

OVERVIEW OF IOT APPLICATIONS IN EDGE- CLOUD

INTRODUCTION TO IOT APPLICATIONS IN EDGE-CLOUD

The Internet of Things (IoT) is transforming our interaction with devices by enabling seamless connections and data exchange. A crucial component of this transformation is **Edge-Cloud computing**, which enhances the efficiency of IoT applications. This presentation explores various IoT applications in Edge-Cloud, emphasising their role in improving resource management across different sectors.



SMART AGRICULTURE



- IoT in Edge-Cloud empowers **farmers** to monitor crops and livestock remotely.
- Sensors in soil and irrigation systems provide real-time data on moisture, temperature, and animal health.
- Local data processing allows for timely decision-making, optimising both **crop yield** and **animal welfare**.

INDUSTRIAL AUTOMATION



- IoT and Edge-Cloud enhance **industrial automation** through real-time equipment monitoring.
- Sensors attached to machinery collect data on temperature, vibration, and performance.
- Edge processing provides real-time alerts on machine health, enabling proactive maintenance and minimising downtime.



SMART CITIES



- IoT applications contribute to the development of **smart and sustainable cities**.
- Edge devices collect data on traffic, air quality, waste management, and energy use.
- Processing this data locally allows municipalities to optimise resource allocation and improve urban planning.

HEALTHCARE

- IoT in Edge-Cloud significantly improves **healthcare services**.
- Connected medical devices and wearables monitor patient vital signs and medication adherence.
- Real-time alerts enable healthcare providers to remotely monitor patients and respond to anomalies quickly.



SUPPLY CHAIN MANAGEMENT

IoT combined with Edge-Cloud enhances **supply chain management**. Sensors and RFID tags track the location and condition of goods in real-time. Local data processing provides actionable insights for **inventory management** and supply chain optimisation.



Funded by
the European Union

SMART HOMES

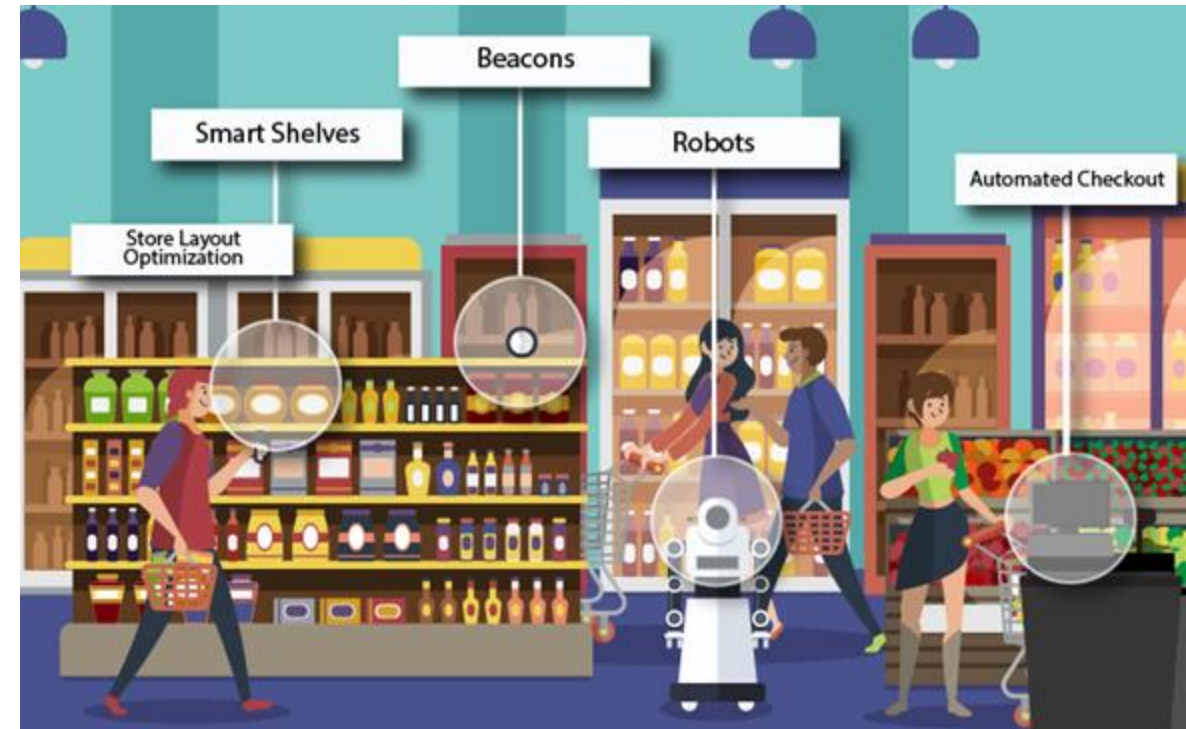


- IoT applications have transformed homes into **smart homes**.
- Devices like smart thermostats and security cameras communicate through Edge-Cloud infrastructure.
- This connectivity allows homeowners to remotely monitor and control their home, optimising energy usage and enhancing security.

RETAIL

Edge-Cloud computing facilitates real-time analytics in **retail environments**. IoT-enabled sensors track consumer behaviour and optimise shelf replenishment.

Local data processing provides insights into consumer preferences, enabling targeted marketing and improved inventory management.



CONCLUSION

IoT applications in Edge-Cloud have the potential to revolutionise industries and enhance resource management.

Based on sensors and real-time local processing, organisations can optimise decision-making, improve productivity, and allocate resources more efficiently.

