

ITC Infotech SPECTRUM

for Smart Manufacturing



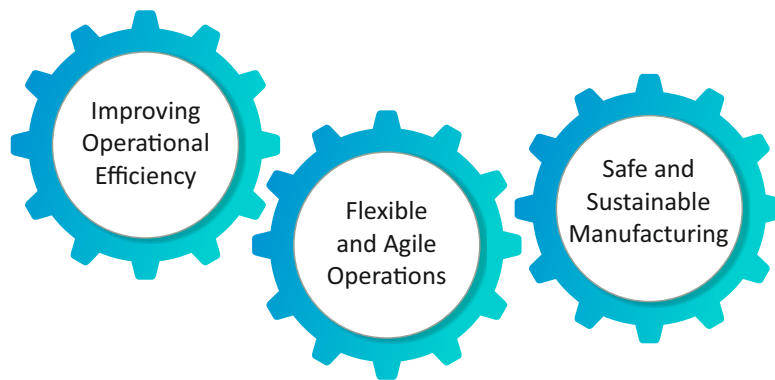
ITC Infotech's SPECTRUM for Smart Manufacturing is a cloud-based solution that acts as a quick launchpad for Industry 4.0 implementation by bringing prebuilt business solutions, assessment framework, @Edge analytics & decision and deployment toolkit to enable accelerated solution scale-up across plants and geographies.

Manufacturing Challenges

Industry 4.0 solutions have enabled organizations bring business value on their manufacturing operations. With plant connectivity established for consolidation of data at shop floor level, plant centric production dashboard and solutions are available for various manufacturing personas. The focus has now shifted to bring this manufacturing data to an enterprise platform for enabling connected value chain and drive business outcome leveraging enterprise dashboards and higher order analytics use cases and thus the need for a Manufacturing Data and Analytics platform. These higher order use cases are in the areas of predictive quality and maintenance, adaptive process control, dynamic production scheduling, supply chain control tower and energy & sustainability.

The Solution

ITC Infotech SPECTRUM is comprehensive industry specific solution on Microsoft Azure IoT. As manufacturing organizations navigate towards remote and autonomous operations, the SPECTRUM solution helps rapid customization and quick deployment of OT cybersecurity compliant business use cases to accelerate value realization from Industry 4.0 initiative. The major drivers for digital transformation are:



ITC Infotech is focused on leveraging Industry 4.0 solutions to deliver business outcomes for manufacturing sector. **ITC Infotech's Digital Manufacturing Practice** brings right blend of industry domain expertise and technology capabilities of Industry 4.0, Data Science, Edge Analytics, AI/ML and Operational Technology (OT) to enable remote and autonomous operations for manufacturing organizations.

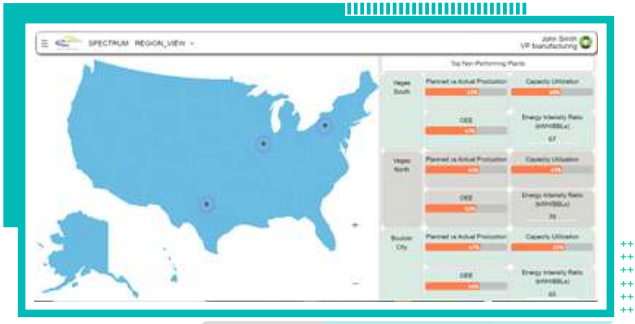
Solution Features

Following are the features of ITC Infotech's SPECTRUM solution :

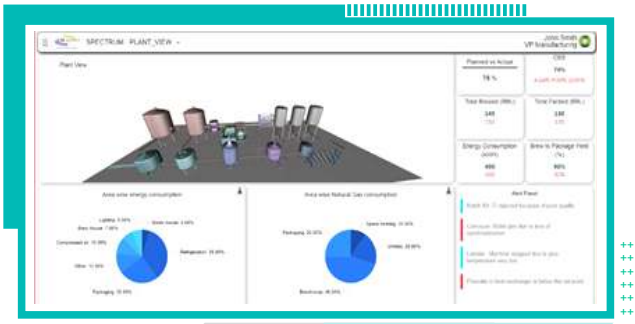
- Framework for Industry 4.0 maturity assessment and OT security assessment of client manufacturing operations
- Pre-defined reference Manufacturing Data Model to address the need to consolidate heterogeneous data of the manufacturing domain
- IoT Gateway Framework for insights and decision @Edge leveraging analytics @Edge - Worker Safety , Quality Inspection
- Industry business apps - Overall Equipment Effectiveness (OEE), Yield Optimization, Asset Predictive Maintenance, Energy Efficiency, many more
- Solution rollout toolkit for accelerated deployment of solution at scale across multiple plants and geographies



Global View provides real time information of manufacturing KPIs across regions for benchmarking of performance for leadership at enterprise level.



First level of drill down provides Region level KPIs required for persona like Regional Director.



Second level drill down for Site level KPIs required for persona like Plant Head

Use Cases Enabled by SPECTRUM



Real time Performance Monitoring: Real time view of operations and production KPIs to help take necessary interventions for meeting targets



Asset Condition Monitoring: Establish shop floor connectivity for real time machine status, health monitoring and rule based condition monitoring



Predictive Maintenance: Predict failure of shop floor equipment based on historical and real time equipment condition data



Yield Optimization: Correlation between input, process and output parameters for root cause and CAPA analysis



Energy Monitoring and Efficiency Improvement: Improve energy efficiency of plant by monitoring energy consumption and efficiency



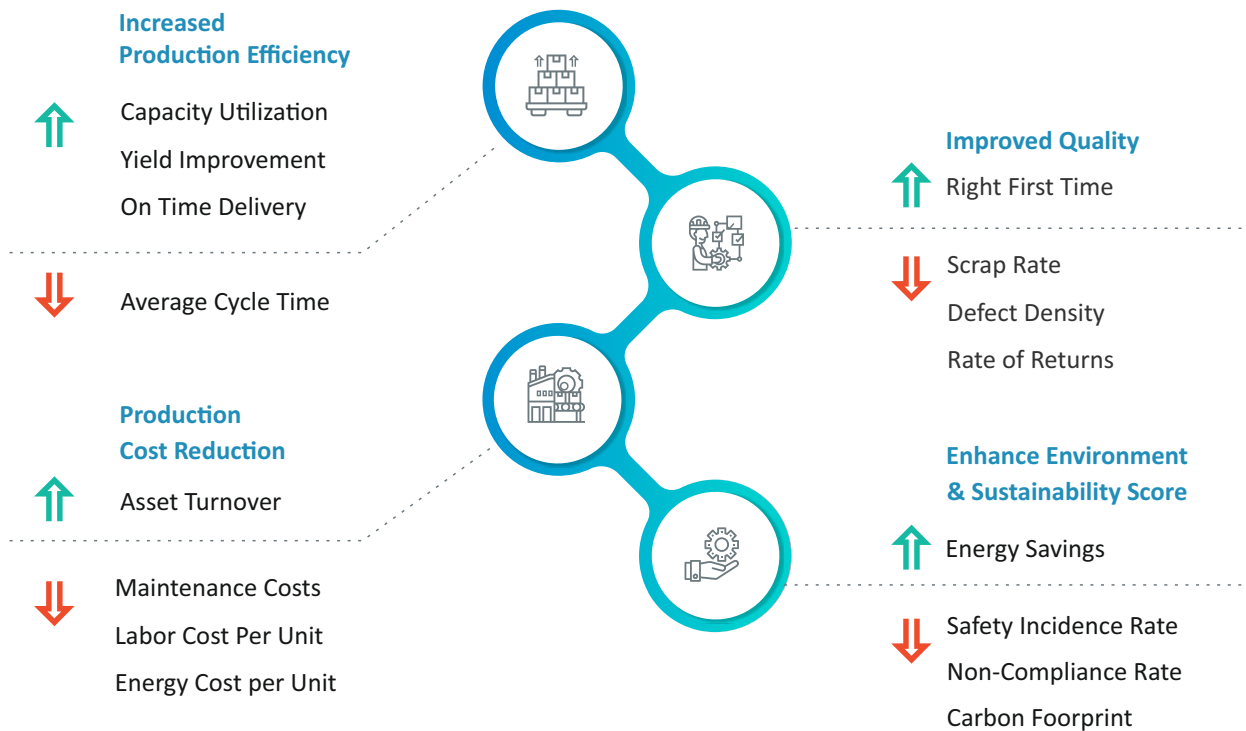
Quality Inspection @Edge: Eliminate manual errors and automate the process during end of line quality inspection, improve efficiency of quality inspection process and accelerate root cause analysis of the defect



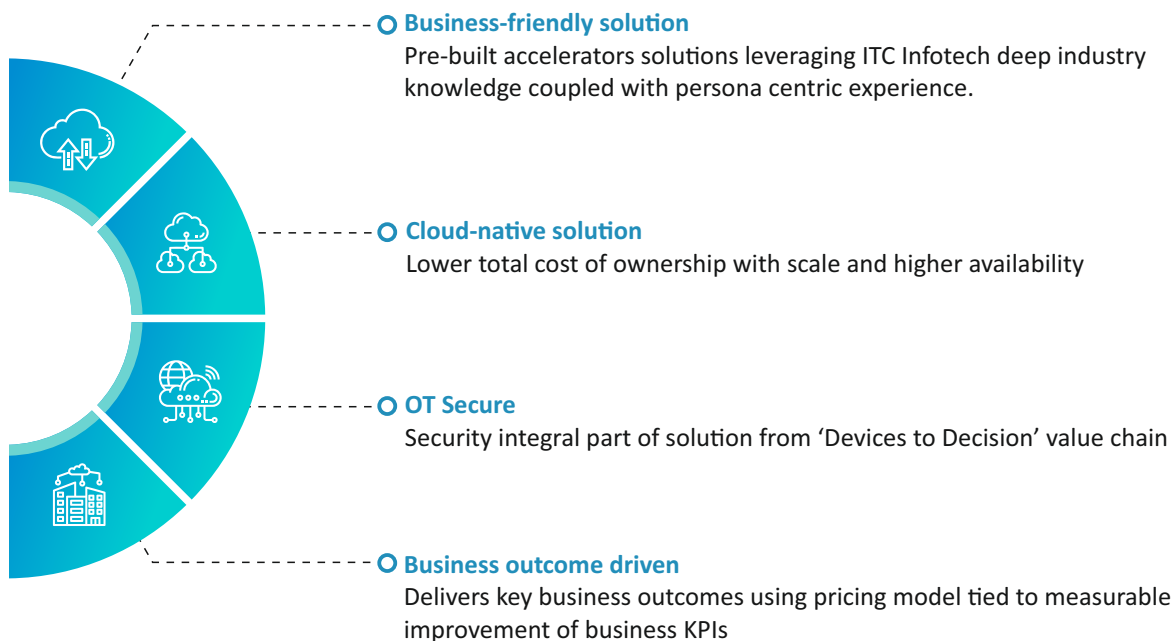
Worker Safety @Edge: Drive compliance to PPE usage through computer vision enabled detection and tracking, track worker movement in zone and proactive alerting by predicting movements of humans and vehicles within a certain proximity



Potential Business Benefits



Key differentiator of SPECTRUM solution



About ITC Infotech

ITC Infotech is a leading global technology services and solutions provider, led by Business and Technology Consulting. ITC Infotech provides business-friendly solutions to help clients succeed and be future-ready, by seamlessly bringing together digital expertise, strong industry-specific alliances, and the unique ability to leverage deep domain expertise from ITC Group businesses. The company provides technology solutions and services to enterprises across industries such as Banking & Financial Services, Healthcare, Manufacturing, Consumer Goods, Travel and Hospitality, through a combination of traditional and newer business models, as a long-term sustainable partner.

ITC Infotech is a wholly-owned subsidiary of ITC Ltd, one of India's foremost private sector companies and a leading multi-business conglomerate. For more information, please visit: www.itcinfotech.com