



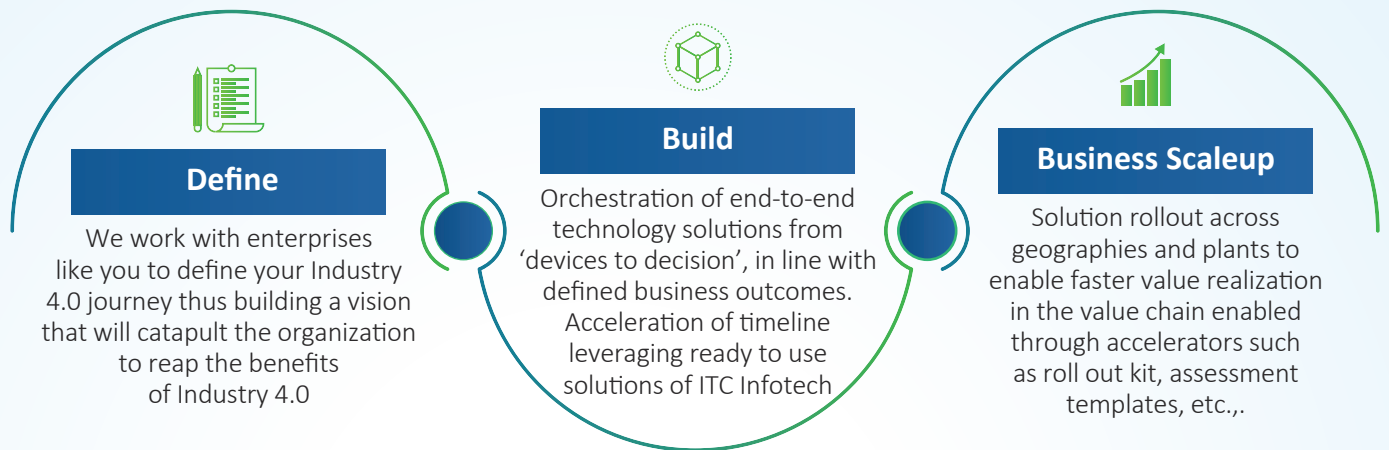
Business-friendly Solutions



Digital Manufacturing

Reimagine the future of manufacturing for your enterprise, with ITC Infotech's Industry 4.0 solutions and leverage the power of edge analytics and cloud. The advancements in Industry 4.0 and the confluence of disruptive technologies are transforming the manufacturing industry - with machines becoming intelligent, self-healing & digitally managed. Plants are becoming dynamic, data-driven and supply chain & operations are getting augmented by advanced analytics, Artificial Intelligence (AI) and Augmented Reality (AR).

ITC Infotech brings the right blend of industry & domain expertise and capabilities, enabling remote and autonomous operations for manufacturing organizations.



Service Offerings

Define

Leveraging our deep domain knowledge, we can help you transform by performing an assessment of your manufacturing operations and enterprise functions. We assess your digital readiness and help create an implementation roadmap, technical solution blueprint, prioritized use case definition, the business case for Industry 4.0 implementation and ROI realization map.



Industry 4.0 Maturity Assessment

Maturity assessment evaluates the plant's current maturity level as per the Industry 4.0 maturity model and enlists actions required to reach the target maturity state.



OT Security Assessment & Definition

We assess the cybersecurity controls of OT network to identify risks, threats, and vulnerabilities to network and provide mitigation recommendations to close security gaps in compliance with ISA 62443 security standards.



MES Consulting

Opportunity assessment, ROI analysis, MES product fitment assessment, MES implementation & roadmap definition.



Sustainability Audit & Consulting

Assessment of non-renewable resource utilization, scrap generation and provide recommendations for technology interventions leveraging our vast domain experience.

BUILD

ITC Infotech's offerings from 'Devices to Decisions' enables **Digital Manufacturing**, to improve operational efficiency, flexible & agile operations for a safe & sustainable manufacturing.



Realtime Operational Visibility

ITC Infotech's domain led approach for providing business KPI view to shopfloor personas for monitoring of operations and providing process deviation information to take necessary action.



Factory Performance Intelligence

ITC Infotech's structured approach to provide real-time visibility to manufacturing performance with loss reasons and its root cause, thus providing a line of sight to drive closed-loop continuous improvement in the overall operational efficiency.



Worker productivity – Digital Work Instruction

ITC Infotech makes the transformation to paperless manufacturing easy and seamless by leveraging our deep domain and similar transformational experiences making them accurate and simplifying tasks to the operator, thus improving their efficiency.



Predictive Quality

Yield optimization using advanced analytics by monitoring various critical process parameters and correlating with historic datasets for predicting possible product quality issues.



Asset Condition Monitoring & Predictive Maintenance

Improve manufacturing asset efficiency, avoid unplanned downtime & reduce maintenance costs with advanced data analytics, machine learning & condition monitoring of assets.



Worker Safety

Continuously monitor the health, location, safety, and movement of workers by identifying potential issues and provide insights to decrease risks & safety incidents in work environments.



Sustainability - Energy and Water Management

ITC Infotech helps optimize the consumption of non-renewable resources like water & energy for a sustainable world by providing business-friendly solutions backed with strong analytics to have a 360° view of efficient water utilization, scrap reduction in shop floor & energy optimization.

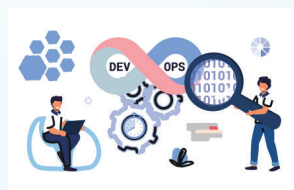
BUSINESS SCALEUP

ITC Infotech's unique & innovative tool kit based solution rollout approach for multiple plant across geographies ensures accelerated plant-specific implementations within a short time frame.



Global Support and Maintenance

ITC Infotech supports business beyond the implementation of Industry 4.0 solution by providing round the clock support and maintenance service to ensure smooth operation.



Global Rollout of Industry 4.0 Solutions

Pilot approved projects could be rolled out to all other plants with our seamless proven global rollout services.

INDUSTRY SOLUTIONS



SPECTRUM for Smart Manufacturing

ITC Infotech's Industry 4.0 solution SPECTRUM for Smart Manufacturing powered by Azure IOT promises to meet the end-to-end requirements of manufacturers to navigate their Industry 4.0 journey.

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 share heterogeneous data of the manufacturing domain
- IoT Gateway Framework for insights and decision @Edge leveraging analytics @Edge - Worker Safety @Edge, Quality Inspection @Edge
- Industry business apps - Overall Equipment Effectiveness (OEE), Yield Optimaton, Asset Predictive Maintenance, Energy Efficiency, many more
- Solution rollout toolkit for accelerated deployment of solution at scale across multiple plants and geographies

BENEFITS

Improvement in OEE by 10-15% on account of reduction in unaccounted losses

- 15% reduction in internal waste and reduction in product integrity violations
- Improvement in manpower productivity by 10% on account of non-value added (NVA) tasks reduction and elimination of manual reporting tasks
- Compliance to regulatory standards



Factory Performance Intelligence

ITC Infotech's Factory Performance Intelligence (FPI) helps organizations drive operational excellence through maximizing the performance of business-critical operations. It is a structured approach to provide visibility into manufacturing operations performance based on personas, bring attention to the right things, help prioritize and take necessary steps to improve the performance.

SOLUTION

Real-Time Asset Tracking

- Real-time tracking of asset status and throughput

Real-Time Performance Monitoring

- Real-time asset performance monitoring in the form of OEE and quality metrics
- Ability to connect to shop floor and enterprise applications such as ERP

Comprehensive solution taking care of shop floor connectivity as well

- PLC logic implementation to capture the asset status, fault codes and alarms and movement to cloud platform

Fault Code Automation

- Asset downtime reasons are automated from PLC to Gateway to the application

Inbuilt Analysis

- Pareto and donut charts for efficient RCA of downtime

Built on a low code-no code cloud native IoT Platform

- Reduce overall cost of ownership and faster ROI
! Ease of scale of solution with additional use cases and across plants

Support variety of devices

- Mobility based application access (Mobile devices/Tablet)
- Displays on televisions/monitors on the shop floor

BENEFITS

Improve Overall Equipment Effectiveness (OEE) by **10-15%**

Reduce Cost of Poor Quality (COPQ) by **8-10%**

Real-time tracking of asset status and throughput



Digital Work Instruction

ITC Infotech's Digital Work Instructions (DWI) ensures manufacturers keep up with the changing business requirements and real-time demands. The solution ensures paperless manufacturing, paper travelers will be replaced with Digital Work Instructions. Operators are presented with production tasks with a pre-determined sequence as per the route. CAD drawings, videos, images, and word documents can be viewed along with production tasks.

SOLUTION

Visually Intuitive Work Instructions:

Operator screens are visually appealing with the ability to display images/video

Process Control:

Ability to record and track vital job data which enables to know who had their hands on a job and precisely what was done

Structured Workflow:

Follows defined logical structure of route during execution

Easy Management of Work Instruction:

Centralized and easy to revise/update work instruc

Cloud Na

Cloud na Help data-driven decision making in an agile manner

Support Variety of Devices

Mobility based application access (mobile, iPad/tablet) Displays on wide screens/ televisions, monitors on the shop floor

Reports

Real - time reports for easy tracking, visibility & timely decision making with insights

BENEFITS

Assures **100%** execution compliance

Up to **30%** reduction in effort for on boarding of seasonal workers

Error proofing steps to reduce waste

Gain production visibility and collect data for performance & compliance

Quality Insights @ Edge

Quality Insights @Edge is the solution to provide image based automatic inspection using visual computing technology to mechanically 'see' the activities that take place along the production line. This solution replaces the manual inspection process by analyzing the captured images and sending them to the trained model which has the image dataset.



SOLUTION

Accelerated deployment:

Pre-built models available aid in accelerated deployment of the solution

Intuitive UI:

Intuitive UI of solution helps to easily train models with reference images

Continuous improvement:

In built machine learning algorithms helps in sharpening of the model as more and more images are scanned

Image re-orientation:

Solution has the capability to re-orient the image if the object is not kept in the correct position and angle

BENEFITS

Increase in inspection accuracy by **5-10%**

Reduction of labor by **10-20%**

Reduction of inspection cycle time by **10-20%**



INSIGHT for cognitive manufacturing

INSIGHT for Cognitive Manufacturing is a PTC ThingWorx powered solution developed to help manufacturers traverse through the next phase of their Industry 4.0 journey. It comprises of advanced Industry 4.0 use cases spread across various areas such as asset, process, sustainability, and quality.

SOLUTION

Asset Advisor:

Ready to use algorithms which quickly analyzes the historical data sets and derives the components, associated parameters, their dependencies and value trends during normal operations and during anomalies.

Easy to extend and deploy to multiple similar assets within a plant or across other plants

Process Advisor:

Pre-built logic which takes historical data as input and develops a model on the trend of influencing parameters during various intervals across varying quality output

Sustainability advisor

In built efficiency model to monitor energy consumption of assets and compare them to benchmarks

Quality advisor

Quick and easy to train and deploy models there by decreasing significant effort and time in implementation

Machine learning model ensures continuous enhancement of algorithm which increases accuracy

BENEFITS

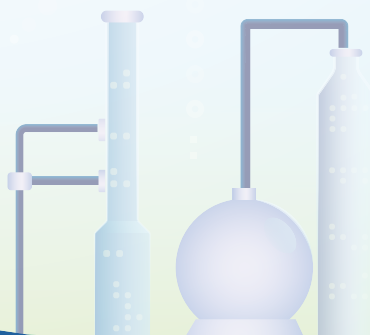
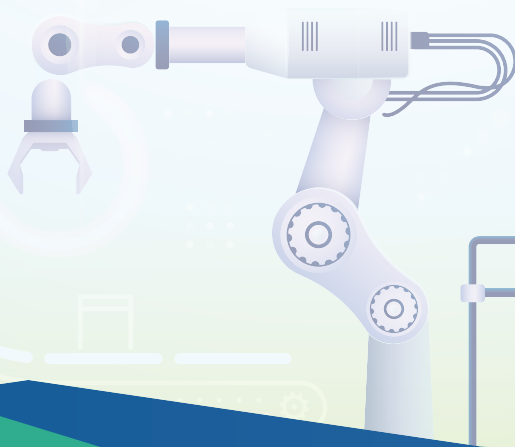
Reduction in
Energy
Consumption

Increased
OEE and asset
efficiency

Ensures
compliance to
ESG guidelines

Increase in
accuracy of testing
and reduction
of labor

Yield improvement
and consistent
good quality



SUCCESS STORIES

Consumer Packaged Goods



Industry 4.0 Implementation for Smart Factory

CLIENT

World's leading CPG manufacturing company based out of UK

PROBLEM STATEMENT

The client wanted to embark on paradigm shift in brown field plants, across the value chain from traditional manufacturing to digital manufacturing

BENEFITS ACHIEVED

Improvement in OEE by **10-15%** on account of reduction in unaccounted losses, **15%** reduction in internal waste and reduction in product integrity violations, Improvement in manpower productivity by **10%** on account of NVA reduction and elimination of manual reporting tasks/roles, **100%** Compliance to regulatory standards

Computer Vision @Edge Solution for Quality Control in a CPG Manufacturing Line

A leading Indian FMCG manufacturer

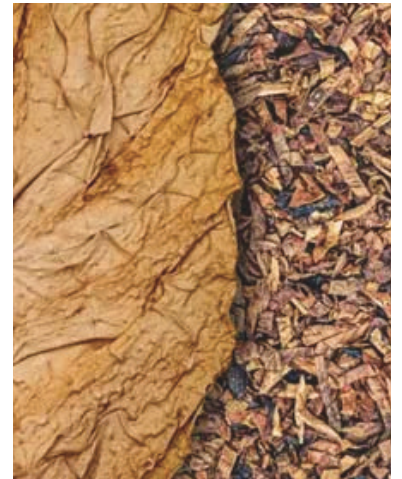
CLIENT

Unavailability of reliable quality inspection solutions led to an increase in operational expenses due to rejection of product at end of line quality check due to NTRM in tobacco

PROBLEM STATEMENT

Solution implementation achieved identification efficiency of **96%** for plastics and feathers, production efficiency on the shop floor improved by **12%**, significant reduction in quality inspection time & effort

BENEFITS ACHIEVED



Industry 4.0 based Digital Transformation-becoming lighthouse factory

CLIENT

A leading global CPG manufacturing company based out of the US.

PROBLEM STATEMENT

The client faced non-availability of real-time visibility of plant operations leading to lower production efficiency, lack of data-driven actionable insights, low/no machine connectivity, etc.

BENEFITS ACHIEVED

Improvement in OEE by **10-15%**, workforce productivity increase by **5-10%**, factory productivity increase by **2-5%**, and more.

Manufacturing



Industry 4.0 based Fleet Tracking and Monitoring Solution

CLIENT

A leading American control system manufacturer for the industrial, transportation, aviation & power generation sector

PROBLEM STATEMENT

Unavailability of real-time monitoring of vehicles in fleet & lack of proactive maintenance increased idle time of the vehicle resulting in escalated operational expenses. Absence of real-time view of vehicle geo-positions resulted in poor planning of fleet, fuel consumption could not be optimized due to the unavailability of realtime tracking of driver's performance and asset handling

BENEFITS ACHIEVED

Economical driving improved leading to fuel economy improvement by **20%**, driver productivity increased by **8-10%** leading to decreased trip time, optimized route plan decreased the idle time of trucks thus increasing the revenue, reduction in accidents due to monitoring of driver's performance, with monitoring of engine parameters, maintenance cost decreased by **7%**

Enabling Industry 4.0 based Remote Monitoring of Lab Assets

A leading electronics test, measurement equipment, and software manufacturing company, based out of the US.

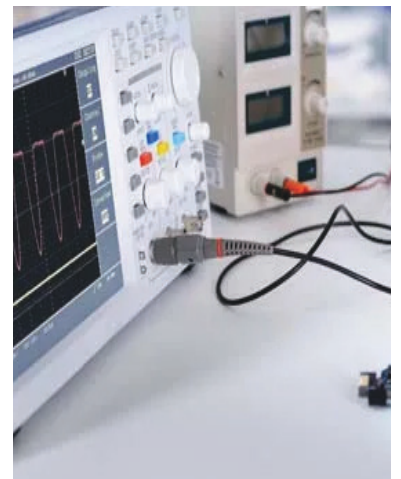
CLIENT

The client faced various issues related to equipment utilization, health, and asset visibility including absence of real-time view of asset health resulting in downtime, lack of visibility of idle time of assets, non-optimization of lab equipment, etc.

PROBLEM STATEMENT

Reduction of CapEX due to sharing of equipment, real-time information on health of lab equipment, enhanced efficiency with end-to-end lab asset track and trace, and more.

BENEFITS ACHIEVED



Cloud-based Smart Manufacturing Solution Architecture and Global Deployment Definition

CLIENT

A leading American home appliances manufacturer.

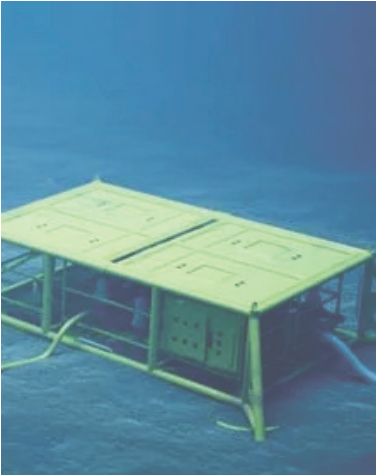
PROBLEM STATEMENT

The client wanted to embark on Industry 4.0 journey to drive business outcome leveraging a scalable, future ready, and cloud-enabled reference architecture that can be deployed across 9+ plants.

BENEFITS ACHIEVED

Scalable architecture for seamless extensibility across 9+ plants & integration with enterprise systems, site independent architecture, and data aggregation and classification for enterprise-level view.

Oil & Gas



Industry 4.0 based Condition Monitoring Solution for Subsea Field Assets

CLIENT

The world's leading Oil Field Services company, headquartered in the US.

PROBLEM STATEMENT

The client faced productivity loss due to unplanned downtime of plant assets, no visibility for operators to monitor plant-wide asset health leading to operational risk, non-intuitive and non-configurable HMI, etc.

BENEFITS ACHIEVED

Proactive insights on asset health using AI/ML based forecasting and predictive algorithms leading to **8-10%** reduction in unscheduled maintenance time and 10% reduction in maintenance cost alongside many more benefits.

Design and Development of Industry 4.0 based Predictive Well Integrity Platform

The world's leading Oil Field Services company, headquartered in the US.

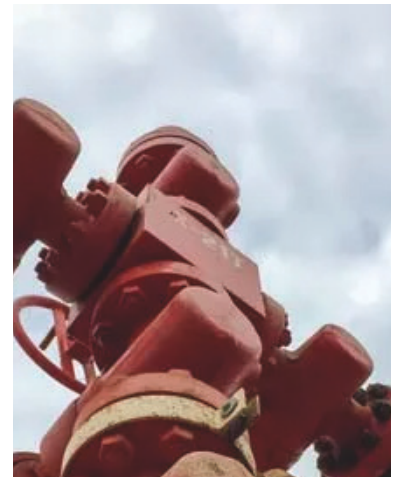
CLIENT

The client faced a challenge in obtaining insights about the integrity of subsurface, well head, and pipelines. Well integrity problems are mainly realized after the failure leading to huge liability Increase in operational expenses.

PROBLEM STATEMENT

Operational cost reduction by **10%** through focusing on most critical wells, reduction of well logging, achieved compliance with regulatory requirements and many more.

BENEFITS ACHIEVED



Design of pipeline inspection and integrity platform for safe and sustainable field operations

CLIENT

The world's leading Oil Field Services company, headquartered in the US.

PROBLEM STATEMENT

The client faced a challenge with the lack of data-driven risk assessment and failure prediction model for the pipeline network and need for a reliable system for leak detection and oil loss.

BENEFITS ACHIEVED

Pipeline risk assessment workflow automation resulting in 30% reduction in maintenance efforts, reduced leakage volume thereby decreasing transit loss, and many more.

Life Sciences



Industry 4.0 based Connected On-field Medical Products to have real-time insights

CLIENT

The client is a leading American medical equipment manufacturing company specializing in sterilization and surgical products

PROBLEM STATEMENT

Lack of insights on, on-field medical products about their performance, operations, and health and Unavailability of data to arrive at proactive service leading to increased breakdowns

BENEFITS ACHIEVED

Real-time visibility and tracking of on-field medical products, proactive service reduced breakdown of medical assets by 6-8% and ease of regular calibration and compliance test of medical equipment

Supply Chain Simulation and Modelling

One of the world's largest pharmaceutical and life sciences companies based out of Germany

CLIENT

Various bottlenecks in supply chain system affected the last mile logistics of the pharma products which eventually increased supply chain and operational expenses

PROBLEM STATEMENT

Reduction in supply chain cost by 10%, optimized dispatch planning, average increase of shelf life of medicines by 15%, Increased customer and distributor satisfaction substantially

BENEFITS ACHIEVED



Analyst Recognitions



Avimanyu Basu

Senior Lead Analyst - ISG Provider Lens™



ITC Infotech has a sharp focus on improving the business outcomes for its customers, across its Digital Manufacturing engagements. The company's business-friendly solutions centric approach helps manufacturing organizations drive operational efficiency, flexibility & agile operations, leading to safe & sustainable manufacturing.

 ISG Provider Lens™



Scan the QR Code
to read more

★★★★★



Pareekh Jain

Founder EIIRTrend



What a performance by ITC Infotech in the last couple of years that too in this tough business environment. Double digit sales growth, EBITDA improved from 8% to 25.2% and 4X growth in large deals pipeline. They are firing on all cylinders and momentum is getting even better in Q1 FY22





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★★★★★



Pareekh Jain

Founder EIIRTrend



EIIR Trends' Enterprise Buyers Guide 2022 for sustainability engineering services has Digital Manufacturing offering of ITC Infotech





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★★★★★

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. ITC is one of India's leading private sector companies and a diversified conglomerate with businesses spanning Consumer Goods, Hotels, Paperboards and Packaging, Agri Business and Information Technology.

For more information, please visit: <http://www.itcinfotech.com/>

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