

Manufacturing Industry

**WHITE PAPER**

# Factory of the Future

Whatever you prefer to call it - Smart Manufacturing, Industry 4.0 or the Digital Enterprise - the Factory of the Future is the result of technologies where the old and the new come together to create a new future.



**TECH FALCON**  
Member of Lootah Holding

# Keeping up with the Future of Manufacturing

In their quest to find the best mix of quality, cost efficiencies and employee safety, manufacturing leaders are often overwhelmed by the sheer number of emerging technologies that are influencing the industry. The usual questions that haunt them are:

- How to leverage the right technology for the right purpose?
- How not to disrupt operations even when testing new business models?
- How to step into the future without forsaking what has worked in the past and what continues to work in the present?

## Awareness of Factory of the Future and its Transformative Benefits

Manufacturing leaders are becoming increasingly aware of the transformative benefits a Factory of the Future can bring to them, including but not limited to cost efficiencies, improved services for customers, better working conditions for employees and overall equipment maintenance. They are aware that advancements powered by smart manufacturing, robotics, artificial intelligence and the Internet of Things (IoT) and data analytics will sooner than later become critical competitive advantage to retain leadership.

## Keeping up with New Technologies

As technology advances rapidly, manufacturers often struggle to keep up with changing trends. In the face of digitisation and new customer expectations, manufacturing businesses are confronted by newer challenges and uncertainties. There is constant need to devise new strategies, evaluate new business models and assess the viability of new technologies. More often than not, by the time the IT departments finish assessing and deploying a new technology, something new emerges and changes the ground rules of the game.

“

**For the future is not what will happen; the future is what is happening. The present and the future don't abut each other... Rather they are intertwined.**

”

*Competing for the Future*, Gary Hamel,  
C. K. Prahalad. Harvard Business Press,



# The Need for Holistic Transformation

The changes triggered by the Factory of the Future will influence all aspects of business, from production and processes, to strategy and governance. Therefore, what manufacturers need is a roadmap to holistic transformation that sees everything from IT and Operations, Finance, HR, Sales & Marketing, Manufacturing, Inventory, Supply Chain and Post-sales service holistically rather than as silos that need to be dealt with one at a time.

“**Manufacturing is more than just putting parts together. It’s coming up with ideas, testing principles and perfecting the engineering, as well as final assembly.**”

Sir James Dyson - Industrial Designer and Entrepreneur

## Just the Beginning

The digital revolution in manufacturing is just beginning to take shape. Nevertheless, the benefits of digital manufacturing are evident to early adopters in the manufacturing industry, including small and medium players. These organisations are already seeing significant competitive advantages by harnessing the power of connected workers, intelligent supply chain and predictive maintenance to speed up the pace of innovation, lower production costs, and increase the impact of marketing.

## Don't Focus only on Technology

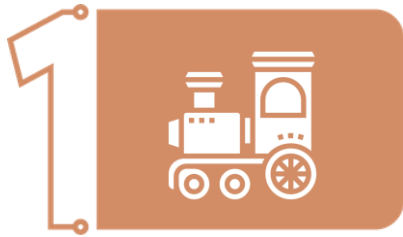
Successful digital transformation initiatives in manufacturing are often those that embrace people, culture, organisations, processes, business strategy and objectives into the overall mix, instead of focussing only on the technology. As consumers' preferences and expectations evolve, finding new ways to meet those expectations becomes the function of not just technology. Rather it is the right mix of people, process and culture unified through a connected and intelligent platform that can address this problem effectively.



# Industrial Revolutions Till Date

To gain production efficiency, a factory needs to produce more output with the same amount of time and available resources. It needs to choose the right set of performance indicators depending on its current stage in the efficiency journey.

## Industry 1.0



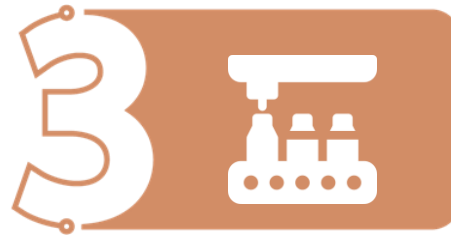
The 1st industrial revolution started in Britain in the late 19th century and was a result of the invention of mechanical production powered by water and steam.

## Industry 2.0



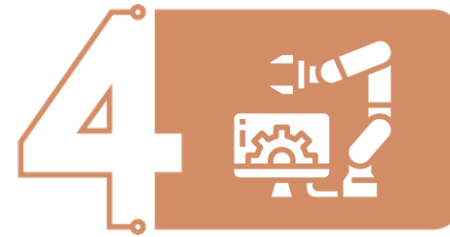
The 2nd industrial revolution began in America in the early 20th century, with mass production of goods primarily using electricity.

## Industry 3.0



The 3rd industrial revolution started in America in the 1960s and was characterised by the use of electronics to automate production.

## Industry 4.0



The 4th industrial revolution began in Germany in the early 21st century and involved the combination of the digital, physical and virtual worlds.

In spite of the fact that there have been 4 industrial revolutions already, Industry 4.0 has brought in the most disruptive structural changes in over 200 years. This new paradigm combines cutting edge production and operations techniques with smart digital technologies. The result is a digital enterprise that is interconnected and autonomous and can transmit, analyse, and use data to drive intelligent actions in the physical world.

# #IntelligentManufacturing

#IntelligentManufacturing enables manufacturers to adapt to new challenges and explore new opportunities in the Industry 4.0 age. Instead of offering products only, manufacturers can expand their business models to deliver service-based products— solutions that encompass both the product and the related complementary services. Only with the Internet of Things, People, and Services can manufacturers take full advantage of opportunities in the market today.

## Optimize your operations

Gather valuable insights into business performance and profitability from the vast stores of data generated by your supply chain operations, plant-floor systems, and customer-facing activities.



## Engage your customers

With the right technology capabilities, you can transform from an asset-focused manufacturer to a customer-centric manufacturer.

## Empower your employees

You can connect your employees to the information they need in their manufacturing roles, so they can manage assets and processes in real time.



# Ways to start your intelligent manufacturing transformation

Develop new business models and revenue streams with intelligent manufacturing – delivering innovative products and services from agile factories and intelligent supply chains, and an empowered industrial manufacturing workforce.

## Connected Field Services

Turn your service centres into profit centres. Deliver proactive, predictive service by connecting your smart products with empowered technicians.

## Digital Sales & Service

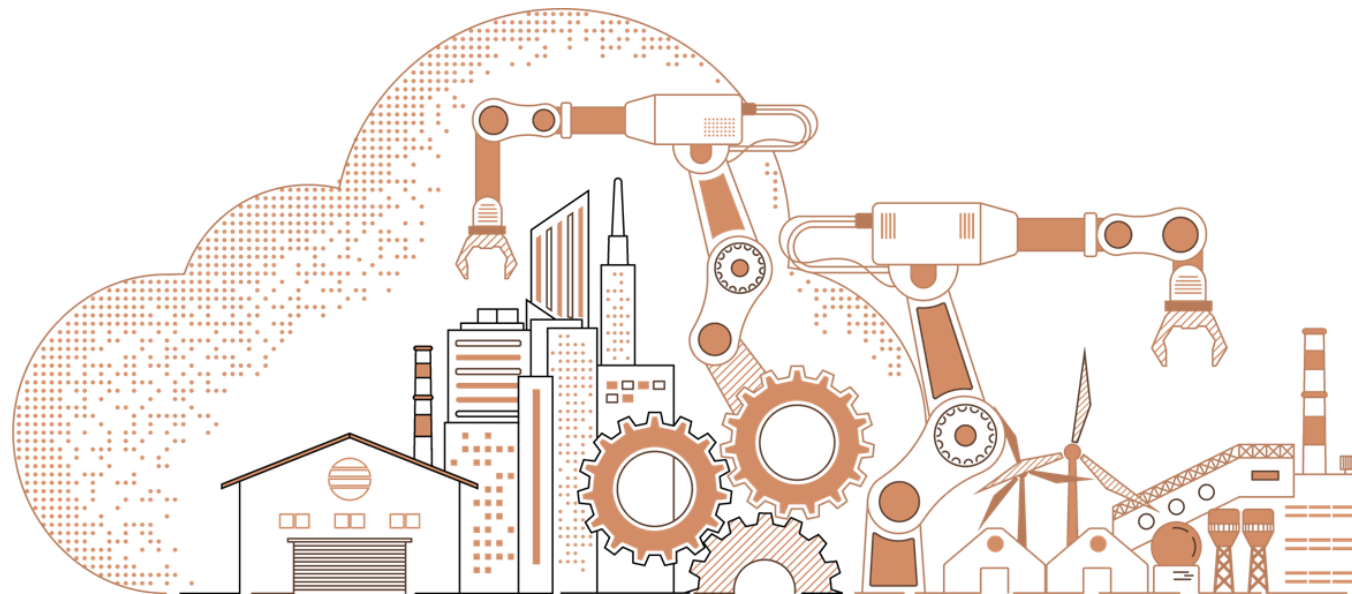
Empower your sales and service workforce to improve customer engagement and drive complex product and service sales with digital tools.

## Digital Operations

Optimise digital operations by connecting your people, devices and processes to overcome skills gaps and increase operational excellence and factory productivity.

## Intelligent Supply Chain

Optimise digital operations with intelligent business applications that help you achieve the right balance of customer service and supply chain cost.



## Prepare for the future

- Build the skilled workforce that you'll need to stay competitive.
- Develop new services that exceed your customers' expectations.
- Customise your products to deliver more value than ever.
- Become more sustainable and pursue new opportunities.

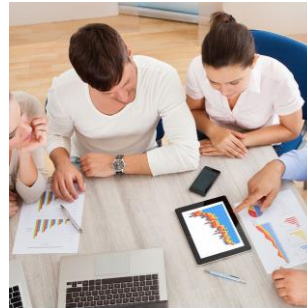
# Tech Falcon is a Full-service Digital Transformation Partner

We are a full-service digital transformation partner and our mission is to help organizations take the digital leap to realize business success. We are one of the fastest growing IT Solutions & Managed Services providers in UAE. Our vision is set to become one of the most preferred IT Solutions and services organizations globally.



## Technology Consulting Service

- Digital Readiness Assessment
- Cloud Migration
- Application Portfolio Rationalization
- Automation Readiness Assessment



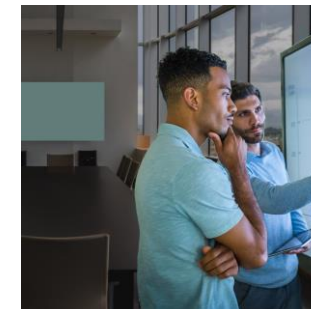
## Business Applications Services

- Application Implementation
- Application Modernisation
- Upgrade Services
- Managed Services



## Automation & AI

- Intelligent Process Automation
- Cognitive Services
- Machine Learning
- Intelligent Bots



## Analytics & Insights

- Enterprise Data Warehouse
- Business Intelligence
- Big Data and Analytics
- Predictive Analysis





## DIGITAL TRANSFORMATION PARTNER

Applications | Automation | Analytics

Tech Falcon LLC is a digital transformation partner for enterprises as they embark on their digital transformation journey. We are headquartered in Dubai. We help clients in manufacturing, projects, distribution, public sector, real estate, and public sector to achieve business and operational goals with business applications, automation, and analytics services.

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