

DAIMLER TRUCK

Practical application of robotics to the benefit of OHS at work

25 April 2025



Who are we



20200 Solar Panels
13.5MWp



Atlantis Foundries



940,000 m²



800+



112,000 MWh p.a



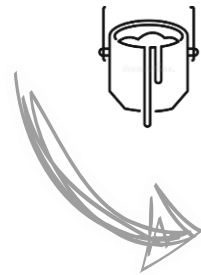
100,000 + Tp.a



Our core process



Induction Furnaces
Holding Furnaces
Pouring Furnace



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

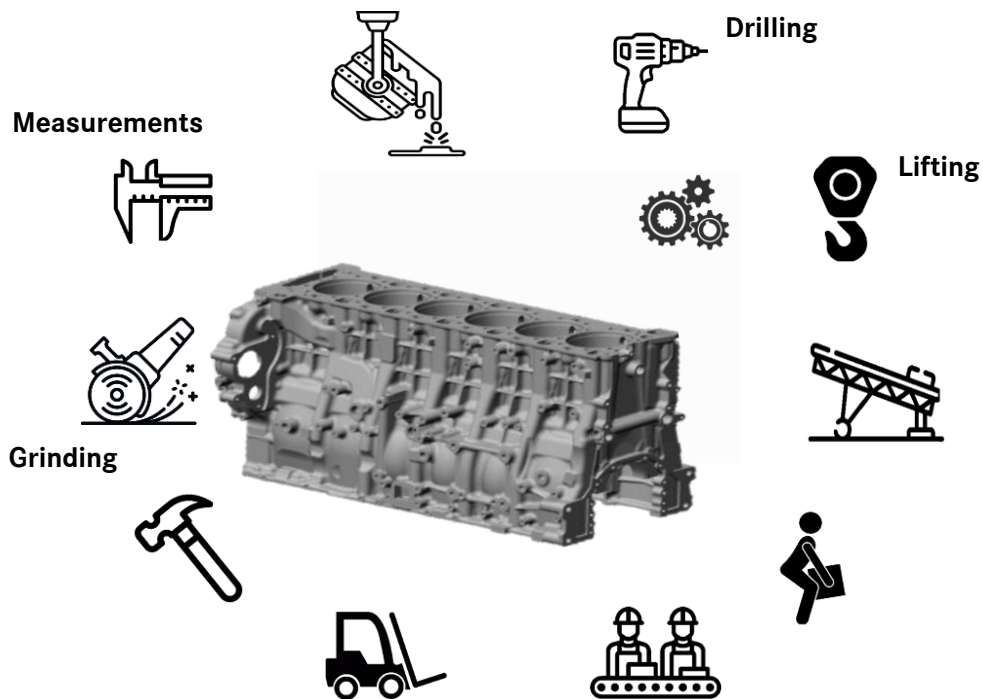


ATLANTIS
FOUNDRIES (Pty)
Ltd

Truck Assembly Europe I USA

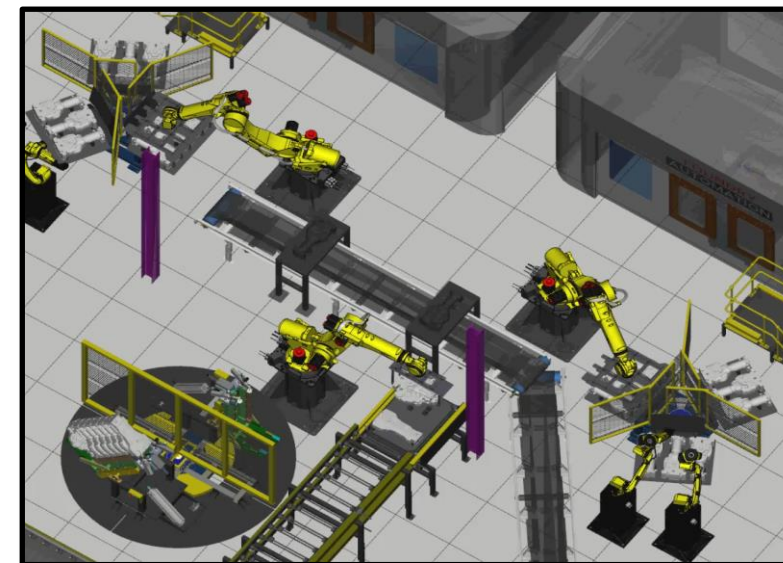


Robotics at Atlantis Foundries - Why



Highly complex / Vast array of processes

- Melting / Molding / Casting
- Processing / Assembly / Transportation
- Inspection / Measuring / QC / Analytics



Efficiency – Increased Takt Times | Consistency | Improved capacity

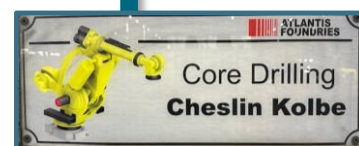
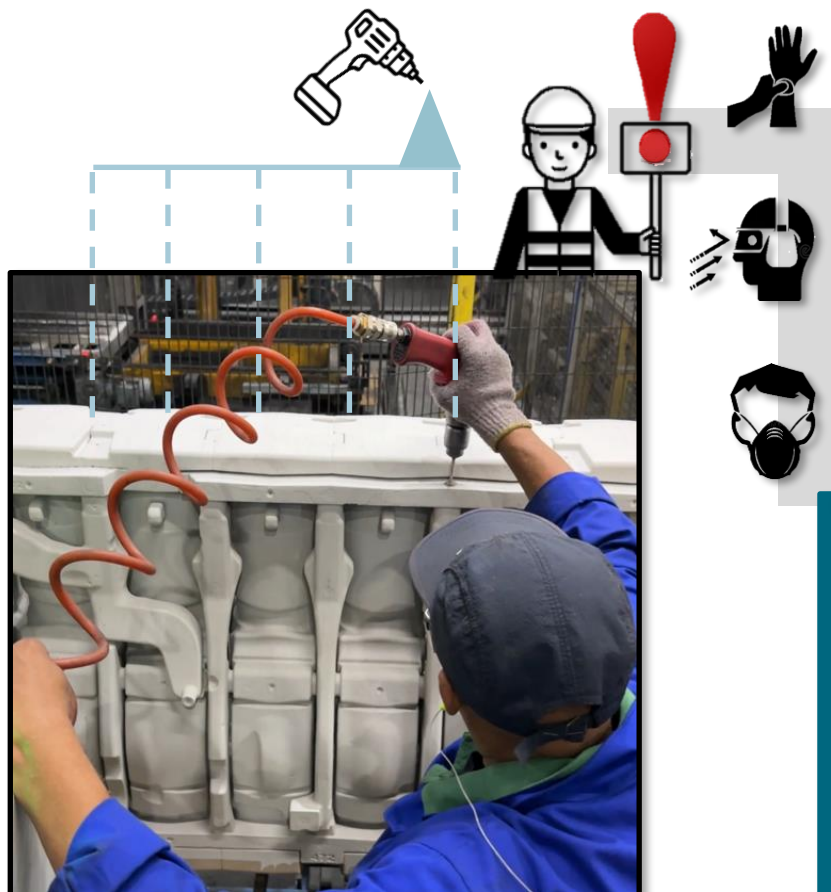
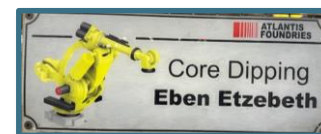


Quality – Process repeatability.

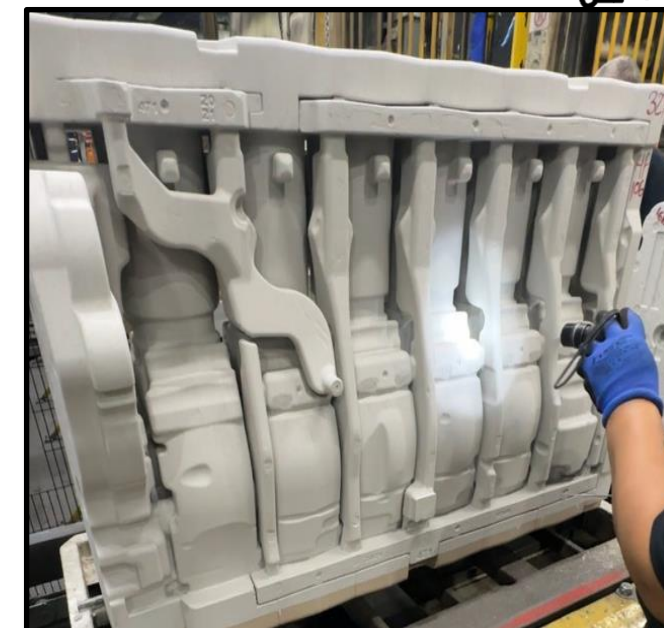


SAFETY – Hazard Mitigation.

Practical use case 1 – Drilling | Dipping



- ❖ Improved Ergonomics
- ❖ Strain removed from operators
- ❖ Operators focus on QC / Acceptance

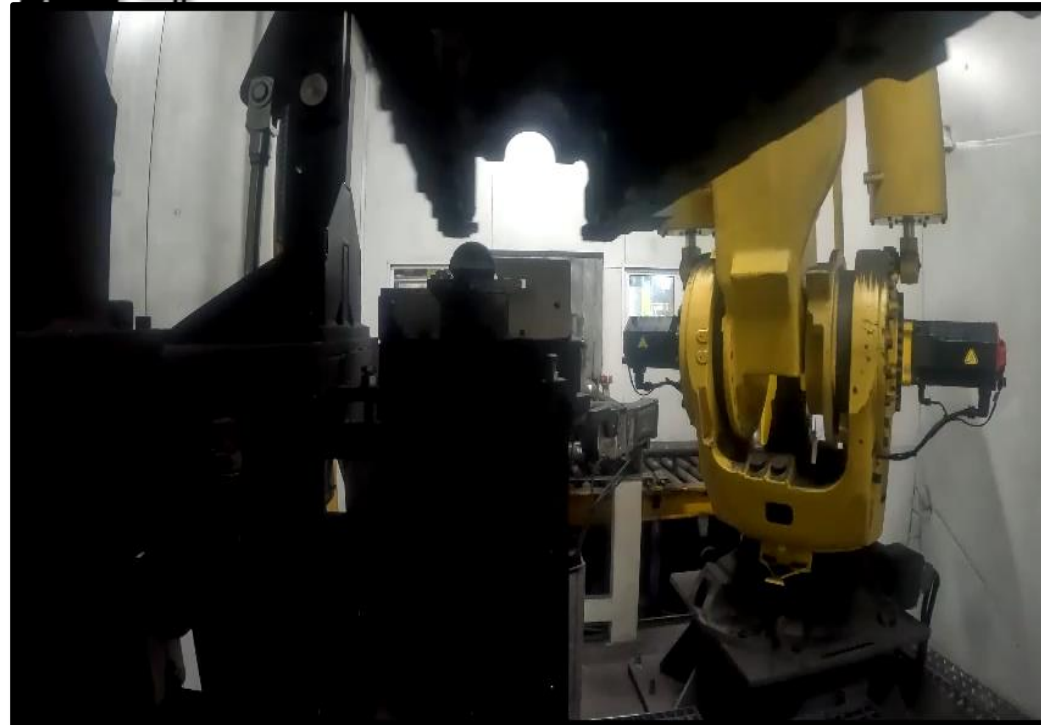
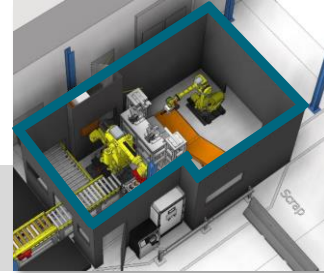
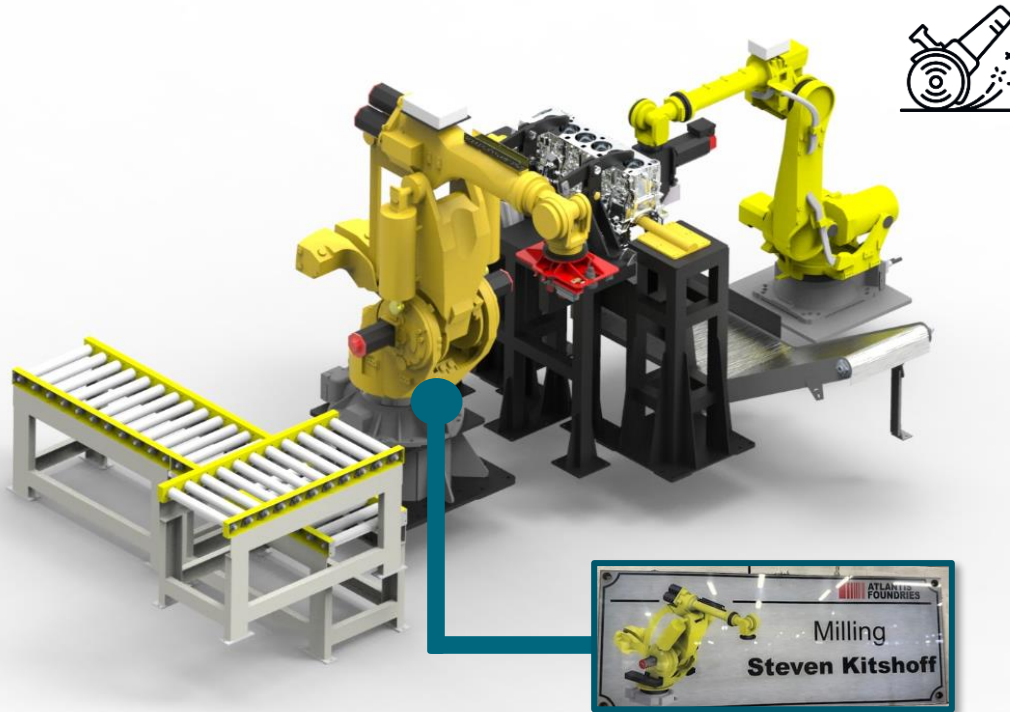


Practical use case 2 – Grinding /Lifting / Transport:

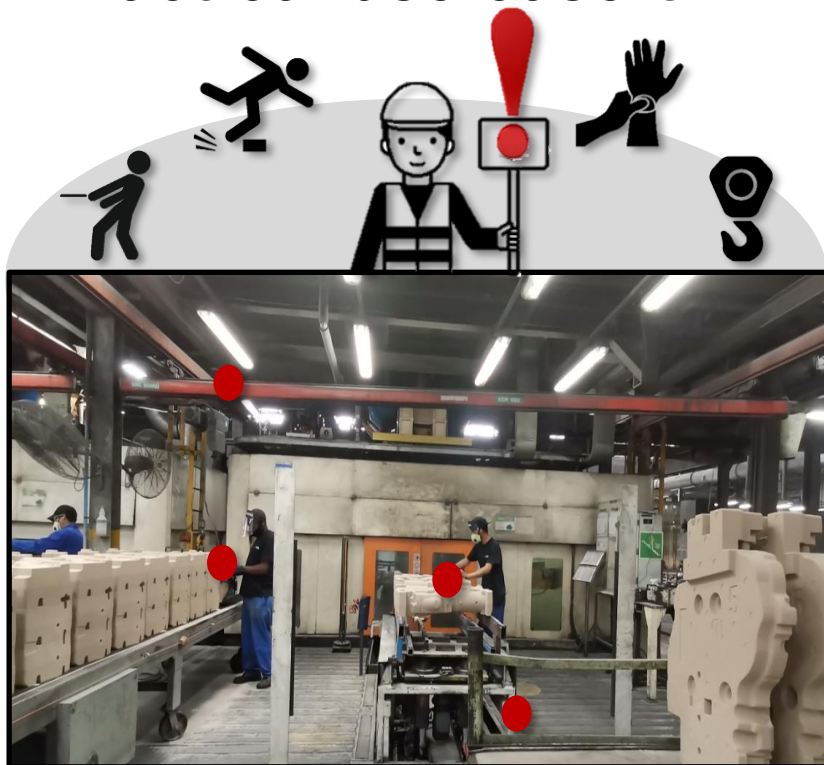


Grinding - Lifting

- Important pre-processing function – High takt times
- Hard to reach / Complex angles
- Pulling / Lifting Strain - Hoist
- Decibels / Face – Arm shielding.



Practical use case 3 – Assembly 1/2

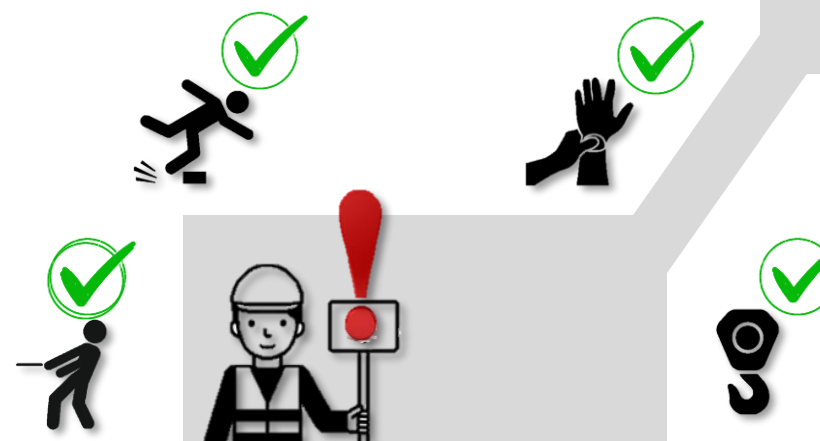


Multi operation assembly

- High takt times
- Craneage – Lifting | Pulling | Duty cycles
- Trip hazards
- QC inspection / acceptance.



Practical use cases 3 – Assembly 2/2



- Hazard elimination
- Strain removed from operation
- Operators focus on quality inspections & acceptance.

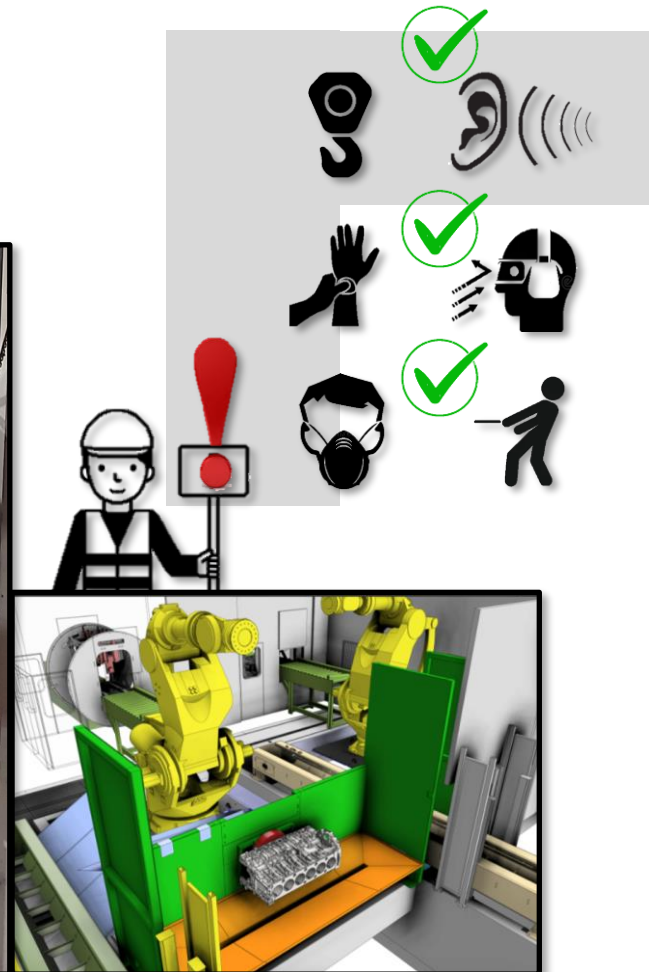


Practical use case 4 – Product processing in Harsh environments



Harsh environment

- Noise exposure
- Impaired Visibility
- Air particles
- High Takt Times



Continual Risk Assessments:

ISO | GMR | SANS



General machine enclosures

- Isolated automation.
- See through – Rigid construction.
- High visibility.
- Strict access control – Lock out
- Guarding design / Construction



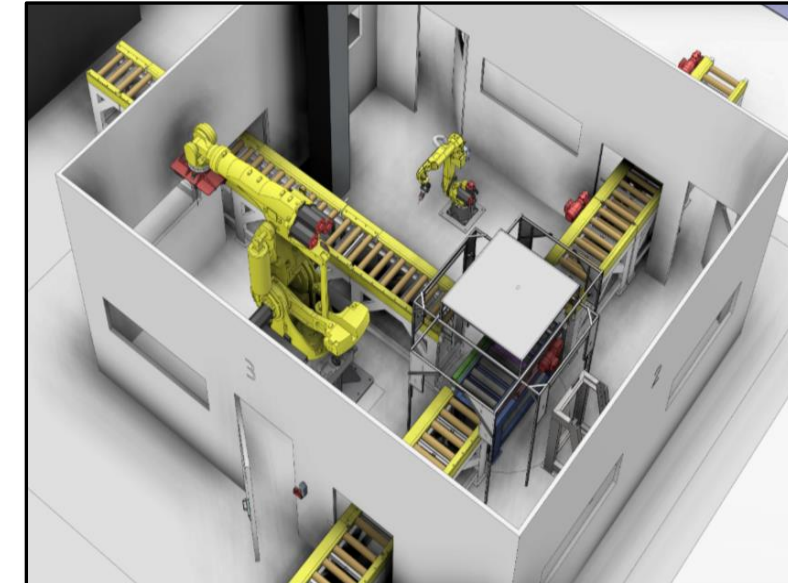
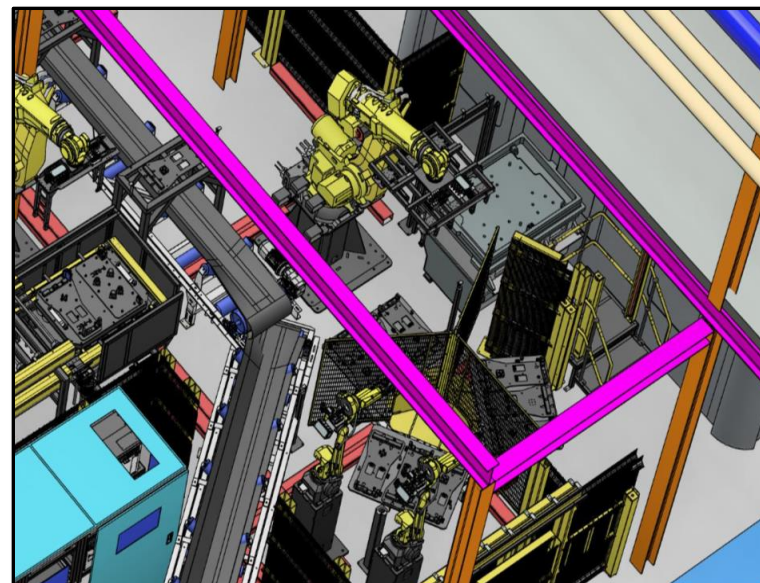
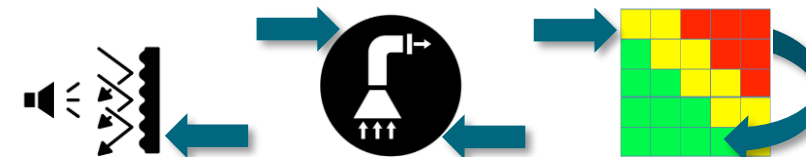
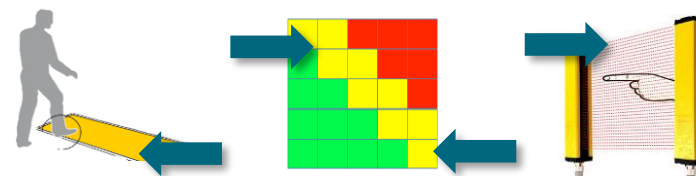
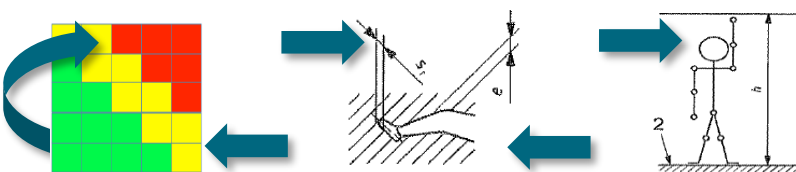
Combination enclosures

- Sectional Guarding / isolation.
- Pressure sensitive mats | Photo-electric
- Two handed starts | Lock out
- Safety distances



Audio / Air born particle enclosures

- Insulated – Inspection windows.
- Decibel mitigation
- Targeted air particle extraction.



END, Thank you.

