STERISON
TECHNOLOGY PVT. LTD.

Brochure

CEMENT
4.0

Digitalization
The path to revolutionize cement production

Taking advantage of digital solutions not only to support equipment availability, but also to reduce energy consumption, increase production, improve product quality and save energy, raw materials, cost and co-operation with the environmental issue such as global warming.

We have Successfully worked with our clients on creating Customized innovative solutions, enabling our customers to increase productivity and resolve challenges. Today we continue that journey into the area of digitalization
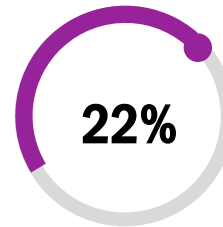
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The driving forces towards Industry 4.0

Technologies are revolutionizing the way we live and the way we work. For now we focus on IoT and AI, together they are sure changing and transforming the future of Industries, including Construction / Cement Industry.
Worldwide trends will greatly impact the cement industry in the near future. The world population is expected to grow from 7.6 to 9.7 billion people by the year 2050 – a growth of 22 percent.

22%

population growth and urbanization.

Source: IEA Study | May 2018

10%

As per a research report by McKinsey, integration, and optimization of AI in the cement industry have increased the production levels by 10%

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Advantages from Sterison's IOT solutions in cement industry

- Saving energy and raw materials and increasing sustainability
- Automation
- Integrated plant engineering
- Optimization of production potential
- Tailor-made Information System with dashboard and trackers

Offerings in Cement Industry Using Industry 4.0

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Digital/connected factory	Plant Safety and Security
Facility management	Quality control
Production flow monitoring	Logistics and Supply Chain
Inventory management	Optimization
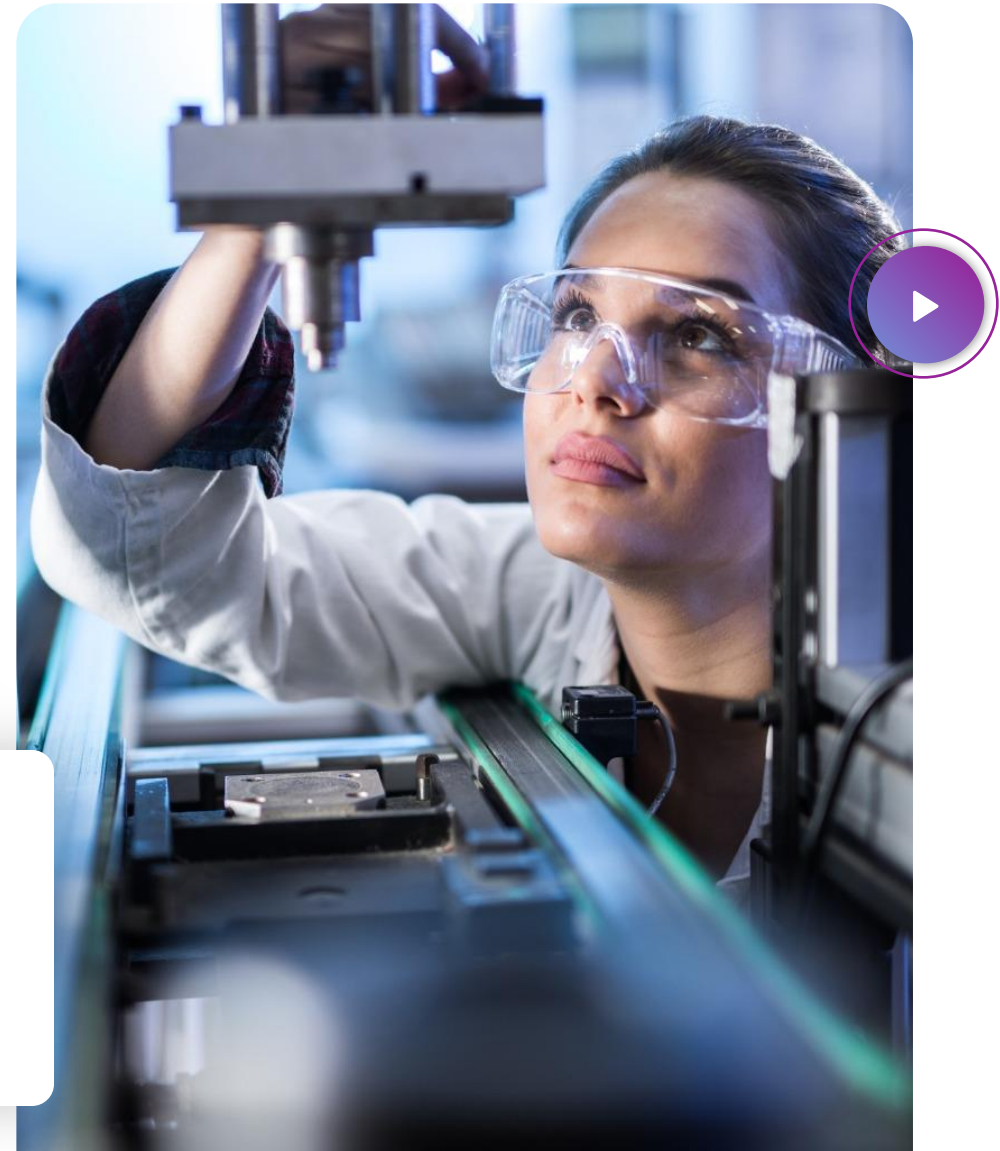
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Digital/connected factory

Industry 4.0 presents an incredible opportunity to power-up your productivity while reducing your environmental impact. With the right digital tools and connections, you can optimize machine performance, reduce energy consumption, and avoid unexpected downtime. It's smart. It's sustainable. And it's easy to get started.

Sterison technology IoT-enabled machinery solutions can transmit operational information to the partners like original equipment manufacturers and to field engineers to enable operation managers and factory heads to remotely manage the factory units and take advantage of process automation and optimization.
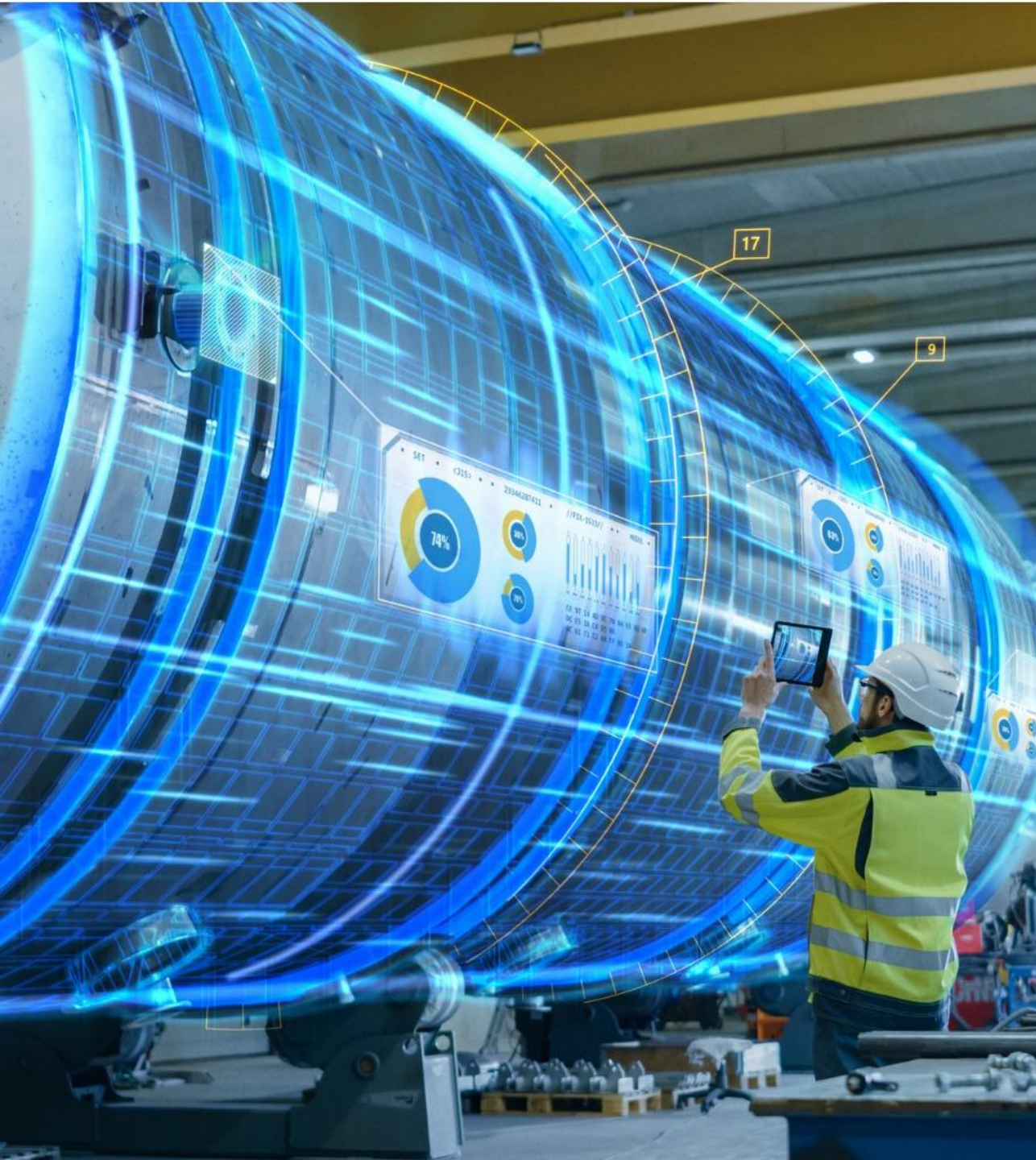
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Facility management

These connected machines stream health and status data, which is captured by other machines or by monitoring systems. Should the data fall outside of normal parameters, alerts are triggered, allowing workers to immediately resolve the problem or, in some cases, prompting the equipment to self-adjust. Real-time issue resolution or problem identification can save significant time and money.

Sterison IoT technology can actively monitor machines and send an alert when the equipment deviates from its prescribed parameters. By ensuring the prescribed working environment for machinery, manufacturers can conserve energy, reduce costs, eliminate machine downtime and increase operational efficiency

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Production flow monitoring

295,907

Production

Last Year

175,252

Production

Previous Year

Sterison's IoT gateway can enable the monitoring of production lines starting from the refining process down to the packaging of final products to recommend adjustments in operations for better management of operational cost

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Inventory management

Sterison's IoT applications permit the monitoring of events across a supply chain. Using our gateway systems, the inventory is tracked and traced globally on a line-item level and the users are notified of any significant deviations from the plans.

## AI in Innovation Business

Businesses can reduce the risks of overstocking and understocking by deploying Innovative approaches since the technology can:

- ✓ Analyze and correlate demand data accurately;
- ✓ Detect and respond to a shift in demand for a particular product;
- ✓ Evaluate the demand in a certain place.

Inventory control and AI

AI machine learning technology or more complex artificial intelligence systems businesses can create smart data-driven manufacturing and distribution centers
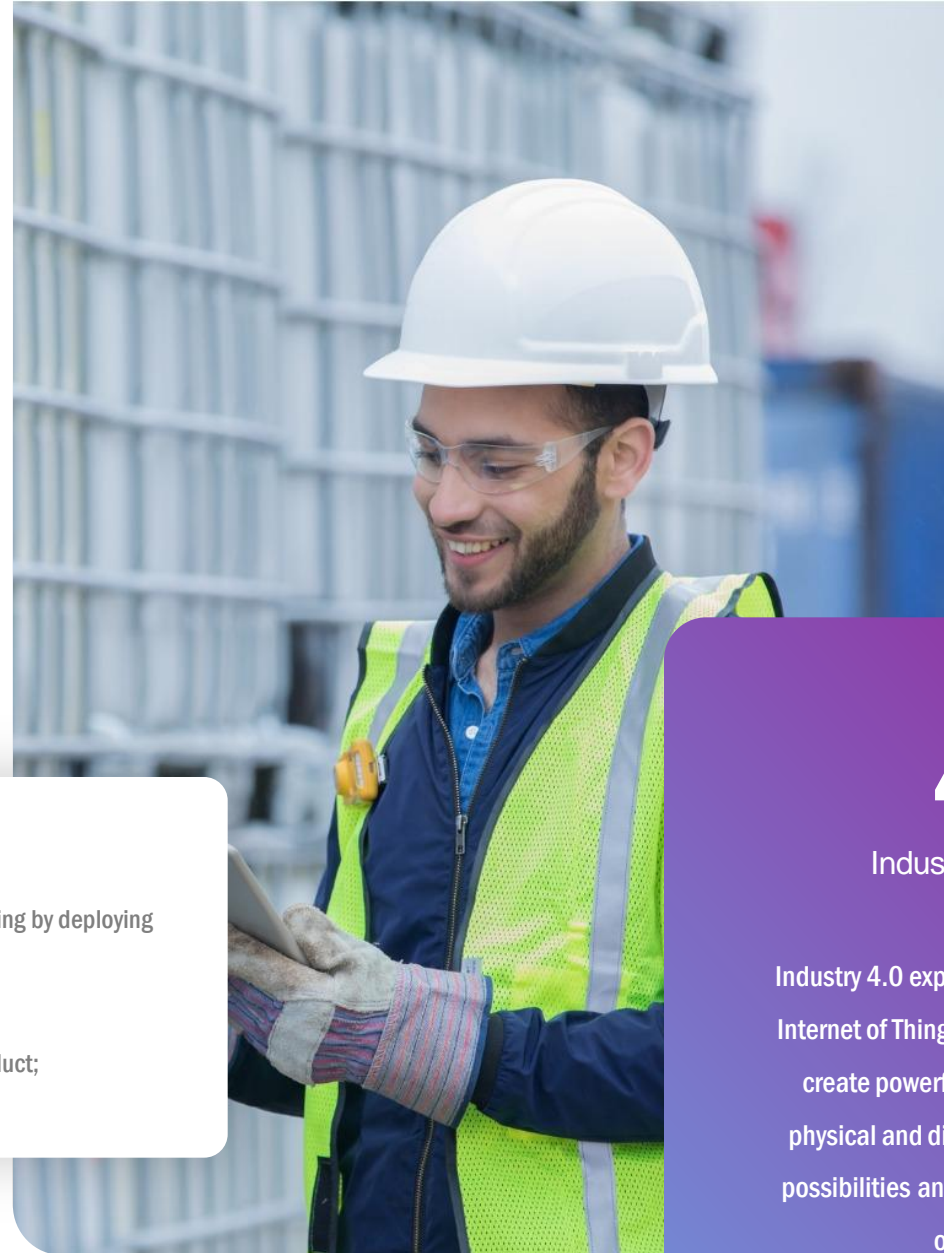
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Industries Business

Industry 4.0 exploits new technologies like Internet of Things and Cloud Computing to create powerful connections between physical and digital systems. This opens possibilities and new solutions for further optimisation

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Plant Safety and Security

10+

KPIs

Our Smart Factory solution combined with big data analysis can improve the overall workers' safety and security in the plant. By monitoring the Key Performance Indicators (KPIs) of health and safety, like the number of injuries and illness rates, near-misses, short- and long-term absences, vehicle incidents, and property damage or loss during daily operations

Our Innovation

Innovations introduced during the Industry 4.0 era consist in the integration of the so called "nine pillars of technologies" in manufacturing, transforming the conventional factory in a smart factory.
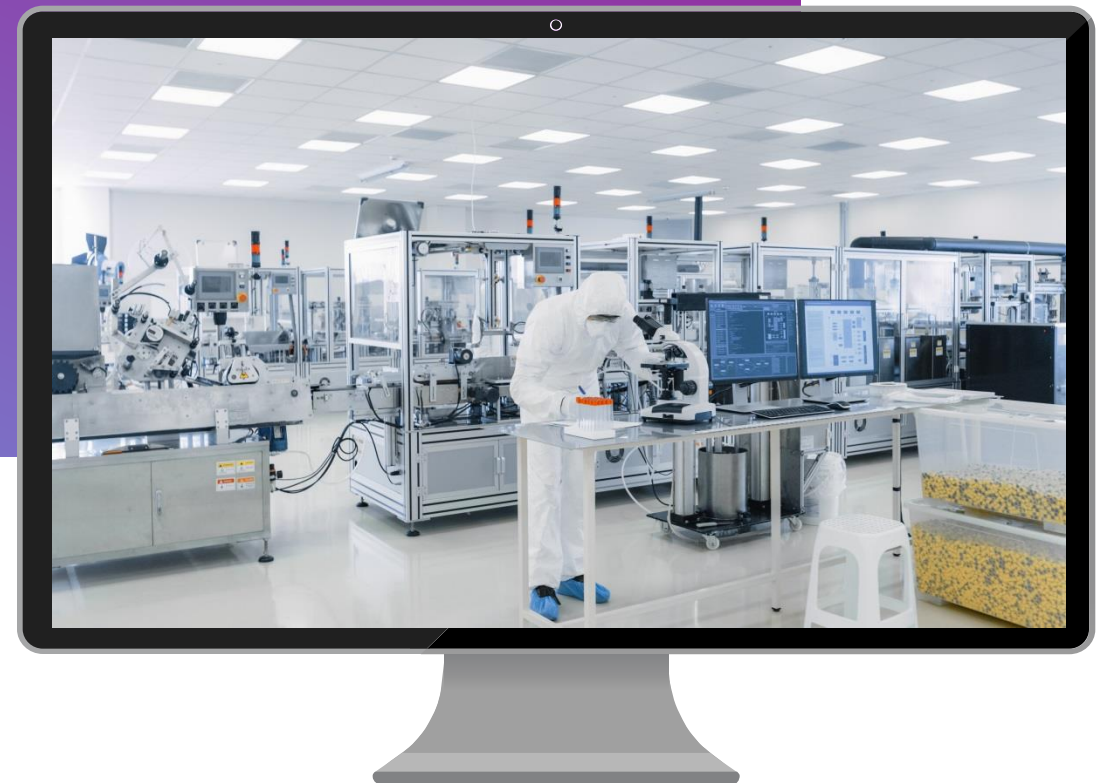
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Quality control

The IoT sensors from Sterison Technologies collect aggregate product data and other third-party syndicated data from various stages of a product cycle. This data relates to the composition of raw materials used, temperature and working environment, wastes, the impact of transportation, etc. on the final products.

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Packaging Optimization

Cement industry uses a lot of mechanical equipment's, while any malfunction leads to downtime, inaccuracies in the weighing scales lead to under-weighing or over-weighing of the material, both resulting in huge losses for the company. Therefore packaging equipment must be constantly maintained for optimum function.

Sterison IoT enables the following features:

• Predictive Maintenance

• Real-time alerts help in error detection

• Legacy Systems Automation

Benefits of Packaging Using IoT:

✓ Active equipment monitoring and maintenance

✓ New business models

✓ Higher production rates and fewer downtimes

✓ Endless integration possibilities

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Logistics and Supply Chain Optimization

Sterison's Software Platform delivers IoT smart factory solutions or Smart Cement Factory which can provide access to real-time supply chain information by tracking materials, equipment, and products as they move through the supply chain. Effective reporting enables manufacturers to collect and feed delivery information into ERP, PLM, and other systems. By connecting plants to suppliers, all the parties concerned with the supply chain can trace interdependencies, material flow, and manufacturing cycle times.

Innovation Structure

Integrated customer solutions across supply chain boundaries, collaboration with external partners

Logistics visibility
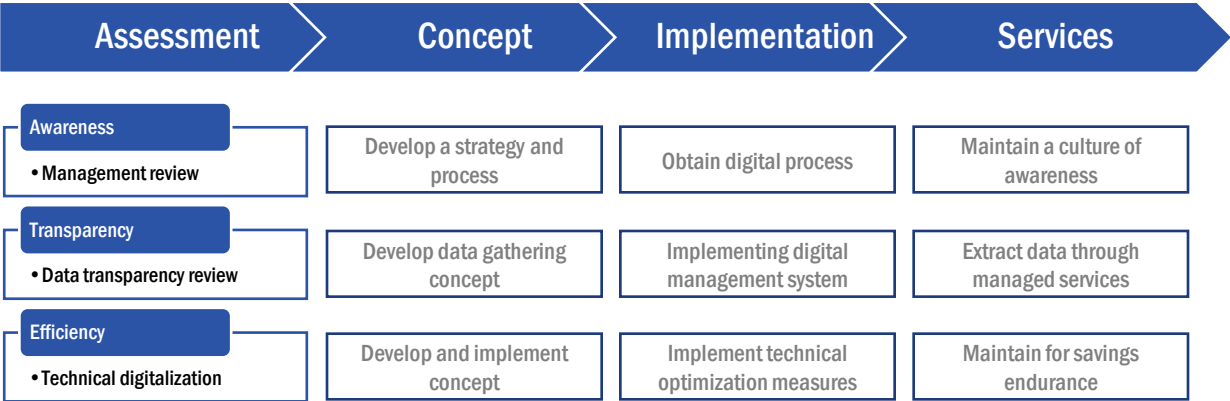
Smart warehousing and logistics

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Next steps

The cement industry can study, learn and draw conclusions from what other industries are doing in the digitalization field and analyze how to apply those experiences to its own activities. Communication and relations with other industries will help the cement industry to learn, either through lectures, conferences, similar pilot schemes or via informal exchanges.

Assessment	Concept	Implementation	Services
Awareness • Management review	Develop a strategy and process	Obtain digital process	Maintain a culture of awareness
Transparency • Data transparency review	Develop data gathering concept	Implementing digital management system	Extract data through managed services
Efficiency • Technical digitalization	Develop and implement concept	Implement technical optimization measures	Maintain for savings endurance

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As machines become more intelligent, this technology can have a positive impact on the everyday lives of citizens.

THANKYOU

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