Pyroptik

Continuous Sinter Sizing & Colour Analysis

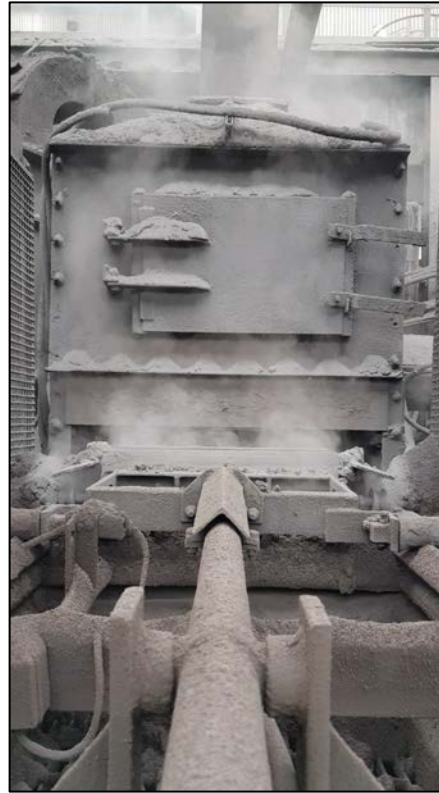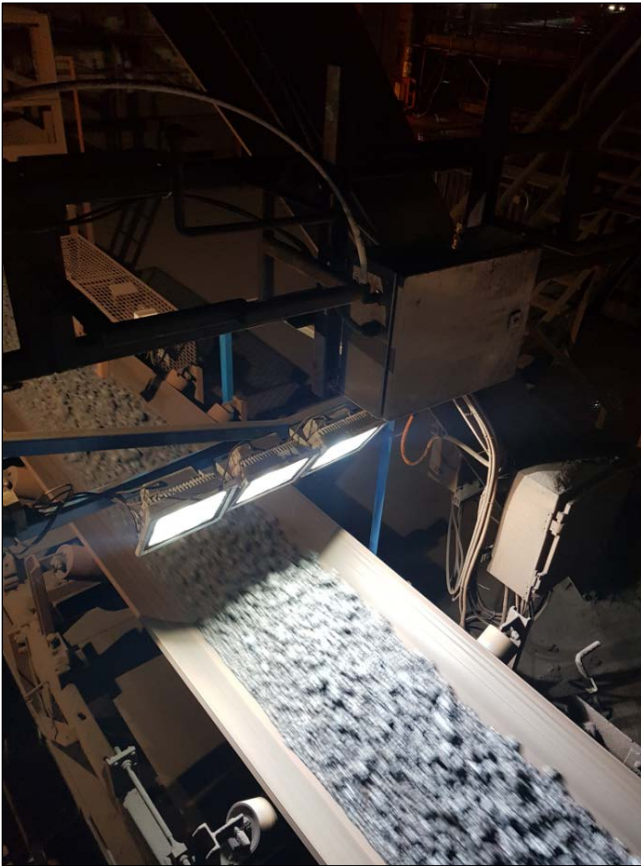30th Oct 2023

Manual Sampling/Measurement

- Manual periodic sampling – cannot respond to system changes quickly

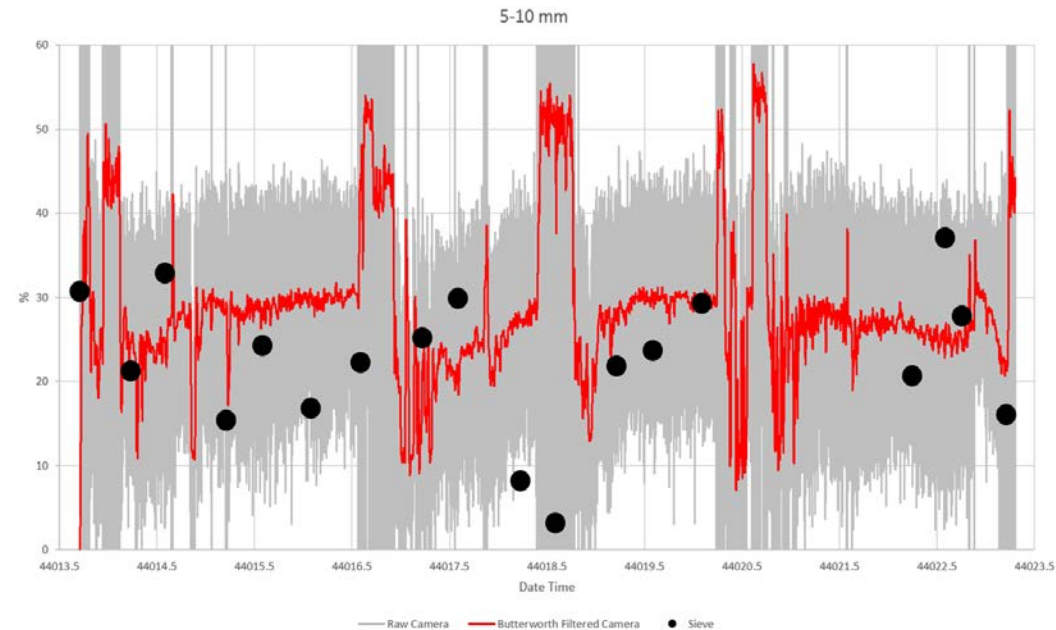- Time consuming / labour intensive

Sinter Sizing – Current State

- **Industry led challenge – improved measurement improves the process control**

- In-line high speed on belt sizing

- Real-time data acquisition and trending

Camera insitu

Camera versus Manual Sampling

Sinter Sizing – Current State

- **Typical Sinter plant**

Bespoke Image Processing and Analysis Methodology
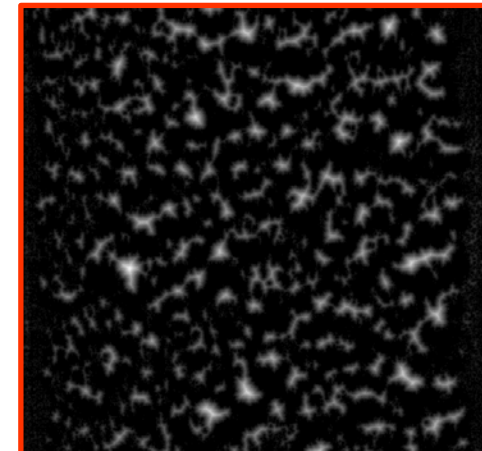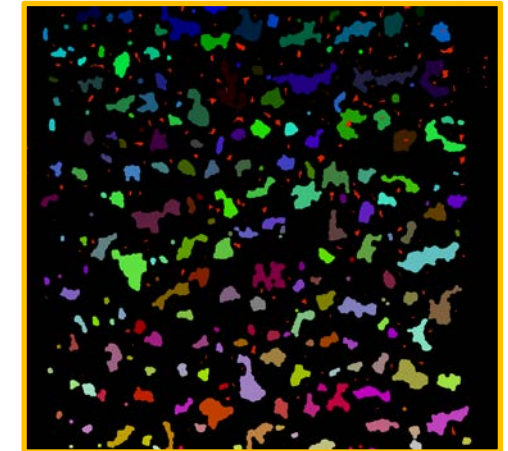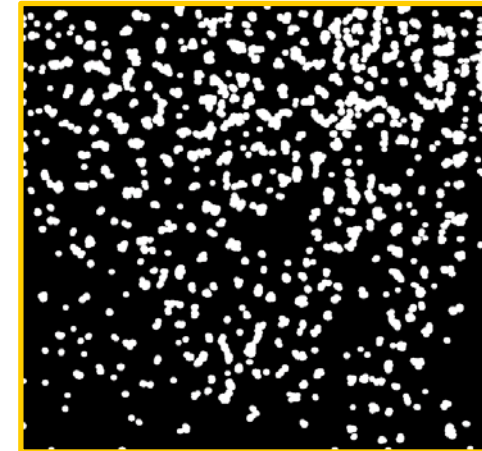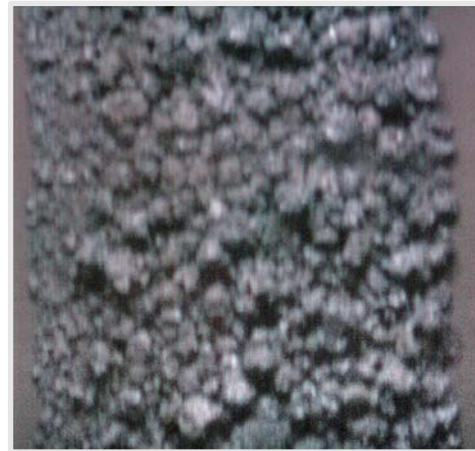
Bespoke Image Processing and Analysis Methodology
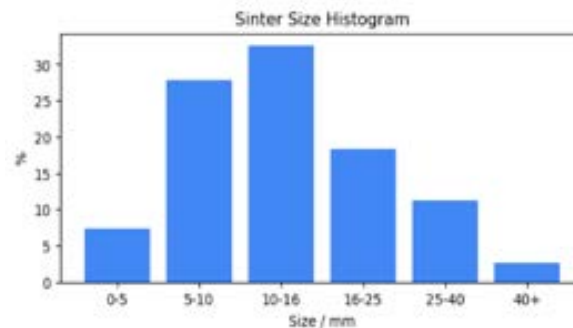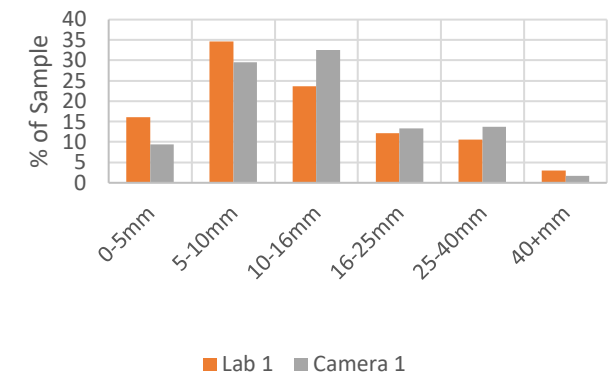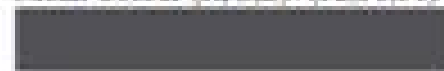
Sinter Sizing

- Camera sizing analysis correlates well with routine manual samples across all six size fractions

Camera data (blue), Sampler data (orange)

Sinter Sizing

- Webpage gives live video feed, live output and 2hr/24hr trending
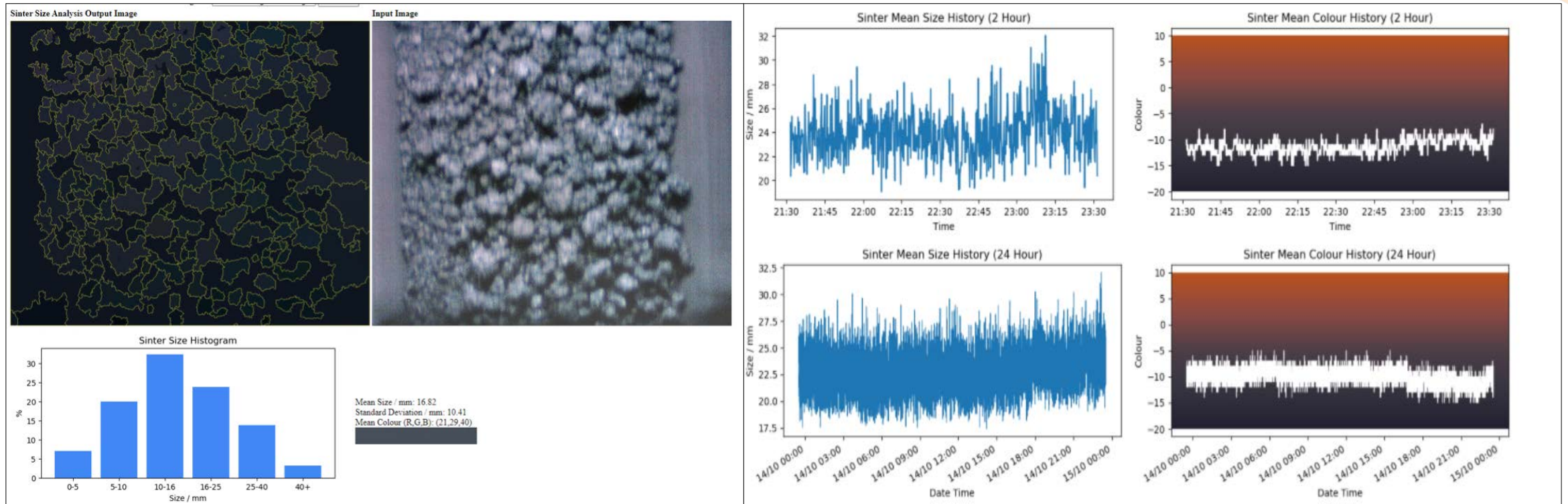
Webpage freely accessible across the plant/at home - can be used as a lead indicator for sinter quality at Blast Furnaces, and feedback for operational steer in sintermaking.
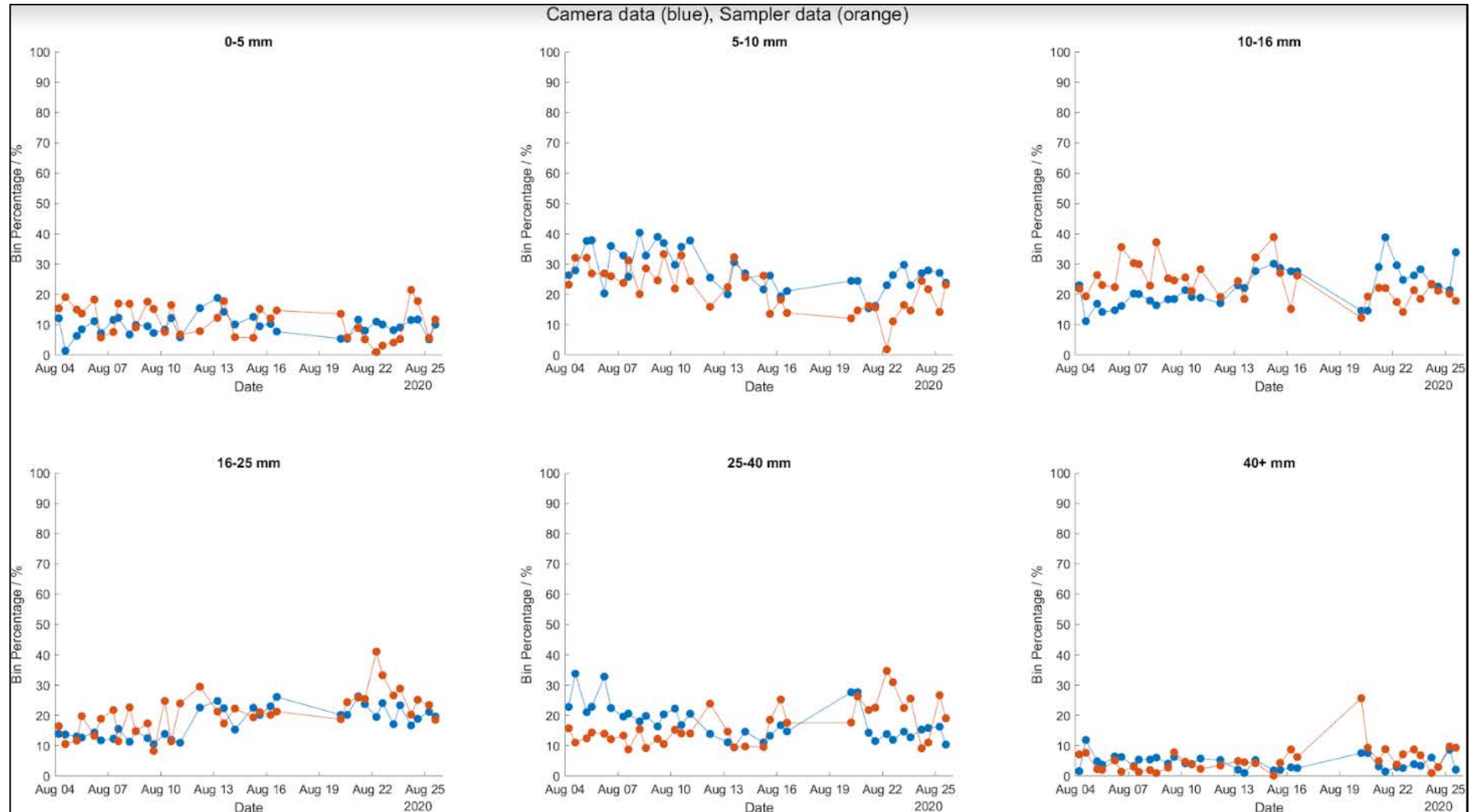
Read the full paper @ https://www.tandfonline.com/doi/full/10.1080/03019233.2023.2208979 and see all our publications at https://pyroptik.com/mission/

Sinter Sizing

- Potential project benefits across the 3 Pillars of Sustainability
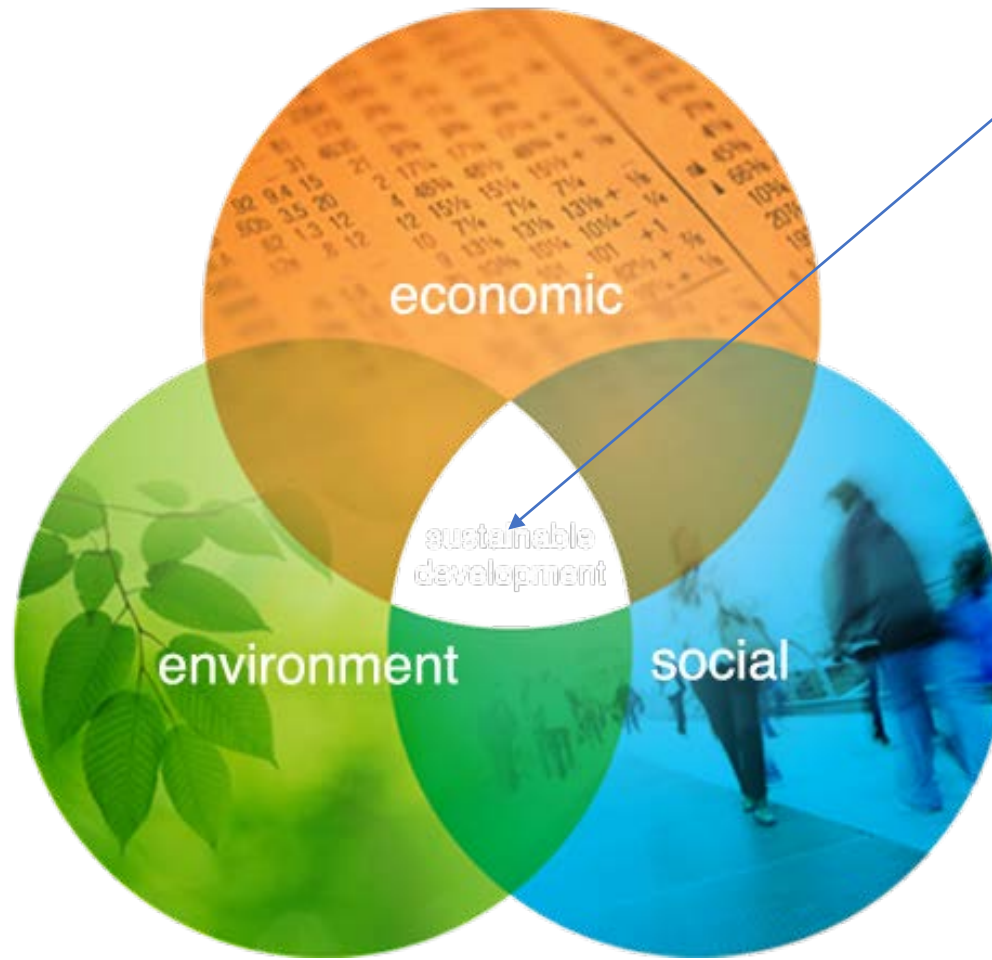
Reduced Blast Furnace coke rates

Reduced Emissions Trading Scheme Liability

Reduced Carbon emissions

Reduced dust emissions

Better working conditions on plant

Low-cost enabler for Digital Transformation

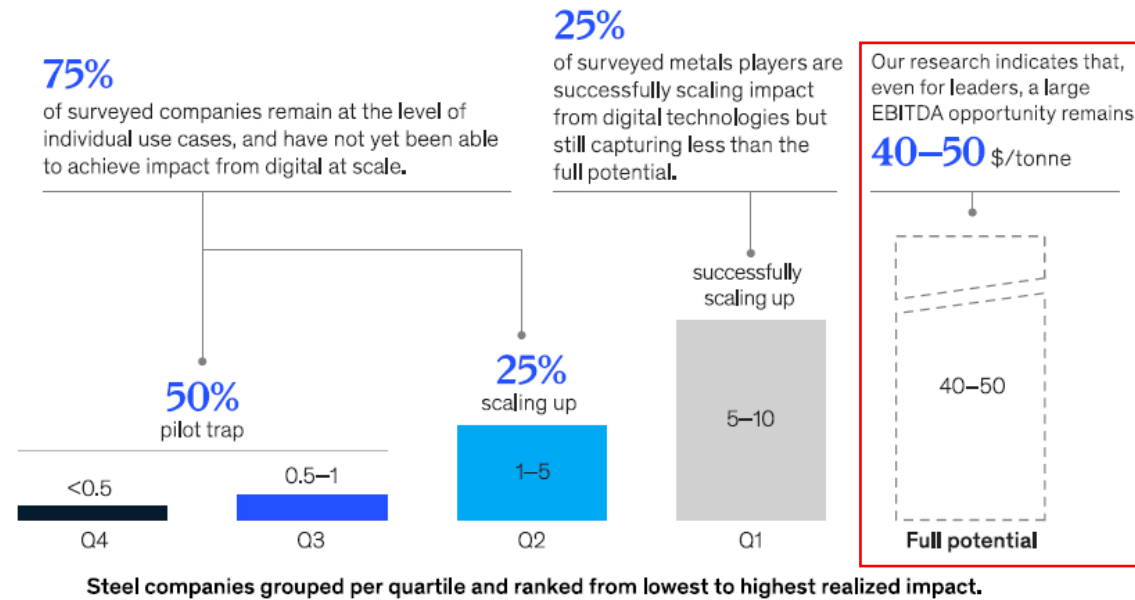Improved Knowledge Transfer

Better data to guide experience
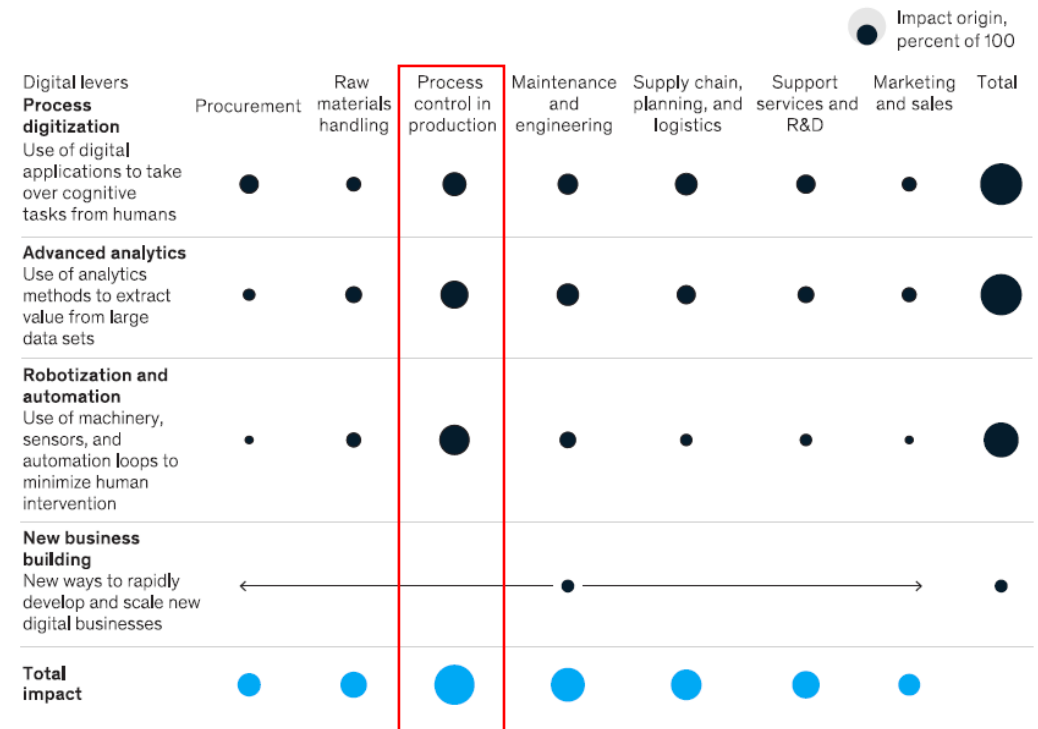
Reduced reliance on manual handling

Sinter Sizing

- McKinsey studies show potential 40$/tonne EBITDA uplift from digital and analytics, led by improved process control in production

Source: *How digital and analytics can unlock full potential in steel, McKinsey, Jan 2021*

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Any Questions?
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