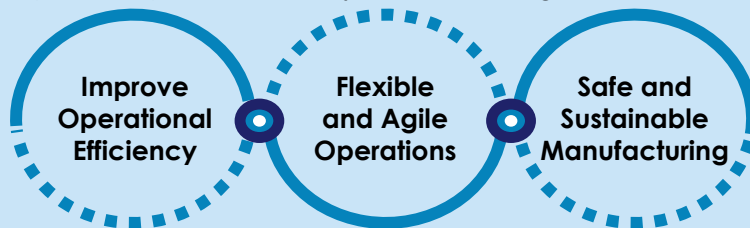




Future Ready Manufacturing for Sustainability and Growth

We are witnessing the rise of smart manufacturing in response to the changing business imperatives and to the pressing need for sustainability. Manufacturing systems are not monoliths anymore. They are expanding beyond the four walls of the shop floor, constantly evolving and creating value across a connected value chain. Collaborative solutions shaped by connected eco-systems have begun to play a key role in unlocking value and efficiency. They are the backbone that supports flexibility and scale.

As manufacturing organization moves towards remote and autonomous operations, it will be imperative to ensure that they use sustainable practices to stay on the growth path while focusing on the triple bottom line of profit, people, and planet. The major drivers for digital transformation are:



With the exception of a handful of top manufacturers, efficiency and sustainability practices have been implemented in pockets and in isolation. Today's manufacturing practices requires plants to be connected across their supply chain and with their vendors, partners, distributors, customers and regulators. These manufacturing operations should be able to rapidly adapt to changes in customer needs, overcome unpredictable supply chain disruptions, improve operational efficiency and minimize waste, without compromising differentiation.

The Role of Cloud

Several changes in manufacturing keeping pace with the digital, distributed, flexible, outcome-driven and secure workplace of the future will go a long way in fostering environmental sustainability. A leading example of this is the accelerated adoption of cloud. Cloud is no longer restricted to enabling functions such as Human Resource Management, Finance or design. It now includes production-critical functions including MES and other shop floor applications.

Cloud providers have already begun to help their customers move to more sustainable practices by increasing the amount of clean energy used to run their services. Microsoft, for example, is using undersea data centers to reduce power required for cooling. These innovations are good news. Manufacturers can now leverage cloud to reduce their emission by offloading compute requirements to cloud providers with clear commitments to reduction in emissions.

The Power of Data and Analytics

In addition to cloud, data and analytics-led insights are enabling real time decision-making across manufacturing plants. This capability is central to remote and autonomous manufacturing. By putting accurate decision-making into the hands of employees, regardless of where they are, manufacturers do not have to be constrained by the availability of talent proximal to their plants. Not only does this reduce emission per employee by eliminating the need to travel to manufacturing locations but also gives access to a distributed and diverse talent base, which is conducive to improved performance and growth.

Leveraging Industry 4.0

Industry 4.0-led interventions such as using robots, retrofitting equipment and facilities with sensors can bring about dramatic changes by placing Automation, Artificial Intelligence (AI) and real-time data into the hands of plant operators. The result is not just an improvement in productivity, quality, and safety but also optimizing asset usage, minimizing waste, creating paperless operations and reducing energy and water consumption. Early adopters will make higher significant gains from adopting Industry 4.0 interventions. Some of these gains can deliver long-term competitive advantage too. For example, manufacturers that use Industry 4.0 technologies will inevitably attract better talent, especially from the newer generation that is technology-savvy.

Sustainability and Business Performance

Sustainability practices are no longer just 'cool' to have. They are, for environmental and business reasons, going mainstream. Some manufacturing leaders have turned sustainability into vastly profitable businesses simply through formulation, process, technology and design modifications. Organizations that embrace sustainability also perform well on all parameters of business. [Studies](#) have found that businesses with sustainability practices have higher stock values—sometimes higher by 25% than those with less sustainable practices.

When manufacturing organizations begin to prioritize and invest in sustainable practices, they consequently begin to:

- ❖ Empower employees with data for decision-making
- ❖ Integrate supply chains, credit and finance institutions, partners and customers, making it possible to respond to change quickly and effectively
- ❖ Leverage automation, simplify processes and reduce touchpoints

The cumulative result triggered by strategies around sustainable manufacturing make the organizations future-ready.

Leverage Real-world Experience

Our parent company, the ITC group, has presence in sectors across CPG, hotels, packaging, paperboards & specialty papers, agribusiness, and technology. Our common focus across our businesses is on spurring innovative strategies that enable us to make a growing contribution along the triple bottom lines of economic, environmental, and social capital. ITC is the only company in the world of comparable dimensions to be carbon, water, and solid waste recycling positive. To ensure a positive environmental footprint, we adopted a low-carbon growth strategy which focused on enhanced use of renewable energy as well as reduction in energy consumption across our manufacturing facilities. Almost 41% of our energy consumption is met from renewable sources.

ITC Infotech has been primarily responsible for leveraging Industry 4.0 technology solutions to enable sustainable operations at our manufacturing plants and for our customers. We see a rising demand for sustainable practices and technologies in manufacturing. This has led us to invest in cloud-native technology solutions, platforms, automation, data lakes, analytics and AI. We are also actively collaborating with technology companies like Microsoft, to elevate the manufacturing industry and to help build a future-ready India.

Specifically, these investments and partnerships have resulted in digital manufacturing solutions that are unlocking hidden operational efficiencies across the manufacturing value chain, shortening lead times for new product introduction, and improving customer experience for aftermarket services.

By partnering with ITC Infotech, manufacturing organizations can leverage the deep and practical real-life experience of our group to quickly move the needle towards sustainable and future-ready operations.

For more information,
please visit: www.itcinfotech.com

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