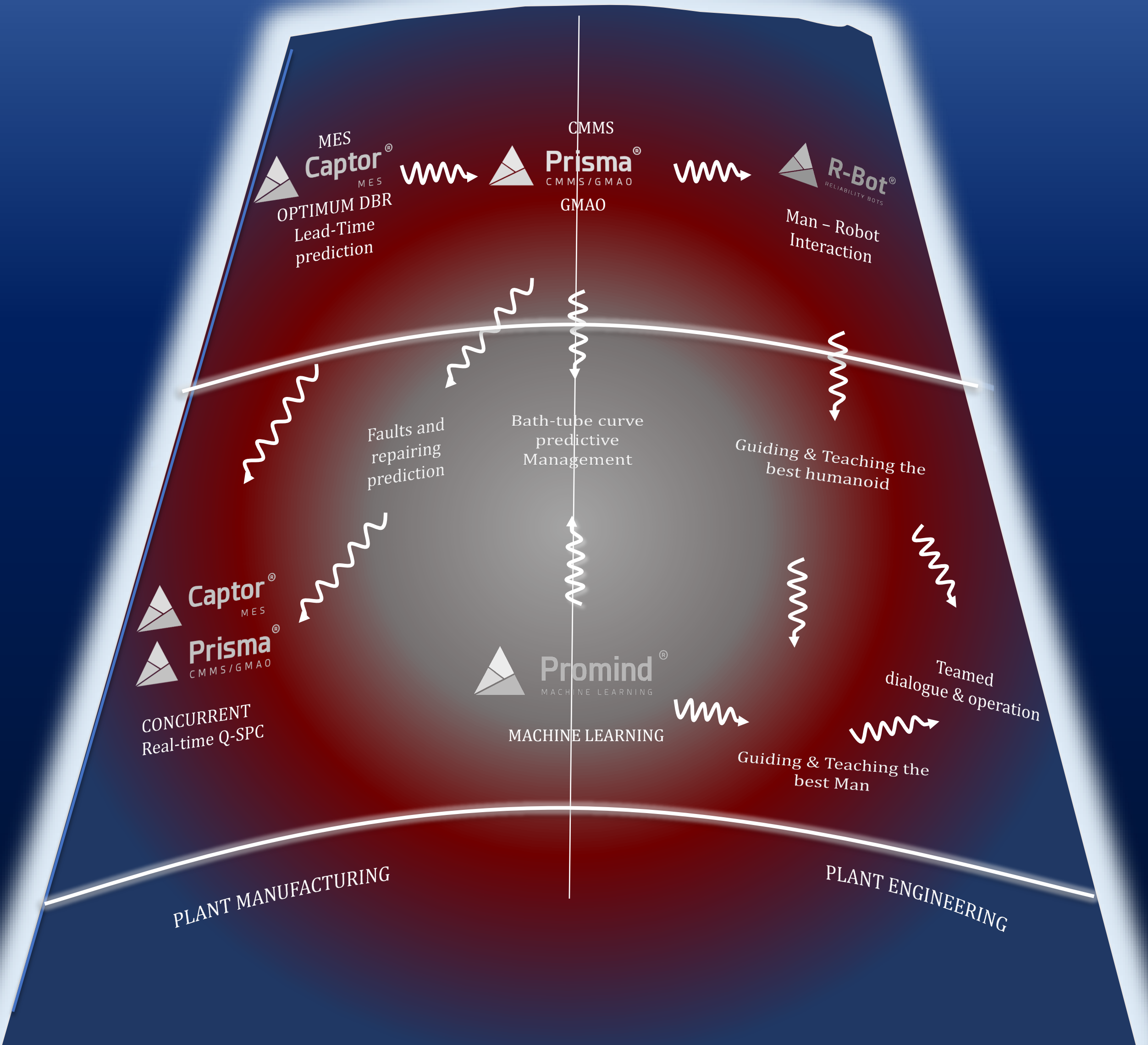
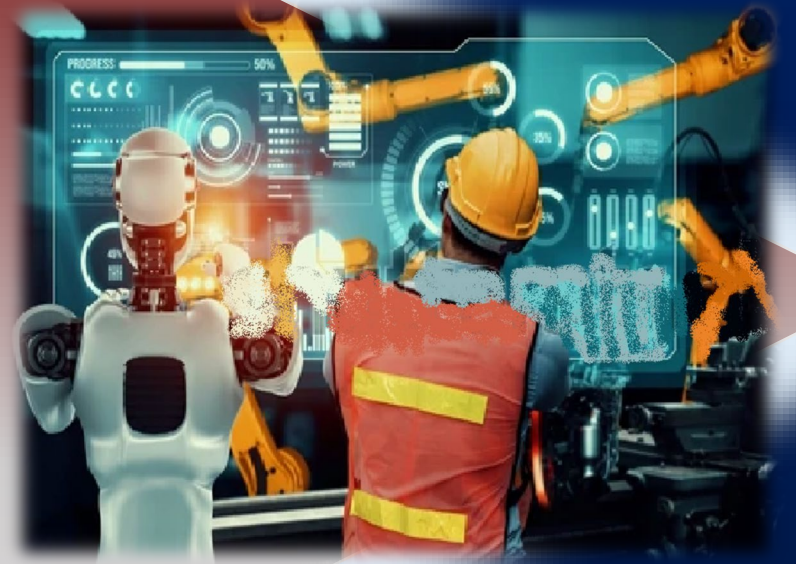


Plant Real Time Operation



SISTEPLANT Engineering: IN THE MIDDLE OF THE Cyber- FoF



Flexible Intelligent Automation

Reconfigurable process Optimization

Integral life-bath-tube-Reliability

Humanoid Robots Interaction

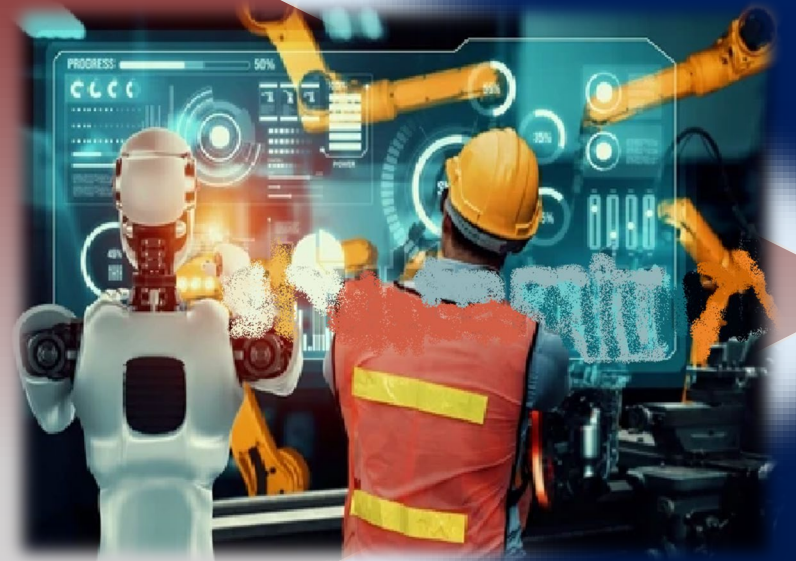
Building the Cyber-Man



Humanoid Robots Interaction

Why Prisma[®] is the best CMMS (GMAO) for the Cyber-FoF?

Integrating life Bath-Tube Reliability
Maintenance Strategy



Real-time fault prediction and A.I. Machine
Learning based root cause Analysis

Virtual reality and Symbolic Regression
Scientific operation & training

WHY Captor® IS THE UNIQUE M.E.S. FOR THE CYBER-FoF's?

CYBER-FoF:

Real time
Adaptative
Predictive
Optimization

RTAPO

DEEP IMPROVED
BY DEEP TEACHING



 Captor®
MES

RTAPO

In:

- DBR-CPM Scheduling Flow
- SPC – Quality
- Machinery Reliability & Maintenance

• $OEE \text{ and } OEE_t = 1 - \frac{MTTR}{MTBF}$

Supporting:
Sisteplant's
software

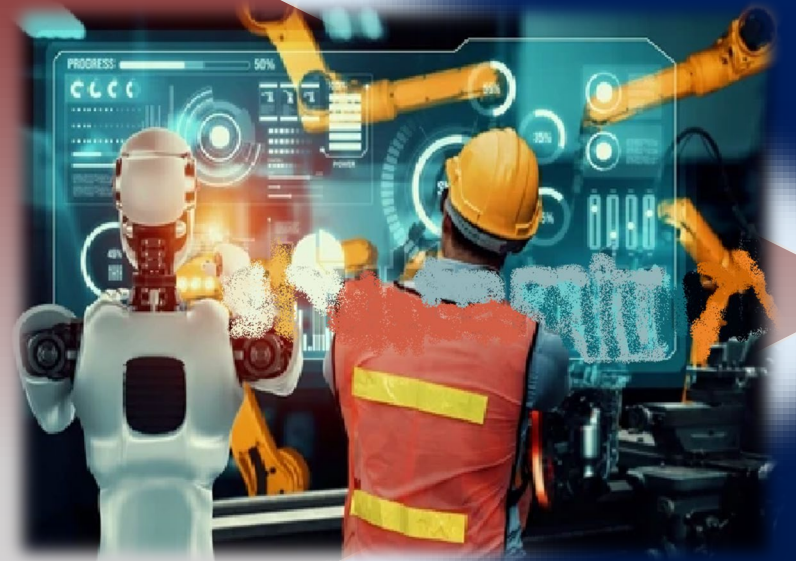
In:
• DBR-CPM Scheduling Flow
• SPC – Quality
• Machinery Reliability & Maintenance
• $OEE \text{ and } OEE_t = 1 - \frac{MTTR}{MTBF}$

(CMMS)



Promind®
MACHINE LEARNING

(Machine Learning)



Captor® &
Supporting:
Software deep
teaching

- Aggregated-Summary filtered info with
- Root-cause provided analysis and
- Plant's real-time filtered-relevant impacts virtual MIMICS



Sisteplant
Dream Innovate Challenge

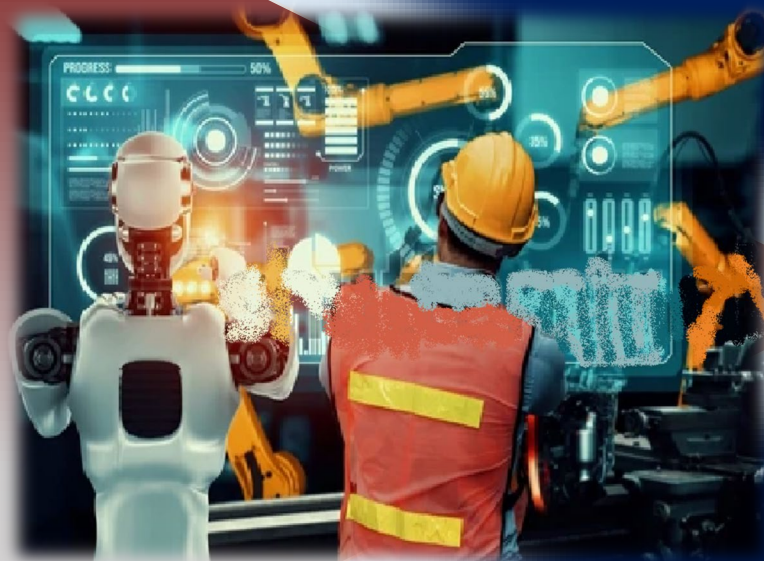
Why Promind® is the best Machine Learning software for the Cybers?

Self-explanatory Symbolic Regression

Equipment Reliability focused leading edge algorithms

Real time interaction with MES and CMMS (GMAO)

Energy optimization module






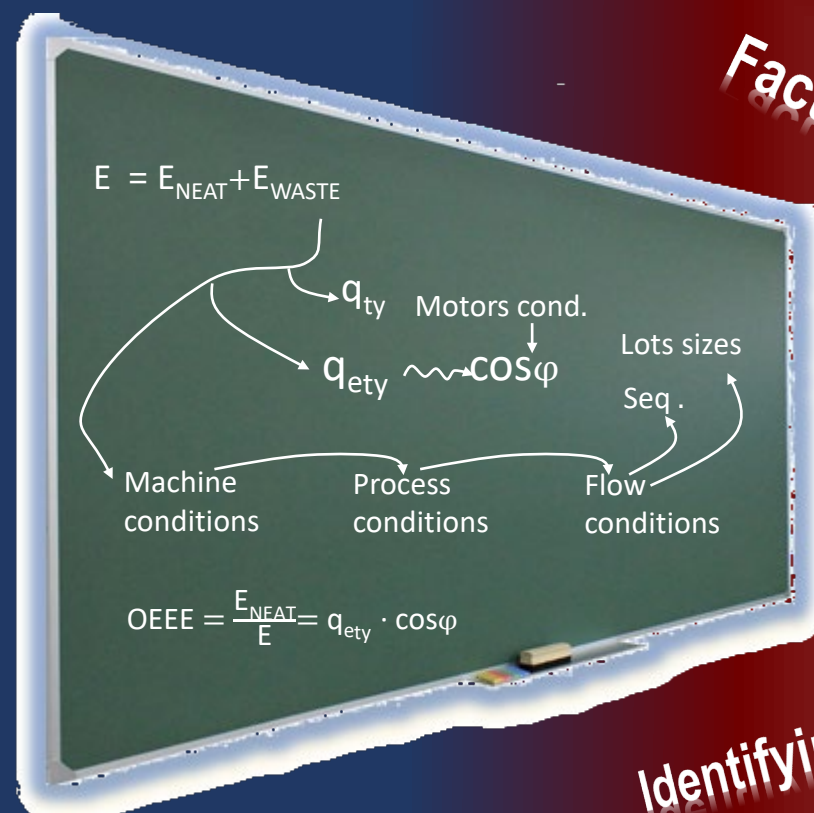
Energy Optimization from its roots



Machine Learning
detecting energy waste pools
Factoring root causes

Identifying best situations,
fixing standards and
integrated alarms

MES  **CMMS**  **Prisma**[®]
MES  **Captor**[®] integrated alarms

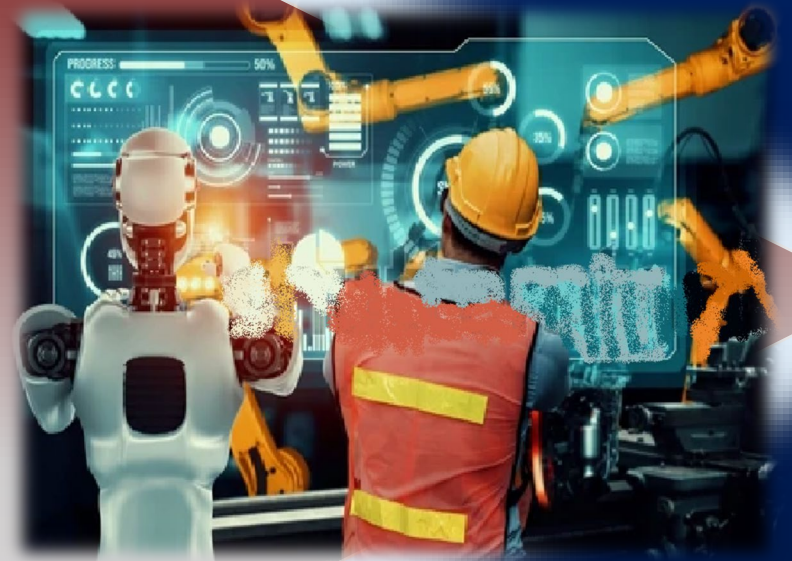


Leading human – robots interaction

Leveraging Cyber – Man Capabilities



Scientific mutual teaching and Knowledge building



Coworking robotized Maintenance



Knowing “Why he knows that he knows”