Wipro Smart-twin

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An Operational Digital Twin

What is it?

- An operational digital twin is a virtual model of a real-life asset, or process, and their impact on your business
- It accurately reflects the state of your **PAST, PRESENT & FUTURE** operations, and ties it to your **Business Economics**
- It is powered by data

What it will drive?

Closed Loop Performance Management

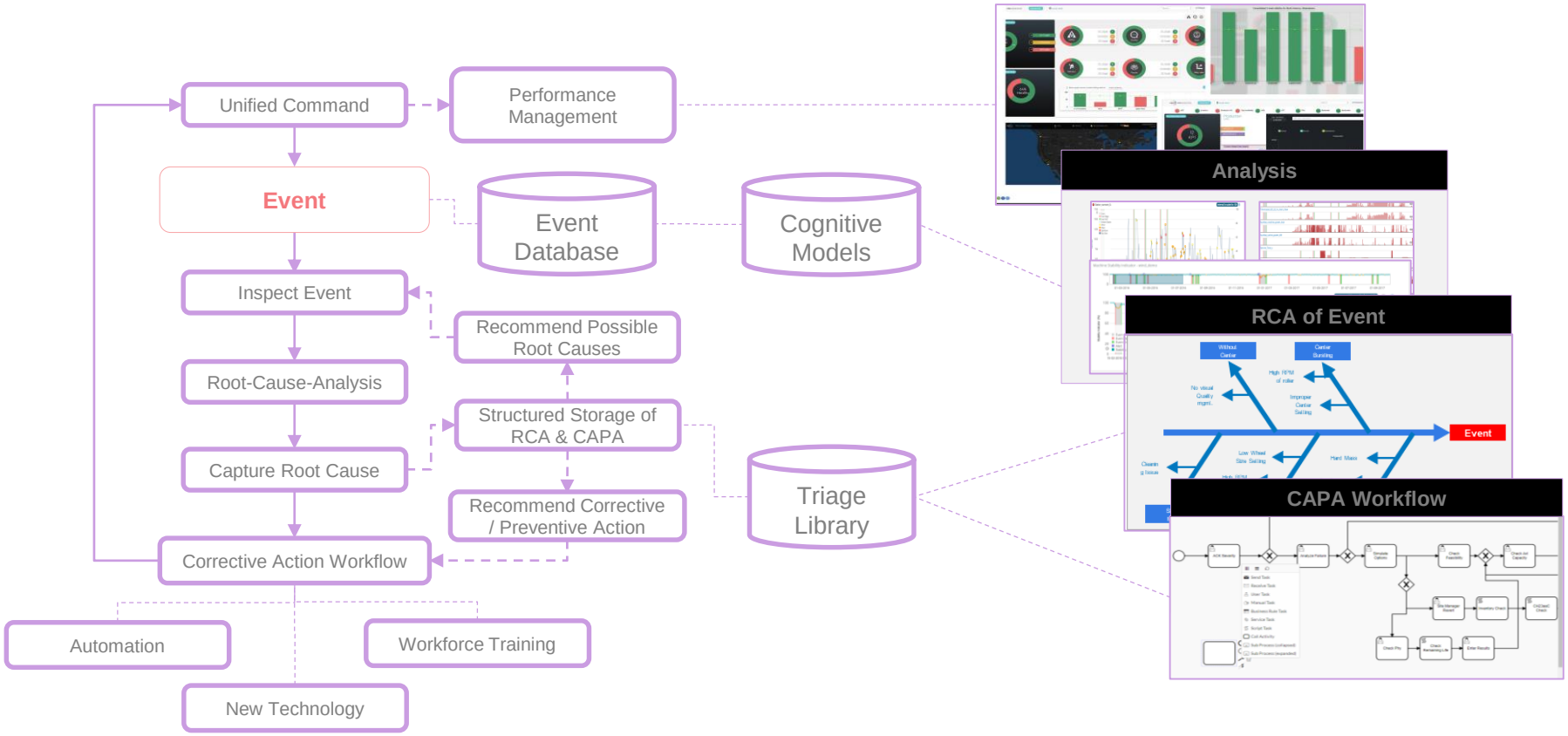
- Faster Responses to adverse events
- Operational Process Streamlining & Optimization
- Digitization of Operations
- Predictive Maintenance
- Transparent access to contextual data, insights, & knowledge

Benefits you can expect

- **Increase Equipment OEE and Extend Equipment Life**
- **Reduce turn-around time of operational processes**
- **Improve workforce productivity and efficiency**

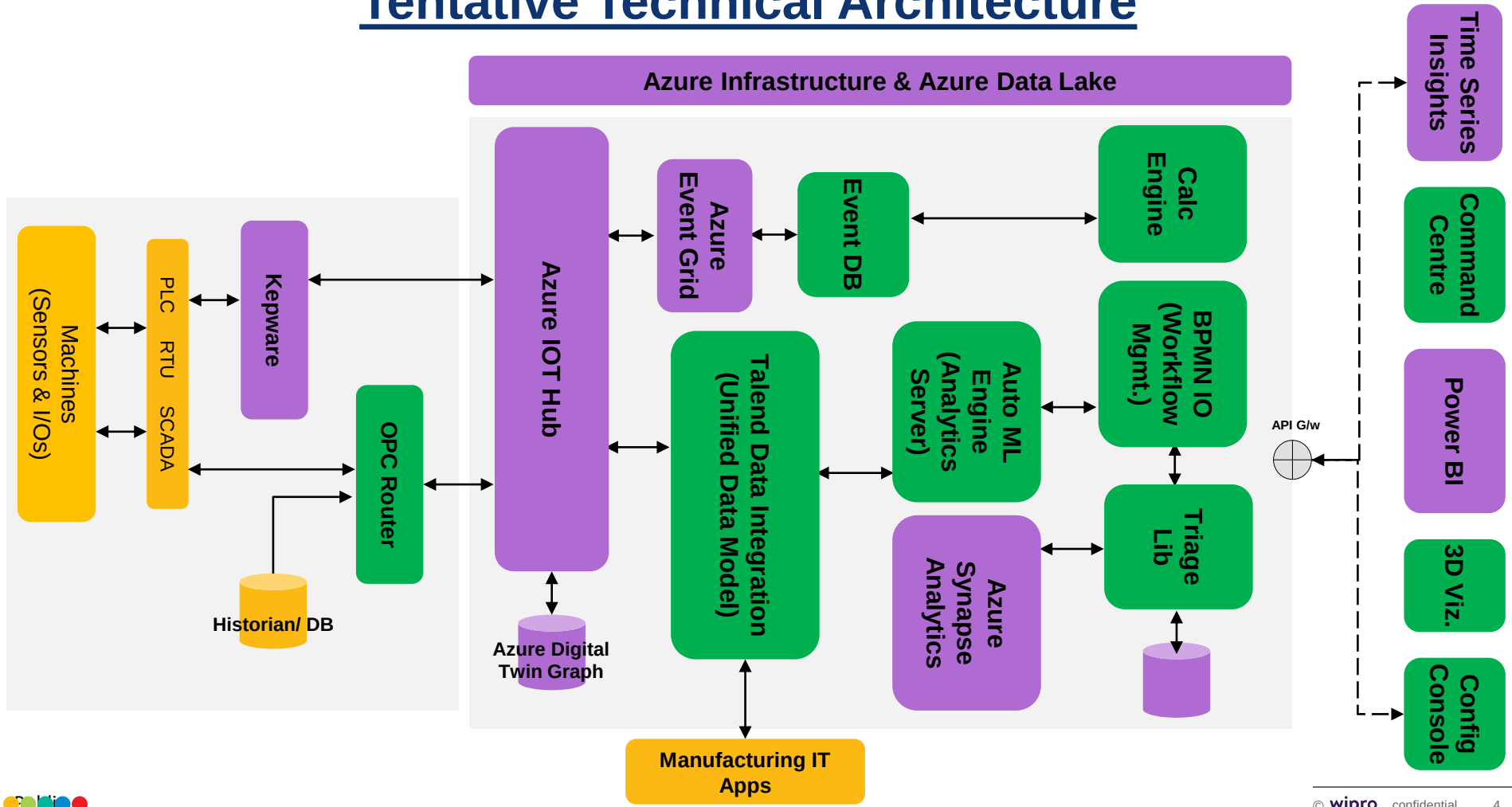
An evolving digital profile of the historical and current behavior of a machine or process

MONITOR > DETECT > INSIGHT > ANALYZE > ACT



Closed Loop Performance Management with Smart-twin

Tentative Technical Architecture



Closed Loop Performance Management

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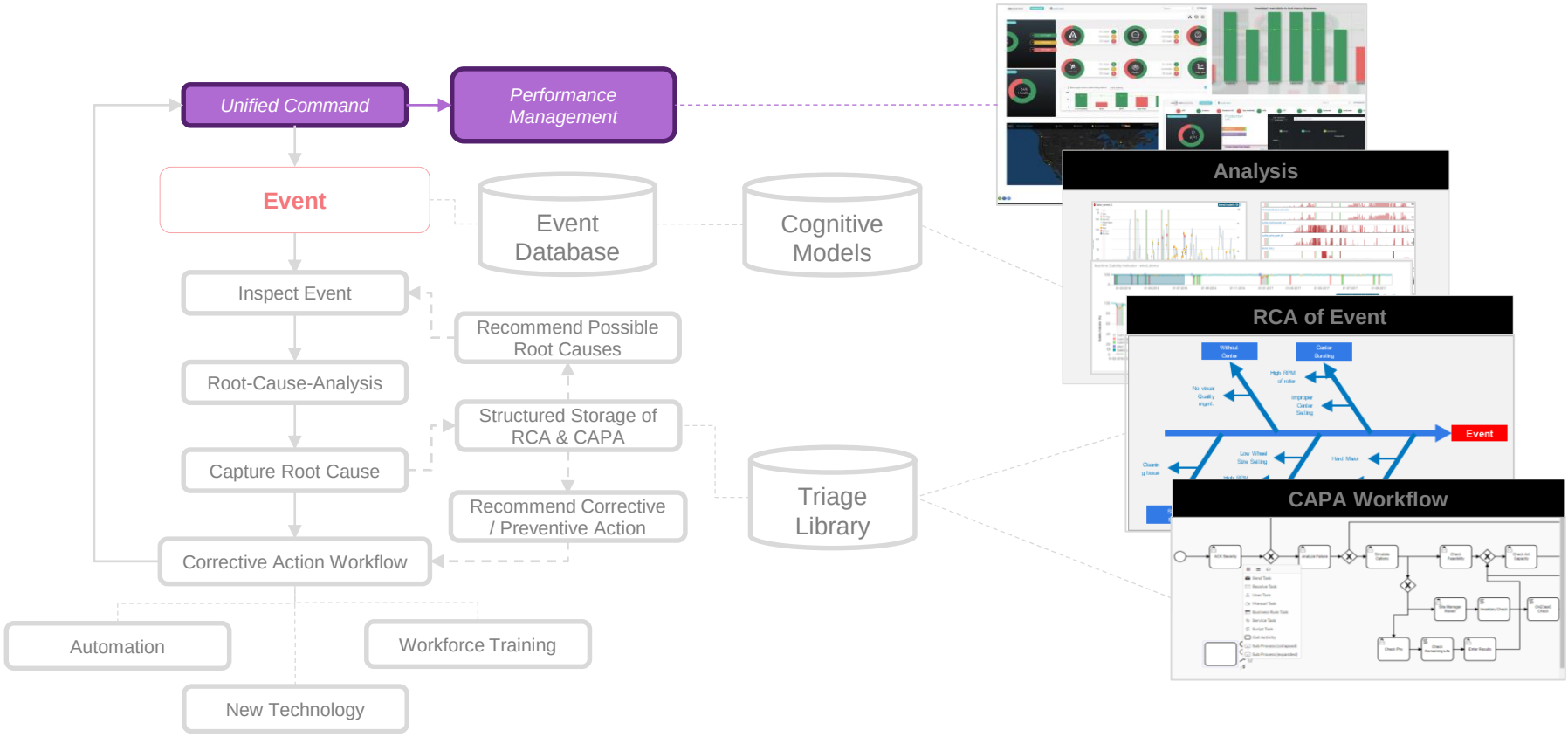
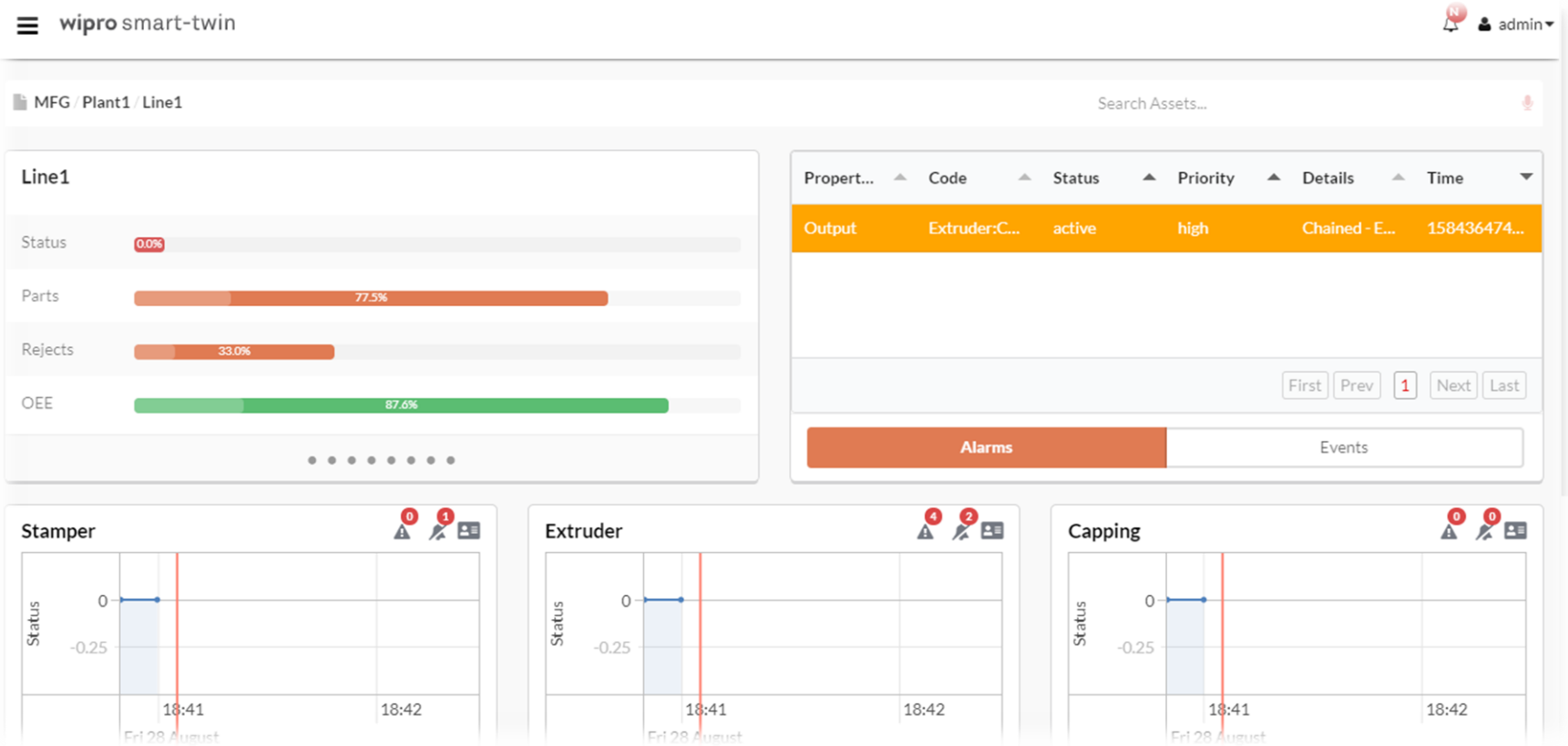
MONITOR



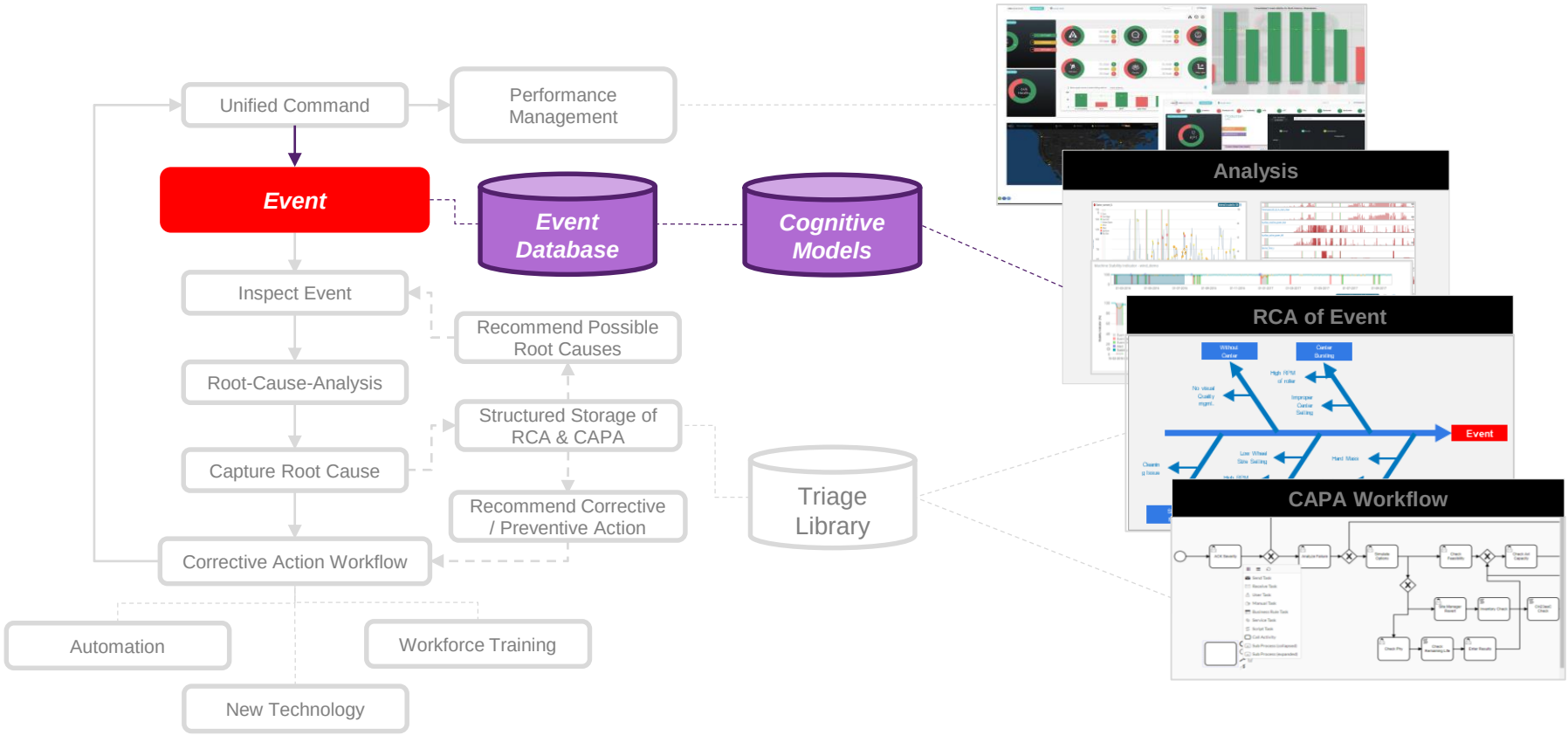
Establish an Integrated Operations Command Center

MONITOR



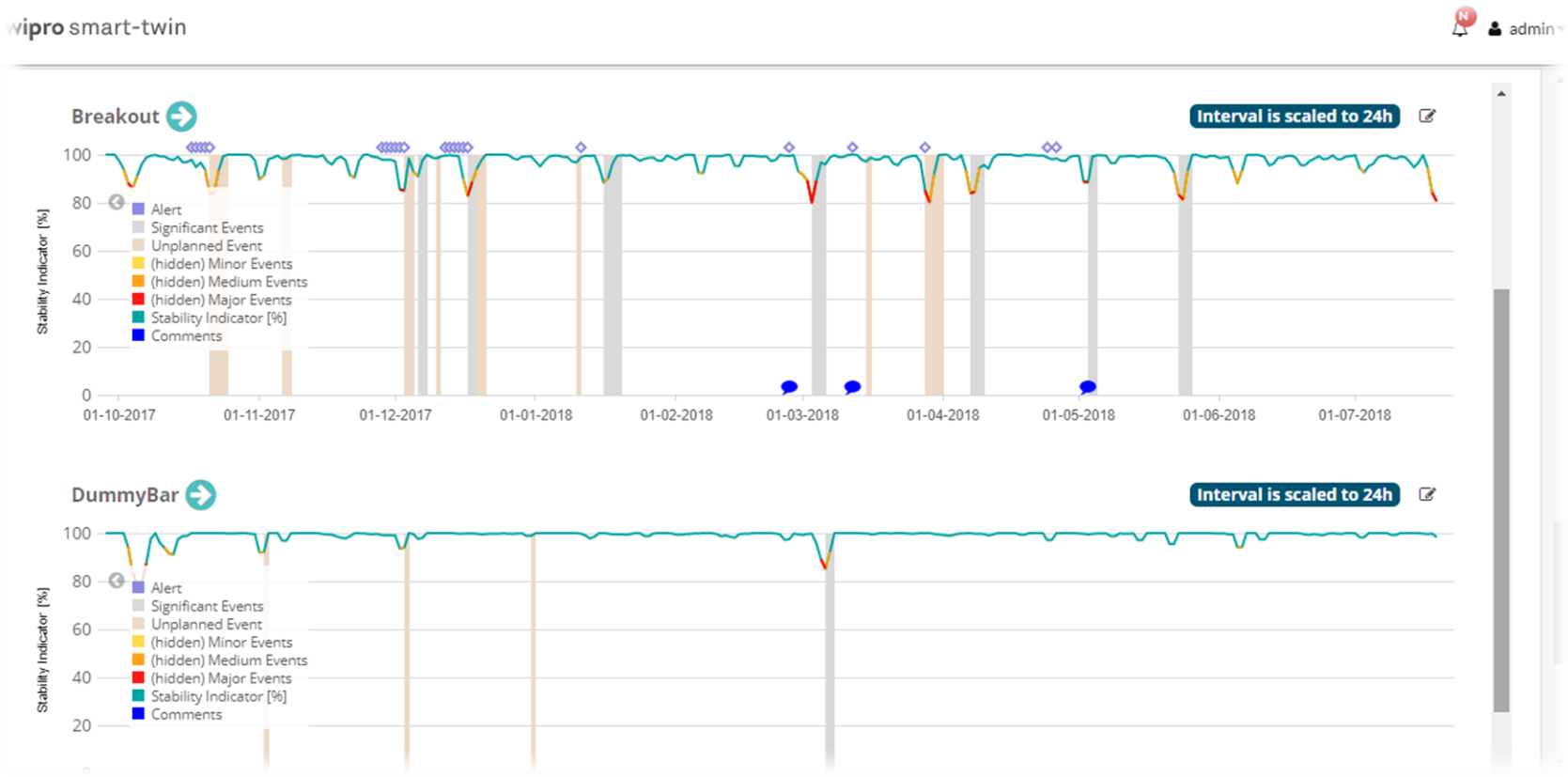
Cognitive dashboards customized to the requirements of different user group

DETECT



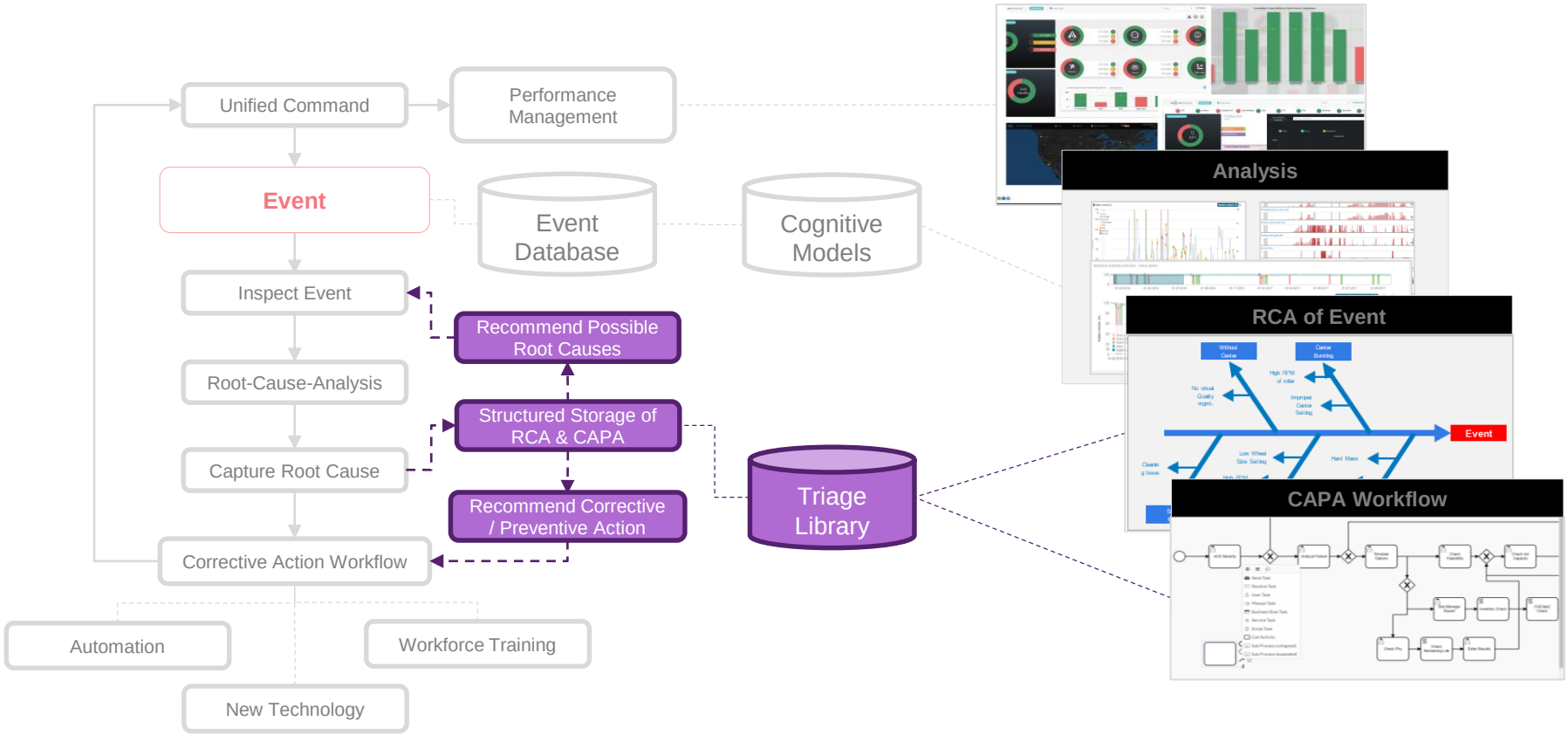
Automated Machine Learning for predictive models at scale

DETECT



Equipment health & stability indicator built using automated machine learning

INSIGHT



Institute an enterprise wide transparent knowledge-base

INSIGHT

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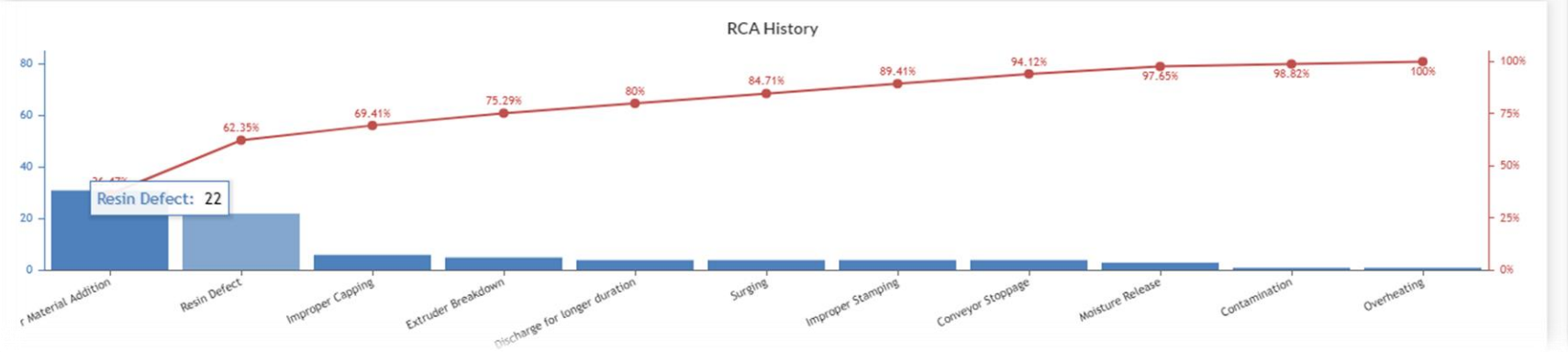
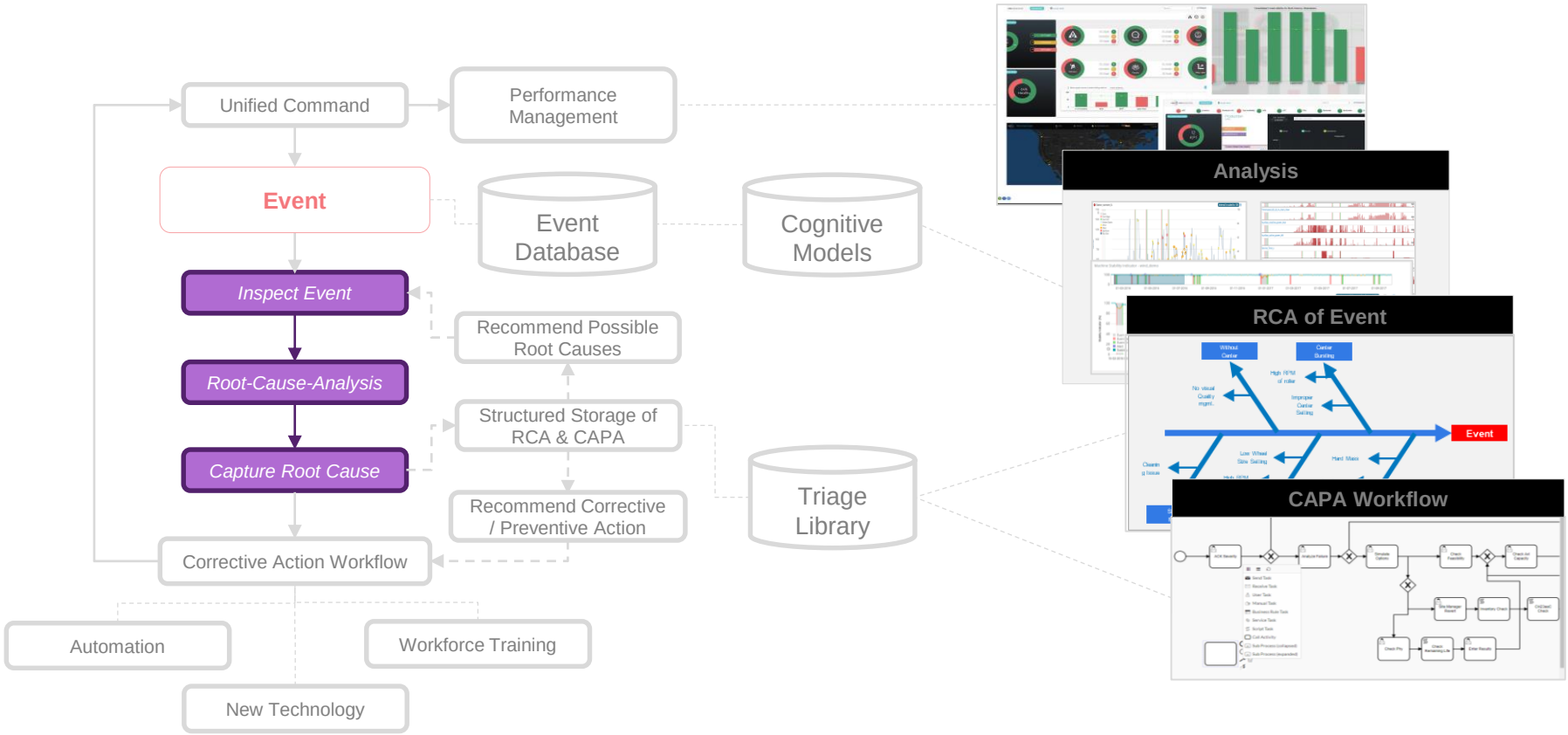
RCA_0015	Quality Issue in Extruder	Extruder	Quality	✕	Fishbone
RCA_0016	Quality Issue in Extruder	Extruder	Quality	✕	Fishbone
RCA_0017	Quality Issue in Extruder	Extruder	Quality	✕	Fishbone
RCA_0018	Quality Issue in Extruder	Extruder	Quality	✕	Fishbone

First Prev 1 2 3 4 Next Last



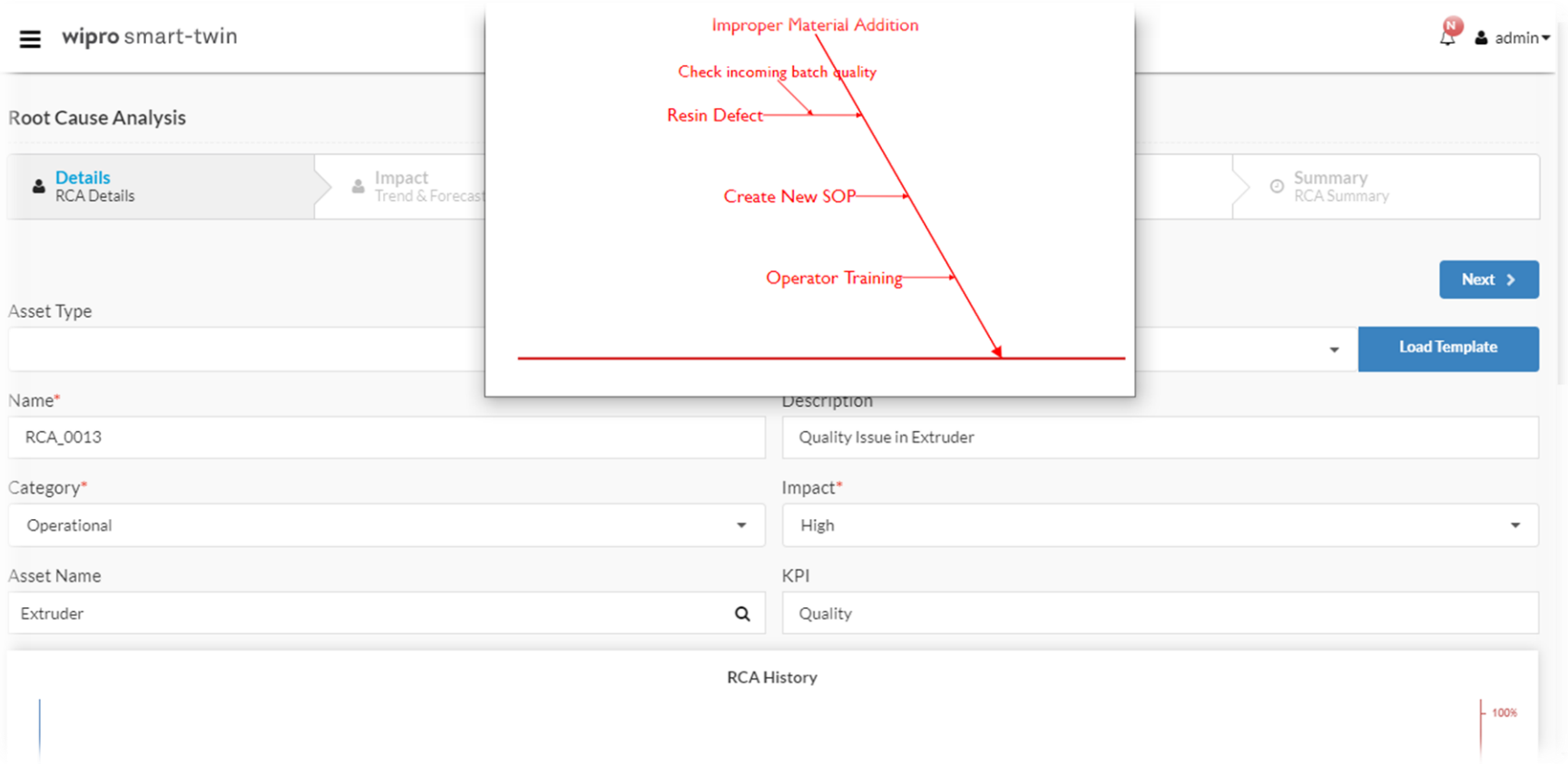
Leverage a library of triages and expert knowledge to troubleshoot events

ANALYZE



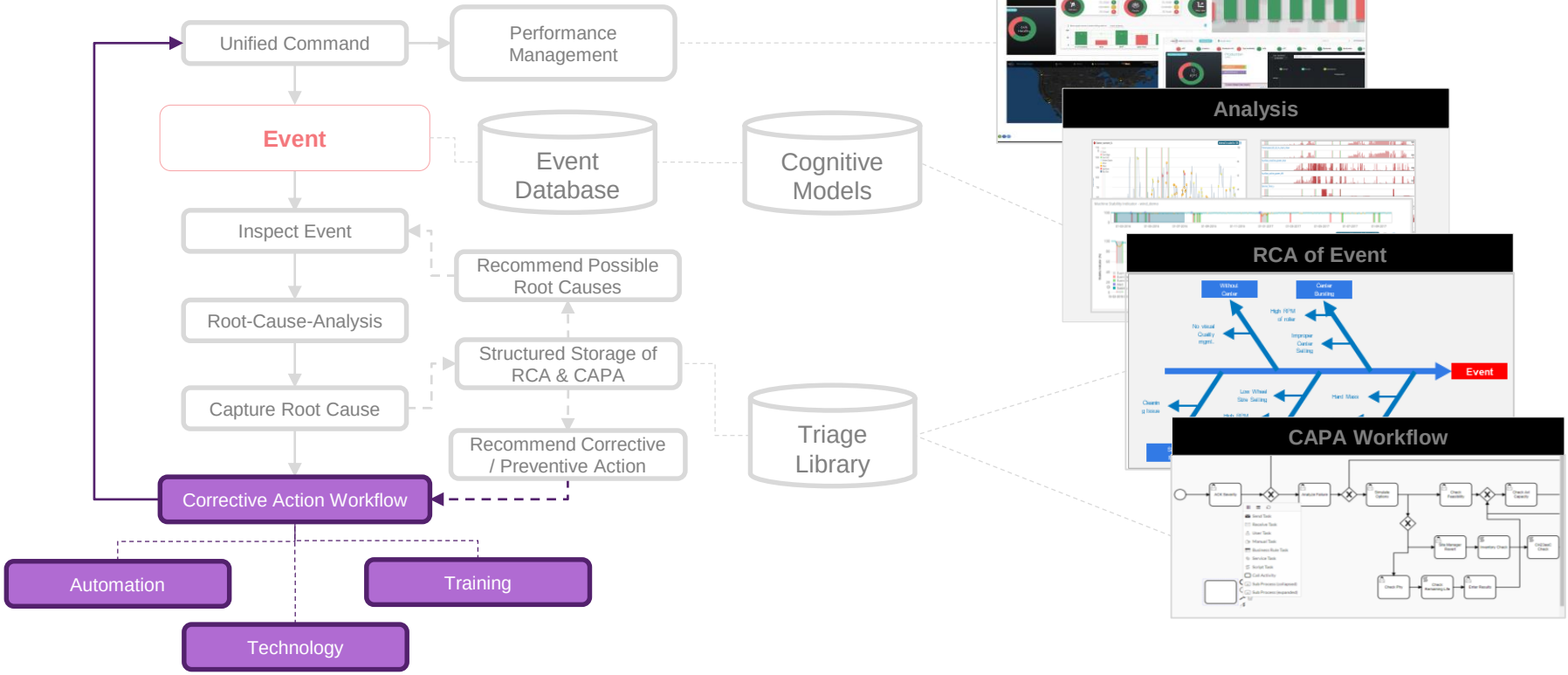
Contextualized real-time data, engineering data and transactional data

ANALYZE



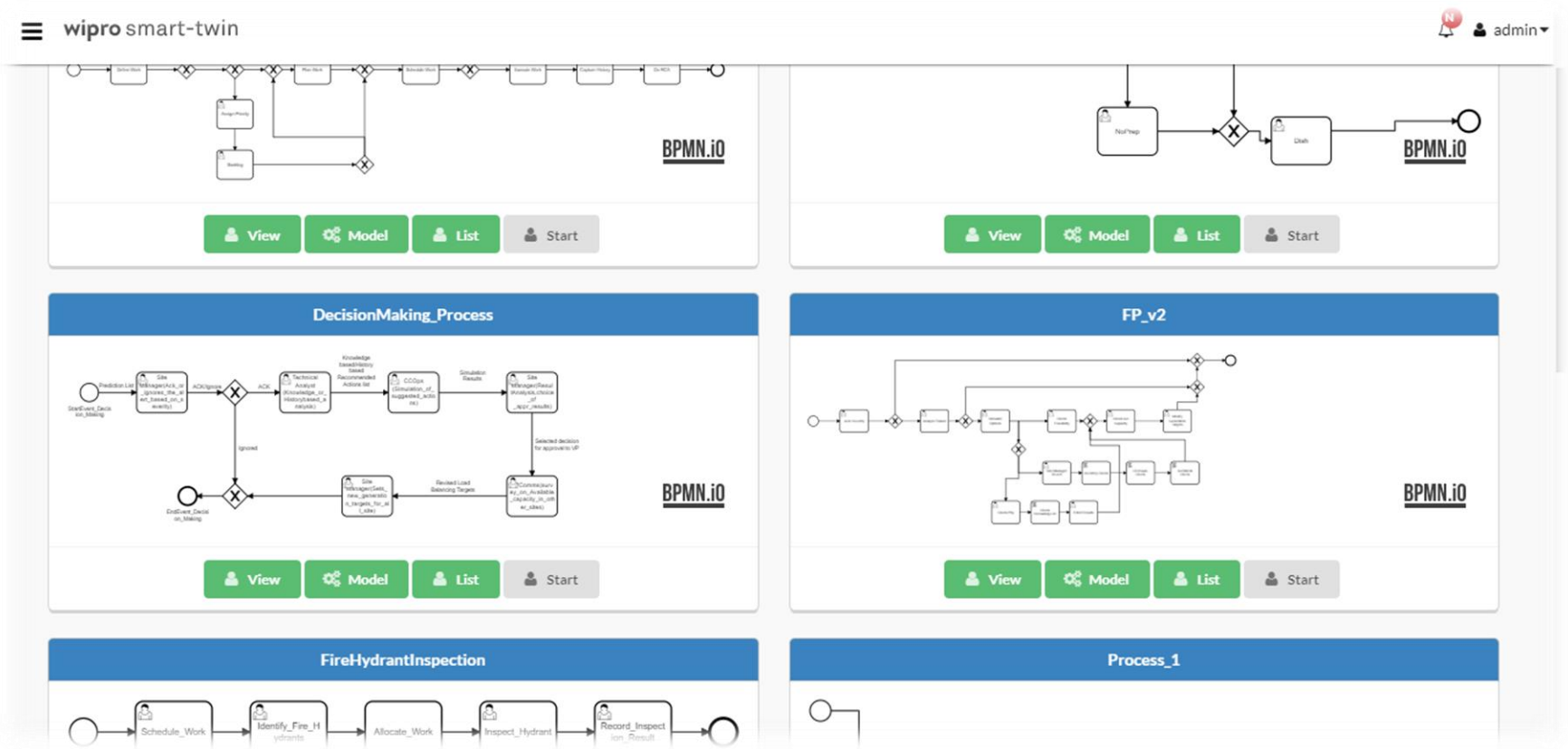
Guided flow to capture root-cause of an event with contextualized data

ACT



Corrective action/ Preventive action recommendation

ACT



Close the performance management loop with an automated workflow

and OPTIMIZE

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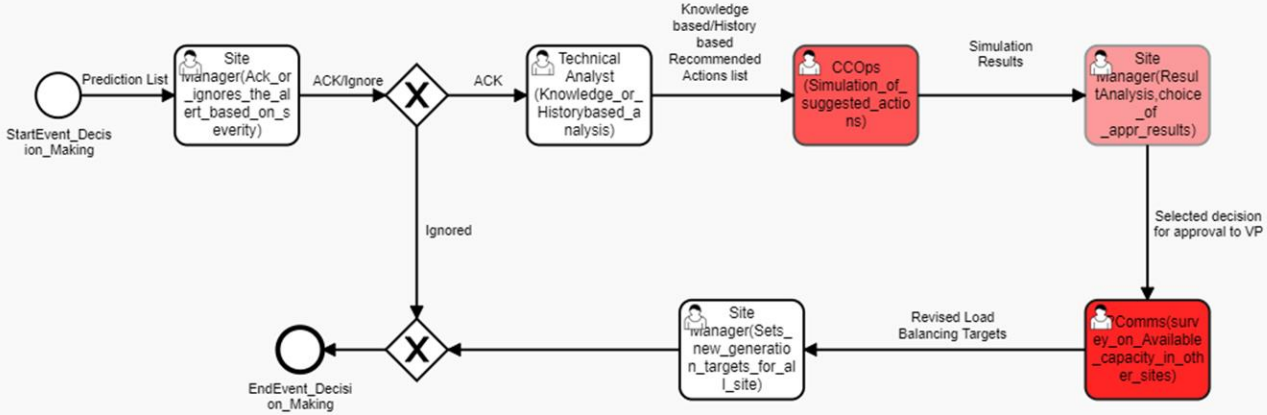
Process Name
DecisionMaking_Process



Task Statistics

Task Name	Task Count	Average Duration (s)
CCOps (Simulation_of_suggested_actions)	57	1641123.8683157892
Site Manager(Ack_or _ignores_the_alert_based_on_severi...	66	772823.5750151516
Site Manager(ResultAnalysis,choice_of _appr_results)	50	1110724.2818200001

Optimize Operational Processes with insights on Process Bottlenecks

Thank You.

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