Vybrana terminologia podla [IoT security risks, issues and considerations in 2022 (telenor.com)](https://iot.telenor.com/iot-insights/what-is-iot-security/)

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| IoT/ Internet of Things | Coined in 1999, this refers to the active exchanged of information between devices previously unconnected. |  |
| IoE/ Internet of Everything | Another term for IoT coined by and still used by Cisco, implies that IoT is not only made up of things, but also of data, process and people. |  |
| IIoT/ Industrial Internet of Things | An umbrella term for M2M technology when it focuses exclusively on industrial machines. |  |
| BLE/ Bluetooth Low Energy | Bluetooth Low Energy is aimed at applications in healthcare, security, home entertainment and wireless beacons. Independent of Bluetooth, BLE offers reduced power consumption while maintaining the range of classic Bluetooth. |  |
| LoRaWAN/ Low-power wide-area network | LoRaWAN is a networking protocol for connecting wireless battery operated devices to the internet in regional, national or global networks. It addresses IoT requirements such as bi-directional communication, end-to-end security, mobility and localisation services. LoRaWAN baud rates range from 0.3 kbps to 50 kbps. |  |
| NB-IoT/ Narrowband IoT | NB-IoT is a low power wide area (LPWA) technology developed to enable a wide range of IoT devices and services. NB-IoT significantly improves the power consumption of user devices, system capacity and spectrum efficiency, especially in deep coverage in contrast to cellular networks. Battery life of more than 10 years can be supported for a wide range of use cases. It provides a simpler, lower bandwidth alternative to cellular connectivity. |  |
| Sigfox | Sigfox is similar to LoRaWAN in that it is a technology designed for global roll-out to provide wireless networks to connect low power objects such as smart meters. It has low power characteristics and utilises the 900MHz band with networks in 72 countries, covering 5.8 million square kilometres, as of November 2020. Sigfox communication supports up to 140 uplink messages a day, which can carry a payload of 12 octets at a data rate of 100 bits per second. |  |
| Wi-Fi | Wi-Fi is commonly used for local area networking of devices and for internet access. Well known in home and small office networks, the technology is also utilised in enterprises to connect devices and provide public internet access for mobile devices. Wi-Fi has a range of 20-150 metres and some versions can achieve speeds of more than 1Gbps. |  |
| Zigbee | Zigbee is a communications protocol used to create personal area networks with small, low power digital radios. Typical applications include home automation, medical device data collection and other low power, low bandwidth use cases. The technology is limited to transmission distances of 10-100 metres with a line of sight in order to keep power consumption low. Zigbee has a defined data rate of 250Kbps and is suited for intermittent data transmission. |  |
| Access point | A wireless network device that acts as a portal for devices to connect to a local area network. |  |
| Device | A device is a unit of physical hardware or equipment that provides one or more computing functions within a system. |  |
| Beacons | Small transmitters that connect to Bluetooth and Bluetooth Low Energy (BLE)-enabled devices such as smartphones or tracked packages. |  |
| Gateway | A “hub that translates” communication between two computers or devices that allows these to understand each other´s data transfer and communication. |  |
| Hub | A hardware device that connects other data-transmitting devices to a central station. |  |
| Sensor | A device that measures a physical input from its environment and converts it into data that can be interpreted by either a human or a machine. |  |
| Lightweight M2M | A device management protocol designed for sensor networks and the demands of a machine-to-machine (M2M) environment. |  |
| Modbus | A serial communications protocol for use with programmable logic controllers (PLCs) that is used to connect industrial electronic devices. |  |
| MQTT/ Message Queuing Telemetry Transport | A protocol designed to connect the physical devices and networks with applications and middleware, making it an ideal connectivity protocol for IoT and M2M. |  |
| API/ Application Programming Interface | A set of routine definitions, protocols, and tools for building software and applications. An API connects your business processes, services, content, and data to channel partners, internal teams, and independent developers in an easy and secure way. APIs are becoming the de facto standard by which companies exchange data and build consistent cross-channel customer experiences. |  |
| APN/ Access Point Name | A gateway that translates communications between telecommunications and computer networks (most often the Internet). |  |
| Cloud computing | Internet-based computing that allows for data access from distinct computers or devices. Typically referred to as though the ‘cloud’ itself is storing the data, but data is stored on physical computers that allow access at any time to the data via the Internet. |  |
| Edge computing | A model in which computation is largely or completely performed on distributed device nodes known as smart devices or edge devices as opposed to taking place in a centralised cloud environment. |  |
| Firmware/FOTA | A specific class of computer software that provides the low-level control for the device’s specific hardware. FOTA refers to the capability of upgrading firmware over-the-air. |  |
| Fog computing | Also known as edge computing or fogging, Fog computing is a term created by Cisco that refers to extending cloud computing to the edge of an enterprise’s network. |  |
| Flow-based programming | A type of dataflow programming in which programme steps communicate with each other by transmitting data through some kind of channel. The channels are managed by the larger system, leaving the connected components free to focus on processing input and producing output. |  |
| Java/JSON | A general-purpose computer programming language designed to produce programs that will run on any computer system. JavaScript Object Notation is text-based lightweight technology for generating human readable formatted data. |  |
| OTA/ Over-the-Air | OTA provisioning refers to various methods of distributing new software, configuration settings, and even updating encryption keys to devices of sorts. |  |
| Open source | Describes software for which the original source code is freely available and can be redistributed or modified. |  |
| Peer-to-peer | Peer-to-peer computing or networking is a distributed application architecture that partitions tasks or workloads between peers. Peers are equally privileged, equipotent participants in the application. |  |
| RESTful API | Also referred to as a RESTful web service a RESTful API is based on representational state transfer (REST) technology, an architectural style and approach to communications often used in web services development. |  |
| SOAP API | Simple Object Access Protocol (SOAP) is a communication protocol for the exchange of information between various operational systems using Extensible Markup Language (XML). |  |
| STA/ AP/ MIX communication modes | Station Mode (**STA**) is the normal mode for a WiFi device. A device uses Station Mode to join a network that already exists (e.g. like smartphone connects to WiFi network and then is is running in a Station Mode).  Connection to Wi-Fi is provided by an access point (**AP**), that acts as a hub for one or more stations. The access point on the other end is connected to a wired network.  Mix/ both modes  See <https://www.embedded-robotics.com/esp8266-wifi/> |  |