

DIGITALSHIFT

Glossary of technological concepts and technologies

Concept	Description	Example(s), applications, implications
STRATEGY-RELATED ARTICLES		
first mover	the pioneer in a certain field of business	Ray Crock's McDonalds was first to introduce a new kind of fast-food restaurants
early adopter	company that is fast to go into business and follow the trail blaze of first mover	
change management	A substantial transition; an evolutionary phase in a life of an organization, where a big change needs careful management of resources, making sure to keep the employees on board	
monitoring and evaluation	a phase after the change has been implemented where management tries to understand how well the change has gone thru	
core	core refers to core business, in relation to industry and key products	
near-core	new products/services will differ from our core portfolio	
non-core	new products/services are radically different from what we've been creating so far	

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AREAS AND MEASUREMENTS-RELATED ARTICLES (A-Z)		
3D printer/Replicator	A device used to print three-dimensional objects; a printing process that involves making three-dimensional solid objects from digital models by applying many thin layers of quick-drying material on top of each other.	
Actuator	An actuator is a component of a machine that is responsible for moving or controlling a mechanism or system.	
Advanced materials	Smart materials that are self-healing, self-cleaning, and that remember their original shape even if they're bent.	
Advanced robotics	Robots get cheaper, more dexterous, and safer to use, they'll continue to grow as an appealing substitute for human labor in fields like manufacturing, maintenance, cleaning, and surgery.	bots, humanoids, industrial robotics, Virtual assistants
Android/Humanoid	An automaton (robot) resembling a human being. from Late Greek <i>androeidēs</i> , manlike. The word 'robot' comes from Czech, coined by Karel Čapek in the play R.U.R. (1920) from the base <i>robot-</i> , as in <i>robota</i> , compulsory labor, <i>robotník</i> , peasant owing such labor.	
Artificial intelligence (AI) and machine learning	The intelligence demonstrated by machines or software with the ability to depict or mimic human brain functions. "The more advanced techniques move beyond traditional rule-based algorithms to create systems that understand, learn, predict, adapt and potentially operate autonomously.	New job colleague :)
Augmented reality - AR	Augmented reality is the integration of digital information with the user's environment in real time. Unlike virtual reality, which creates a totally artificial environment, augmented reality uses the existing environment and overlays new information on top of it.	Google glass Onboarding

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Automation	Automation[1] or automatic control, is the use of various control systems for operating equipment such as machinery, processes in factories, boilers and heat treating ovens, switching on telephone networks, steering and stabilization of ships, aircraft and other applications and vehicles with minimal or reduced human intervention.	Automation has been achieved by various means including mechanical, hydraulic, pneumatic, electrical, electronic devices and computers, usually in combination. Complicated systems, such as modern factories, airplanes and ships typically use all these combined techniques.
Autonomous vehicles	An autonomous vehicle, for example a driverless car (also known as self-driving car and robotic car) is a vehicle that is capable of sensing its environment and navigating without human input.	cars, drones
Big Data	Everything we do is increasingly leaving a digital data which we (and others) can use and analyse. Big Data therefore refers to that data being collected and our ability to make use of it.	BASF is providing farmers with detailed suggestions on which fertilizer to use for which part of the crop, depending on crop data, soil properties and weather data
Business model	A business model is the way in which a company generates revenue and makes a profit from company operations. Analysts use the metric gross profit as a way to compare the efficiency and effectiveness of a firm's business model. Gross profit is calculated by subtracting the cost of goods sold from revenues.	
Cloud computing	Use of computer hardware and software resources delivered over a network or the Internet, often as a service	cloud -management software, e.g. virtualization, metering; data center hardware; high-speed networks; software platform as service (Saas/Paas)
CRM	Customer relationship management. Usually refers to a software solutions enabling users (sales personal in an organization) to organize sales leads and clients and organize various data related to a particular customer.	Past purchases, when to call them next, birthdays

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Digital twins	This is a computerized replication of something in the real world generated by sensor data. Digital twins will one way become the de facto way that workers interact with the real devices floating around the real world.	Job training
Drones	an unmanned aircraft or ship guided by remote control or onboard computers	
Genomics	Genomics based services in the field of cosmetics, medical and pharmaceutical, perhaps even F&B	DNA-based job-worker matching
Geo spatial data	The term geospatial is a term that has only recently been gaining in popularity and is used to define the collective data and associated technology has a geographic or locational component. The word geospatial is used to indicate that data that has a geographic component to it. This means that the records in a dataset have locational information tied to them such as geographic data in the form of coordinates, address, city, or ZIP code. GIS data is a form of geospatial data. Other geospatial data can originate from GPS data, satellite imagery, and geotagging.	Geospatial technology refers to all of the technology used to acquire, manipulate, and store geographic information. GIS is one form of geospatial technology. GPS, remote sensing, and geofencing are other examples of geospatial technology.
Gesture-based user interface	the interface features through which users interact with the hardware and software of computers and other electronic devices.	
Holograms	a three-dimensional image reproduced from a pattern of interference produced by a split coherent beam of radiation (as a laser)	A hologram is a picture of a "whole" object, showing it in three dimensions. We've all seen cheap holographic images on credit cards and ID cards (where they help prevent copying). Far more impressive are large holograms that take the form of a ghostly 3-D moving figure that you can walk around to see from all angles.

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Human augmentation	Human augmentation is generally used to refer to technologies that enhance human productivity or capability, or that somehow add to the human body. Modern advancements in many areas of IT have led to a greater variety of implants and other technologies that could be classed as human augmentation.	
Hyperpersonalized advertisements	Simply put, the 'follow you around digital ads.' Think Facebook, displaying ads of products you recently viewed in some online shop.	As seen in the 'Minority report' movie.
Insect-based food	Food made out of real insects, usually thermally processed. Scientifically proven to contain big volumes of protein.	
Internet of Things (IoT)	The Internet of Things (IoT) is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.	baby control, smart houses, smart cities. Smart workplace.
IoT - Internet of Things	the concept of basically connecting any device to the Internet (and/or to each other). This includes everything from cellphones, coffee makers, washing machines, headphones, lamps, wearable devices	smart houses; smart cars that know your calendar and take the best route
KPI	A Key Performance Indicator is a measurable value that demonstrates how effectively a company is achieving key business objectives. Organizations use KPIs at multiple levels to evaluate their success at reaching targets. High-level KPIs may focus on the overall performance of the enterprise, while low-level KPIs may focus on processes in departments such as sales, marketing or a call center.	

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Lean start-up	A teachable and learnable method for creating success when founding a new company or when introducing a new product by an existing company. The lean startup method advocates developing products that consumers have already demonstrated a desire for so that a market will already exist as soon as the product is ready rather than developing a product and then hoping that a market will grow around it.	
Lidar	Lidar is a laser-based method of detection, range finding and mapping.	
Lithium energy storage	Inajor repercussions for the transportation, power generation, and the oil and gas industries as batteries grow cheaper and more efficient.	Tesla
Multi-channel	This term refers to companies using multiple channels (e.g. social media, web and email) to engage their customers. Companies with this approach are adopting two or more channels to engage their customers, however, they are not necessarily focused on delivering a seamless / consistent message across multiple touch-points. Furthermore, these programs don't necessarily factor in optimizing the customer experience based on the different devices (e.g. smartphones, tablets and laptops) clients use to interact with the business.	
Multifunctional team	Group composed of members from two or more departments or functional areas working together to solve a problem or handle a situation that requires capabilities, knowledge, and training not available from any one source.	

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Omni-channel	Omni-channel: While companies using this approach also use multiple channels to engage their customers they distinguish themselves through two additional factors; consistency and focus on devices involved within client interactions. These businesses are diligent to ensure that their customers receive the same experience and message through different channels and devices involved within their interactions with the firm. For example, a company that provides customers with the ability to engage it through a mobile app, social media portal and website would be focused to ensure that the look and feel as well as the messages they receive across each touch-point are seamless.	Data shows that companies with well-defined omni-channel customer experience management (CEM) programs achieve a 91% higher year-over-year increase in customer retention rate on average, compared to organizations without omni-channel programs. These organizations also average a 3.4% increase in customer lifetime value, while those without omni-channel programs actually diminish customer lifetime value by .7% year-over-year.
SaaS/PaaS	Software as a service (SaaS) is a software distribution model in which a third-party provider hosts applications and makes them available to customers over the Internet. SaaS is one of three main categories of cloud computing, alongside infrastructure as a service (IaaS) and platform as a service (PaaS).	
Security architecture	Security architecture is a unified security design that addresses the necessities and potential risks involved in a certain scenario or environment. It also specifies when and where to apply security controls.	control
Service model	A Service Model describes how a service provider creates value for a given portfolio of customer contracts by connecting the demand for service from the assets of its customers with the service provider's service assets. It describes both the structure and the dynamics of the service.	
Smart devices	See 'IoT' article.	

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Swipe and pinch-to-zoom motions	to move a finger or fingers, or a stylus, across an area on (a touchscreen) in order to execute a command: Put your finger on the arrow and swipe the screen to the right to unlock your phone.	
Targeted advertising	Advertising targeted at a specific audience, corresponding with customer segments (see 'Target segments' description on the game board).	
Touchpoints	A touchpoint is any time a potential customer or customer comes in contact with your brand—before, during, or after they purchase something from you.	For example, customers may find your business online or in an ad, see ratings and reviews, visit your website, shop at your retail store, or contact your customer service etc.
Virtual reality - VR	Virtual reality is an artificial environment that is created with software and presented to the user in such a way that the user suspends belief and accepts it as a real environment. On a computer, virtual reality is primarily experienced through two of the five senses: sight and sound.	Digital twins Job training
Wearables	Wearables, gadgets that you wear, are the biggest new innovation in technology since the smartphone – and the possibilities are endless. Something that may be worn or carried on the body, as an item of clothing; relating to or noting a computer or advanced electronic device that is incorporated into an accessory worn on the body or an item of clothing: wearable gadgets embedded in fabric;	Google glass, Apple watch, smartwatches, fitness trackers, sports watches and other connected devices, smart clothing. GSK is using wearable devices to monitor patient compliance and patient condition in clinical trials