

DAIMLER TRUCK

The Impact of Artificial Intelligence in the Iron and Steel Sector. Atlantis Foundries

27 February 2025



Who are we



20200 Solar Panels
13.5MWp



Atlantis Foundries



940,000 m²



800+



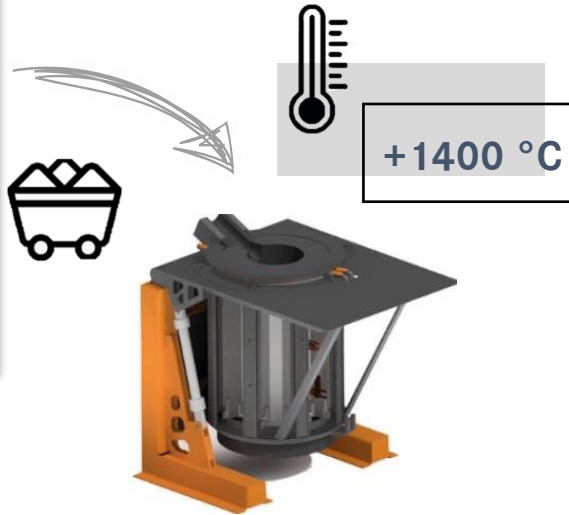
112,000 MWh p.a



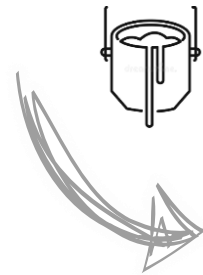
100,000 + Tp.a



What we do



x4 Induction Furnaces
x3 Holding Furnaces
x1 Pouring Furnace



employment & labour
Department:
Employment and Labour
REPUBLIC OF SOUTH AFRICA

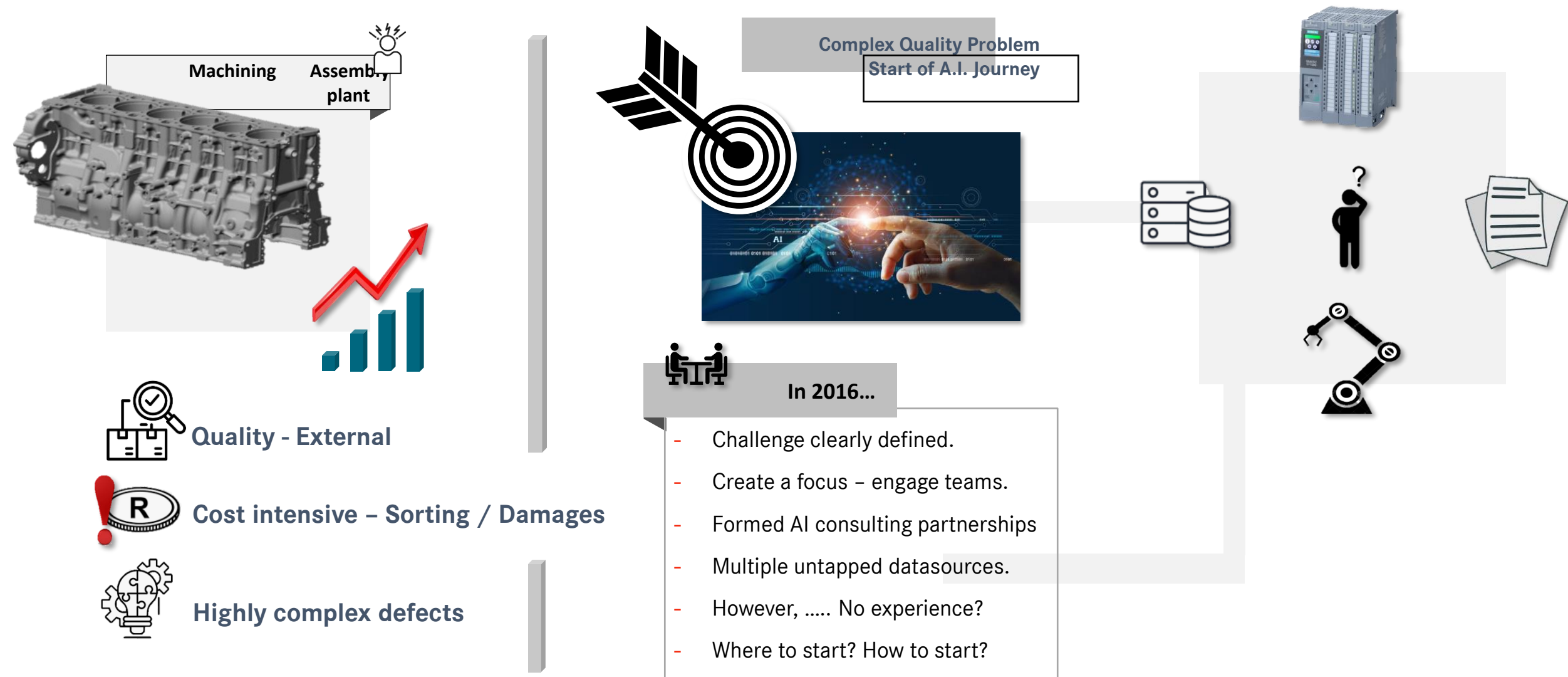


ATLANTIS
FOUNDRIES (Pty)
Ltd

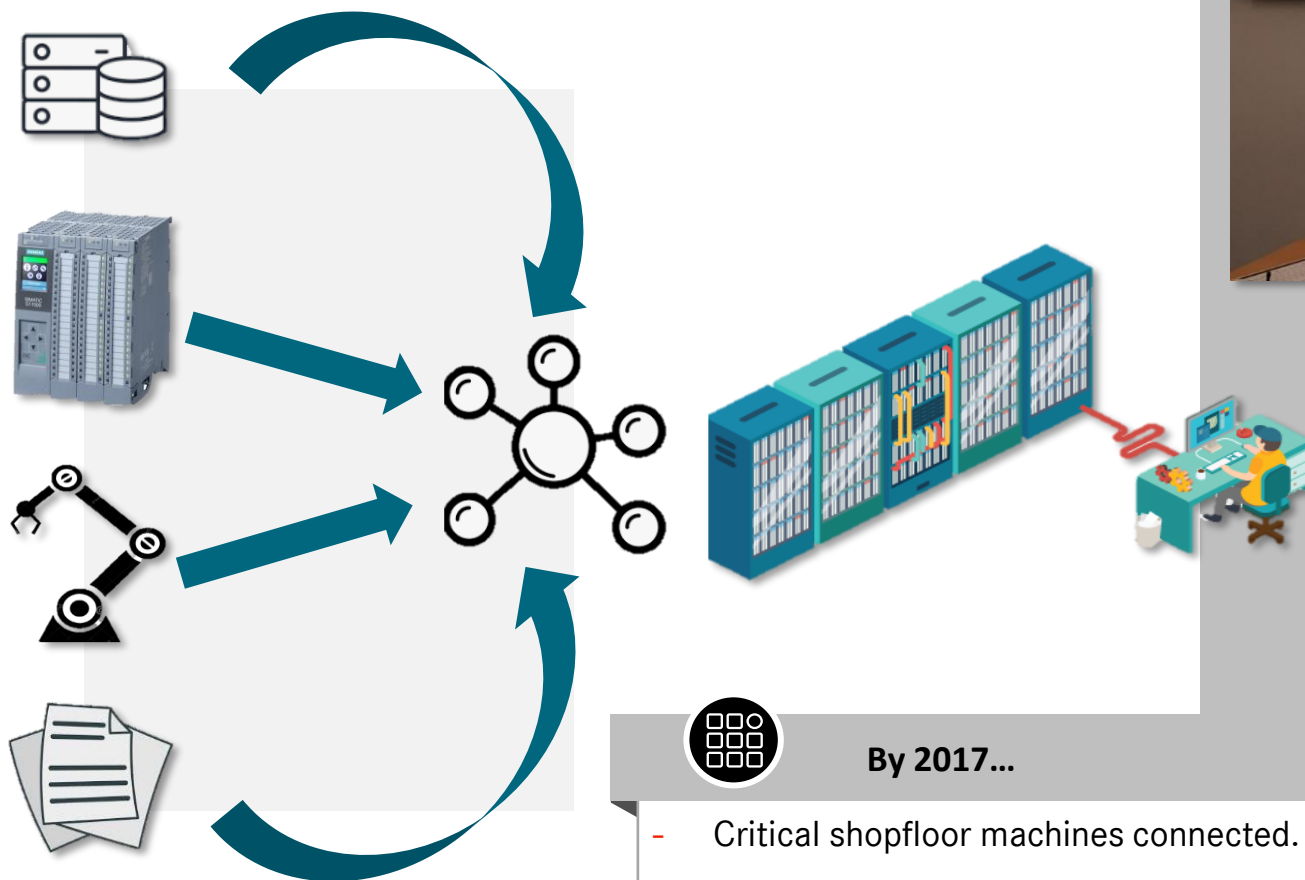
Truck Assembly Europe | USA



Our Journey with Artificial Intelligence - Digitization

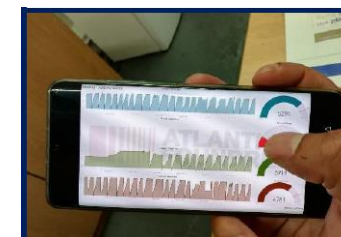


Connect the shopfloor - Digitize

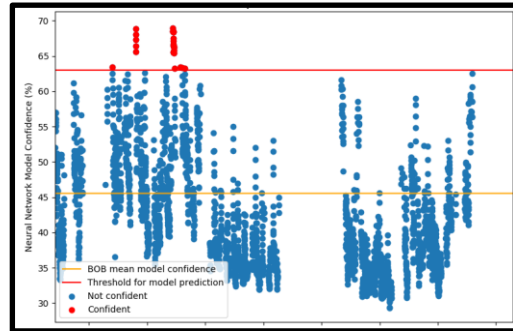


By 2017...

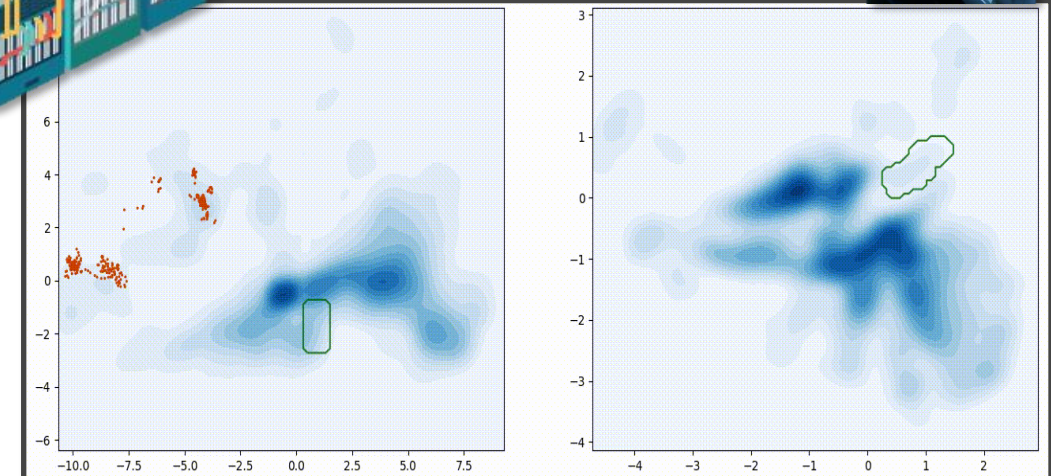
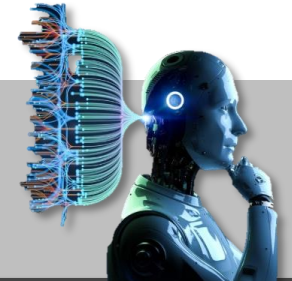
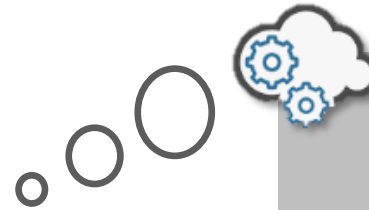
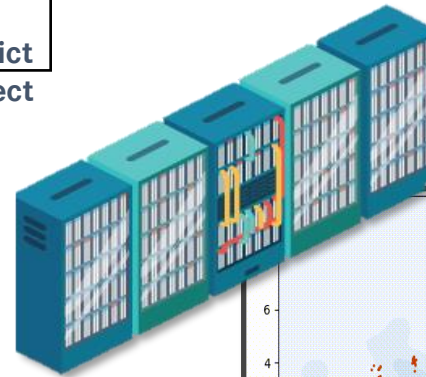
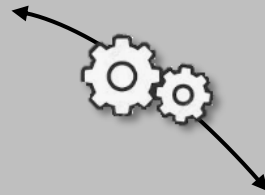
- Critical shopfloor machines connected.
- 6000+ Datapoints.
- Learned - Quality of data
- Expertise required - E M I Data



AI – Digitization – Prediction



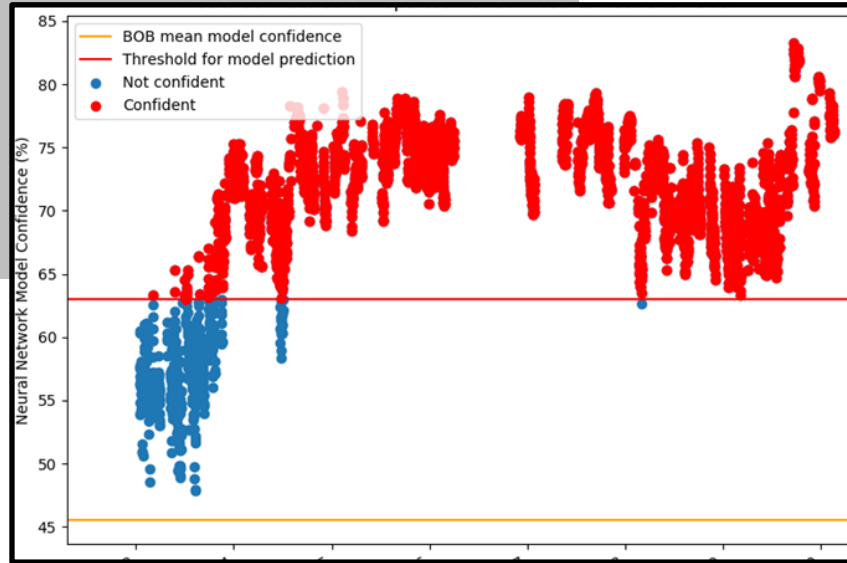
A.I. - Able to predict
when we'd have a defect



Confidence
Increase +



Confidence
Decrease -

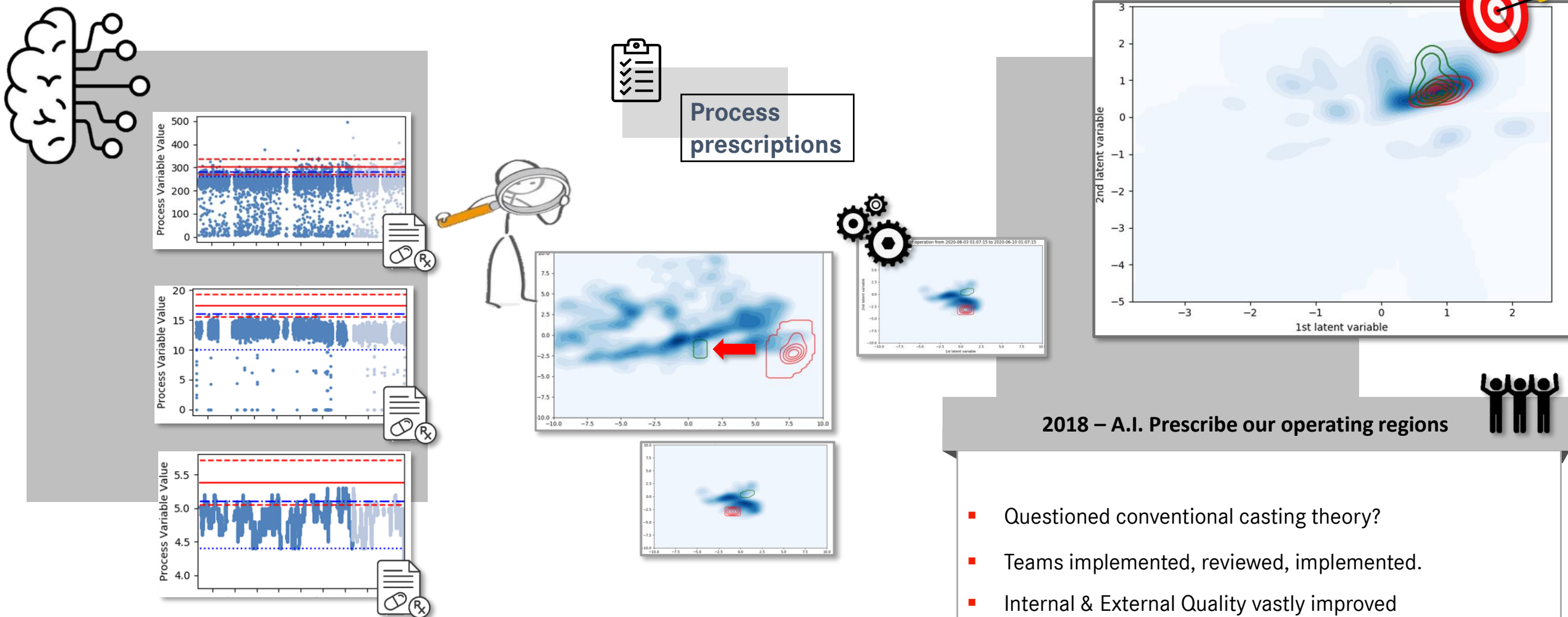


2018 – A.I. Prediction phase.



- Feed data into A.I. model, train, retrain
- A.I. model confidence increased.
- Turned the narrative –predicting – **tell us how not to.**

AI - Digitization - Prescriptions



2018 – A.I. Prescribe our operating regions

- Questioned conventional casting theory?
- Teams implemented, reviewed, implemented.
- Internal & External Quality vastly improved
- Understanding of our processes and machinery

Where are we today?

Automation | Digitization | A.I.

Industry 4.0



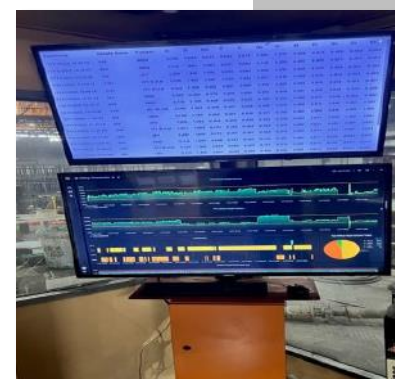
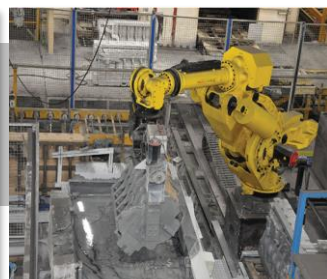
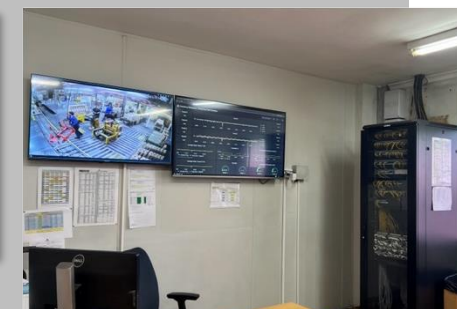
- Access to 9000+ real time data points.
- Data & AI entrenched into our culture.
- Casting Quality
- Production Efficiency
- Process Repeatability – Multiple Automation Robots – Safety.



A.I. Live Data on the shopfloor
used Daily



Automation!
P.S. No Job losses



What we learned along the way



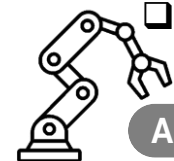
Digitization of shopfloor

- ✓ Expedite decision making – Safety – Process control – Predictive maintenance.
- ✓ Holistic view of process and equipment – deeper understanding.
- ❑ Electrical | Mechanical | IT | Data – New skillset.
- ❑ Shopfloor data security



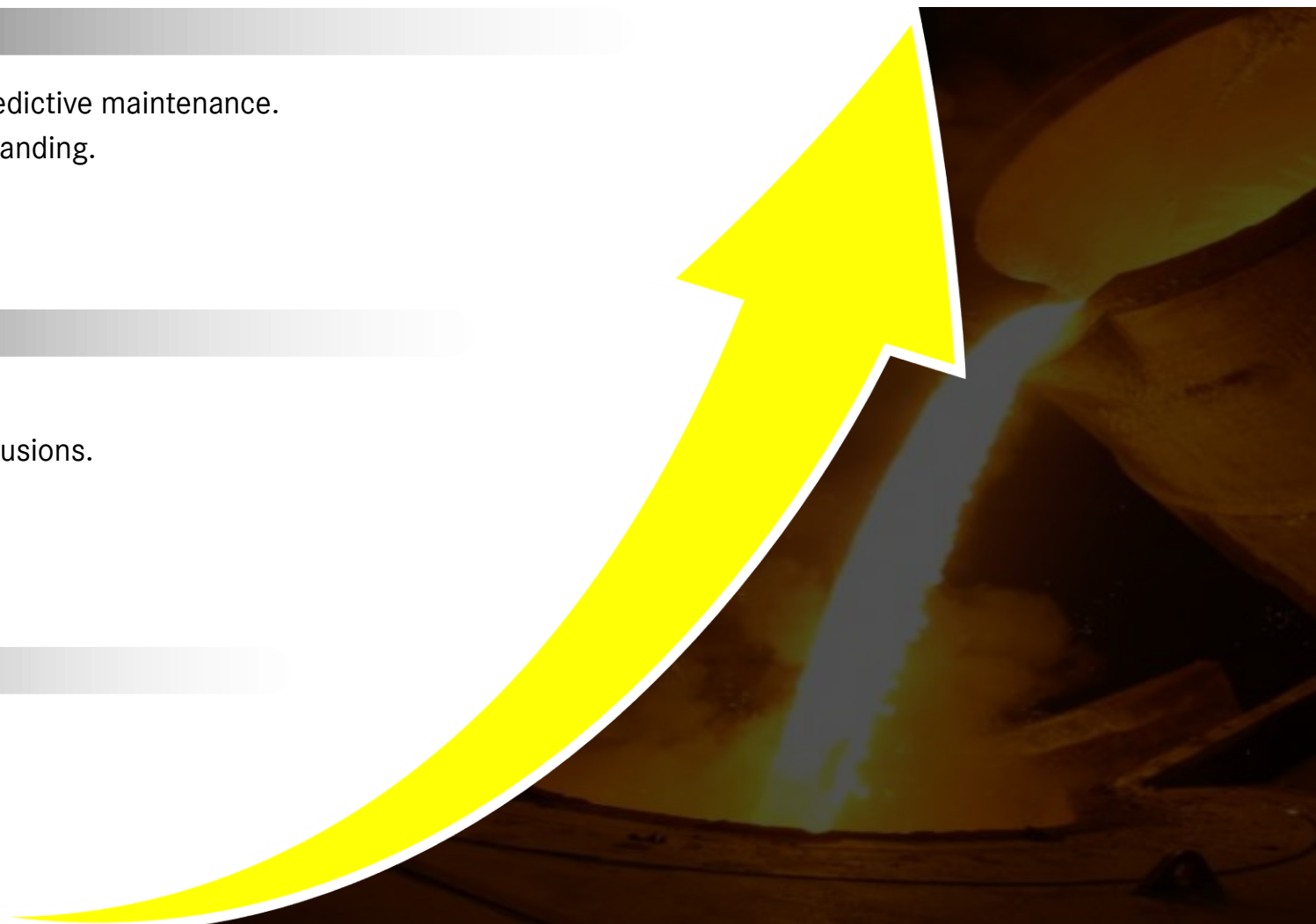
Artificial Intelligence

- ✓ Considers Multiple / previously unknown factors .
- ✓ Upskills your teams – new ways of analysis – faster conclusions.
- ❑ Shopfloor adoption – Challenge the narrative.
- ❑ Learning curve – patience



Automation - Robotics

- ✓ Human ergonomics – Safe operating procedures.
- ✓ Process repeatability – Quality and Efficiency .
- ❑ Cost – Capital intense – Payback S,Q & E.
- ❑ Expertise – Robotics | Automation.





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END, Thank you

