

PoV

# The Intelligent Automation Promise: Exponential Growth for Manufacturing

Author : Omar Siddiqui

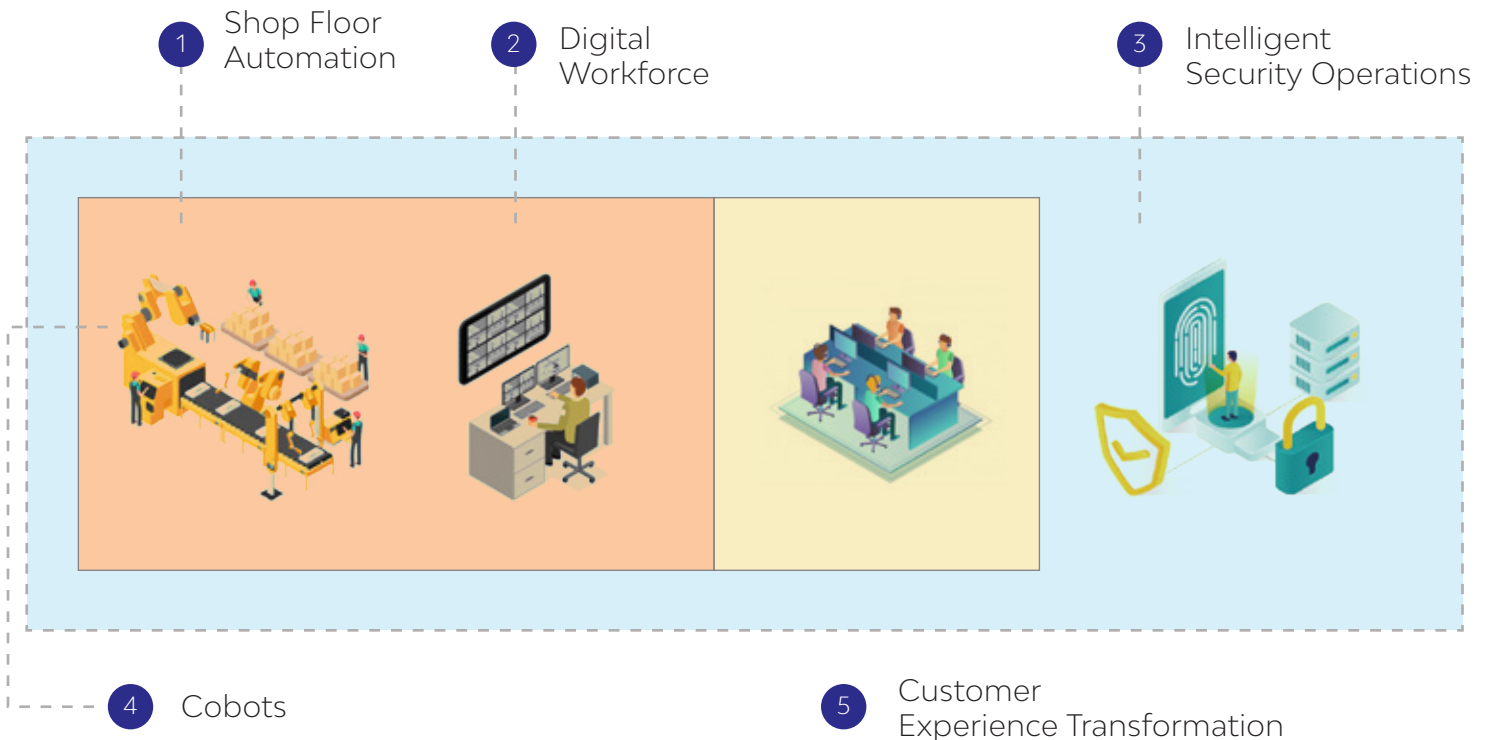


The Manufacturing industry has been at the forefront of some of the most pathbreaking industrial revolutions known to mankind, starting with mechanization and evolving to industrial robotics. This evolution transpired from the manufacturing industry's ability to harness existing industrial capabilities, in the process giving birth to new technologies that could replace existing ones. However, in order to effectively mobilize existing industrial capabilities, it is important to embrace Intelligent Automation that will act as a catalyst and enable manufacturing companies to enhance their production efficiencies, save their operational costs and gain an edge over the competition.

Today, Intelligent Automation, Cyber Security and Industrial Internet of Things (IIoT) form the most important building blocks of the fourth industrial revolution. Intelligent Automation technologies such as Robotic Process Automation (RPA), Artificial Intelligence (AI) and other cognitive digital technologies are particularly popular due to their wide-scale applicability, agility and intensity of impact across the business value chain. According to a research conducted by KPMG, enterprises will be spending over USD 232 billion on Intelligent Automation by 2025.

Intelligent Automation has the distinct advantage of offering cost-effective development, rapid deployment and tangible benefits from Day One. Let us explore through some use cases how Intelligent Automation is changing the face of modern manufacturing.

### Leveraging Intelligent Automation in the Manufacturing Arena



## Shop floor automation

Unplanned downtime can lead to significant delays and increased operational costs. The humongous amount of data being generated on shop floors can be leveraged by Intelligent Automation to build meaningful solutions related to scheduled maintenance, machine anomaly detection, inventory control, shop floor supervision, false positives alerts, etc. These can be combined with other systems such as Programmable Logic Controller (PLC), Supervisory Control and Data Acquisition (SCADA) systems, digital logbooks, plant level dashboards, etc. Such solutions help improve yield and quality

### **Here are some recent examples where shop floor automation has delivered results:**

- A building material manufacturing company implemented connected shop floor solutions for different manufacturing processes to improve traceability, reduce defects and improve asset utilization.
- A global automobile manufacturer utilized IoT sensors and business intelligence tools to build a virtual production preparation and manufacturing solution for production analysis, and predictive and scheduled maintenance. This solution accelerated production schedules, decreased downtime and gave real-time actionable insights from shop floor data.

## Digital workforce

Automation solutions can mimic employee actions to monitor a multitude of operations, act as a force multiplier and enhance the overall work quality of the workforce. Intelligent Automation solutions related to supplier onboarding, purchase management, delivery management, matching supply with demand, predictive maintenance, etc. can help manufacturing companies stay focused on their core expertise while reducing their operational costs and enhancing productivity gains.

### **Here are a few recent examples of successful digital workforce implementation:**

- A global construction company automated a diverse set of processes such as accounts payable, invoicing, data migration, etc. for its Shared Services Center with Intelligent Automation. This helped the company create elastic capacity for its Shared Services Center, enabling it to proactively cater to the ever-changing requirements.

- A leading pharmaceutical company used Intelligent Automation for its procurement and sales processes for managing supplier delivery dates, production lead times and demand forecasting resulting in improved delivery performance and decreased inventory levels

## Intelligent security operations

With everchanging global dynamics, companies now need higher threat level perception to safeguard from cyberattacks. This is of paramount importance, since any breach could lead to production delays, industrial accidents, data theft etc. Intelligent Automation solutions can be of immense help in building a strong security posture:

- **Security Information & Event Management (SIEM) Systems**

They can learn from thousands of negative event patterns, not possible with human analysts, to differentiate between false positives and trigger action

- **Alert Triage Automation:**

Helps evaluate if alerts from SIEMs are real threats

- **Automated Incident Response:**

Takes automated steps as per incident levels

- **Threat Hunting:**

Built with cognitive technologies to identify unknown threats in the environment and take appropriate action

### Here are some examples of how Intelligent Security Operations has helped manufacturing firms:

- A steel manufacturing giant used Intelligent Automation for its governance security program for processes related to security posture testing, reporting dashboards, compliance, etc. resulting in improved security reporting quality, timely security testing and throughput rates.

- An aircraft manufacturer enhanced its cybersecurity operation by using Intelligent Automation tools to build automated diagnosis and alert notification, device discovery, data aggregation, threat detection and remediation. This minimized security threats, reduced response time and improved compliance levels across the organization

## Cobots

Industrial robots have been around for some time now, and in most cases they operate in a separate physical area, to ensure human safety requirements. Advancements in Intelligent Automation have given rise to cobots or “collaborative robots” which, unlike industrial robots, can operate in conjunction with humans in proximity. They are able to interpret things around them and take actions as required. They have cognitive intelligence that augments human capabilities and enhances work operations. Applying AI and ML eliminates the need for extensive programming and allows them to work in tandem with human workers resulting in increased productivity and process optimization. Although cobots haven’t been deployed on a large scale, it is safe to say that they’ll be widely adopted extensively in the next few years as the technology stabilizes and production costs decrease.

### **Let’s look at real cases where cobots cohesively worked with their human counterparts:**

- A leading luxury car manufacturer has deployed cobots in its production line to work alongside human workers in the welding department, making the overall process efficient and less time consuming. Previously, workers had to load the individual chassis separately before robots could undertake any welding tasks. Now cobots worked on the same chassis simultaneously which drastically reduced production time.
- A precision parts manufacturing company has deployed cobots to package completed manufactured parts by shifting away the packaging responsibility from machine operators, who can now focus on changing machine tools, adjusting and measuring the parts. This has resulted in productivity gains, reduced manufacturing delays and significant cost savings.

## Customer experience transformation

Manufacturing is no longer a transactional buyer-seller process. Manufacturing companies, like all other industries, have to be connected with their customers for a truly transformative

experience. Intelligent Automation helps provide a seamless, unified customer experience. As per a recent survey conducted by Gartner, “72% of customer interactions in 2022 will be facilitated through emerging Intelligent Automation technologies such as RPA, machine learning applications, chatbots and mobile messaging”. RPA in particular can help customer service agents access varied data at a single point without multi-screen navigation. Chatbots added on top of RPA can respond to customer queries instantly without the need to refer back, and so on.

### **Recent examples where chatbots were used for enhancing customer experience include:**

- A leading automobile manufacturer deployed a chatbot that worked alongside human workers to offer its customers a convenient frictionless car buying experience from the comfort of their homes. The solution was placed between the dealer websites and front-end car showrooms. Customers were able to interact with the virtual dealer agents for details such as car configuration modification, financing plans, sales material, inventory check, test drive booking, etc. Post the interaction, customers could also be connected with dealer-specific customer care agents who would then guide them further. The company has seen an increase in leads, bookings and overall annual sales, with no increase in operational cost.
- A computer hardware manufacturer has deployed cognitive chatbots in its virtual service centers. These chatbots help customers solve hardware and software issues without any need to visit the service center. This self-learning chatbot keeps improving its resolution accuracy and issue prediction rate as it goes about working on different service tickets. The solution has been able to reduce pressure on customer care teams and ensured speedy issue resolution

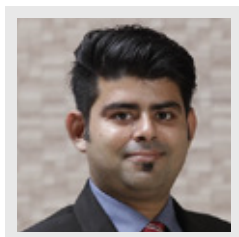
## **A digital future for manufacturing**

Intelligent Automation has a very significant role to play in the manufacturing industry in the coming years. Emerging technologies are ringing in a new era for manufacturing firms, in which humans and machines will increasingly work together. As the industry becomes hyper competitive, cost margins decrease, product development lifecycles shrink, and regulatory compliances become more stringent, it will become imperative for manufacturing organizations to become highly agile and effectively utilize Intelligent

Automation to achieve their goals and succeed in this new digital world. The eventual aim for manufacturers as they weigh their options and consider automation is to capture as much long-term value as possible from automation. How they will achieve desirable results will also depend on each manufacturer's automation maturity.

---

## Author



### **Omar Siddiqui**

**Sr. Business Development Executive, Intelligent Automation, LTI**

Omar is a seasoned global Business Development and Consulting executive, with focus on the IT sector, across domains. He is responsible for leading efforts under presales and marketing in LTI's Intelligent Automation practice. As part of his experience, he has built a track record in building purposeful digital transformation solutions leveraging technology in the context of the customer's business.

LTI (NSE: LTI, BSE: 540005) is a global technology consulting and digital solutions company helping more than 420 clients succeed in a converging world. With operations in 32 countries, we go the extra mile for our clients and accelerate their digital transformation with LTI's Mosaic platform enabling their mobile, social, analytics, IoT and cloud journeys. Founded in 1997 as a subsidiary of Larsen & Toubro Limited, our unique heritage gives us unrivaled real-world expertise to solve the most complex challenges of enterprises across all industries. Each day, our team of more than 30,000 LTIites enable our clients to improve the effectiveness of their business and technology operations, and deliver value to their customers, employees and shareholders. Find more at [www.Ltinfotech.com](http://www.Ltinfotech.com) or follow us at [@LTI\\_Global](https://twitter.com/LTI_Global)

[info@Lntinfotech.com](mailto:info@Lntinfotech.com)