AI in manufacturing:

Emerging opportunities or new challenges for data acquisition.

OLSOM

MERGING TECHNOLOGIES
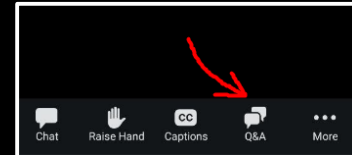
Agenda

1 Speakers Info

2 Factory Goals

3 Technology Overview

4 AI in Manufacturing Industry

5 Implementation Challenges

6 Data Engineering for AI

! The meeting is recorded

! Attendees are muted

! Questions can be asked in the chat during the meeting and will be addressed at the end

Chat	Raise Hand	Captions	Q&A	More

Welcome to Q&A

Questions you ask will show up here. Only host and panelists will be able to see all questions.

Ask a Question

1. Our Speakers

Enrique Herrera
Industry 4.0 Independent Consultant

20+ years in Digital Transformation

Automotive, Manufacturing, Industry 4.0 solutions.

Martin Davis
CIO | CDO | *Industry 4.0 Consultant*

20+ years in Digital Transformation and Strategy

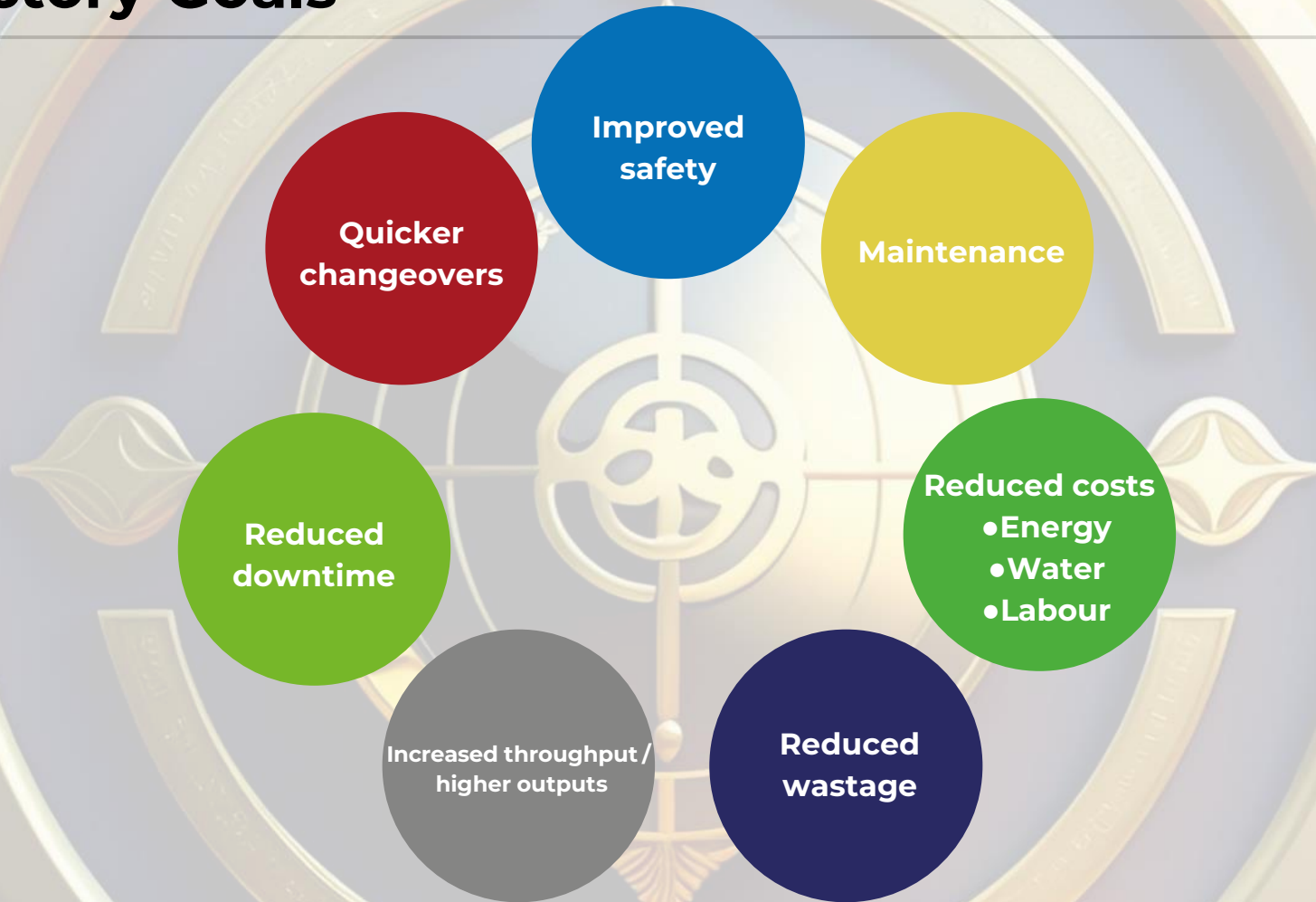Industry 4.0, IT and business strategies.

Yuri Pilipenko
Founder and CEO at OLSOM

20+ years in Manufacturing IT
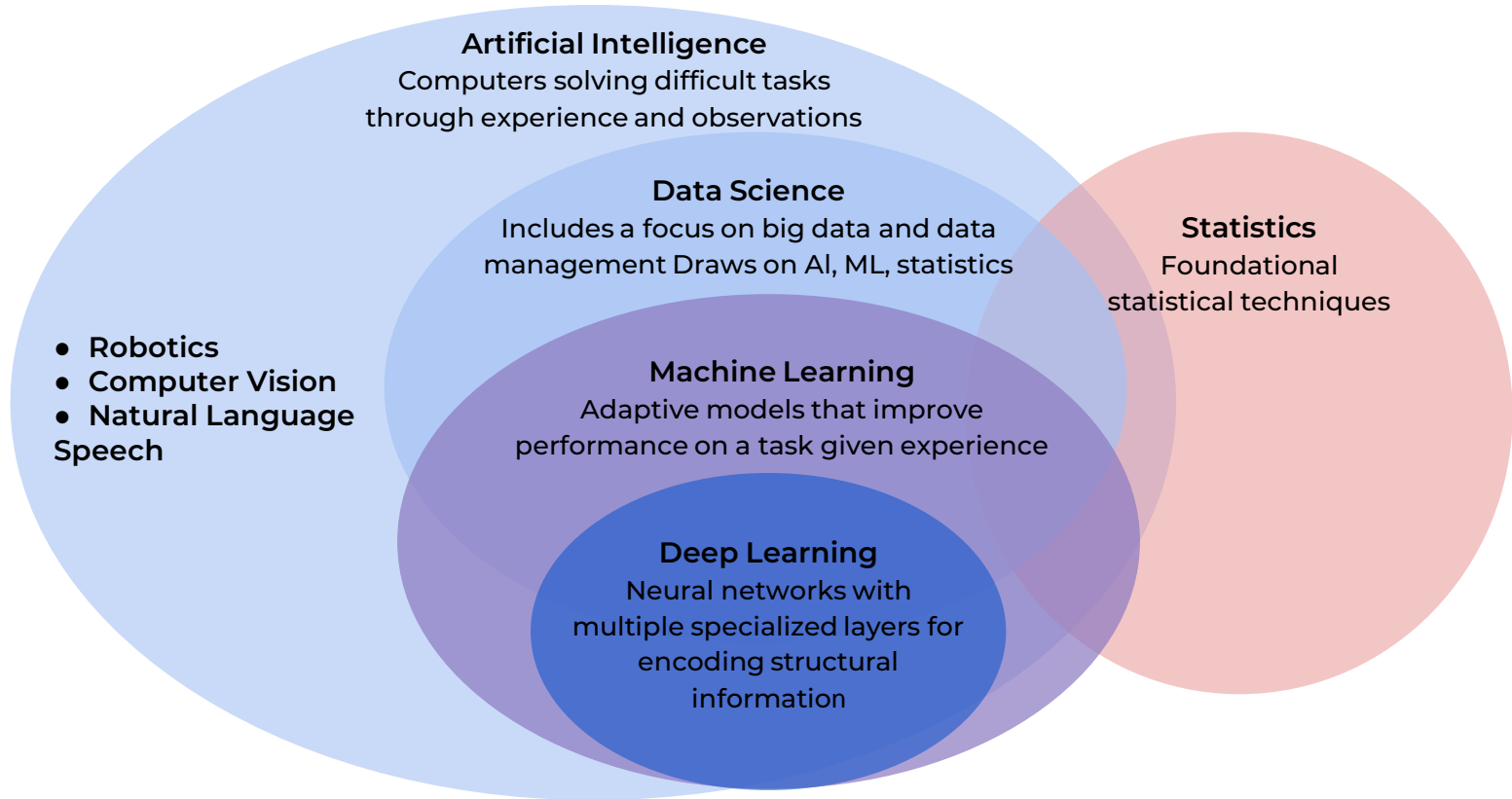
Specializes in discrete manufacturing and its processes

2. Factory Goals

Improved safety

Quicker changeovers

Maintenance

Reduced downtime

Reduced costs
- Energy
- Water
- Labour

Increased throughput / higher outputs

Reduced wastage

3. Technology Overview

Behavioural science, psychology, social science, mathematics, and many other disciplines

Artificial Intelligence
Computers solving difficult tasks
through experience and observations

Data Science
Includes a focus on big data and data
management Draws on AI, ML, statistics

Statistics
Foundational
statistical techniques

- Robotics
- Computer Vision
- Natural Language
Speech

Machine Learning
Adaptive models that improve
performance on a task given experience

Deep Learning
Neural networks with
multiple specialized layers for
encoding structural
information

4. AI in Manufacturing Industry

How can AI help Improve the Manufacturing Industry

Automation

Quality control

Supply chain mgmt.

Data Analysis

Predictive Maintenance

Improved Safety

Energy Efficiency

Simulation

4. AI in Manufacturing Industry

AI in the Future Manufacturing

Optimize mobility / stock movement

Safety collision and accident avoidance

End-to-end visibility of manufacturing operations

Cost savings and revenue growth

AI

Reduce Environmental Impact & keep emissions as low as possible

Reduce labor costs & stay resilient despite supply chain disruptions

Tackle operational challenges

Ensure efficiency and reduce waste

5. Implementation Challenges

Buy-in

Funding

Good data
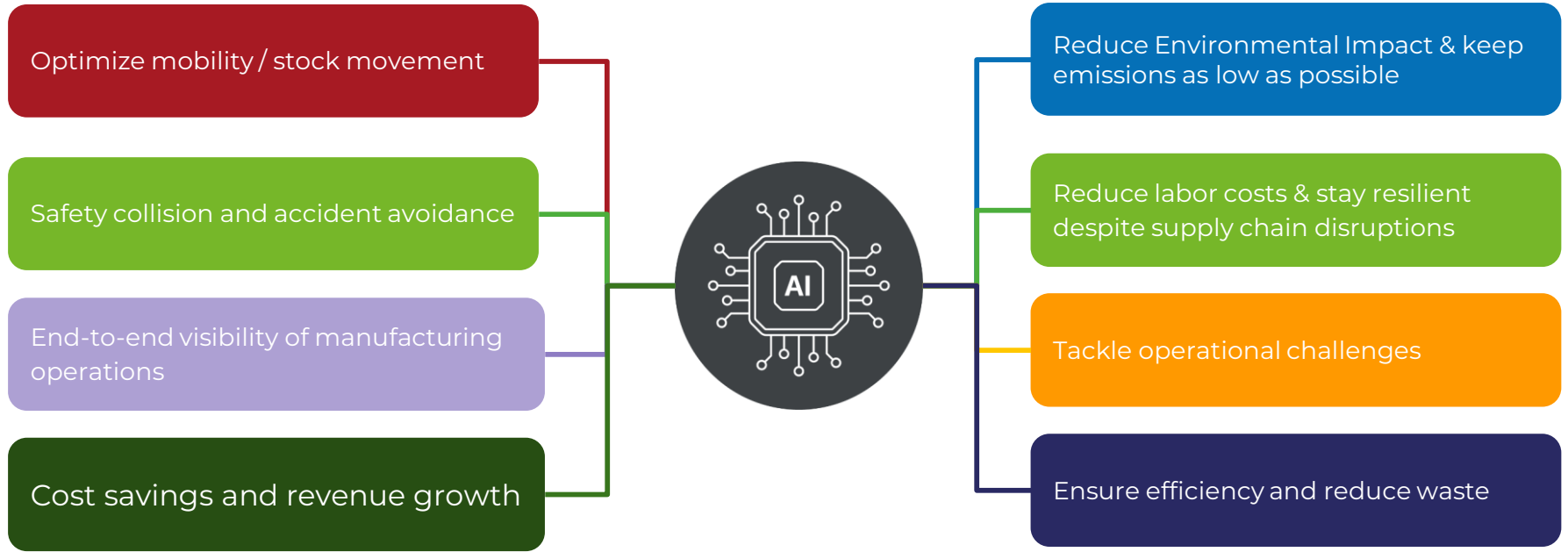
Why data engineering is challenging for manufacturing environment?

Data is not being collected at all

Noise and anomalous data

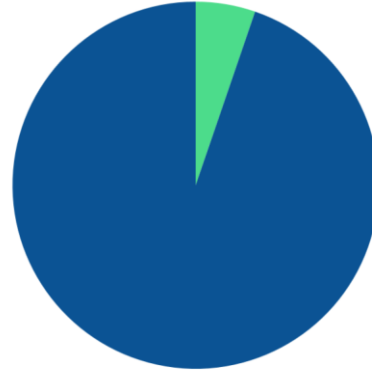Fragmented unnormalized, inconsistent IT environment

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Industry and Research Invest in AI in Different Ways Better Models or Better Data?

PhD

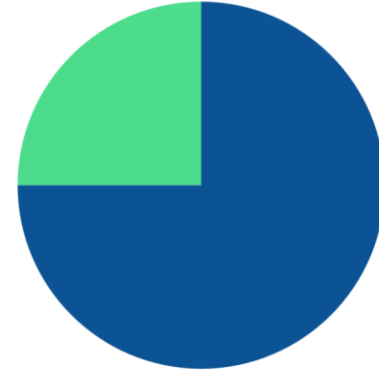● Datasets ● Models & Algorithms

Tesla

● Datasets ● Models & Algoritms

80%

Data scientists spend most of their time to gathering, cleaning, and preparing data.

Andrej Karpathy – Building the Software 2.0 Stack (Spark+AI Summit 2018)
https://www.analyticsinsight.net/everything-about-data-cleansing-in-analytics-and-business-intelligence/

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AGW™

PLATFORM THAT ALLOWS

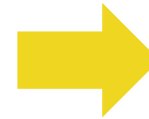### Data collection
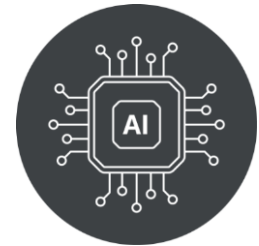
Applications

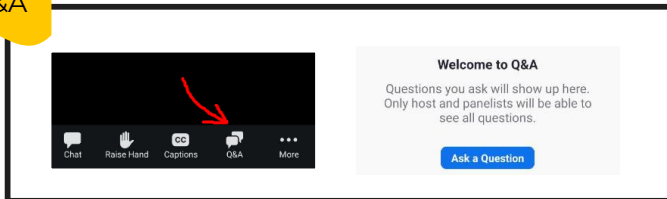Equipment

Workers

Third parties

Data Processing

- Clean up
- Normalize
- Aggregate
- Contextualize
- Visualize

Training the model

AI

Book your
AGW Demo to learn how to start your data engineering

Q&A

More information

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Start Engineering Your Data NOW