

Internet Of Things



IoT Systems

The Internet of Everything (IoE) brings together people, process, data, and things to make networked connections more relevant and valuable than ever before. Internet of everything turns information into actions that create new capabilities, richer experiences, and unprecedented economic opportunity for organizations. One of many trends that are combining to make the Internet of Everything possible is the Internet of Things bringing things that have never been connected before online. By connecting things to applications, Internet of Things can increase operational efficiency and enable new services. Internet of Things System provides the technologies and software you need to deploy, accelerate, and innovate in the era of Internet of Things. It is a comprehensive solution addressing challenges across several industries, including manufacturing, utilities, oil and gas, transportation, mining, and public sector.

Six pillars form the Internet of Things System:

- Network connectivity
- Fog computing
- Data analytics
- Security (cyber and physical)
- Management and automation
- Application enablement platform

Resilience at scale: High availability facilitates network wide resilience as you scale your networks with millions of new endpoints and applications.

Integrated security: Network-as-a-sensor approach integrates cyber security throughout the network, maximizing security visibility and control.

Converged networking: Our broad portfolio of Internet Of Things networking solutions supports the disparate needs of IT and operational technology standards and protocols.

The capturing and sharing of data by computers without the direct input of humans is at the heart of the IoT. This is where the “Things” play their part, as every-day, familiar objects, as well as less familiar ones, are fitted with sensors, processors and radio chips allowing them to share data on their operations and their environment. These objects may include domestic items such as light bulbs, fridges, door locks and thermostats as well as industrial equipment including jet engines, bulldozers, air quality sensors and factory production lines. The rapidly decreasing cost of embedding these technologies into objects has been

accelerated by the widespread adoption of smartphones and the component industry which has sprung up to make the GPS chips, accelerometers, processors and radio chips embedded in the more than 3 billion smartphones in use Globally.

Internet Of Things and Our Bodies The intersection of the IoT and our bodily processes is perhaps the most controversial area of this new technology. Being able to track and evaluate how our bodies are performing offers all sorts of potential health benefits both at the personal level but also at a broader societal level as well. Fitness trackers which users wear such as the Fitbit have been available for several years and, more recently have evolved into more powerful devices such as the Apple Watch and Samsung Gear Fit. These can typically measure pulse rates, body temperature and physical activity. For athletes as well as those wishing to keep an eye on their exercise levels they provide useful information which can improve levels of physical performance.

These are just a few examples of how some of the current technologies which form part of the Internet Of Things ecosystem are currently or could be deployed to enhance library services. As with most other Internet Of Things technologies, they are at an early stage but point the way to how the Internet Of Things could help make connections between the physical environment of the library and the digital needs of users.