

An IoT-Connected World

The world that surrounds us is increasingly connected—potentially uniting us into a single interconnected network in the near future. For more on the Internet of Things (IoT), see p. 26.

SMART HOMES

By 2020 there could be **3.75 billion** home IoT devices.

Smart thermostats monitor temperature and humidity for optimum comfort and savings.

Smart appliances alert you when they need a new part.

Keyless locks and doorbell cameras monitor access.

Smart sprinklers save on water bills.

Iris-scanning door locks provide you access with just the blink of an eye.

Ride a train with just a wave of your hand—an implanted microchip replaces your ticket.

A digital contact lens records your blood sugar levels from your tears.

GOING PERSONAL

The wearable-tech market is expected to grow to **162.9 million** units by the end of 2020.

Commute to work via an induction priority lane with an embedded magnetic field that keeps your electric vehicle charged.

A wearable sensor monitors blood pressure 24/7 and can wirelessly deliver data to your healthcare provider.

INTELLIGENT ROADS

Autonomous vehicles and roadside units communicating in a peer-to-peer network could help avoid up to **79 percent** of all traffic accidents.

INDUSTRIAL INTERNET

The Industrial IoT could deliver more than **US\$1.9 trillion** in productivity gains globally by 2020.

Scanning fruits and vegetables identifies nutritional information.

A pill containing a tiny robot helps detect or monitor cancer.

DATA-DRIVEN AGRICULTURE

IoT device installations in agriculture could increase from 30 million in 2015 to **75 million** in 2020.

Smart intersections will have no traffic lights or stop signs—instead computers will communicate directly with each autonomous car.

Motion-sensor streetlamps light up when a car approaches specific section of the road and slowly dim away as it passes.

Data analysis anticipates when a device might break down—and fixes it before it does.

Sensors record a machine's temperature and operating hours and adjust settings across the factory to reduce bottlenecks.

Data-collecting sensors help farmers increase yield, save on water and reduce daily planning time.

Uploaded sensor data is integrated with a web-based weather forecast, so farmers can better plan harvesting schedules.