

# TKIL-Valmet Automation Solutions for Optimizing Plants Operations for Efficiency & Sustainability

## Gujarat Chem & Petchem Conference | 14.05.2026

Presenter : **Pratik Thakkar** – Regional Head (Sales & Marketing)



**TKIL Industries**  
(formerly thyssenkrupp Industries India)



# TKIL Industries Compliance Commitment

## The Executive Broad of TKIL has issued a clear Commitment for Right Environment:

We are dedicated to conduct our business with the highest standards of integrity, professionalism, and compliance. As a leading provider in EPC industry, we understand the importance of upholding regulatory requirements and ethical practices in all aspects of our operations.

Our commitment to compliance begins with our corporate governance framework, which is designed to ensure transparency, accountability, and effective governance. [Our board of directors and management team are fully committed to promote a culture of ethics and compliance throughout the organization.](#)

We understand the importance of ethical conduct in our business relationships. We strive to treat all employees and business partners with respect and equity, ensuring an inclusive and respectful work environment. With our continuous efforts towards sustainable and ethical business practices, we take responsibility for our actions and their impact on the environment, society, and our stakeholders. [We maintain strict anti-corruption and anti-bribery policies and comply with all applicable laws and regulations, including the Prevention of Corruption Act, 1988.](#) We expect our employees, suppliers, and partners to uphold the same standards of integrity and compliance.

At TKIL, compliance is not just a regulatory requirement – it is a fundamental part of who we are and how we do business. [We are committed to fostering a culture of compliance, where every employee understands their responsibilities and acts with honesty, integrity, and respect for the law.](#)

Vikram Swarup  
Chairman of the Board

Vivek Bhatia  
Managing Director &  
Chief Executive Officer

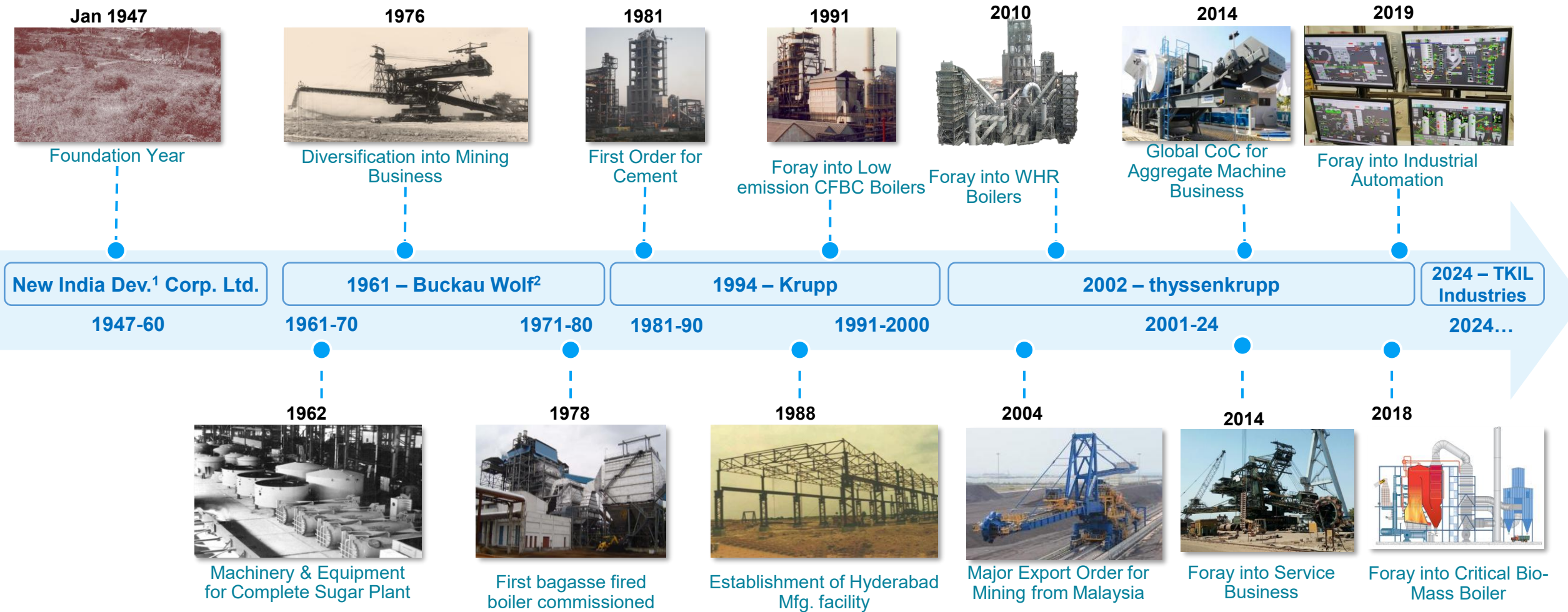
Ketan Pendse  
Whole Time Director &  
Chief Finance Officer

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**About TKIL Industries Private Limited**  
(Formerly thyssenkrupp Industries India)

- 79 Years of Industrial Leadership
- Global delivery in Energy, Sugar, Mining, Cement & Automation
- 350+ Boilers | 140+ Sugar Plants | 90+ Mining | 40+ Cement Plants | 6000+ Machines and Equipment installations



1. Development 2. Buckau Wolf New India Engineering Works Limited

... and we have successfully delivered many projects worldwide

● Sugar ● Cement ● MHE ● Energy ● Service



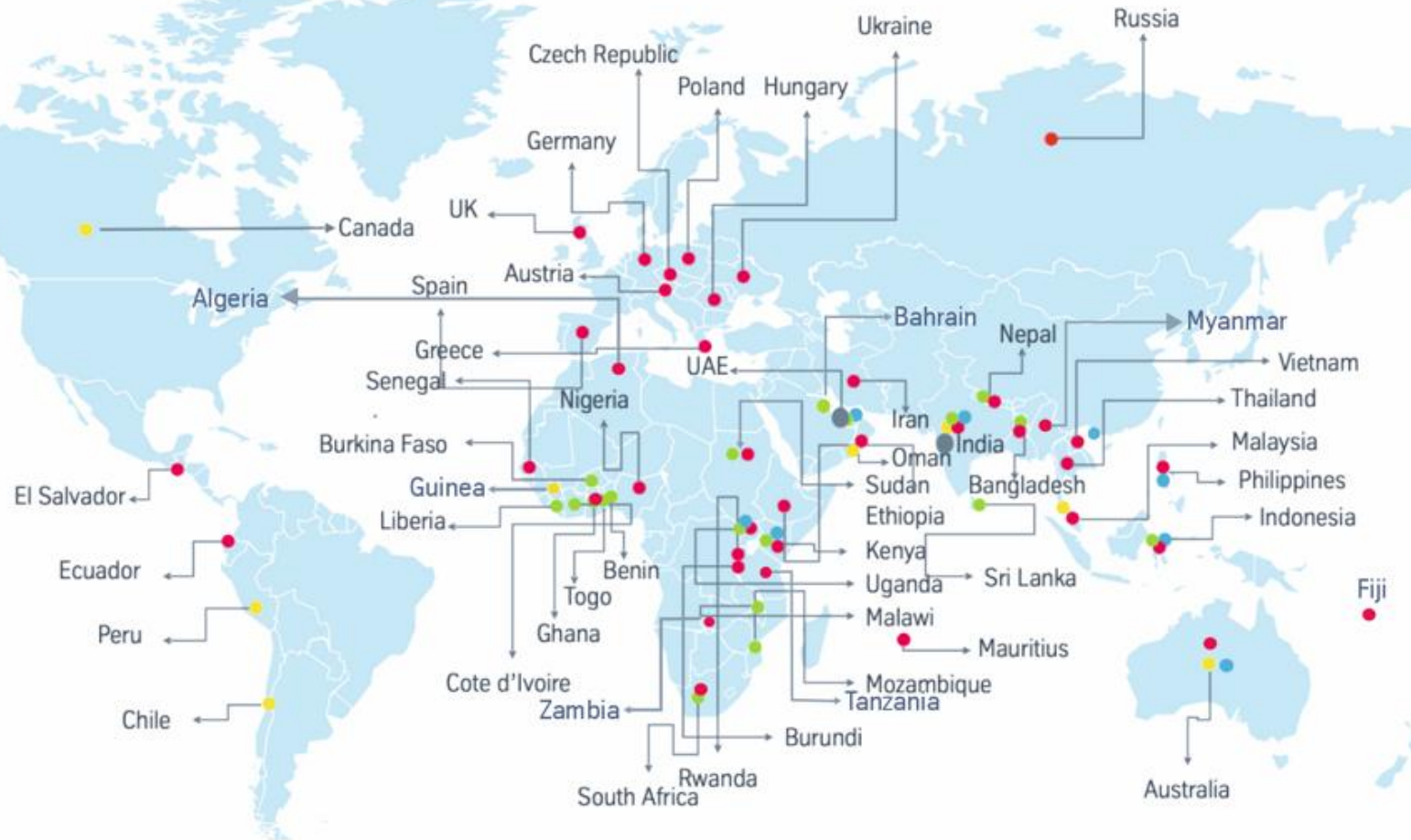
TATA Steel Ltd; Rotary Twin Wagon Tippler, Kalinganagar



JSW Steel Ltd, Dolvi, Raigad; O&M of RMHS



6 Nos. of Gearless Drive Escondida Pulley Project, Chile, South America



TPSC CEPALCO, Philippines, 3 Units of 220 TPH CFBC Boiler



Samur Project At Sabah Malaysia, 1,120 TPH Portal Scrapper reclaimer, Conveying system and Ship loader



GCC, Integrated cement plant ~7,000 TPD and 33MWe WHR power plant

Multiple manufacturing sites in India | International installations in 35+ countries | Strong O&M and lifecycle support

## Collaboration – TKIL and Valmet for Distributed Control System

# News TKIL- Valmet DCS collaboration ...

### The Financial Express

#### Thyssenkrupp, Valmet tie up for industrial automation solutions

GEETA NAIR  
Pune, July 20

**INDUSTRIAL AND TECHNOLOGY** company Thyssenkrupp Industries India and Finland-based Valmet have joined hands to deliver control and industrial automation solutions in India and other countries. Thyssenkrupp will sell and distribute Valmet's process automation systems for the energy sector and process industries such as sugar, fertilisers, petrochemicals and metals. The first phase of the collaboration will be for eight years.

Valmet was in partnership with BHEL for over two decades and is now going to work with Thyssenkrupp to accelerate growth and expand in India. Till now, Thyssenkrupp was buying these control and automation equipment from firms like Siemens, Honeywell, ABB and Emerson, and will now have its own products for the power plant segment, Abhay Patil, director, energy division, Thyssenkrupp Industries India, said.

BHEL is largely into plants in the 600-800 MW range but this market is shrinking. Thyssenkrupp plants would be in the 300 MW range and these are mostly captive and cogeneration plants.

### Statesman

**Valmet partners thyssenkrupp industries India: thyssenkrupp industries India and Valmet have signed a cooperation agreement to sell and distribute process automation systems for the energy sector and process industries such as sugar, fertilizers, petrochemicals, and metals in India and other countries. The contract signing ceremony was held on June 26th, 2023, at the Embassy of Finland in New Delhi. The partnership between thyssenkrupp industries India and Valmet goes beyond the cooperation on Valmet DNA Distributed Control System. They plan to work together in areas such as technology innovation, business model development, and customer service.**

### Financial Explorer

#### Thyssenkrupp Industries India and Valmet Combine Forces for IIoT 4.0 Industrial Automation Offerings

**JAMMU, JULY 14** thyssenkrupp Industries India and Valmet have signed a cooperation agreement to sell and distribute process automation systems for the energy sector and process industries such as sugar, fertilizers, petrochemicals, and metals in India and other countries. The contract signing ceremony was held on June 26th, 2023, at the Embassy of Finland in New Delhi, India.

The collaboration will primarily focus on projects billed through thyssenkrupp, and the first phase will be effective for a period of eight years. By leveraging their respective strengths and expertise, both companies aim to deliver top-notch control and automation solutions, thereby establishing a robust portfolio of Industrial Automation solutions within the realm of IIoT 4.0.

The partnership between thyssenkrupp Industries India and Valmet goes beyond the cooperation on Valmet DNA Distributed Control System. They plan to work together in areas such as technology innovation, business model development, and customer service.

The agreement highlights the commitment of thyssenkrupp Industries India and Valmet to become preferred brands for their customers by delivering value and premium solutions. thyssenkrupp Industries India also emphasizes its dedication to expanding its service offerings for both domestic and global customers by developing new solutions.

"We are very happy to offer to our customers a control system that will work seamlessly with our equipment. We are delighted to be able to offer this in collaboration with Valmet who are a proven technology leader in this field. This is in keeping with our strategy to enhance the automation and digital quotient of the products we bring into the market" - said Mr. Vivek Bhatia, Managing Director & CEO, thyssenkrupp Industries India.

"With Valmet as our technology partner, our primary goal is to deliver long-term value and exceptional benefits to our valued customers. Through the partnership, we aim to bring operational efficiency to all our customers." - said Mr. Abhay Patil, Director - Energy Division, thyssenkrupp Industries India.

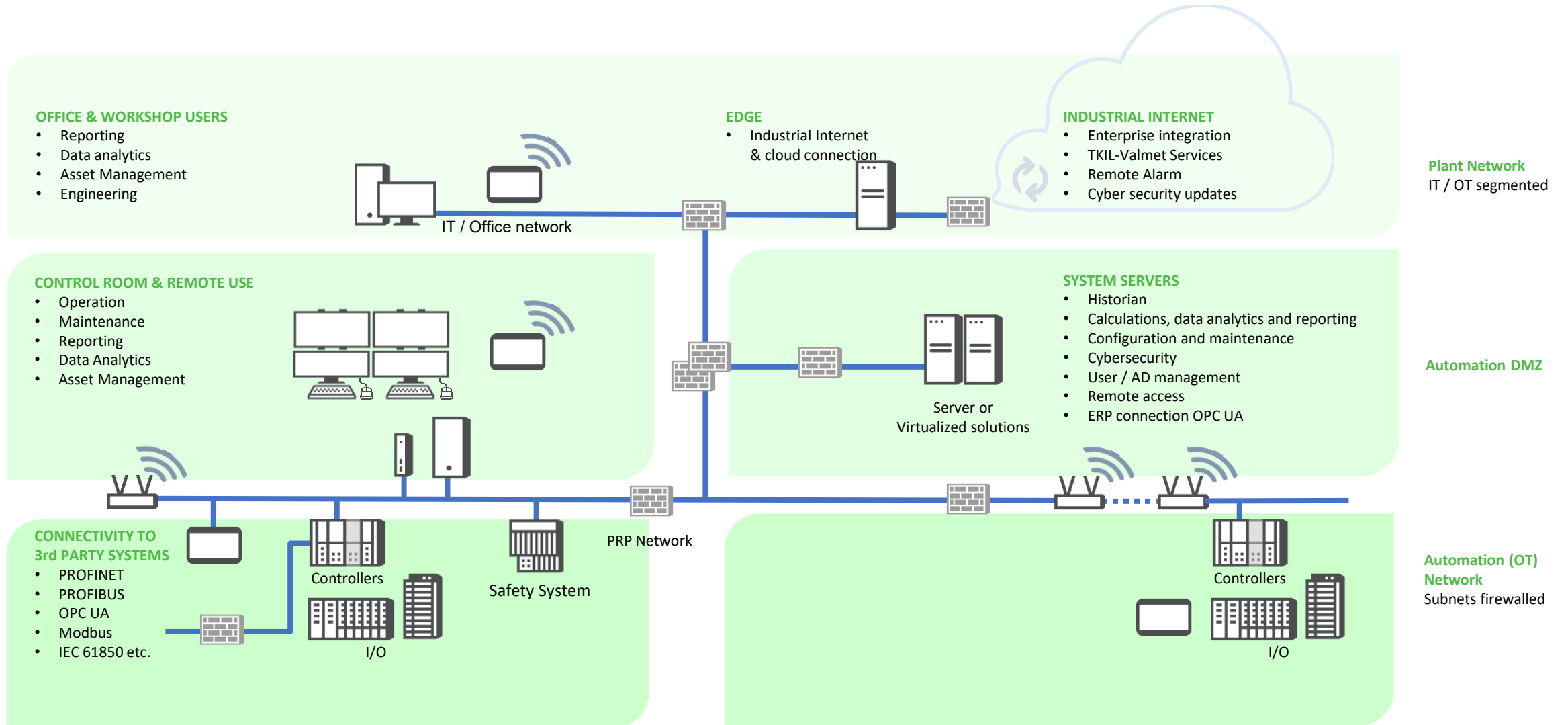
"thyssenkrupp's and Valmet's offerings complement each other, and with this cooperation we will be able to offer unbeatable value for the end customers. This agreement is an important step for Valmet's Automation Systems to further increase our market share in India." - said Mr. Pekko Luomi, Automation Partner Business Director, Energy and Process Systems, Automation Systems Businessline, Valmet.

"Valmet is aiming to increase their footprint in the energy sector through various technologies and partnerships. The strategic agreement with thyssenkrupp will strengthen Valmet's automation business in India and other countries. Moreover, the solution will help to differentiate ourselves among automation solutions and create new technology job opportunities in India. This is a first step and we look forward to expanding this partnership in other complementing areas." - said Mr. Varun Jain, Director, India Region, Asia Pacific, Valmet.



**TKIL - Valmet DNA DCS**  
Unified and Scalable Automation for Process Plants

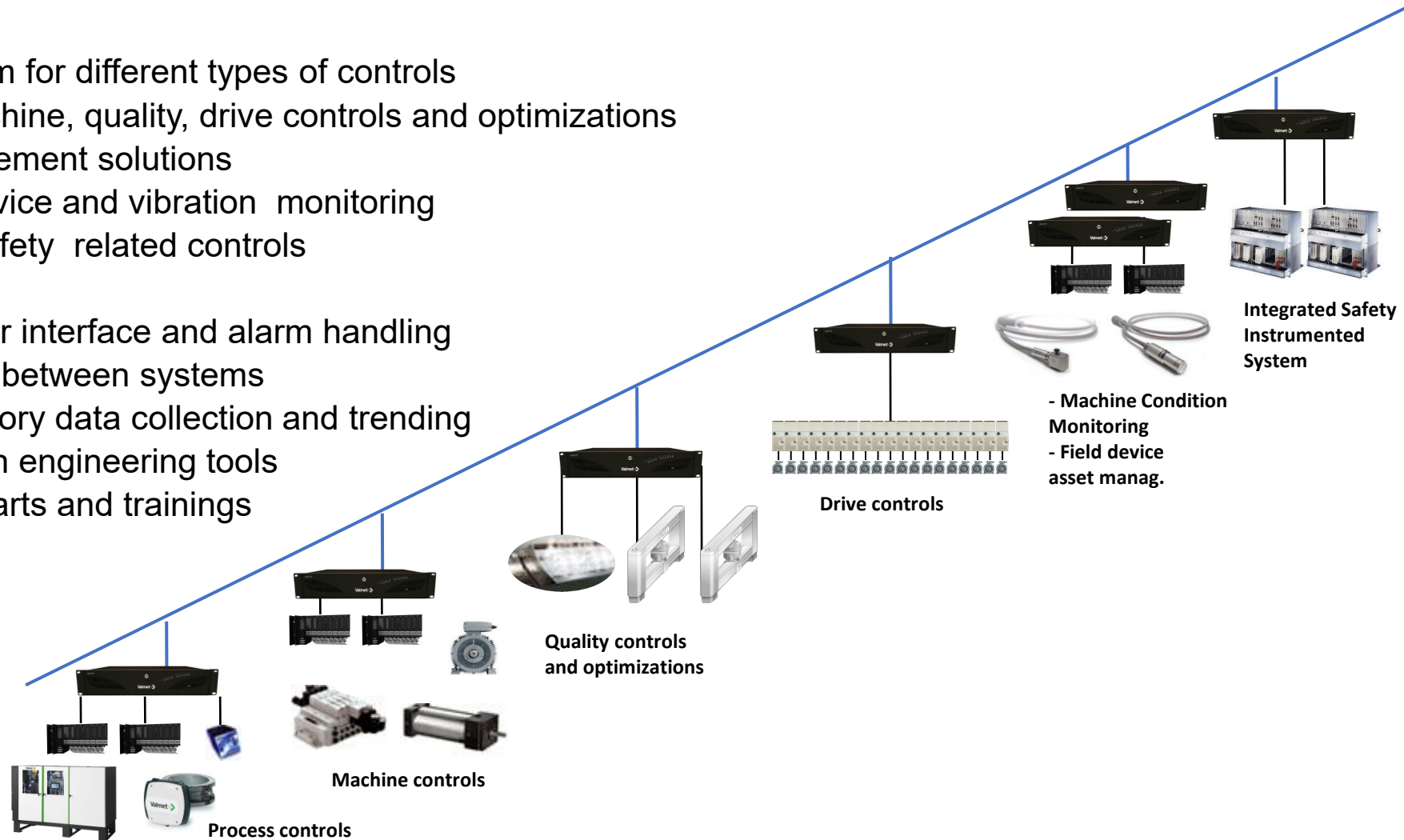
# TKIL-Valmet DNA DCS architecture :



DCS Architecture meant for Reliable, redundant, and highly scalable solutions for complex process plant management

## One Platform for All Needs

- Same platform for different types of controls
- Process, machine, quality, drive controls and optimizations
- Asset management solutions
  - Field device and vibration monitoring
- Integrated Safety related controls
- Benefits
  - One user interface and alarm handling
  - No links between systems
  - One history data collection and trending
  - Common engineering tools
  - Spare parts and trainings



## Competitive advantages of TKIL-Valmet DNA – DCS System

### Valmet DNA DCS – Differentiating & Unique Features

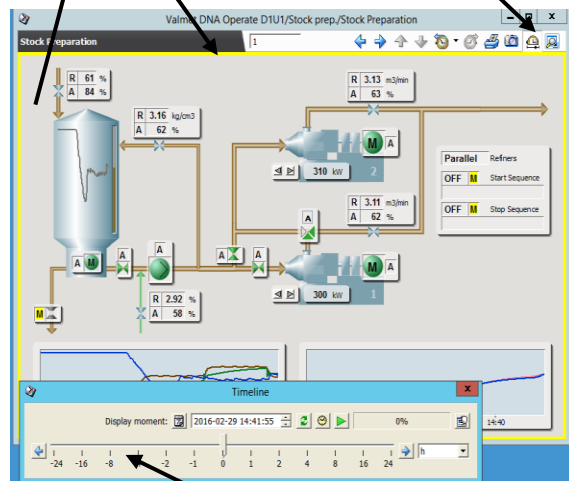
- ✓ Workstation based architecture directly connected on communication bus without any proprietary interface (Protocol conversion) card
- ✓ Most powerful controller in industry with **2 GB RAM** and **1.91 GHz**
- ✓ Operating Temp of Controller & I/O modules is upto **(+) 70° C**
- ✓ Up to **256** Modules / Controller
- ✓ Digital I/Os with maximum **16 Channels per modules** with **status indication** LED for each channel
- ✓ **No mixing** for Input / Output in a module
- ✓ **Identical speed** for communication between various I/O racks
- ✓ Fast control cycles, as low as **10 millisecond**
- ✓ Trends as fast as **100 millisecond** possible for critical data points & available in all stations
- ✓ All Digital Input modules with provision of **2 millisecond** or faster time stamping in real time on the card
- ✓ All modules with default **G3 Protection** coating for improved reliability in harsh conditions
- ✓ Integrated **SOE** recording at **1 millisecond** for all DI signals & SOE viewing possible in **all stations**
- ✓ **Direct connectivity** with Third Party Systems / PLCs / Field devices using industry standard communication protocols
- ✓ **Time Machine** feature : Option of replay of process graphics for fault analysis or troubleshooting and training purpose
- ✓ Configurable **multi-lingual support** for User Interface

## DNA Operate – Time machine for root cause analysis, diagnostic & troubleshooting tool enhancing plant efficiency



History mode indication

Switch to history mode



Select time in history and replay

### Key Features of the Valmet DNA Time Machine:

- **One-Click Replay:** Operators can switch from live mode to history mode with a single click to replay past events.
- **Replay Any Picture:** It enables the replay of data from any process picture or display, not just designated trend screens.
- **Flexible Time Selection:** Users can pick a specific time and date to "rewind" to, then play through the sequence of events.
- **Comparison Function:** The system allows comparing past, recorded, or "frozen" process situations against the current real-time process to identify deviations.
- **Drag-and-Drop Analysis:** Any signal can be drag-and-dropped from a process picture to a trending tool for rapid analysis.
- **Integrated with Diary & Alarms:** The Time Machine integrates with the Valmet DNA Diary and alarm lists, allowing users to trace the causes of alarms during the replayed sequence.

### Benefits of Time Machine:

- **Efficient Disturbance Analysis:** Enables instant understanding of what happened during a specific time, such as a trip or a weekend shift
- **No Configuration Needed:** The feature automatically uses historical data stored in the Valmet DNA Historian, requiring no extra engineering.
- **Improved Troubleshooting:** Helps in identifying root causes,, which supports predictive maintenance and improves overall reliability

# Performance solutions for Process plants

## Cloud-based reporting and data analysis

TKIL-Valmet Customer Portal

Self Service Analytics

Dashboard KPI Creator

Reliability Monitoring

Fuel Chain Management

## Emission Monitoring

DNA LCP and WI Emission Monitoring (Bio/multi & WtE/co-inc.)

DNA Pulp Air Emission Monitoring

DNA Flue Gas Monitoring (LCP and WI)

DNA CO<sub>2</sub> Monitoring \*

## Plant Management

DNA Energy Management

DNA Fuel Data Manager

## Performance Monitoring

DNA Plant Operation Monitoring

DNA Boiler Perf. Monitoring

DNA System Monitoring and Reporting for Turbines

DNA HRSG Perf. Monitoring

DNA Heat Exchangers Perf. Monitoring

DNA Gas Turbine Perf. Monitoring

DNA Steam Turbine Perf. Monitoring

DNA Pumps & Fans Perf. Monitoring

DNA Energy Dashboards

DNA Operation Point Deviation Monitoring

## Maintenance Monitoring

DNA Boiler Sootblowing Manager

DNA Machine Monitoring (DMM)

DNA Boiler Life Monitoring

DNA Boiler Corrosion Manager

## TKIL-Valmet DNA - Information Management

DNA Historian

DNA Report

DNA Operate/ User interface

DNA Historian Calculation

DNA Historian Excel Add In

DNA Diary

DNA Disturbance Management

3<sup>rd</sup> party Interface tools

## TKIL-Valmet DNA - Advanced Process Controls (APC)

DNA Fuel Power Compensator

DNA Combustion Manager

DNA Steam Network Optimizer

DNA District Heat Optimizer

DNA Electric Load Shedding

DNA Corrosion Manager

DNA Power Management System

DNA Training Simulator

Included in the standard DNA Information Management delivery scope

- [Time Machine](#)

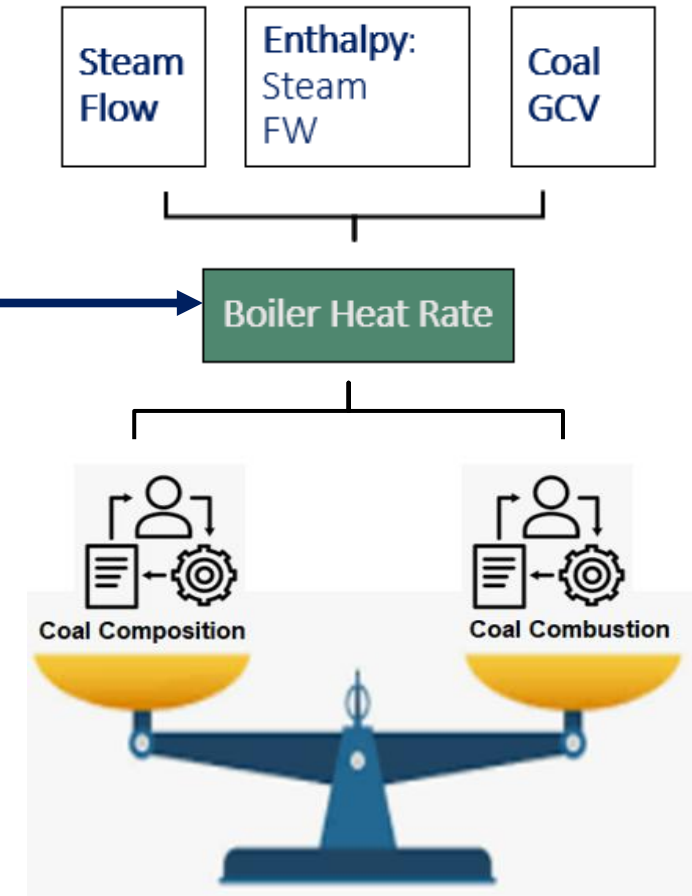
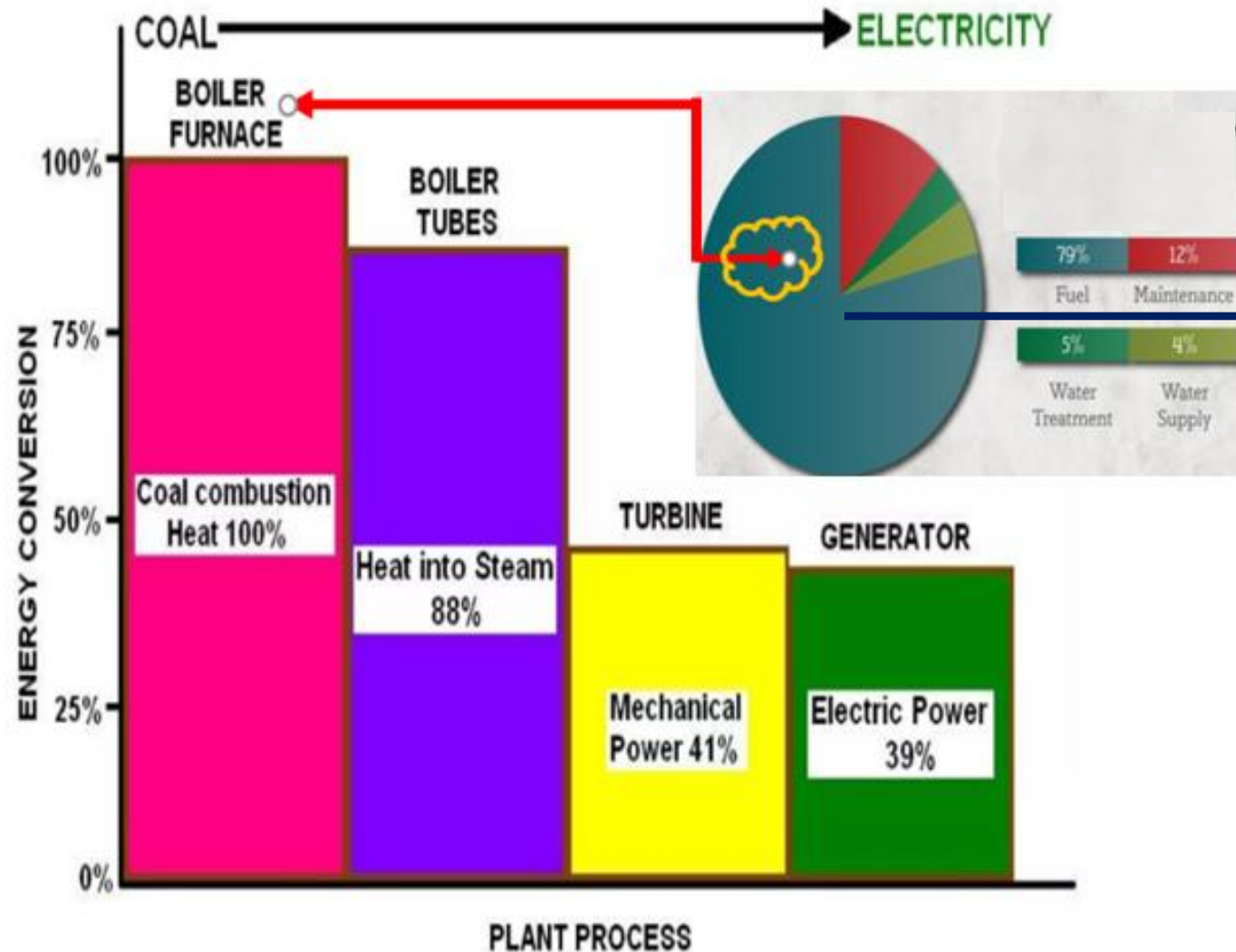
**TKIL SCOBES :  
Sustainable Coal & Boiler Excellence Solution**

# Genesis of the Concept

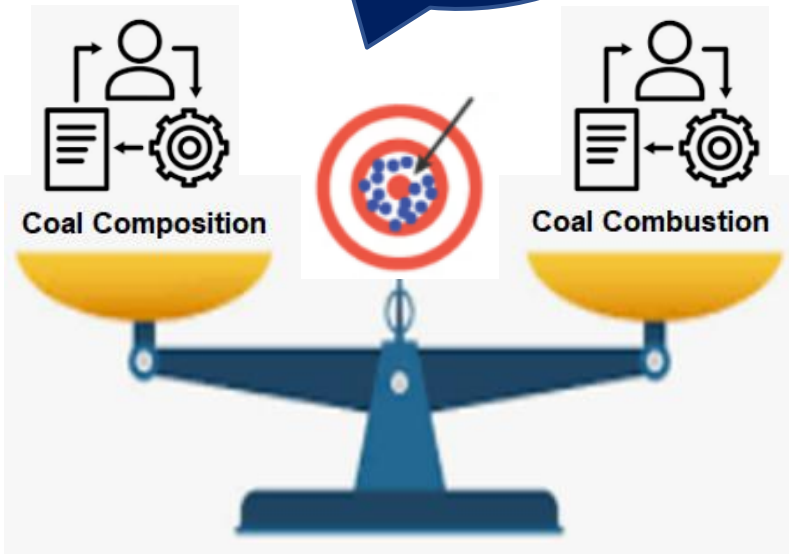
Fuel cost dominates operational expenses

Boiler heat rate is a key efficiency indicator, influenced by coal quality and combustion efficiency

## Electric Power Generation From Coal



How?



**What**

1. Analyzes Coal Properties & Calculates Boiler Heat Rate in Real-Time
2. Determines Actual Coal, Combustion Air & Back-end temp required
3. Steers Close-Loop System (Auto) for Consistent Optimal Operation

**Why**



**Small Savings, Big Impact**

1	Coal	.x 1 = /hr	... x 24 = / Day	....x 30 = / Month	X 330 = / Year
2	Aux. Power	.x 1 = /hr	... x 24 = / Day	....x 30 = / Month	X 330 = / Year

TKIL HQ



**Track at TKIL HQ**

**Trend**

**Live Dashboard**

Parameter	Unit	Actual	Target	Difference	Class
Coal Feed	WPH	8.15	7.65	0.5	Boiler No:
Coal Grade	WPH	80.10	76.0	4.10	Capacity:
Moisture	WPH	41.89	40.2	1.69	Previous Day Summary
Moisture	WPH	38.21	35.8	2.41	Actual
Moisture	WPH	4.79	3.5	1.29	Target
Moisture	WPH	7.46	6.80	0.66	Actual
Moisture	WPH	159.4	137.0	22.4	Target
Moisture	WPH	226.2	250.0	-23.8	Actual
Moisture	WPH	890.0	850.0	40.0	Target
Moisture	WPH	935.6	312.0	23.6	Actual

**TKIL Data Processing Unit (DPU)**

- Coal Database \*Analysis Softwares
- Boiler Database & Analysis Softwares
- Data Comparator & Algorithms
- Communication Module
- Historian
- On-Prem Server & Display

**Ambient & RH Sensor**

PLANT

Modem

TKIL EDGE Device

Data Transferred in Encrypted form

MODBUS  
TCP/IP

Live Coal Analysis

OPC UA

Ethernet Switch

OPC UA

Plant Control System

Intranet

OPERATION

## What is in for

**CUSTOMER**

Real-Time Coal Analysis & Optimal Boiler Heat Rate

Sustainable Savings in Coal & Aux. Power Cost

Minimal Manual Intervention for Operation

Quick Return on Investment (RoI)

**TKIL**

Predictive Operation for Combustion Optimization

Value-Added Offering for Clients

Unique & Exclusive Feature by TKIL

Patented Technology of TKIL (Patent applied)

Consistent Engagement between Client and TKIL

# TKIL - Valmet PlantTriage : Enhancing Process Performance with PID Tuning & Diagnostics

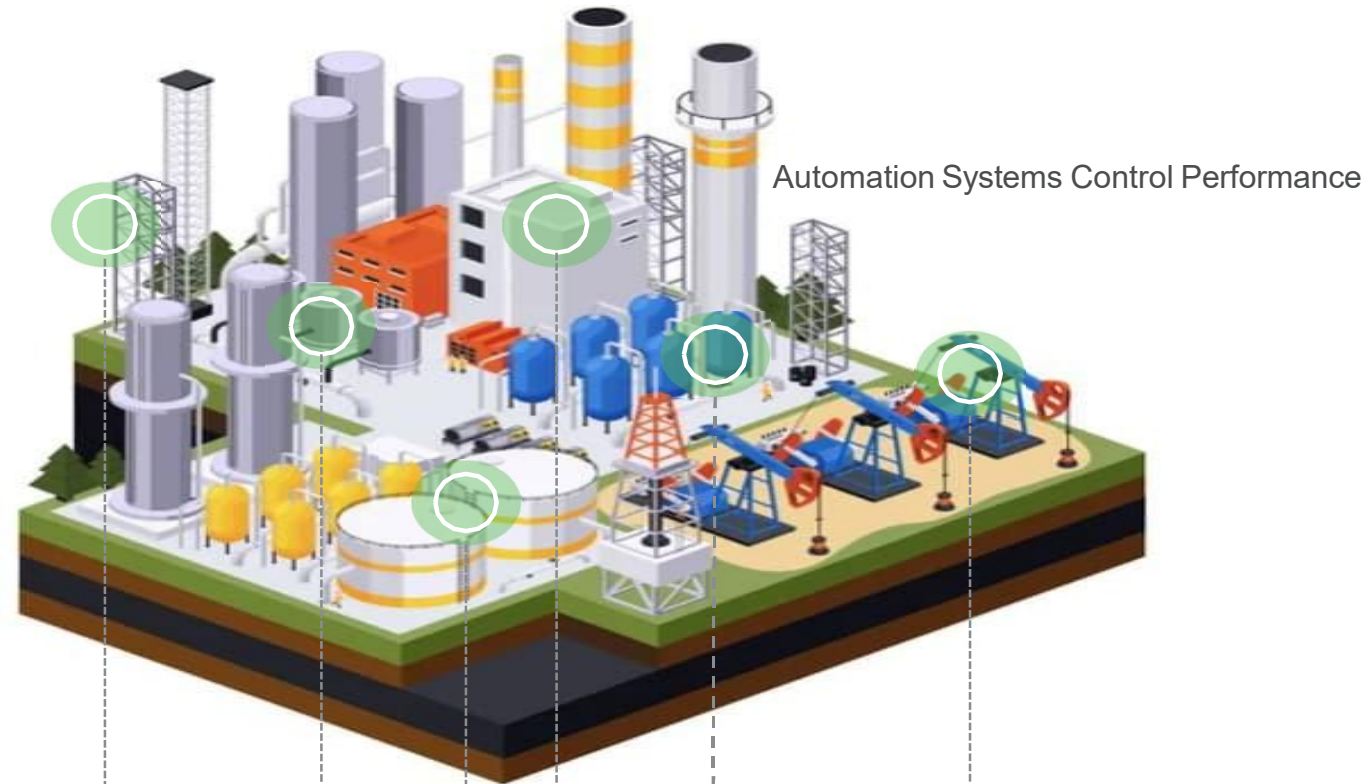
# Valmet PlantTriage

## Process Performance

- **Improved process performance**
- Increased capacity better efficiency
- **Better reliability and uptime**
- Elimination of unplanned shutdowns
- **Reduced maintenance costs**
- Shorter and safer planned shutdowns
- **24x7 control loop monitoring**

## General Features

- Monitors the performance of instruments, valves, and controllers
- Prioritizes issues by improvement opportunity
- Determines the root cause of process upsets
- Complete set of analysis tools
- Integrated loop tuning, instrument, and valve analysis
- Cybersecurity measures built-in
- Graphical, web-based interface
- Fully integrated loop tuning
- Unlimited number of users
- Integrated data historian
- Support for industry-standard OPC interfaces
- Scalable, from 100 loops to tens of thousands.
- Integrated, practical help system
- Powerful reporting, easy to use



## Some of our customers

Oil & Gás	Chemicals	Pulp & Paper	Metals and Mining	Pharma, Beverage & Food	Utilities / Energy

8000+

Licenses Sold Globally

300k+

Control loops monitored

Time for your questions!

For any query and information Contact us...



➤ Pradeep Jagtap - Engineering

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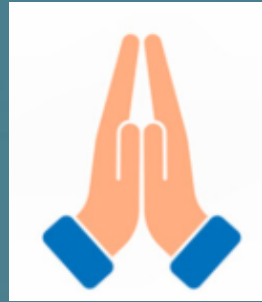
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**We welcome you to visit our  
Booth No.15 for F2F interaction...**



**Thank You**