

## Internet of Things

**Internet of Things definition:** The vast network of devices connected to the Internet, including smart phones and tablets and almost anything with a sensor on it – cars, machines in production plants, jet engines, oil drills, wearable devices, and more. These “things” collect and exchange data.

IoT – and the machine-to-machine (M2M) technology behind it – are bringing a kind of “super visibility” to nearly every industry. Imagine utilities and telcos that can predict and prevent service outages, airlines that can remotely monitor and optimise plane performance, and healthcare organisations that can base treatment on real-time genome analysis. The business possibilities are endless.

Internet of Things (IoT) is an ecosystem of connected physical objects that are accessible through the internet. The ‘thing’ in IoT could be a person with a heart monitor or an automobile with built-in-sensors, i.e. objects that have been assigned an IP address and have the ability to collect and transfer data over a network without manual assistance or



intervention. The embedded technology in the objects helps them to interact with internal states or the external environment, which in turn affects the decisions taken.

An article by Ashton published in the RFID Journal in 1999 said, “If we had computers that knew everything there was to know about things - using data they gathered without any help from us - we would be able to track and count everything, and greatly reduce waste, loss and cost. We would know when things needed replacing, repairing or recalling, and whether they were fresh or past their best. We need to empower computers with their own means of gathering information, so they can see, hear and smell the world for themselves, in all its random glory.” This is precisely what IoT platforms does for us. It enables devices/objects to observe, identify and understand a situation or the surroundings without being dependent on human help.

Internet of Things can connect devices embedded in various systems to the internet. When devices/objects can represent

improving safety and IoT security.

IoT is a transformational force that can help companies improve performance through IoT analytics and **IoT Security** to deliver better results. Businesses in the utilities, oil & gas, insurance, manufacturing, transportation, Infrastructure and retail sectors can reap the benefits of IoT by making more informed decisions, aided by the torrent of interactional and transactional data at their disposal.

IoT platforms can help organizations reduce cost through improved process efficiency, asset utilization and productivity. With improved tracking of devices/objects using sensors and connectivity, they can benefit from real-time insights and analytics, which would help them make smarter decisions. The growth and convergence of data, processes and things on the internet would make such connections more relevant and important, creating more opportunities for people, businesses and industries.



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