

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.

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

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

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.