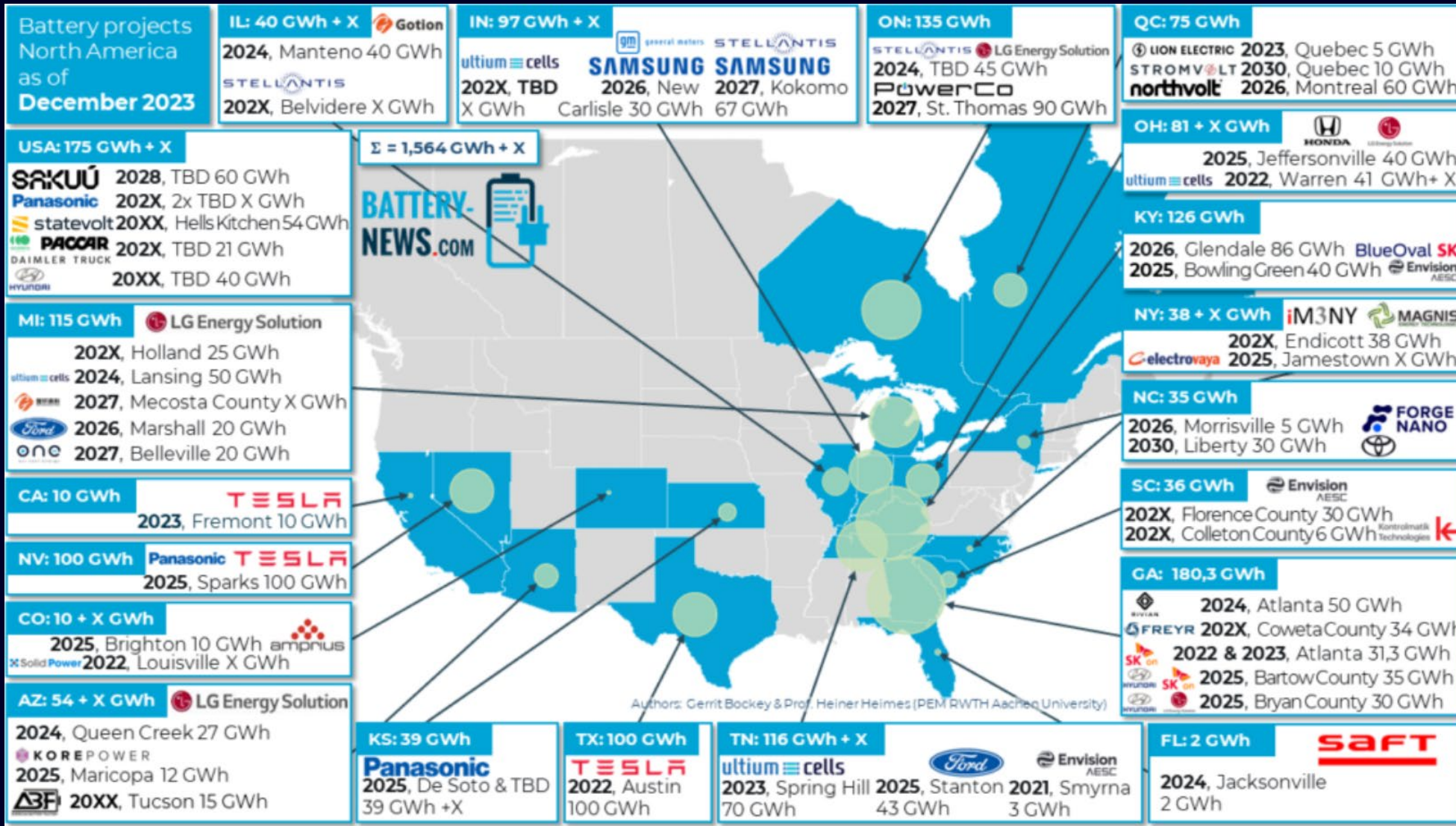
Automotive, aerospace, and 3C production line OEM tool builder and site engineer for Boeing, Ford, BMW, Volvo, Foxconn, Sony, etc.



- Lead Controls Project Engineer – Automotive Powertrain
- Senior Controls Engineer – Automotive & Aerospace
- Electrical Design Engineer



United States Landscape



David Ventola



Director of Business Development

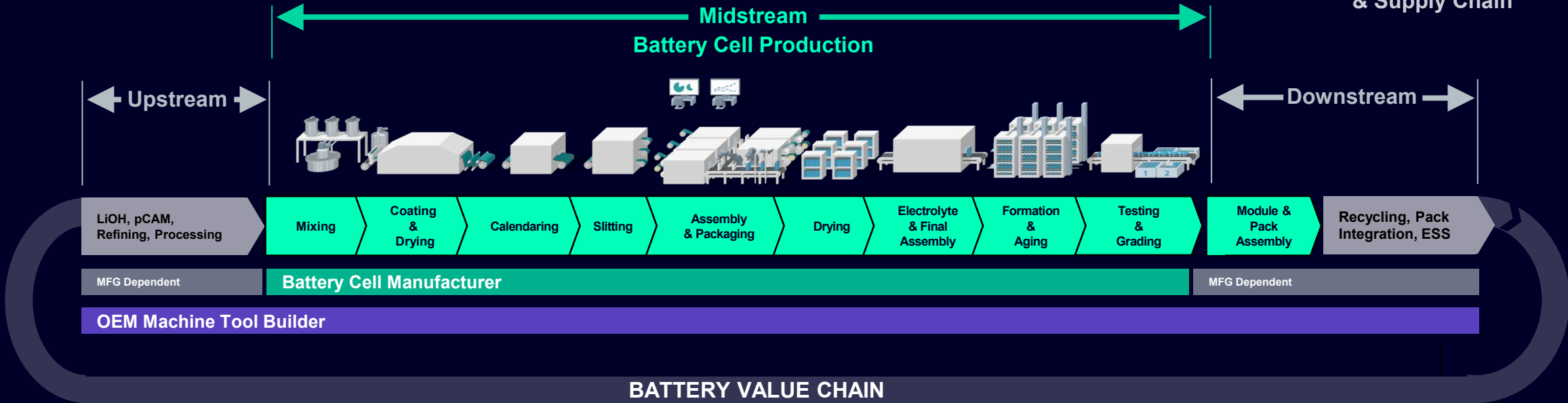
Clean Technology Systems Division

OEM Tool Builder & Manufacturing Automation

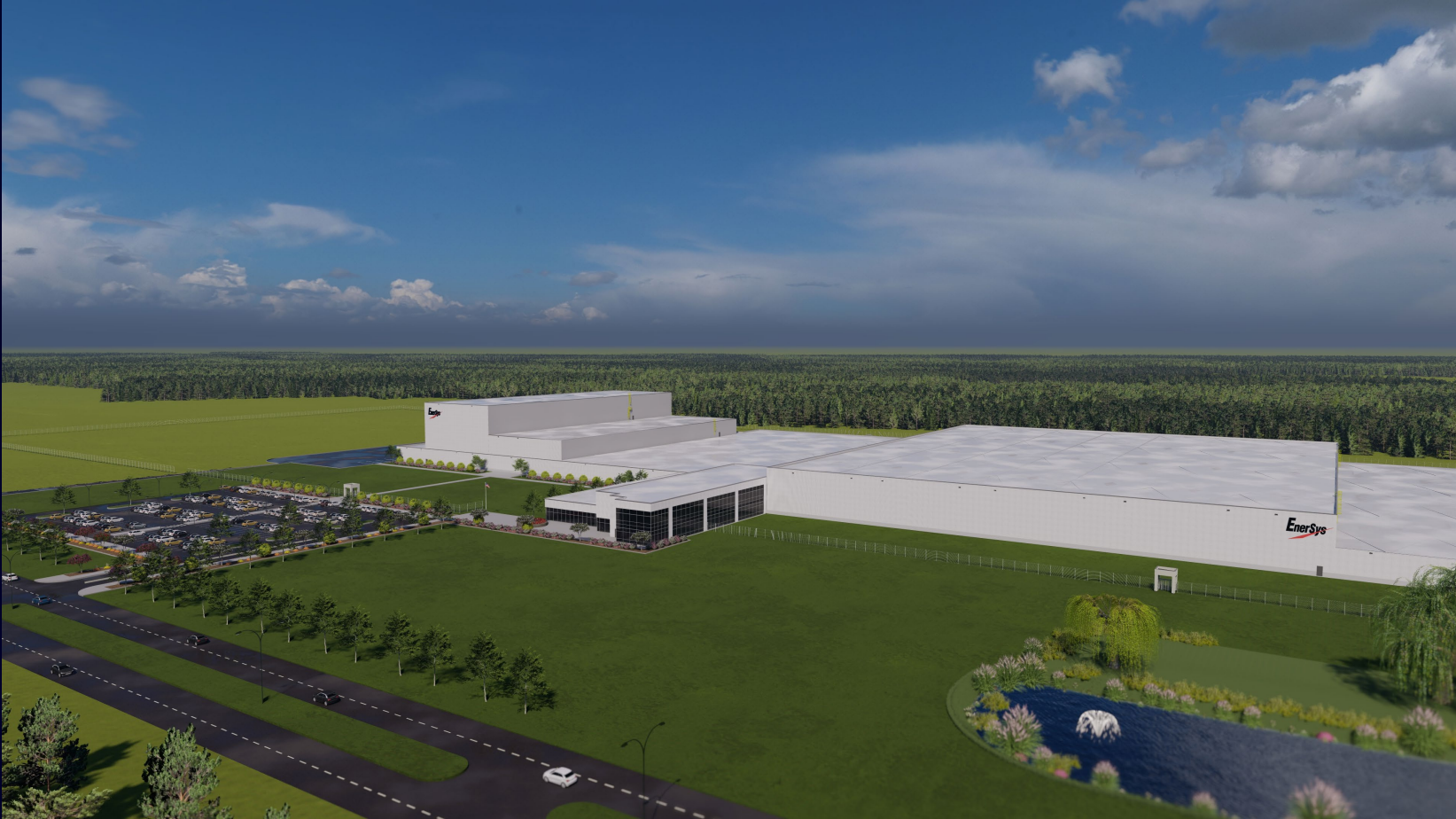
Battery Production - Value Chain



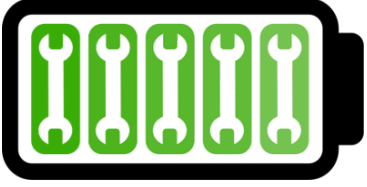
Battery Analyst, Production, & Supply Chain



Building A Lithium Cell Manufacturing Plant In The US – Voice of Customer



- No manufacturer in the US able to offer end to end integrated system
- Qualified support – installation and after SoP
- Question of ‘me-too’ or leapfrog to more advanced technologies
- Lead time control
- Localization of supply chain



U.S. Battery Machine Builders

Proudly Made in America: Energizing the Nation

Bennet Resnik



Senior Vice President

Critical
Infrastructure



Chad Shafer

SIEMENS

Director of Business
Development

Digital Enterprise
Industrial Software



Challenges

- Deficiency in a robust American-made battery machines and equipment market to meet existing and growing demands from U.S. companies conducting electrode production, cell assembly, formation and finishing, and recycling processes.
- Underdeveloped workforce for battery machine research, manufacturing, and maintenance impeding the markets' ability to quickly adapt to growing product demand.

Objectives

- Increase awareness of U.S. battery machine manufacturing supply chain, from mining through batteries and recycling.
- Obtain preferential consideration in federal funding, financing, and tax credits for sourcing of domestic battery machines and equipment.
- Develop and secure additional federal programs for battery machine research, development, and commercialization.
- Build machinery and machinist capacity in the U.S. by encouraging market growth.



Audience Q&A