



ACCELERATING  
INNOVATION

# **Modernizing Data Infrastructure ERCO's Leap to a Unified, Future-Proof Data Ecosystem**

*Session ID#: 5-1575*

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Emerson Impact Partner

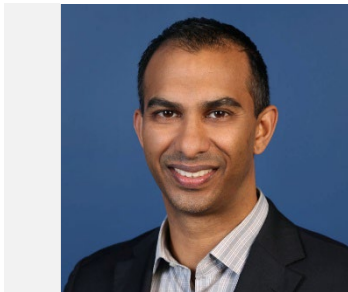
## How can we use Data to:

1. Drive change on the plant floor to improve operations
2. Manage plant operations to drive operational excellence
3. Realize Enterprise Optimization to delivery business outcomes
4. Build Intellectual Property into systems to retain knowledge
5. Accelerate Innovation to transform our business



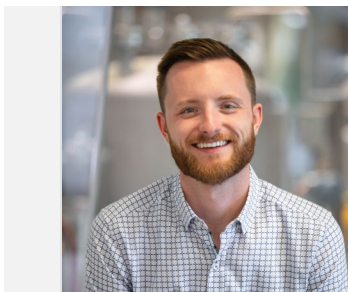
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Account Manager, Capital Projects / Lakeside Process Controls



## **Rob Derosky**

Business Development Manager / Emerson





**125**  
1897/2022

Celebrating 125 Years  
of Reliability, Growth  
& Innovation



▲ 1932 Incorporated in Toronto  
2020 New ERCO Corporate office,  
Mississauga, Ontario



▲ Research and Development, Toronto, Ontario  
Formed in 1940



▲ North Vancouver, British Columbia  
Operating since 1957



▲ Buckingham, Gatineau, Quebec  
Operating since 1897



▲ Grande Prairie, Alberta  
Operating since 1992



▲ Valdosta, Georgia  
Operating since 1996



▲ Saskatoon, Saskatchewan  
Operating since 1962 / ERCO Worldwide since 1997



▲ Hargrave,  
Virden, Manitoba  
Construction completed  
in 2002  
ERCO purchased in 2003



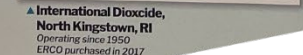
▲ Thunder Bay, Ontario  
Operating since 2003



▲ Mininco, Chile  
Operating since 2006



▲ Port Edwards, Nekoosa, Wisconsin  
Operating since 1967 / ERCO purchased in 2005  
Converted and expanded to membrane cell  
technology in 2009



▲ International Dioxide,  
North Kingstown, RI  
Operating since 1950  
ERCO purchased in 2017

# ERCO Worldwide: About the Company

- Global chemical supply and manufacturing company with multiple manufacturing sites in North and South America
- **ERCO Worldwide** has a 125-year history of producing chemicals and continues to play a pivotal role in supplying environmentally preferred chlorine dioxide technology and services to the pulp and paper industry.
- **ERCO Worldwide's** chloralkali business serves a variety of industries including municipal and industrial water treatment, food processing, fertilizers, agricultural intermediates, and oil and gas.
- **ERCO Worldwide** is the second largest producer of sodium chlorate in the world



# Business Priorities



## ***Responsible Care***

Our commitment to sustainability is a core principle covering all aspects of the company's business and product lifecycle



## ***Process Safety***

Process Safety Management (PSM) is covered under Chemistry Industry Association of Canada (CIAC) & American Chemistry Council (ACC)



## ***Operational Efficiency***

Providing quality products to our customers at reasonable cost to meet customer/vendor sustainability goals.



## ***Mechanical Integrity & Reliability***

Optimizing Capital Investments to assure constant availability of critical systems & equipment



# The challenge

*WHY? – Digital Transformation*

*HOW to digitally transform a successful business, with 125 years of history, to be better prepared for the future?*

# ERCO's Data Structure (before)



8 sites, 3 product lines



4

Legacy and in House Built  
Historians



Different Spreadsheets and Script  
Based Tools for Visualization





# ERCO's Challenge

## Need Data for Informed Decisions

- Data wasn't there where needed
- Need data to make informed decisions
- Lots of manual entries, excel sheets
- Need for dashboards, analysis, and trending tools

## Resource Management

- Onboarding / retirement / retention / shortage in labor force

## In-House-Built Tools Management and Maintenance

- In house Tools are Hard to Maintain
- Need a lot work to keep up with the technology, cybersecurity – Would rather use the resources to focus on the business



# Solution & Learnings

*Emerson-ERCO – Lakeside Partnership with AspenTech Software*

# Solution Selection

## Modern Solution



Secure, up to  
date solution



Modern, yet cost  
efficient

# Solution Selection

## Modern Solution



Secure, up to  
date solution



Modern, yet cost  
efficient

## Fits the needs



Provide the  
solution needed  
to the users





Site and  
enterprise  
optimization

# Solution Selection

## Modern Solution

 Secure, up to date solution Modern, yet cost efficient

## Fits the needs

 Provide the solution needed to the users Site and enterprise optimization

## Implementation considerations

 Migration of Existing Data Implementation partners


# Solution Selection


## Modern Solution

 Secure, up to date solution

 Modern, yet cost efficient

## Fits the needs

 Provide the solution needed to the users

 Site and enterprise optimization

## Implementation considerations

 Migration of Existing Data

 Implementation partners

## Future Proof

 Establishes Digital Infrastructure

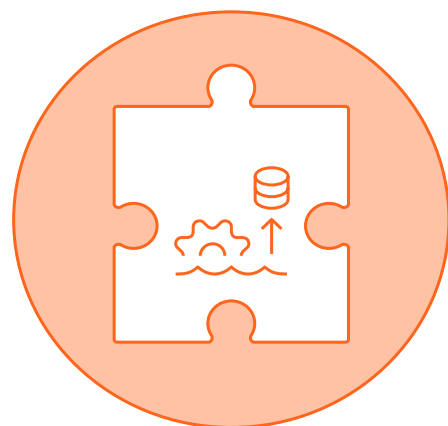
 Provide the foundation for future projects



# Project Scope

## Standardization

Implement AspenTech  
IP.21 and AspenOne  
Process Explorer

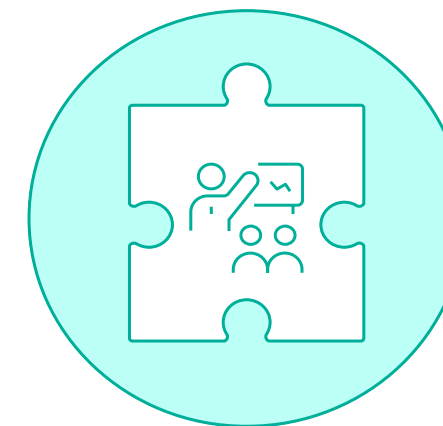
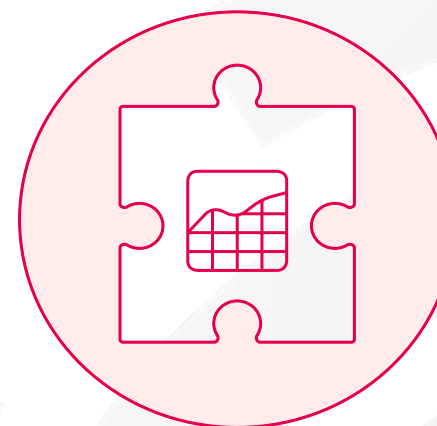


## Data Migration

Transfer 12,000 data  
tags to new system.

## Data Visualization

Collect and visualize  
data across the  
enterprise.

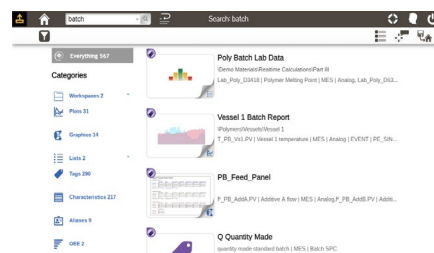


## Training

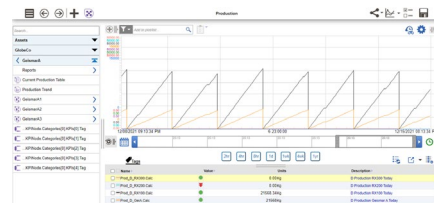
Provide training and  
transition support to  
users.

# Discover

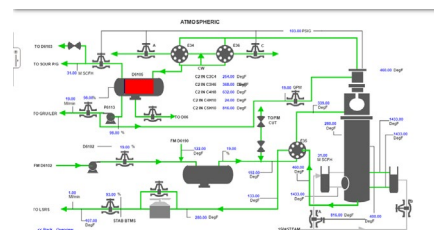
## Search for data and artifacts



## Navigate by files or asset hierarchies



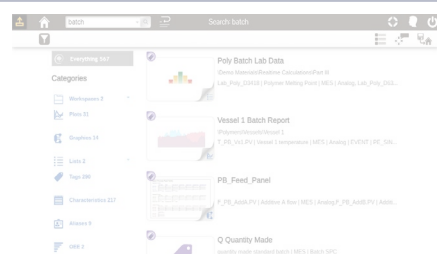
## Browse the physical process



# Discover

# Visualize

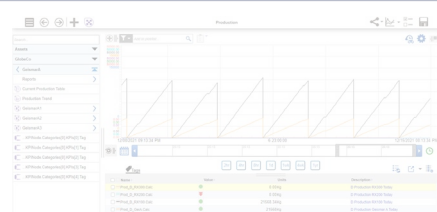
## Search for data and artifacts



## Visualize data through trends and charts



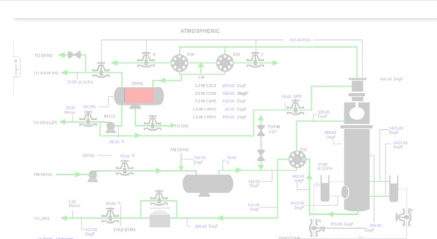
## Navigate by files or asset hierarchies



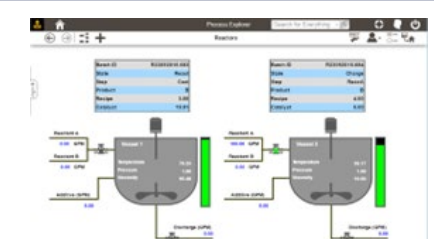
## Tables

Batch ID	Batch Name	Batch Type	Batch Status	Batch Date	Batch Time	Batch Location	Batch Quantity	Batch Weight	Batch Volume
1	Poly Batch Lab Data	Poly Batch Lab Data	Completed	2023-01-01	10:00:00	Plant 01	100.00	100.00	100.00
2	Poly Batch Lab Data	Poly Batch Lab Data	Completed	2023-01-01	11:00:00	Plant 01	100.00	100.00	100.00
3	Poly Batch Lab Data	Poly Batch Lab Data	Completed	2023-01-01	12:00:00	Plant 01	100.00	100.00	100.00
4	Poly Batch Lab Data	Poly Batch Lab Data	Completed	2023-01-01	13:00:00	Plant 01	100.00	100.00	100.00
5	Poly Batch Lab Data	Poly Batch Lab Data	Completed	2023-01-01	14:00:00	Plant 01	100.00	100.00	100.00

## Browse the physical process



## Graphics

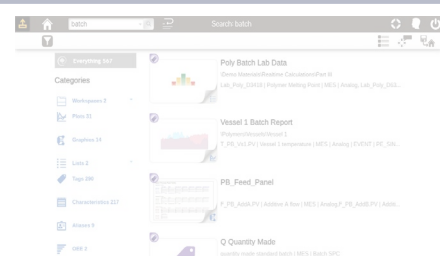


## Discover

## Visualize

## Analyze

### Search for data and artifacts



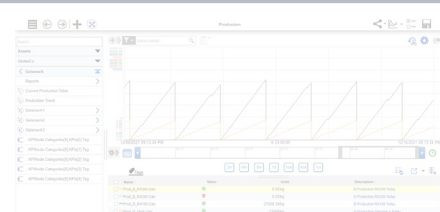
### Visualize data through trends and charts



### Analyze process performance



### Navigate by files or asset hierarchies



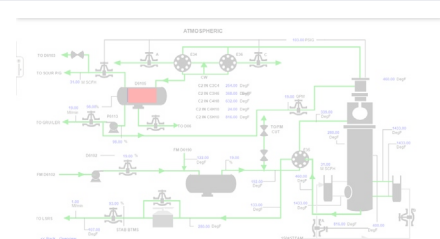
### Tables

A screenshot of a data table. The table has multiple columns and rows, displaying numerical data. The columns are labeled with various parameters, and the rows represent different data points or time intervals.

### Determine whether the process is in control



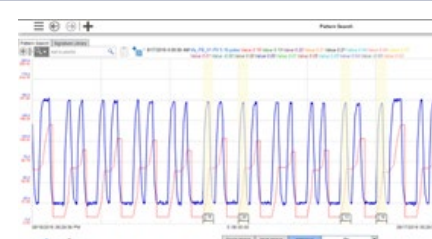
### Browse the physical process



### Graphics



### Look for patterns in process behavior



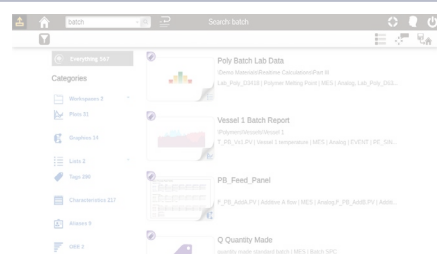
## Discover

## Visualize

## Analyze

## Document

### Search for data and artifacts



### Visualize data through trends and charts



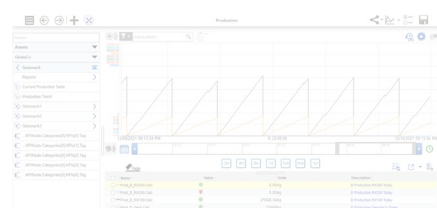
### Analyze process performance



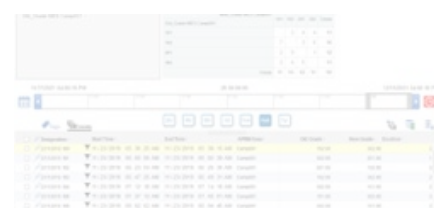
### Attach observations to process data



### Navigate by files or asset hierarchies



### Tables



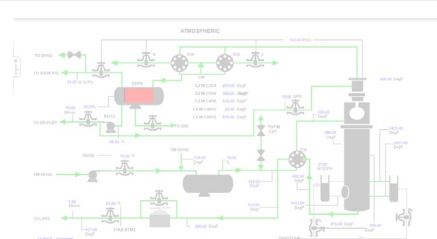
### Determine whether the process is in control



### Integrate conversations with process data



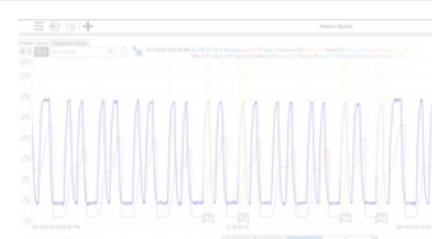
### Browse the physical process



### Graphics



### Look for patterns in process behavior

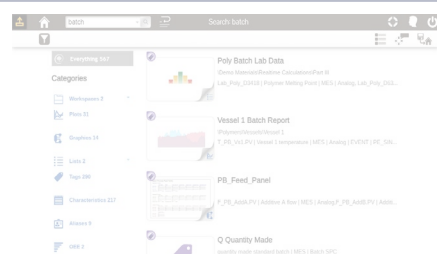


### Share important analyses with others

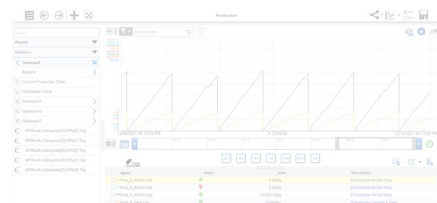


## Discover

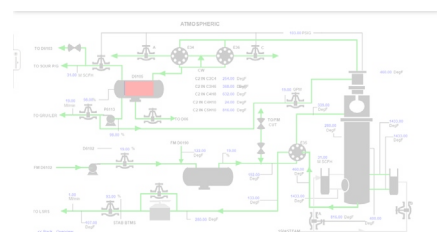
Search for data and artifacts



Navigate by files or asset hierarchies



Browse the physical process

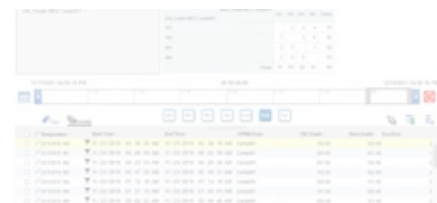


## Visualize

Visualize data through trends and charts



Tables



Graphics



## Analyze

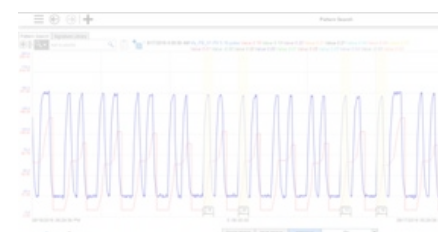
Analyze process performance



Determine whether the process is in control



Look for patterns in process behavior

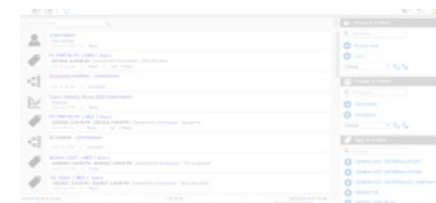


## Document

Attach observations to process data



Integrate conversations with process data



Share important analyses with others



## Monitor

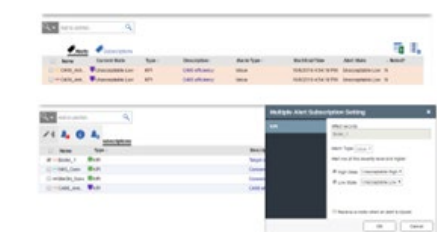
Track real-time batch performance



Track important KPIs across the enterprise

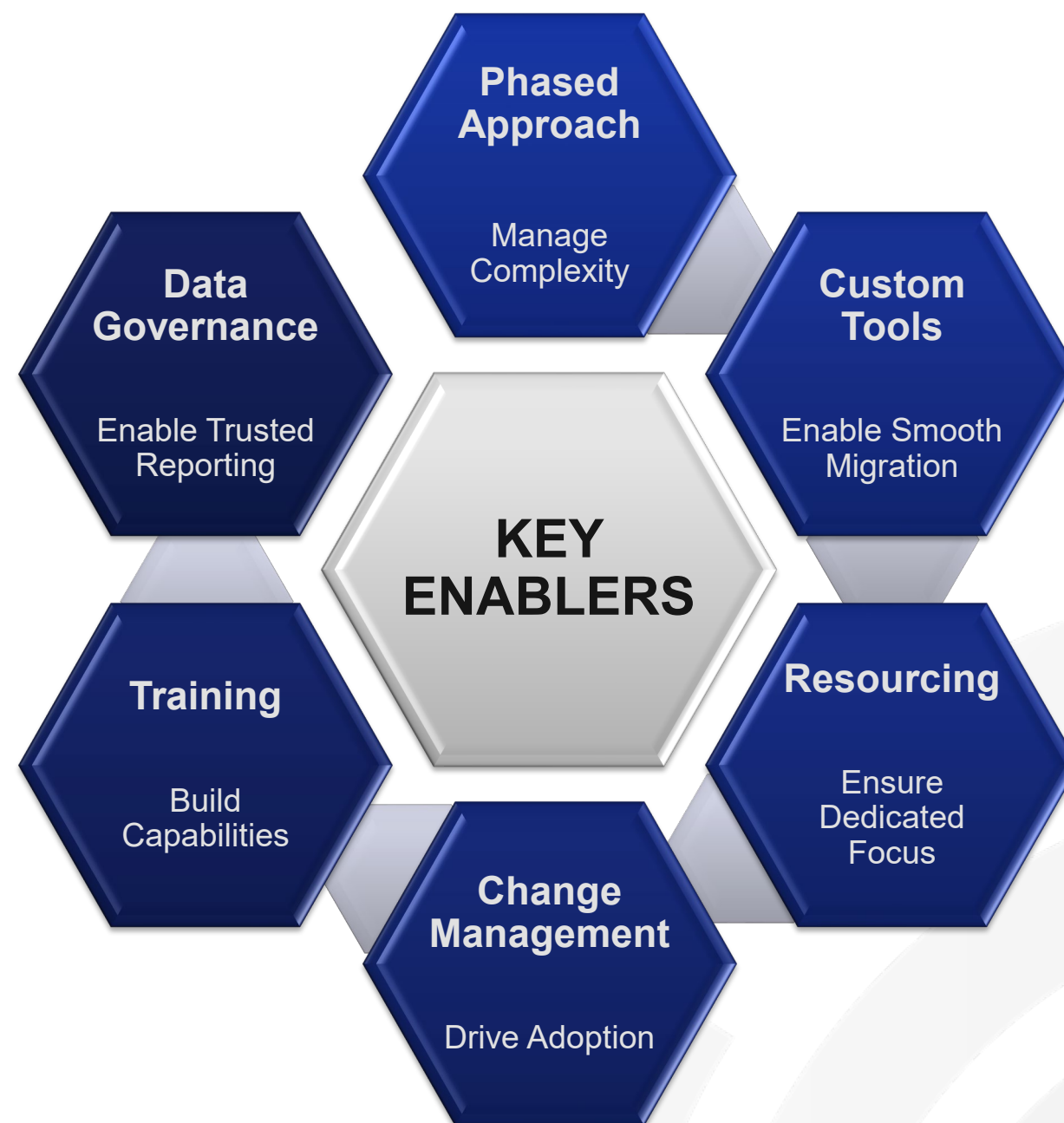


Be alerted to process excursions





# Project Challenges & Progress



# Expected Results: Unlocking Value Through Standardization

## Operational Gains

- Unified data historization & visualization
- Cross-site tool standardization
- Foundation for predictive analytics

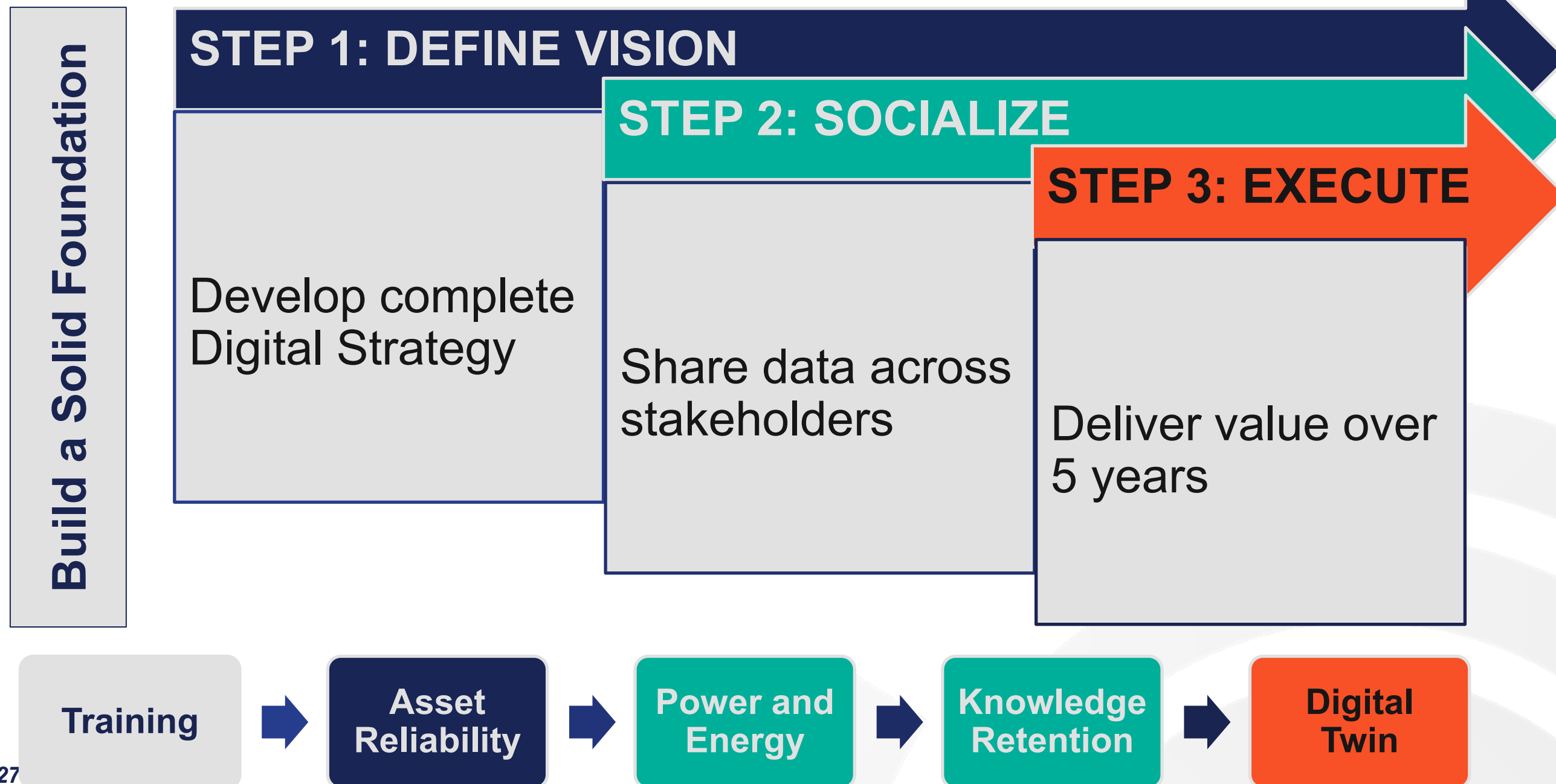
## Transformation Catalyst

- Standardized data platform
- Auto-updated via licenses
- Single source of truth

## Platform Scalability

- Predictive maintenance readiness
- Real-time performance monitoring
- Enterprise-wide alignment

# The Road Ahead: Building a Digital Future



# Key Takeaways

- **Implementation Learnings:**
  - Resource Requirements
  - Phased Approach
  - How to manage & socialize capabilities
- **Expected Results:**
  - Standardized real-time data, visualizations & reporting
  - Integration of various data sources to drive decision making at all levels of the organization.
- **Future Development:**
  - Integration of intellectual property & embedded knowledge into data management systems
  - Overall organization digital transformation strategy, anchored through standardized data



Emerson Impact Partner



# Want More Info?



## SPEAKERS

Bios & LinkedIn Profiles



## DOWNLOADS

Presentations Slides



## SESSIONS

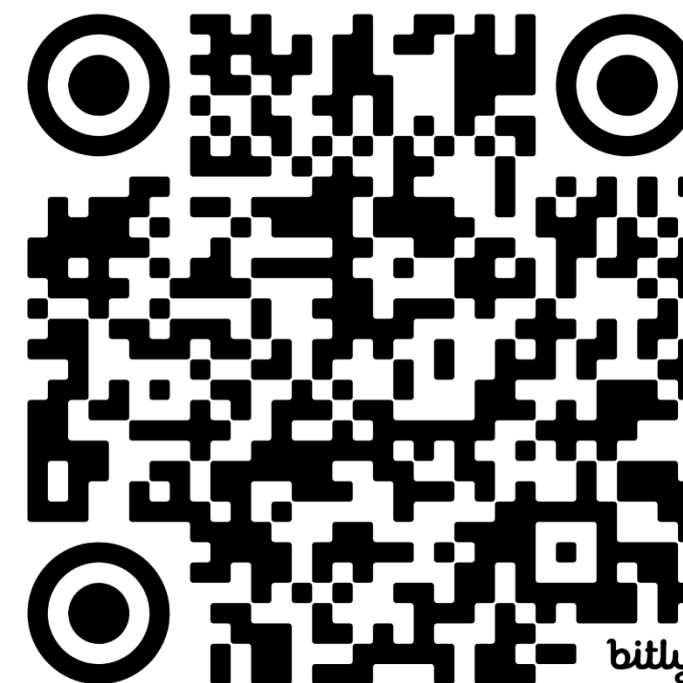
Abstracts & Topics



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one scan away!**





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# Thank You