



# Lexicon

**5G Radio Access Networks (RAN)** The part of a 5G or LTE telecommunications system that connects individual devices to other parts of a network through radio connections.<sup>1</sup>

**Artificial Intelligence (AI) /Machine Learning (ML)** Modern computational approaches and algorithms like neural networks that are used for "human-like" tasks, e.g., in picture or speech recognition, and many others. AI/ML is increasingly deployed at edge level – outside data centers – and facilitated by dedicated edge servers equipped with accelerator hardware, such as Graphical Processing Units (GPUs).

**Augmented Reality (AR)** A technology that superimposes a computer-generated image on a user's view of the real world, thus providing a composite view.<sup>2</sup>

**Bandwidth** The maximum amount of data transmitted over an internet connection in a given amount of time.<sup>3</sup>

**Big data** Extremely large data sets that may be analyzed computationally to reveal patterns, trends, and associations, especially relating to human behavior and interactions.<sup>4</sup>

**Biometric ID** A form of identification that recognizes and analyzes an individual based on their physical and behavioral traits.<sup>5</sup>

**Cloud Security Posture Management (CSPM)** A key component of cloud data security that scours cloud environments and alerts staff to compliance risks and configuration vulnerabilities in cloud services, most of which stem from human error.<sup>6</sup>

**Digital Twins** A virtual representation that serves as the real-time digital counterpart of a physical object or process.<sup>7</sup>

**enhanced Mobile Broadband (eMBB)** A 5G service profile applicable to a 5G network slice (a "sub-network" in a 5G network), which is used for high bandwidth use cases like a multimedia transmission.

**Industry 4.0** The Fourth Industrial Revolution, 4IR, or Industry 4.0, conceptualizes rapid change to technology, industries, and societal patterns and processes in the 21st century due to increasing interconnectivity and smart automation.<sup>8</sup>

**Internet of Things (IoT)** Physical objects (or groups of such objects) that are embedded with sensors, processing ability, software, and other technologies that connect and exchange data with other devices and systems over the Internet or other communications networks.<sup>9</sup>

**Internet Protocol TV (IPTV)** Sometimes known as streaming media, is the delivery of television content over Internet Protocol (IP) networks. This is in contrast to delivery through traditional terrestrial, satellite, and cable television formats.<sup>10</sup>

**Kubernetes containers** Also known as K8s, is an open-source system for automating deployment, scaling, and management of containerized applications.

**massive Machine Type Communication (mMTC)** A 5G service profile, applicable to a 5G network slice (a "sub-network" in a 5G network), which is optimized for low-bandwidth, low-energy transmission – e.g. the connection of many thousands of IoT devices.

**Metadata** "data that provides information about other data", but not the content of the data, such as the text of a message or the image itself.<sup>11</sup>

**Micro-, nano- and femto-cells** These are elements of small-cell 5G or LTE installations. The range goes from micro-cell radio units typically dedicated to a single building – e.g. a railway station – all the way down to femto-cells radios, which are used outdoor or indoor in a way similar to WiFi base stations.

<sup>1</sup> [https://www.cablefree.net/wirelesstechnology/4glte/lte-4g-5g-radio-access-network-ran/#:~:text=A%20Radio%20Access%20Network%20\(RAN,connection%20with%20its%20core%20network](https://www.cablefree.net/wirelesstechnology/4glte/lte-4g-5g-radio-access-network-ran/#:~:text=A%20Radio%20Access%20Network%20(RAN,connection%20with%20its%20core%20network)

<sup>2</sup> [https://www.anotherreality.io/technology/augmented-reality-and-mixed-reality/#:~:text=Augmented%20Reality%20\(AR\)%20is%20a,thus%20providing%20a%20composite%20view](https://www.anotherreality.io/technology/augmented-reality-and-mixed-reality/#:~:text=Augmented%20Reality%20(AR)%20is%20a,thus%20providing%20a%20composite%20view)

<sup>3</sup> <https://www.techtarget.com/searchnetworking/definition/bandwidth#:~:text=Network%20bandwidth%20is%20a%20measurement,be%20transmitted%20in%201%20second>

<sup>4</sup> <https://centricconsulting.com/blog/a-data-and-analytics-minute-what-is-big-data-cincinnati/#:~:text=If%20you%20Google%20the%20term,to%20human%20behavior%20and%20interactions.%E2%80%9D&text=Big%20data%20is%20also%20often%20paired%20with%20analytics%20success>

<sup>5</sup> <https://www.alpha-card.com/id-cards/biometric-uses#:~:text=Biometric%20ID%20Cards%20are%20a,an%20body%20movement%2C%20including%20gait>

<sup>6</sup> [https://www.zscaler.com/resources/security-terms-glossary/what-is-cloud-security-posture-management-cspm#:~:text=Cloud%20security%20posture%20management%20\(CSPM\)%20is%20a%20key%20component%20of,which%20stem%20from%20human%20error](https://www.zscaler.com/resources/security-terms-glossary/what-is-cloud-security-posture-management-cspm#:~:text=Cloud%20security%20posture%20management%20(CSPM)%20is%20a%20key%20component%20of,which%20stem%20from%20human%20error)

**Multi-access Edge Computing (MEC)** The integration of edge computing technologies into telco networks, typically 5G or LTE. Cloud-like compute, and storage functions are built into the network, so telecom operators can operate value-add edge services from the augmented network.

**Multi-Operator Radio Access Network (MORAN)** A Radio Access Network built in a way that it can be shared by multiple mobile network cores, i.e. used by multiple different network providers simultaneously.

**Nano store** A nano store is a crossover between a small convenience store and a vending machine.<sup>12</sup>

**Network Function Virtualization (NFV)** A way to virtualize network services, such as routers, firewalls, and load balancers, that have traditionally been run on proprietary hardware.

**Over-The-Top (OTT)** Video service is a media service offered directly to viewers via the Internet. OTT bypasses cable, broadcast, and satellite television platforms, the types of companies that traditionally act as controllers or distributors of such content.<sup>13</sup>

**Radio Frequency Identification (RFID)** Uses electromagnetic fields to automatically identify and track tags attached to objects. An RFID system consists of a tiny radio transponder, a radio receiver and transmitter. When triggered by an electromagnetic interrogation pulse from a nearby RFID reader device, the tag transmits digital data, usually an identifying inventory number, back to the reader. This number can be used to track inventory goods.<sup>14</sup>

**Self-Organized Networks (SON)** An automation technology based on AI/ML, geared at fully automated planning, configuration, management, ongoing optimization, and healing of mobile radio networks, with only a minimum of human intervention.

<sup>7</sup> [https://en.wikipedia.org/wiki/Digital\\_twin](https://en.wikipedia.org/wiki/Digital_twin)

<sup>8</sup> [https://en.wikipedia.org/wiki/Fourth\\_Industrial\\_Revolution](https://en.wikipedia.org/wiki/Fourth_Industrial_Revolution)

<sup>9</sup> [https://en.wikipedia.org/wiki/Internet\\_of\\_things](https://en.wikipedia.org/wiki/Internet_of_things)

<sup>10</sup> [https://en.wikipedia.org/wiki/Internet\\_Protocol\\_Television](https://en.wikipedia.org/wiki/Internet_Protocol_Television)

<sup>11</sup> <https://artsandculture.google.com/entity/metadata/m05451?hl=en>

<sup>12</sup> <https://retailwire.com/discussion/are-nanostores-the-new-ultra-convenience-stores/>

**Spectrum:** The radio frequencies allocated to the mobile industry and other sectors for communication over the airwaves.<sup>15</sup>

**Ultra-Reliable Low Latency Communication (URLLC)** A 5G service profile, applicable to a 5G network slice (a "sub-network" in a 5G network), which is geared at extremely reliable communication with minimum latency (delay), e.g. for the control of self-driving cars or drones or for emergency telesurgery.

**Virtual Reality (VR)** The term used to describe a three-dimensional, computer-generated environment that can be explored and interacted with by a person.<sup>16</sup>

**wireless LAN (WLAN)** A wireless computer network that links two or more devices using wireless communication to form a local area network (LAN) within a limited area such as a home, school, computer laboratory, campus, or office building.<sup>17</sup>

<sup>13</sup> [https://en.wikipedia.org/wiki/Over-the-top\\_media\\_service](https://en.wikipedia.org/wiki/Over-the-top_media_service)

<sup>14</sup> [https://en.wikipedia.org/wiki/Radio-frequency\\_identification](https://en.wikipedia.org/wiki/Radio-frequency_identification)

<sup>15</sup> <https://www.gsma.com/spectrum/what-is-spectrum/>

<sup>16</sup> <https://virtuallspeech.com/blog/vr-definition>

<sup>17</sup> [https://en.wikipedia.org/wiki/Wireless\\_LAN](https://en.wikipedia.org/wiki/Wireless_LAN)