



# Deploying AI and Analytics for Process Improvement and Optimization

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Santosh Panday | Aditya Birla Group

# THINKING

## ROI of AI/Analytics for Use Cases?



### Production/Process Optimization

- Does this challenge cause downtime? What is the cost of downtime?
- Does it cause slowdowns? What is the difference between actual and target throughput rate?
- How many batches do we currently make per day?



### Quality

- What is the current defect / scrap / off-spec rate?
- What is the difference in selling price between good and bad product?
- What is the value of one batch?



### Reliability

- If this equipment went down would there be an associated downtime?
- Would providing earlier warning time lessen the OPEX / maintenance cost or associated downtime of the event?
- How much do we spend on time-based maintenance for this equipment?

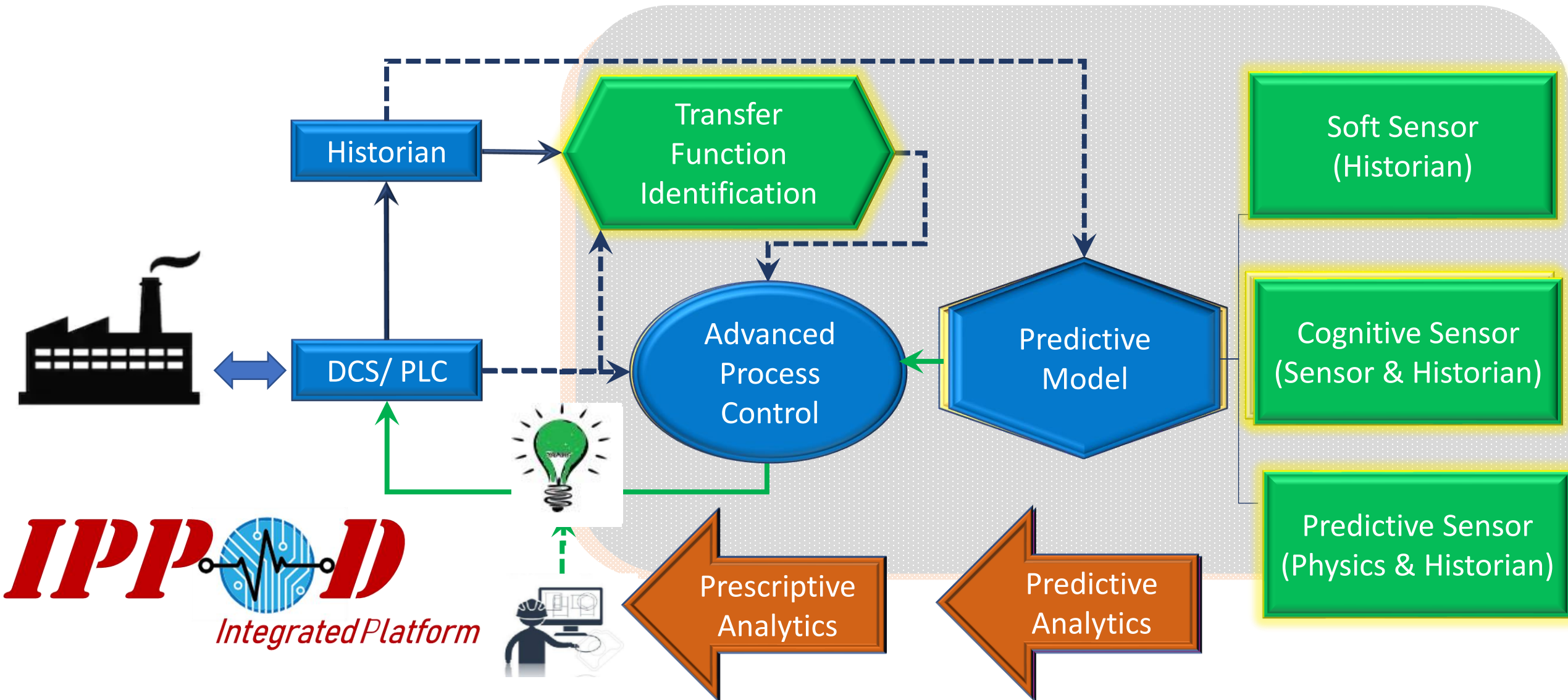


### Sustainability

- Is there an opportunity to use less water / steam / energy in the process?
- What is the cost to generate that utility? (energy required to make steam, clean water, electricity costs)
- What is the environmental impact of using less of this resource?

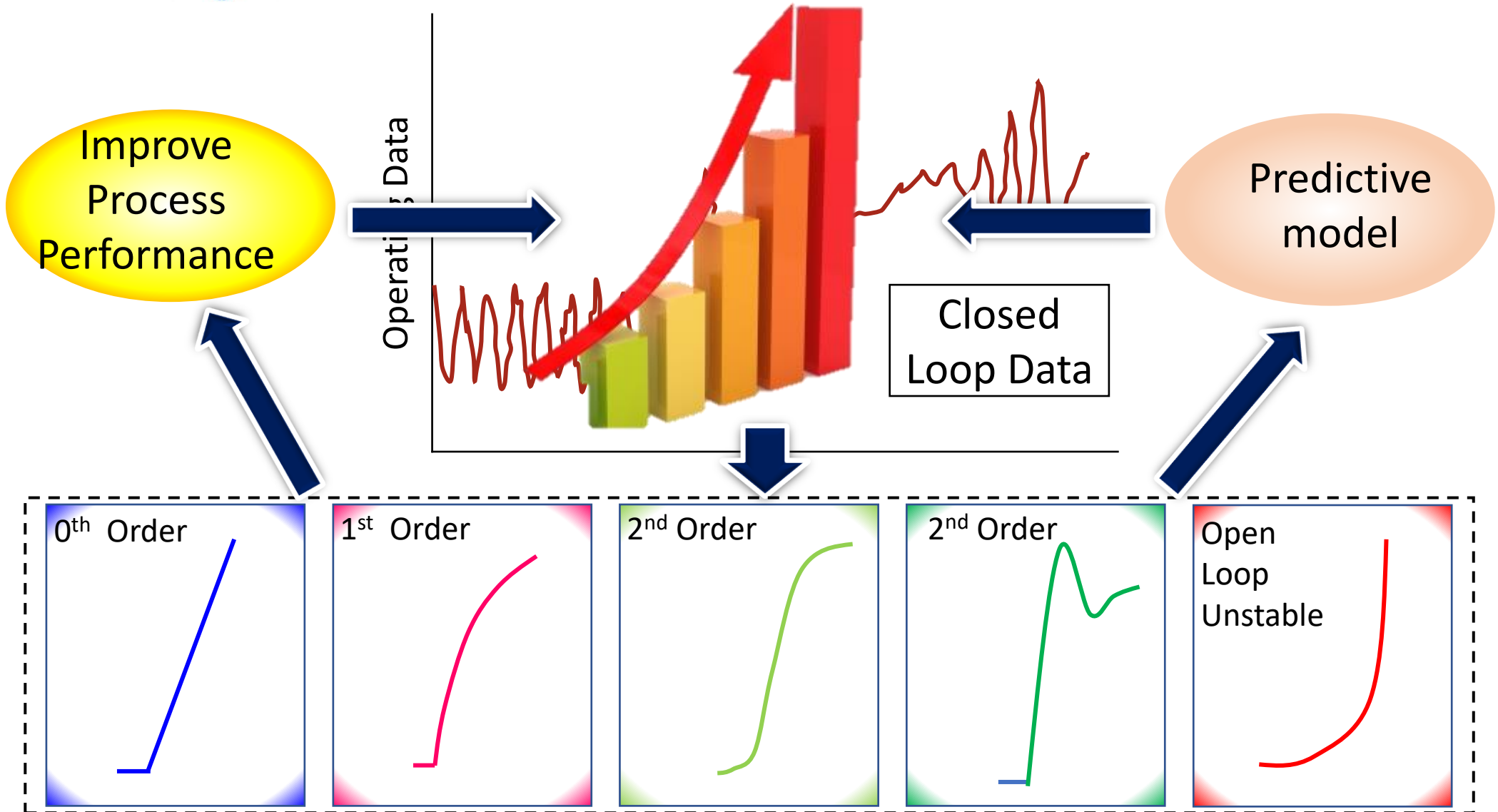
# Process Optimization Platform

INTEGRATED PLATFORM FOR PROCESS OPTIMIZATION THROUGH DIGITAL-TWIN



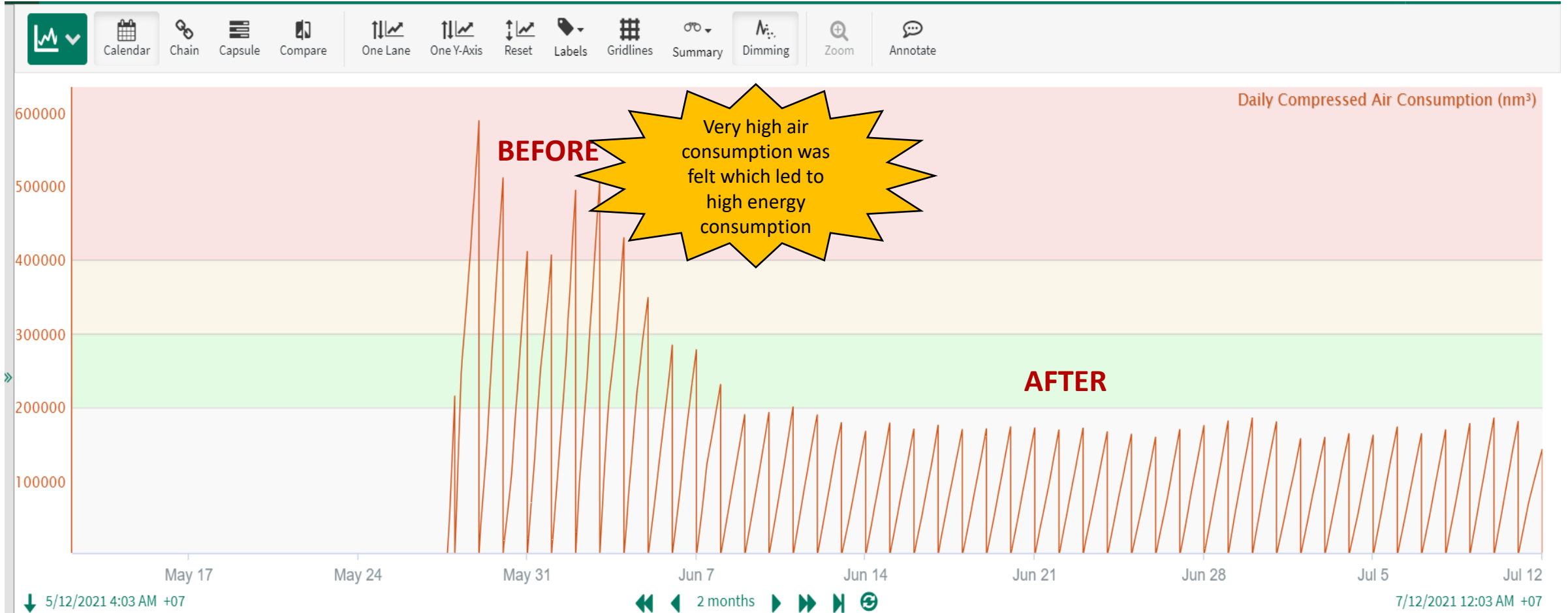


# Application in Process Optimization



- Cognitive Sensor
- Soft Sensor
- Predictive Sensor
- Transfer Function

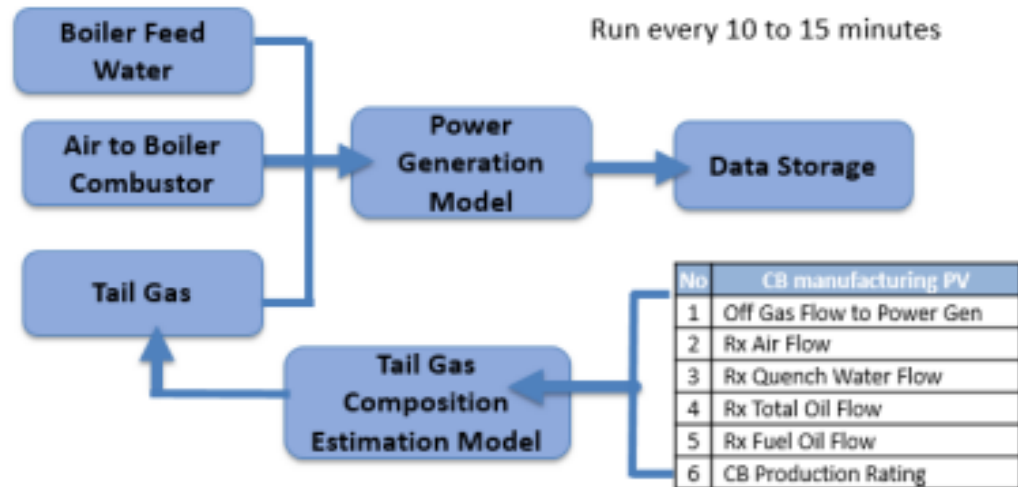
# Compressed Air Consumption Reduction



# Power Export Commitment Predictor

Committing the Power Export one day in advance

- 01** Identification of key PV affecting Power Generation
- 02** AI/ML Model to Prediction Power
- 03** Validation  
~98% accuracy
- 04** Action  
Data based Prediction for commitment



## Business Impact:

- Accurate Power generation estimation to commit export one day in advance
- Eliminate revenue loss from penalties due to short supply
- Increase revenue from more power export



# And AI Analytics in many more use cases...





# THANK YOU!

**GET IN TOUCH**

<https://www.linkedin.com/in/santosh-panday-a481596>

