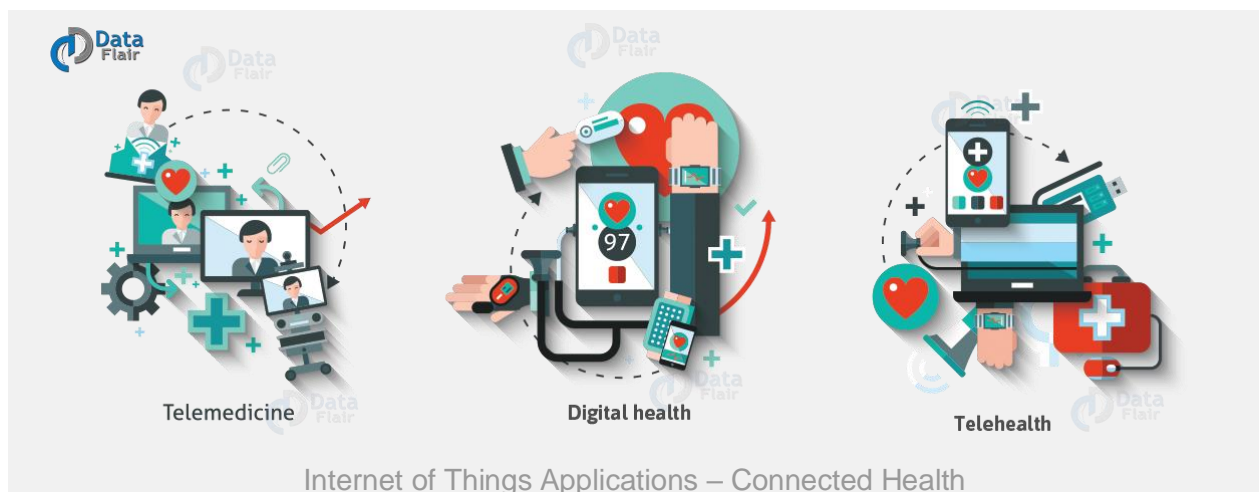


The wearable technology, a big part of IoT can help patients to keep a track of their vitals, such as blood pressure, calorie count, etc. They can also use it to keep a track of their heart rate, set reminders for medicines, doctor's appointment, and daily exercise schedule. The data collected by the wearable device is stored on the cloud so that the doctors can, later on, check the data and treat the patients accordingly.

The matter of IoT in health care doesn't end here. With this technology, it is now easier to keep track of hospital equipment. With IoT devices, doctors and nurses can be easily tracked and contacted whether they are in the hospital or out of it. The application of IoT in Healthcare is making it more and more efficient every day.



2. Smart Homes

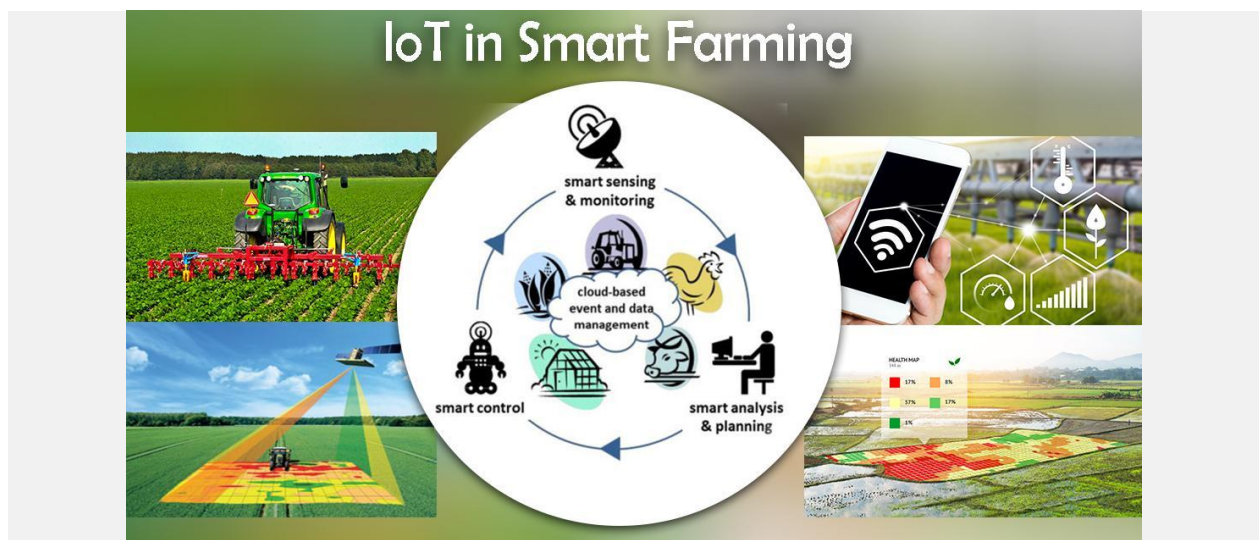


Remote Control Appliances

IoT powered home appliances let residents remotely switch on and off devices using smartphone apps to avoid incidents and save energy. Additionally, these devices can make autonomous decisions based on sensor inputs such as preparing fresh coffee when a resident is identified to wake up. Other examples of autonomous or remote controlled actions include:

- turning on lights
- starting the coffee maker,
- setting temperature,
- open up a music playlist,
- Locking doors.

3.IoT in Agriculture



Different aspects of farming such as the soil condition, heat and humidity can be closely monitored. The irrigation system can be modified to work accordingly with the farming situation.

The use of drones and livestock monitoring are making sure that we get clean and fresh produce. With smart greenhouse, manual labour can be decreased, which in turn reduces production loss, labour cost, and

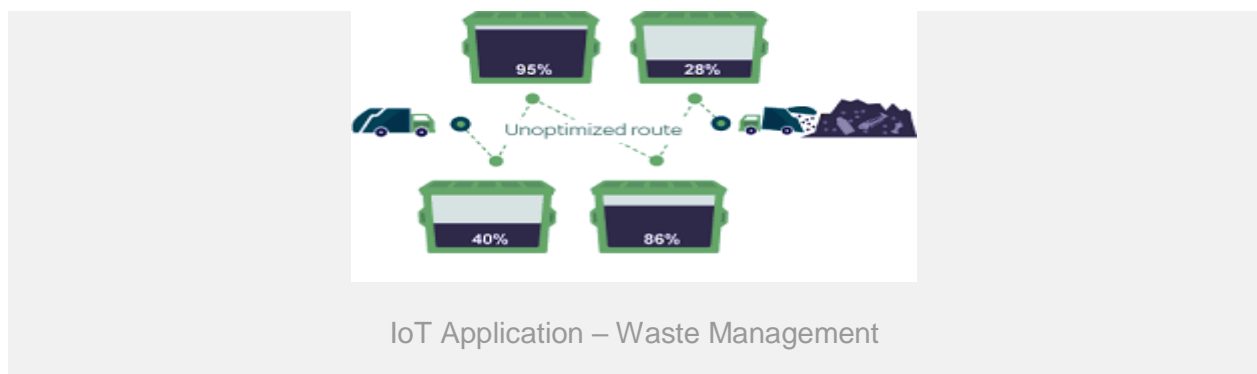
energy loss. It is an all-around efficient way of solving the world food problem.

4. Waste Management

The problem of waste management is very crucial issue in big cities, due to two reasons; first the cost of service and second the problem of storage of accumulating garbage. In order to save and make use of inexpensive environmental advantages, a deeper penetration of information and communications technologies solutions in this field will be required.

For example, intelligent waste containers help identify the level of load the trucks carry and allow for an optimization of the collector trucks route, which in turn can reduce the cost of waste collection and improve the quality of recycling.

To incorporate and make effective use of such smart waste management services, the IoT will connect these intelligent waste containers, to a control center where an optimization software will process the data and determine the optimal management and route the collector truck should follow.



5. Workplace

A smart workplace or different workspace combines customization of the working environment with clever equipment. IoT learns about you, your task, and the way you work to supply optimized surroundings.

This outcome in a realistic resort like adjusting the room temperature, but also extra advanced benefits like modifying your schedule and the gear you operate to increase your output and decrease your work time.

IoT system inside a workplace acts as a consultant and a manager with the potential of seeing what you can't.



6. Safe Driving

With the increasing use of mobile phones, there has been a tragic rise in car accidents. These accidents have been connected to distracted driving. While there have been warnings against the use of mobile phones while driving, many drivers do not pay heed to it. However, with the help of IoT technology, it is possible to track the mobile usage of drivers during driving and block distracting apps.

IoT applications can also be used to understand driver behaviour and coach drivers based on how they are driving. A recent area where IoT is being used is in the construction of driverless cars. While it seems like something from the future, driverless cars are already in the making. These cars use advanced sensors and gyroscopes, all of which are connected to cloud platforms and the internet.

Using this platform, the driverless car is able to data from a variety of sources which tells them about the traffic conditions as well as potholes, sharp turns, speed breakers and other useful information required for driving. Driverless cars can be a perfect addition in a Smart City to ensure smooth traffic conditions.

7. Attendance Monitoring System



A robust faculty attendance gadget guarantees the safety of an academic enterprise and may assist colleges and education facilities in many methods. It allows the academics to input the vital records immediately into the gadget.

This could help the agency to reduce the time it takes to publish attendance facts and allows school officers to send a piece of email to mother and father.

It can additionally help to save the number of instances a pupil has said to the doctor and hold a test on scholar's clinical desires and the medicinal drug they will be taking. It additionally offers the choice to the student to verify their meal for the day.

8. Asset tracking – tracking your valuable assets

From smart cell phone tracking to GPS pet monitoring and tracking any asset you want to, is likewise famous in Consumer IoT. Puppy monitoring is becoming increasingly more popular to offer pet proprietors complete peace of thoughts.

They could screen the movement in their pets. Asset monitoring answers allow this and permit to music anything at all, additionally over longer distances in which IoT coverage is present for low energy wide area networks.



9. Smart City

The smart city like the name suggests is a very big innovation and spans a wide variety of use cases, from water distribution to traffic management to waste management, environmental monitoring, and urban security.

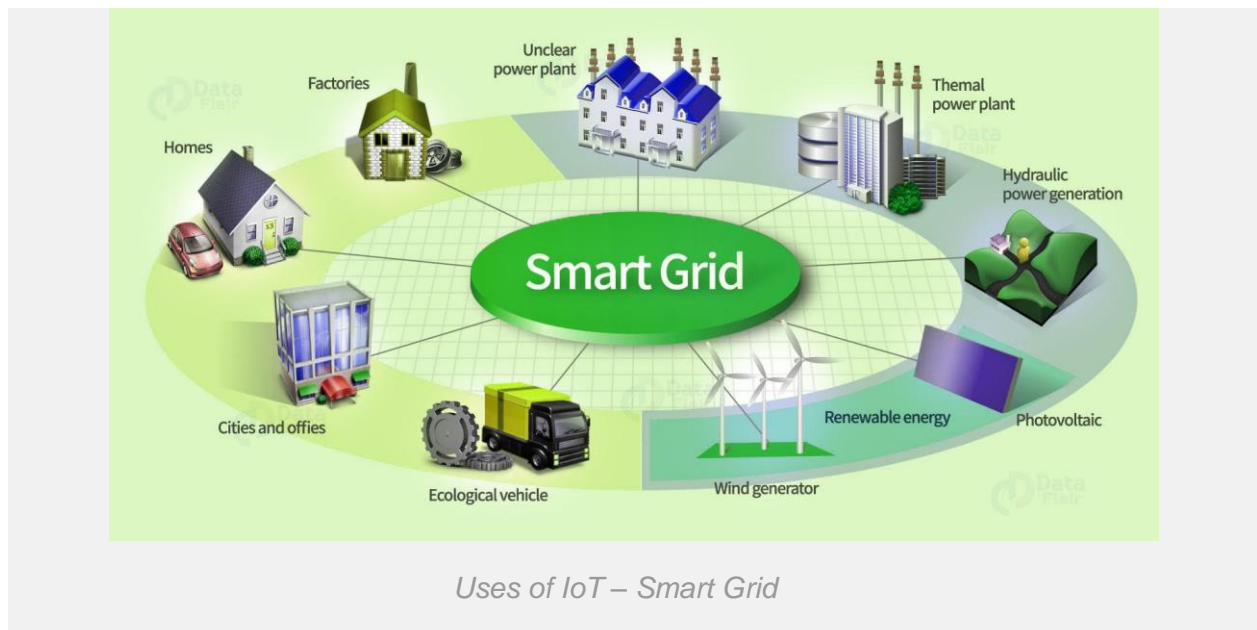
The reason why it is so popular is that it tries to remove the discomfort and problems of people who live in cities. IoT solutions offered in the Smart City area solve various city-related problems comprising of traffic, reduce air and noise pollution and help make cities safer.



10. Smart Grids

Smart grids are another area of application that stands out. A smart grid basically promises to extract information on the behaviours of consumers

and electricity suppliers in an automated fashion in order to improve the efficiency, economics, and reliability of electricity distribution.



11. Industrial Internet

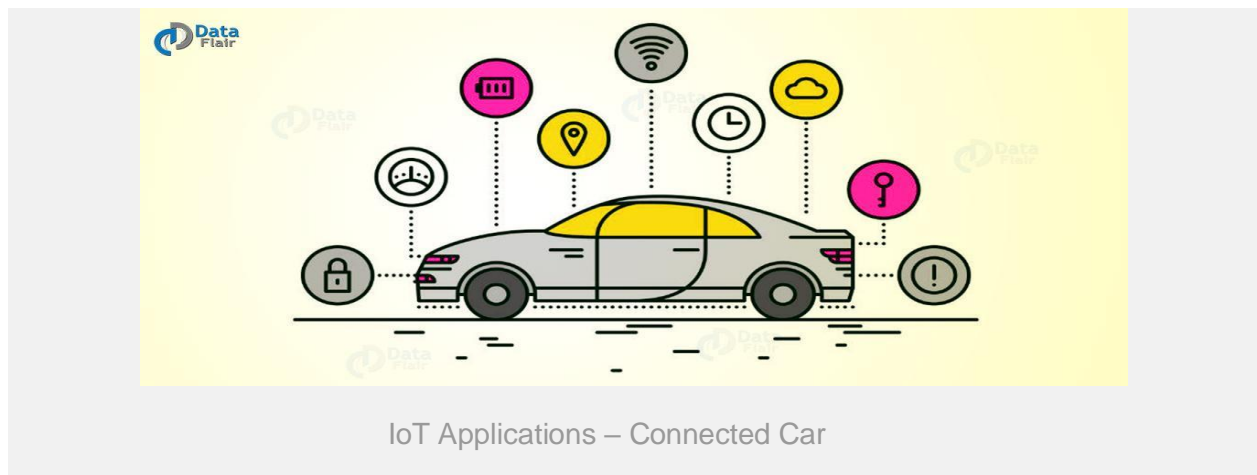
One way to think of the Industrial Internet is, as connecting machines and devices in industries such as power generation, oil, gas, and healthcare. It is also made use of in situations where unplanned downtime and system failures can result in life-threatening situations.

A system embedded with the IoT tends to include devices such as fitness bands for heart monitoring or smart home appliances. These systems are functional and can very well provide ease of use but are not reliable because they do not typically create emergency situations if a downtime was to occur.

12. Connected Car

Connected car technology is a vast and an extensive network of multiple sensors, antennas, embedded software, and technologies that assist in communication to navigate in our complex world. It has the responsibility of making decisions with consistency, accuracy, and speed.

It also has to be reliable. These requirements will become even more critical when humans give up entirely the control of the steering wheel and brakes to the autonomous or automated vehicles that are being successfully tested on our highways right now.



13. Smart Retail

Retailers have started adopting IoT solutions and using IoT embedded systems across a number of applications that improve store operations such as increasing purchases, reducing theft, enabling inventory management, and enhancing the consumer's shopping experience. Through IoT physical retailers can compete against online challengers more strongly. They can regain their lost market share and attract consumers into the store, thus making it easier for them to buy more while saving money.



14. Smart Lighting

Smart lighting aims to optimize the energy management.

Smart lighting is made up of street lighting with the IoT sensors. Sensors collect data about the condition of traffic and pedestrians. With that data, streetlights provide optimum lighting so that street lighting systems can save up to 80% of the energy.

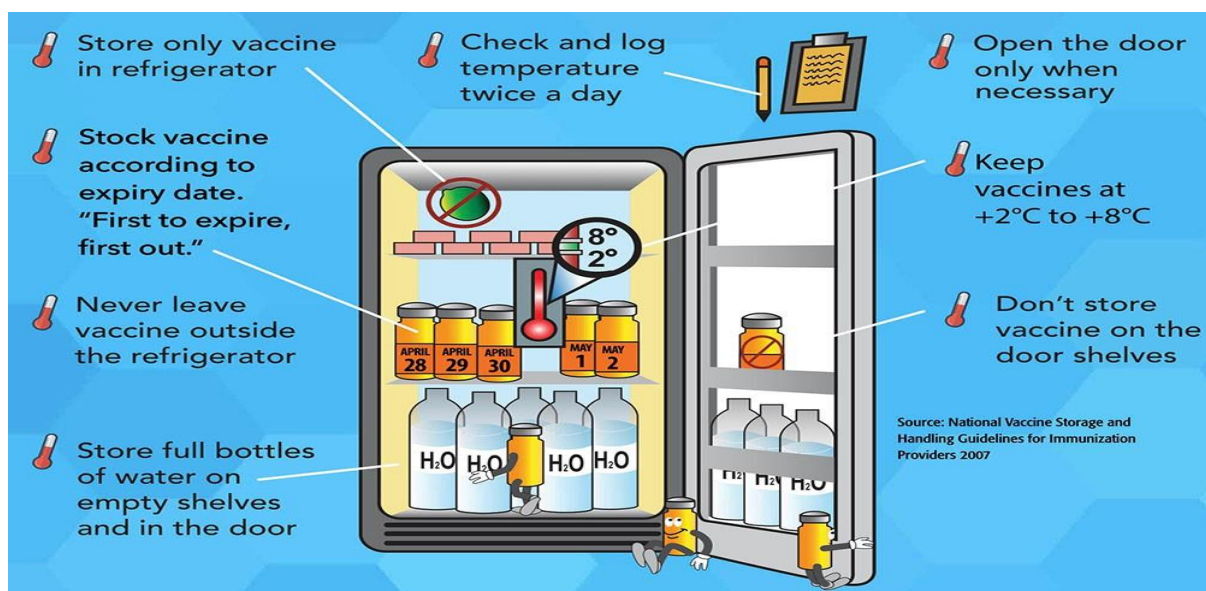
Smart lighting can also be applied to factories or homes.



15. Medical Fridges

Medical fridges monitor the temperature of vaccines, medicines and organic elements for clinics and health centers. Medical fridges provide an opportunity to follow all safety standards and national regulations of the pharmaceutical market using IoT sensors. They prevent medicines and vaccines from spoiling.

Efento is an IoT sensor an IoT platform vendor that has a variety of temperature measurement products along with wireless monitoring of temperature in medical refrigerators.

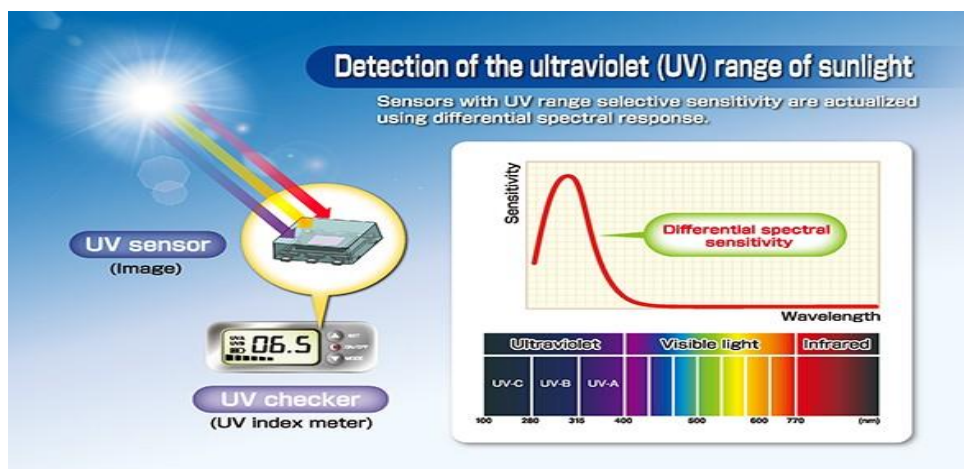


16. Ultraviolet Radiation Monitoring

Sunlight consists of three major components:

- Visible light: Wavelengths between 0.4 and 0.8 micrometres,
- Ultraviolet light: Wavelengths shorter than 0.4 micrometres,
- Infrared light: Wavelengths longer than 0.8 micrometres.

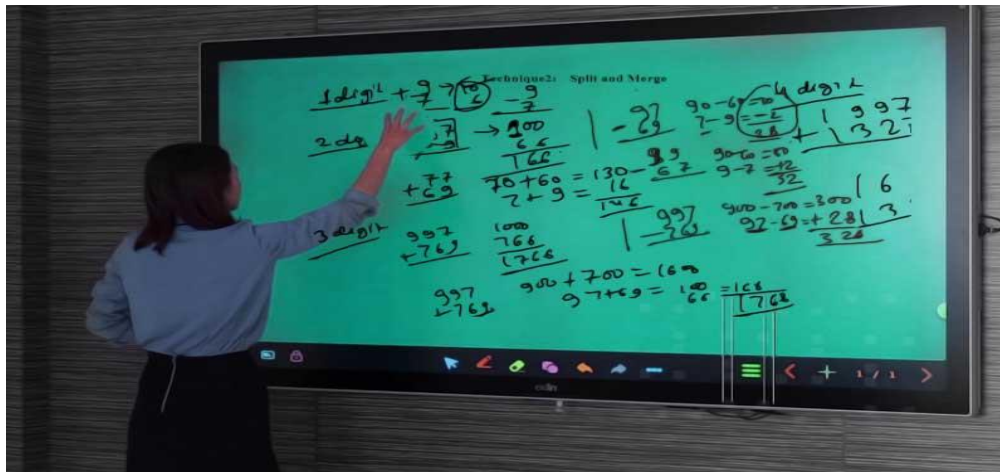
Ultraviolet (UV) rays are electromagnetic waves that account for about 10% of solar light. When overexposed, UV rays have harmful effects such as skin cancer, premature aging, cataracts, and immune system suppression. lot sensors measure UV sun rays to warn people not to be exposed in certain hours.



17. Smart Boards

The times have changed. The current day students enjoy smartboards way more than black boards. Smart boards are interactive white boards that projects subject images. It enables the teachers and students to interact with it. How? Bysimply writing on it or moving it around the class. It is much more fun and exciting than it is seems at the moment. Here, applications of iot in education have managed to make education and the exchange of information simple, interestingand interactive.

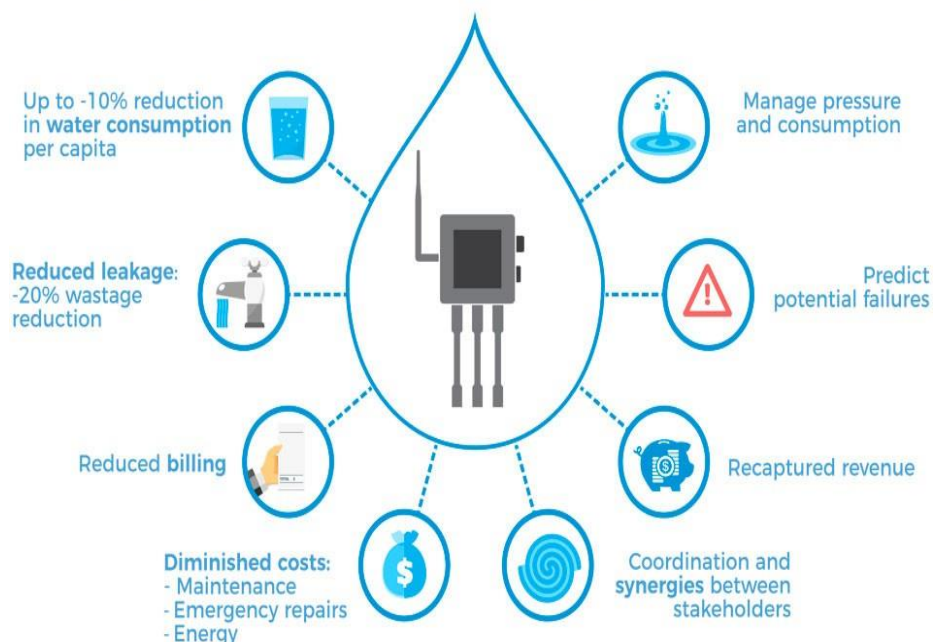
With smart boards, a teacher can take a sigh of relief. Info graphics, tutorial videos and complex formulae, be it for any subject and especially of mathematics, could be solved in shorter time frame.



18. Water Quality management

IoT sensors determine the what kind of chemicals are in the water. They also identify metrics such as total dissolved solids (TDS), bacteria, chlorine, electrical conductivity, etc. This will assist in accessing the real-time, precise quantification of results and will also offer the capability to pinpoint the difficult areas.

BENEFITS OF SMART WATER SOLUTIONS



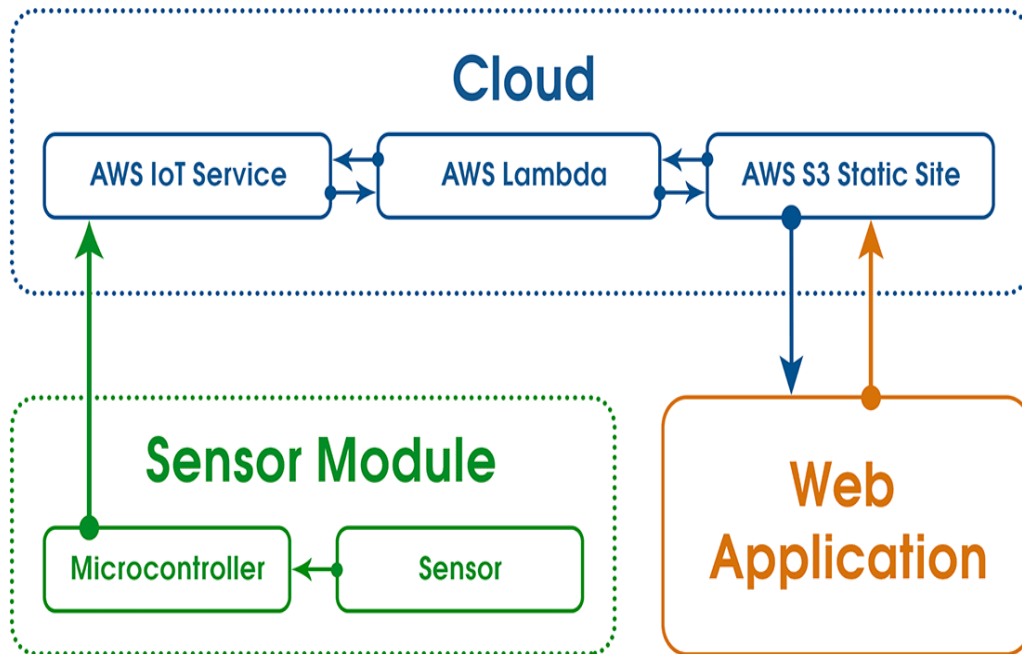
19. Water Conservation

A smart water management system ensures protection from water damage, flooding, and unpleasant surprises in your water bill. The digital system identifies unusual water consumption, both, in open and concealed areas. The system alerts you immediately about water leaks and closes the main water supply itself, even when you are not at home. IoT sets a new standard for water technology worldwide. IoT offers full control by syncing the system with mobile devices through mobile and web app for simple and precise management of water consumption in the home. You determine how, how much, and when all over click of a button. Using the mobile app, you receive real-time alerts about abnormal and unexpected situations, and you can manage and control them remotely, saving lots of money yearly.



20. Smart Parking

In cities parking is a big problem. With iot sensors, parking problems in a city can be minimized.



mobidev

The IoT device consists of an ESP8266 microcontroller and an HC-SR04 distance measurement sensor. The sensor periodically measures the distance and transmits this data to the microcontroller, which is connected to AWS IoT service via the MQTT protocol.