Word of the day

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## Emotional Intelligence

[Emotional intelligence](https://mail.softcon1.com/owa/redir.aspx?SURL=245NWzdhs1lrmM82XUjDsQ48zxzHnyrFr00vw6rFCvVz8Pgrs1_TCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANQA0ADEAMQA0ADEAMQAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f55411411%2f19560265) (EI) is the area of cognitive ability that facilitates interpersonal behavior.

The term emotional intelligence was popularized in 1995 by psychologist and behavioral science journalist Dr. Daniel Goleman in first book, Emotional Intelligence. Dr. Goleman described emotional intelligence as a person's ability to manage his feelings so that those feelings are expressed appropriately and effectively. According to Goleman, emotional intelligence is the largest single predictor of success in the workplace.

Dr. Goleman and other social scientists have promoted the concept of an emotional intelligence quotient (EQ) test to serve as a counterpart to more traditional intelligence quotient (IQ) tests. While a traditional IQ test seeks to evaluate an individual's ability to learn new information, an EQ test seeks to evaluate an individual's capacity to deal successfully with others. To that end, EQ test questions focus on assessing soft skills such as self-awareness, social awareness, relationship management and empathy.

Although Goleman's theories have been influential, they have not gone without criticism. Several of his peers have claimed that among other things, Dr. Goleman's research has not been sufficiently rigorous. Most critics agree, however, that the concept of emotional intelligence is a valid one because human intellect is complex and it's simply not possible for one type of intelligence test to provide an accurate assessment of a person's ability to be successful.

## SCADA (Supervisory Control and Data Acquisition)

[SCADA](https://mail.softcon1.com/owa/redir.aspx?SURL=oK9QjOW3aIeW8Wt1v4CtWm9zT7Fi_D2f-yLwXr__oumcbTpZs1_TCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANQAyADUAMQA5ADAAMQAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f55251901%2f19560265) (supervisory control and data acquisition) is a category of software application program for process control, the gathering of data in real time from remote locations in order to control equipment and conditions. SCADA is used in power plants, as well as in oil and gas refining, telecommunications, transportation, and water and waste control.

SCADA systems include hardware and software components. The hardware gathers and feeds data into a computer that has SCADA software installed. The computer then processes this data and presents it in a timely manner. SCADA also records and logs all events into a file stored on a hard disk, or sends them to a printer. SCADA warns when conditions become hazardous by sounding alarms.

## Complex Event Processing (CEP)

[Complex event processing](https://mail.softcon1.com/owa/redir.aspx?SURL=NR5OCljg23fNqr6cKKuspt5DV-6mgBJF2lCwNAlUxBPFkUFZs1_TCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANQAyADEAMAAwADkAMwAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f55210093%2f19560265) (CEP) is the use of technology to predict high-level events likely to result from specific sets of low-level factors. CEP identifies and analyzes cause-and-effect relationships among events in real time, allowing personnel to proactively take effective actions in response to specific scenarios. CEP is an evolving paradigm originally conceived in the 1990s by Dr. David Luckham at Stanford University.

CEP is used in security policy risk management, customer relationship management (CRM), application servers and middleware.

One important aspect of CEP is business activity monitoring (BAM), the use of technology to proactively define and analyze the most critical opportunities and risks in an enterprise. CEP is especially effective in situations involving numerous factors that interact in variable ways, such as the investment and lending environments for financial institutions. CEP can also be used in threat management for communications networks.

## Apple AirDrop

[Apple AirDrop](https://mail.softcon1.com/owa/redir.aspx?SURL=9TWsveyk_I6fXXTwjvylkSeiG5gdvJtiaYYx0CeEJJxRF0tZs1_TCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANQAxADYANAAyADgAOAAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f55164288%2f19560265) is a native feature in iOS and OS X that lets users share data from one device to another on the same Wi-Fi network.

AirDrop allows users to share photos, videos, websites and locations between devices that are up to about 30 feet apart. The feature can be activated through the Control Center on iPhone 5 or later, iPad 4 or later, iPad mini, or iPod Touch fifth generation or later with the Wi-Fi and Bluetooth on. When users have a piece of content open, they can click share, select the AirDrop icon from the list of options, and then choose the name of the AirDrop user they want to share with. The other user receives a preview of the content, and can accept or decline it. The process on a Mac computer is slightly different: The user accesses AirDrop through the Finder, Share menu or Open and Save windows, and then shares files by dragging and dropping them onto the other user's device icon.

IT cannot control which data users can share through AirDrop, so employees could potentially leak corporate data through the tool. The only way for IT to restrict access to AirDrop is through supervised mode, a mobile device management (MDM) feature that gives IT administrators control over iOS devices.

In iOS 8 and OS X Yosemite, users can transfer data from an iOS device to a Mac computer and vice versa. In iOS 7, users could only use AirDrop to transfer data across like devices. A user could only move data from one iOS device to another iOS device, for example. OS X Lion was the first Mac OS to include AirDrop.

## Key Performance Indicator (KPI)

A [key performance indicator](https://mail.softcon1.com/owa/redir.aspx?SURL=jTDV1WS4iS_ai7N0F0bevvDvxVLpmno4DqMaMxxfj0h6O1JZs1_TCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANQAxADEANAAwADgANAAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f55114084%2f19560265) (KPI) is a business metric used to evaluate factors that are crucial to the success of an organization. KPIs differ per organization; business KPIs may be net revenue or a customer-loyalty metric, while government might consider unemployment rates.

KPIs are applied in business intelligence (BI) to gauge business trends and advise tactical courses of action. Before KPIs can be identified, the following requirements must be met:

* A predefined organizational process.
* Clear business objectives for the process.
* Quantitative and qualitative measurements.
* An active approach to finding and remedying enterprise variances.

KPIs are, above all else, a set of indicators to measure data against -- a sort-of enterprise-success gauge. Ultimately, they help an organization assess progress toward declared goals.

Indicators include quantitative metrics, such as process tracking and progress measurement.

## Microsoft HoloLens

[Microsoft HoloLens](https://mail.softcon1.com/owa/redir.aspx?SURL=ij2p7P5Gyse5Gzq7SL5EiX_jyj9Q6howQKU3LkIldJ6eVArE6l_TCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANQAwADYANwA5ADIAOAAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f55067928%2f19560265) is a virtual reality (VR) headset, with transparent lenses for an augmented reality experience.

According to Microsoft, HoloLens is a "fully untethered, see-through holographic computer." HoloLens allows users to experience 3D holographic images as though they are a part of their environment. This level of immersion enables new forms of computing in which the user's desktop could be the living room. You might stream Netflix on a wall, or build a Minecraft castle on your coffee table, as high-resolution holograms.

HoloLens packs more processing power than many notebooks, with a "Cherry Trail" Intel Atom processor. The hardware features 3D spatialized sound; Wi-Fi; a Kinect-like camera, with a 120-degree spatial sensing system; a fleet of gyroscopes and accelerometers; and a transparent screen for each eye -- all combined in a lightweight, mobile and cool wearable system.

Along with its CPU and GPU, the unit features a new first: a holographic processing unit (HPU) that is responsible for the processing that integrates real-world and holographic data.

Microsoft is hoping HoloLens will be used in design, data analysis, medical imaging, standard computing and gaming. The company also expects that the device could inspire entirely new augmented reality experiences.

## Project Management Office (PMO)

A [Project Management Office](https://mail.softcon1.com/owa/redir.aspx?SURL=61F03UlMKCfVY4Jli_trluLmmCb8wnGzeBlQVSrn6KYezG5Zs1_TCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANAA5ADQAMwA2ADQAOAAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f54943648%2f19560265)(PMO) is a group or department within a business, agency or enterprise that defines and maintains standards for project management within the organization.

The primary goal of a PMO is to achieve benefits from standardizing and following project management policies, processes and methods. Over time, a PMO generally will become the source for guidance, documentation, and metrics related to the practices involved in managing and implementing projects within the organization. A PMO may also get involved in project-related tasks and follow up on project activities through completion. The office may report on project activities, problems and requirements to executive management as a strategic tool in keeping implementers and decision makers moving toward consistent, business- or mission-focused goals and objectives.

A PMO generally bases its project management principles, practices and processes on some kind of industry standard methodology such as PMBOK (Project Management Body of Knowledge) or PRINCE2 (Project in Controlled Environments). Such approaches are consistent with the requirements related to ISO9000 and to government regulatory requirements such as the US Sarbanes-Oxley (SOX) program.

How a project management office (PMO) is designed and staffed for maximum effectiveness depends on a variety of organizational factors, including targeted goals, traditional strengths and cultural imperatives. There are three basic organizational styles for a project management office.

1. The project repository: This model occurs most often in organizations that empower distributed, business-centric project ownership, or enterprises with weak central governance. The project office simply serves as a source of information on project methodology and standards. Project managers continue to report to, and are funded by, their respective business areas.
2. The project coach model: This model assumes a willingness to share some project management practices across business functions and uses the project office to coordinate the communication. Best practices are documented and shared and project performance is monitored actively. The PMO in this model is a permanent structure with staff and has some supervisory responsibility for all projects.

The enterprise project management office: This model also assumes a governance process that involves the project office in all projects, regardless of size, allowing it to assess scope, allocate resources and verify time, budget, risk and impact assumptions before the project is undertaken. Funding is generally a combination of direct, budgeted allocation for baseline services and a fee-for-service charge for others.

## Ransomware

[Ransomware](https://mail.softcon1.com/owa/redir.aspx?SURL=zX6v1b3b2i6x9ESCKvB5SjQImqH7klzmt160Vc8ZDOy3wfvvGGPTCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANQA2ADIANQAzADUANQAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f55625355%2f19560265) is malware for data kidnapping, an exploit in which the attacker encrypts the victim's data and demands payment for the decryption key.

Ransomware spreads through e-mail attachments, infected programs and compromised websites. A ransomware malware program may also be called a cryptovirus, cryptotrojan or cryptoworm.

Attackers may use one of several different approaches to extort money from their victims:

1. After a victim discovers he cannot open a file, he receives an email ransom note demanding a relatively small amount of money in exchange for a private key. The attacker warns that if the ransom is not paid by a certain date, the private key will be destroyed and the data will be lost forever.
2. The victim is duped into believing he is the subject of an police inquiry. After being informed that unlicensed software or illegal web content has been found on his computer, the victim is given instructions for how to pay an electronic fine.
3. The malware surreptitiously encrypts the victim's data but does nothing else. In this approach, the data kidnapper anticipates that the victim will look on the Internet for how to fix the problem and makes money by selling anti-ransomware software on legitimate websites.

To protect against data kidnapping, experts urge that users backup data on a regular basis. If an attack occurs, do not pay a ransom. Instead, wipe the disk drive clean and restore data from the backup.

## Medical Identity Theft

[Medical identity theft](https://mail.softcon1.com/owa/redir.aspx?SURL=_dASLDSZDh70AMv8CZROatJO0MZ-_sbb8uhst530e6xwNlkuGWPTCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANQA1ADgAMAA4ADcAMQAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f55580871%2f19560265) is the illegal access and use of a patient's personally identifiable information (PII) healthcare information to fraudulently obtain goods or services.

In addition to stealing the victim's date of birth, address and social security number, the thief may also misappropriate the identification number the patient is assigned by his or her health care provider. The stolen information may be used to open credit card accounts or obtain medical services, such as treatment at an emergency medical crisis location. The information may also be used to fraudulently obtain prescription drugs or medical equipment that can be sold on the black market.

Victims of medical identity theft may receive bills for medical services they did not receive, and the length of time it can take to resolve a dispute may have a negative impact on the victim's credit rating and future insurance costs. The perpetrators' actions may also add false information to the victim's electronic health record (EHR). Left unnoticed, this would provide medical personnel with incorrect or conflicting information about the patient's medical history or prescribed medications.

To mitigate the impact of medical identity theft, patients should routinely monitor their credit ratings and carefully read over bank, credit card and insurance statements to ensure that all charges are legitimate. Suspicious activity should be reported to the appropriate agency as soon as possible.

## Paternalistic Leadership

[Paternalistic leadership](https://mail.softcon1.com/owa/redir.aspx?SURL=CkUvMrV6wegQ83vwkIAPZHUWmwpKPIzjGOFC-QI6pF_njZaI22PTCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANQA2ADcAMgAwADIANQAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f55672025%2f19560265) is a managerial approach that involves a dominant authority figure who acts as a patriarch or matriarch and treats employees and partners as though they are members of a large, extended family. In exchange, the leader expects loyalty and trust from employees, as well as obedience.

The term paternalistic leadership is often associated with non-Western cultures because historically, males in non-Western cultures are more likely to be in positions of authority than females. In Western cultures that emphasize equality in the workplace, the gender-neutral phrase "parental leadership" has replaced the words paternal or maternal. Regardless of what word is used to describe the parent, employees who work in such an environment are expected to understand that the authority figure knows what is best for the organization and trust that their leader will always have the employee's best interests at heart. Employees are encouraged to share their ideas with the leader, but the authority figure always makes the final decision.

A successful paternalistic leader thinks about the big picture and considers how every decision will affect "the family." Paternal leaders value education and social skills and often go out of their way to provide employees with opportunities for improving business and interpersonal skills. A benefit of this managerial style, when carried out successfully, is that employees may work harder to complete tasks within a given time frame so that they can reach, and sometimes even exceed, their goals in order to please the parental leader and bring honor to the family.

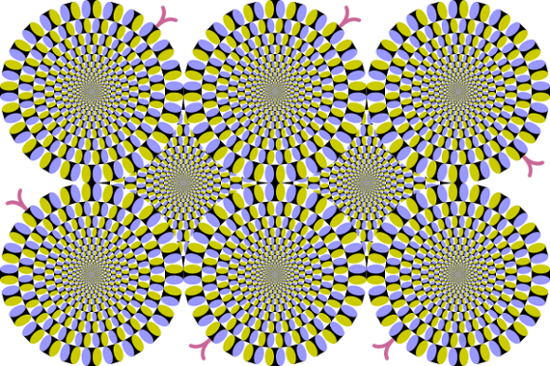
A shortcoming of paternalistic leadership is the possibility that the parent figure may inadvertently upset the hierarchial structure of the family, especially during times of crisis. If a parental leader is perceived to unfairly favor some members over others, jealousy and resentment can poison the workplace environment and the patriarch or matriarch will not longer have the loyalty, trust and obedience he or she requires to be an effective leader.

## Peripheral Drift Illusion

The [peripheral drift illusion](https://mail.softcon1.com/owa/redir.aspx?SURL=WAbbfddltQOuonpoZQqXHf4I237s4ONEJofkvBbv0at0H9KWemTTCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANAA3ADAANwAxADYAMwAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f54707163%2f19560265) is a perception of movement in a static image; the illusion is caused by the brain's interpretation of patterns seen outside of the eye's area of focus.

Certain repeated patterns of black and white and simple color patterns can elicit the illusory effect. Typically, people see the motion moving from high luminance to low luminance areas of the pattern. Larger images usually produce a stronger effect and some color combinations and intensities work better than others. If one stares at a fixed point in the image the motion disappears in the area of focus. The intricacies of how these illusions work are still debated, and theories that explain one type of illusion may fail to account for others.

One of the best-known illustrations of peripheral drift illusion is Kitaoka Akiyoshi's Rotating Snakes image, an adaptation of which is pictured below. As you read this text, you probably see the snakes below rotating. If you look directly at one snake, it appears to hold still, while those in your peripheral vision seem to be in constant movement; if you look close to the image but not right at it, it looks like a nest of stealthily stirring snakes. The obtruding tongues do not move, however, even in the illusion, another indication that none of the snakes are actually moving.



Peripheral drift and other types of illusions are often presented purely for amusement or as psychedelic art. However, optical illusions are also used to study how the human brain interprets visual data. From studying how these patterns create perceived motion, we can better understand how the brain interprets motion. We can also gain knowledge about how a damaged brain fails to guide an individual's movement when they have difficulties perceiving motion in their environment.

Motion illusions can be used in virtual reality (VR) and augmented reality (AR) applications to properly guide individuals with problems tracking movement. Various types of optical illusions are used for a number of effects in VR and AR. The peripheral drift illusion and other motion illusions can not only lead viewers to see movement but also to perceive themselves to be in motion while remaining stationary.

## Cloud Management

[Cloud management](https://mail.softcon1.com/owa/redir.aspx?SURL=fPPnTaRJpOxxXxIC76DnY_XI8uhwbvrAnDAVsuodW620F-jdc2TTCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANAA3ADkAMwAzADcAMwAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f54793373%2f19560265) is the exercise of administrative control over public, private and hybrid clouds. A well-implemented cloud management strategy allows users to maintain control over these dynamic and scalable environments.

A solid cloud management strategy helps organizations achieve several goals. First, cloud management introduces self-service capabilities that eliminate the traditional processes associated with IT resource provisioning. Users can access a public or private cloud, review current cloud instances or create new ones, monitor utilization and costs, and adjust resource allocations. With reporting, users can track cloud budgets and reduce or delete unused instances to cut operating expenses.

Second, cloud management enables workflow automation. Through automation, organizations can turn business policies into the actionable steps needed to create and manage cloud instances, without requiring human intervention. In addition to creating, placing and adjusting cloud instances, workflow automation helps businesses meet their reporting, deployment and compliance needs. For example, cloud management tools can alert a manager when an employee tries to move a private cloud workload to the public cloud, potentially violating company compliance or security policies.

Third, cloud management enables ongoing analysis of cloud workloads and user experiences (UX). In a private cloud environment, organizations can ensure their infrastructure is working properly and offer a basis for tasks such as workload balancing and capacity planning. In public clouds, performance metrics for latency or downtime help ensure compliance with public cloud provider service-level agreements (SLAs). Using metrics, organizations can also decide whether it's time to change cloud providers or migrate workloads from public to private clouds.

Cloud management requires tools. Public cloud providers typically develop highly specialized tools to suit the capabilities of their services. For example, Amazon Web Services (AWS) allows users to access and manage cloud instances through a command-line interface (CLI) that runs individual commands and scripts. However, most public cloud management tools limit users to basic workload tasks and reporting, offering little insights into the provider's underlying infrastructure or performance.

For private cloud management, organizations use in-house tools. Such tools can include platform-specific management software, such as VMTurbo Operations Manager, Embotics vCommander, and cloud management and analytics tools from RightScale. Some private cloud management tools offer sophisticated software frameworks for managing complex private and hybrid cloud deployments. These tools include Microsoft System Center Virtual Machine Manager (VMM) for Hyper-V, VMware vCloud Suite, Red Hat CloudForms and Citrix CloudPlatform.

The success of any cloud strategy depends on the proper use of tools and automation, but a competent IT staff is also crucial. Although administrators don't handle cloud provisioning or related tasks, a business still needs cloud expertise to codify its policies into workflows. This requires an IT staff with knowledge of cloud tools and the business' cloud management goals. To deploy a private or hybrid cloud, enterprises must invest in IT training or hire new staff.

IT teams must also monitor cloud metrics, make critical infrastructure decisions, address patch and security vulnerabilities, and update the business rule sets that drive cloud automation. Although IT doesn't run the cloud, it runs the tools that run the cloud. For example, tools can easily perform cloud workload balancing without any manual intervention from IT, but IT must set the performance thresholds and migration rules used to govern that process.

Companies lacking skilled IT staff can seek help from third parties. For example, a cloud service brokerage (CSB) is an intermediary firm that helps businesses identify and integrate suitable public cloud services. In addition, CSBs can aggregate multiple providers and allow a business to access multiple providers at once. An in-house IT staff well-versed in public cloud integration and management can sometimes act as CSBs.

## Sensor Analytics

[Sensor analytics](https://mail.softcon1.com/owa/redir.aspx?SURL=v7z7JaFAn-APgHm7YKK-yqFo3-pi5cZTzsj4Bcdqxx90QnyUSGXTCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANQA3ADEAOQAwADEAMQAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f55719011%2f19560265) is the statistical analysis of data that is created by wired or wireless sensors.

A primary goal of sensor analytics is to detect anomalies. The insight that is gained by examining deviations from an established point of reference can have many uses, including predicting and proactively preventing equipment failure in a manufacturing plant, alerting a nurse in an electronic intensive care unit (eICU) when a patient's blood pressure drops, or allowing a data center administrator to make data-driven decisions about heating, ventilating and air conditioning (HVAC).

Because sensors are often always on, it can be challenging to collect, store and interpret the tremendous amount of data they create. A sensor analytics system can help by integrating event-monitoring, storage and analytics software in a cohesive package that will provide a holistic view of sensor data. Such a system has three parts: the sensors that monitor events in real-time, a scalable data store and an analytics engine. Instead of analyzing all data as it is being created, many engines perform time-series or event-driven analytics, using algorithms to sample data and sophisticated data modeling techniques to predict outcomes. These approaches may change, however, as advancements in big data analytics, object storage and event stream processing technologies will make real-time analysis easier and less expensive to carry out.

Most sensor analytics systems analyze data at the source as well as in the cloud. Intermediate data analysis may also be carried out at a sensor hub that accepts inputs from multiple sensors, including accelerometers, gyroscopes, magnetometers and pressure sensors. The purpose of intermediate data analysis is to filter data locally and reduce the amount of data that needs to be transported to the cloud. This is often done for efficiency reasons, but it may also be carried out for security and compliance reasons.

The power of sensor analytics comes from not only quantifying data at a particular point in time, but by putting the data in context over time and examining how it correlates with other, related data. It is expected that as the Internet of Things (IoT) becomes a mainstream concern for many industries and wireless sensor networks become ubiquitous, the need for data scientists and other professionals who can work with the data that sensors create will grow -- as will the demand for data artists and software that helps analysts present data in a way that's useful and easily understood.

## Data Federation Software

[Data federation software](https://mail.softcon1.com/owa/redir.aspx?SURL=mICM5b54PAdVyXrLKJ5yiH2Fx9_7sxXhpr0iHFYf8NzVXOTSZGXTCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANQA3ADYANQA2ADMAMgAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f55765632%2f19560265) is programming that provides an organization with the ability to aggregate data from disparate sources in a virtual database so it can be used for business intelligence (BI) or other analysis. The virtual database created by data federation software doesn't contain the data itself. Instead, it contains information about the actual data and its location (see metadata). The actual data is left in place.

Data federation technology can be used in place of a data warehouse to save the cost of creating a permanent, physical relational database. It can also be used as an enhancement to add fields or attributes that are not supported by the data warehouse application programming interface (API). This approach is especially useful if some of an organization's data is stored offsite by a third-party cloud service provider. It allows the person performing the analysis to aggregate and organize data quickly without having to request synchronization logic or copy the data until it's absolutely necessary.

Making a single call to multiple data sources and then integrating and organizing the data in a middleware layer may also be called data virtualization, enterprise information integration (EII) or information-as-a-service, depending on the vendor.

## Innovation Process Management

[Innovation process management](https://mail.softcon1.com/owa/redir.aspx?SURL=3KDC7NkuUBa-ZR2HJZFe6VpaYzoflL26e0Tkxw-AWCaeoheQVGjTCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANQA4ADQANwA2ADEANgAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f55847616%2f19560265) (IPM) is a systematic approach to nurturing the creative capabilities of employees and creating a workplace environment that encourages new ideas for workflows, methodologies, services or products.

In information technology (IT), innovation processes often fall into one of two categories: "pushed" or "pulled." A pushed process occurs when a company has access to existing or emerging technologies and wants to find a profitable application for it. A pulled process occurs when a company focuses on the customers' needs and tries to figure out a new or better way to meet them.

Gartner's recommendation to IT leaders interested in launching an innovation management program is to follow a disciplined approach. Here are five steps Gartner recommends IT leaders and their companies take to develop an innovation management program:

1. **Strategize and plan**: Settle on an agreement of the vision for the initiative that is also in line with business goals. Then establish the resources and budget, and integrate the vision with IT and business plans.
2. **Develop governance**: Establish a process for making decisions. This includes identifying and engaging stakeholders, agreeing on who is in charge and what the flow for decision making is and also having feedback mechanisms in place.
3. **Drive change management**: Have systems by which people can communicate and socialize via multiple channels; get buy-in from stakeholders at all levels and assess which open innovation initiatives and cultural shifts will help the company optimize contributions to innovation.
4. **Execute**: Make sure to draw from a wide range of sources to generate ideas for innovations that will transform the business, align the initiatives with business goals and then update and drive new elements of the initiatives in response to changing business requirements.
5. **Measure and improve**: Once the innovative initiative is in place, monitor and measure how it has affected business outcomes. It is also important to seek feedback from stakeholders and to continue to study innovation best practices and case studies from other organizations. Also make sure to continually drive improvements through process changes and upgrades.

## Uncloud (de-cloud)

[Uncloud](https://mail.softcon1.com/owa/redir.aspx?SURL=G_3Qm6Sg7rm5K127etKb0MHYKFlOpMjwD5lsyVZpOJ63RhdH6WnTCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANQA4ADkANQAzADUAMgAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f55895352%2f19560265) is the removal of applications and data from a cloud computing platform. De-cloud is another term used to describe this reverse cloud migration.

In recent years, organizations ranging from small and medium-sized businesses to large enterprises have turned to the cloud to run applications, store data and accomplish other IT tasks. Over time, however, an organization may elect to uncloud one, a few or, possibly, all of its cloud-based assets. Examples could include shutting down a server instance in a public cloud and moving the associated software and data to an in-house data center or colocation facility.

In the process of unclouding, the cloud customer or, potentially, a channel partner acting on its behalf, will work with the cloud vendor to extract the customer's applications and data. The task involves locating the data and mapping the application's dependencies within the cloud vendor's infrastructure. The unclouding customer -- and its channel partner -- may encounter higher levels of complexity in the case of a public multi-tenant cloud setting. A customer may have to wait for the cloud vendor's scheduled downtime to migrate its applications and data or the cloud provider may limit the customer's use of migration tools so as not to interfere with the application performance of other customers

Customers may cite a number of reasons for wanting to uncloud. Factors include security issues, liability concerns and difficulty in integrating cloud-based applications with on-premises enterprise applications and data. Frustrated expectations with respect to the cloud's cost efficiency may also influence de-clouding decisions. Anecdotal evidence suggests that customers citing cost as a factor may elect to move applications to an in-house, hyper-converged infrastructure as the better economic choice

## Docker Swarm

[Docker Swarm](https://mail.softcon1.com/owa/redir.aspx?SURL=PQXaLPGj_p5WgkgpbIUAdGY7Mh6n6JkIilCnJQ1Ux6GjTLNG6WnTCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANQA5ADQANAA1ADYAOAAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f55944568%2f19560265) is a clustering and scheduling tool for Docker containers. With Swarm, IT administrators and developers can establish and manage a cluster of Docker nodes as a single virtual system. Clustering is an important feature for container technology because it creates a cooperative group of systems that can provide redundancy if one or more nodes fail. Clustering also provides administrators with the ability to add or subtract container iterations as computing demands change.

Swarm has scheduling capabilities to ensure that there are sufficient resources for distributed containers. Swarm assigns containers to underlying nodes and optimizes resources by automatically scheduling container workloads to run on the most appropriate host. This provides basic workload balancing for containerized applications, ensuring containers are launched on systems with adequate resources while maintaining necessary performance levels.

Docker Swarm uses the standard Docker API. An IT administrator controls Swarm through a swarm manager, which orchestrates and schedules containers. The swarm manager allows the administrator or developer to create a primary manager instance and multiple replica instances in case the primary instance fails.

Swarm has three different strategies for determining which nodes each container should run on:

* Spread -- Acts as the default setting and balances containers across the nodes in a cluster, based on the nodes' available CPU and RAM, as well as the number of containers it is currently running. The benefit of the Spread strategy is that if the node fails, only a few containers are lost.
* BinPack -- Schedules containers to fully use each node. Once a node is full, it moves on to the next in the cluster. The benefit of BinPack is that it uses a smaller amount of infrastructure and leaves more space for larger containers on unused machines.
* Random - Chooses a node at random.

Swarm also has five filters for scheduling containers:

* Constraint - Also known as node tags, constraints are key/value pairs associated to particular nodes. A user can select a subset of nodes when building a container and specify one or multiple key/value pairs.
* Affinity - To ensure containers run on the same network node, the Affinity filter tells one container to run next to another based on an identifier, image or label.
* Port - With the Port filter, ports represent a unique resource. When a container tries to run on a port that's already occupied, it will move to the next node in the cluster.
* Dependency - When containers depend on each other, this filter schedules them on the same node.
* Health - In the event that a node is not functioning properly, this filter will prevent scheduling containers on it

## Software-defined WAN

[Software-defined WAN](https://mail.softcon1.com/owa/redir.aspx?SURL=qpc3qer-g9ocHe9eg0GYn7ZskAuj1S8eW87GmVI_JbtkX9pPGGrTCGgAdAB0AHAAOgAvAC8AZwBvAC4AdABlAGMAaAB0AGEAcgBnAGUAdAAuAGMAbwBtAC8AcgAvADUANQA5ADkAMwA1ADIANQAvADEAOQA1ADYAMAAyADYANQA.&URL=http%3a%2f%2fgo.techtarget.com%2fr%2f55993525%2f19560265) (SD-WAN) is an approach to designing and deploying an enterprise wide area network (WAN) that uses software-defined networking (SDN) to determine the most effective way to route traffic to remote locations.

SDN-WAN shifts traffic monitoring and management from physical devices to the application itself, capitalizing on SDN's flexibility and agility. Intelligence is abstracted into a virtual overlay -- enabling a secured pooling of both private and public connections and permitting automation, centralized network control, and agile, real-time traffic management over multiple links. This model enables a network administrator to remotely program edge appliances via a central controller, reducing provisioning times and minimizing or eliminating the need to manually configure traditional routers in branch locations.

SD-WAN products and services vary by vendor, but many enable hybrid WAN -- dynamically routing traffic over both private and public links, such as leased Multiprotocol Label Switching (MPLS) links and broadband, Long Term Evolution (LTE) and/or wireless. An SD-WAN architecture allows administrators to reduce or eliminate reliance on expensive leased MPLS circuits by sending lower priority, less-sensitive data over cheaper public Internet connections, reserving private links for mission-critical or latency-sensitive traffic like VoIP. The flexible nature of SD-WAN also reduces the need for over-provisioning, reducing overall WAN expenses.

SD-WAN is a compelling SDN use case, as it has the potential to offer clear cost savings while improving overall connectivity between branch locations, the central office and the cloud. The overlay technology is also relatively easy to implement in pilot testing, making it attractive to decision-makers who might shy away from a rip-and-replace approach