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adaptive system

A system in which the behaviour of agents changes and they self-organize in response to events.

AIOps

The application of machine learning and big data to IT operations to receive continuous insights which provide continuous fixes and improvements via automation. Also referred to as 'artificial intelligence for IT operations' or 'algorithmic IT operations'.

Andon

A system, either manual or automated, used to notify workers and other parts of an organization of quality or process issues. The Andon system originated in manufacturing, but is now widely used in IT.

backlog

A list of new features for a product. The list may consist of user stories which are structured in a way that describes who wants the feature and why. It is also a generic term that can be defined in terms of releases, sprints, and products.

big data

The use of very large volumes of structured and unstructured data from a variety of sources to gain new insights.

blameless post-mortem

A non-judgemental description and analysis of the circumstances and events that preceded an incident.

blockchain

An open, distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent way.

business case

A justification for the expenditure of organizational resources, providing information about costs, benefits, options, risks, and issues.

chaos engineering

The discipline of experimenting on a system in order to build confidence in the system's capability to withstand turbulent conditions in production.

chaos monkey

A tool that tests the resilience of IT systems by intentionally disabling components in production to test how remaining systems respond to the outage.

complex adaptive systems

Systems that adapt in, and co-evolve with, a changing environment, resulting in:

- behaviour that is not predicted by the behaviour of parts of the system
- the inability to examine the system in isolation from the other systems in its environment.

complex system

A system in which agents' interactions are dynamic and often unpredictable.

complexity thinking

A systems thinking approach based on the recognition and understanding of the various levels of complexity inherent in the systems and the context in which they operate.

compliance

Both the act and result of ensuring that a standard or set of guidelines is followed, or that proper, consistent accounting or other practices are being employed.

configuration management database (CMDB)

A database used to store configuration records throughout their lifecycle. The CMDB also maintains the relationships between configuration records.

containerization

The technique of packaging software into standardized lightweight, stand-alone, executable units for development, shipment, and deployment.

continuous delivery

An approach to software development in which software can be released to production at any time. Frequent deployments are possible, but deployment decisions are taken case by case, usually because organizations prefer a slower rate of deployment.

continuous deployment

An approach to software development in which changes go through the pipeline and are automatically put into the production environment, enabling multiple production deployments per day. Continuous deployment relies on continuous delivery.

continuous integration

An approach to integrating, building, and testing code within the software development environment.

control

The means of managing a risk, ensuring that a business objective is achieved, or that a process is followed.

cost of delay

The benefits that are expected to be lost when the launch or update of a service offering is delayed.

cultural fit

The ability of an employee or a team to work comfortably in an environment that corresponds with their own beliefs, values, and needs.

customer experience (CX)

The sum of functional and emotional interactions with a service and service provider as perceived by a customer.

customer journey

The complete end-to-end experience that service customers have with one or more service providers and/or their products through touchpoints and service interactions.

customer orientation

An approach to sales and customer relations in which staff focus on helping customers to meet their long-term needs and wants.

cycle time

The amount of time required to complete a discrete unit of work, converting inputs into outputs.

data

Information that has been translated into a form that is efficient for movement or processing.

data analytics

A branch of data science focused on analysing raw data in order to draw conclusions about it, using highly automated techniques.

definition of done

A checklist of the agreed criteria for a proposed product or service.

design thinking

A practical and human-centred approach used by product and service designers to solve complex problems and find practical and creative solutions that meet the needs of an organization and its customers.

digital organization

An organization that is enabled by digital technology to do business significantly differently, or to do significantly different business.

digital product

A product is digital when digital technology plays a significant role in its goods, resources, or associated service interactions.

digital technology

Technology that digitizes something or processes digital data. Digital technology refers to information technology (IT) and the parts of operational technology (OT) that have been digitized. *See also* digitization.

digital transformation

The use of digital technology to enable a significant improvement in the realization of an organization's objectives that could not feasibly have been achieved by non-digital means.

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digitization

The process of transforming something (e.g. text, sound, or images) from analogue to digital form by expressing the information in binary digits.

double-loop learning

A form of learning that takes place when examining the purpose and function of work being done, without taking the existing organizational structure for granted. Also known as 'reframing'.

early-life support (ELS)

A period of time associated with the release of service components to users, when additional resources are allocated to user support and service operations. Early-life support can also be applied to the onboarding or offboarding of users from a service.

emotional intelligence

The ability to understand the way people feel and react, and to use this skill to make good judgements and to avoid or solve conflicts.

epic

A high-level definition of a requirement that has not yet been sufficiently refined or understood. Eventually an epic will be refined or broken down into several user stories and requirements.

ethics

A system of principles that defines what is good for individuals and society.

gap analysis

An activity that compares two sets of data and identifies the differences; for example, comparing a set of requirements with the actual delivery, or the current state of an organization with a target future state.

governance

The means by which an organization is directed and controlled.

high-velocity IT

The application of digital technology for significant business enablement, where time to market, time to customer, time to change, and speed in general are crucial. High velocity is not restricted to fast development; it is required throughout the service value chain, from innovation at the start, through development and operations, to the actual realization of value.

high-velocity IT operating model

An IT operating model where digital technology plays a major role in the co-creation of value.

improvement

A deliberately introduced change that results in increased value for one or more stakeholders.

indicator

A metric that is used to assess and manage something.

information model

The construct of information, related to the taxonomy and relationships of data to other data, required to present and share content in a meaningful and representative way.

information technology

The application of digital technology to store, retrieve, transmit, and manipulate data (data processing), often in the context of a business or other kind of organization.

integration of duties

Having a task that is prone to fraud or error performed by one person because other controls have been applied. This serves as an alternative to separation (or segregation) of duties.

intelligent disobedience

Deliberately disobeying or disregarding rules in order to avoid a dangerous situation, or 'doing the right thing'.

ITIL continual improvement model

A model which provides organizations with a structured approach to implementing improvements.

ITIL guiding principles

Recommendations that can guide an organization in all circumstances, regardless of changes in its goals, strategies, type of work, or management structure.

ITIL service value chain

An operating model for service providers that covers all the key activities required to effectively manage products and services.

ITIL service value chain activity

A step of the value chain that an organization takes in the creation of value.

Kanban

A method for visualizing work, identifying potential blockages and resource conflicts, and managing work in progress.

lead time

The time taken to complete the execution of a process, usually measured from a specific perspective (e.g. that of the customer).

Lean culture

A work environment where trust, respect, curiosity, enquiry, playfulness, and intensity all co-exist to support learning and discovery.

machine learning

An applied form of artificial intelligence, based on the principle of systems responding to data, and adapting their actions and outputs as they are continually exposed to more of it.

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measurement

A means of decreasing uncertainty based on one or more observations that are expressed in quantifiable units.

metric

A measurement or calculation that is monitored or reported for management and improvement.

microservices

A variation of the service-oriented architecture in which an application is designed and developed as a set of small, loosely coupled services, each running in its own process and using lightweight mechanisms to communicate.

minimum viable approach

A technique of providing users with the minimum set of capabilities to enable rapid assessment and learning. Minimum viable approaches can be applied to products, services, practices, processes, and process outputs.

multi-sourcing

The use of multiple service providers offering similar (if not the same) services, balancing the risks of relying on a single provider with the overhead of managing work across multiple providers.

operating model

A conceptual and/or visual representation of how an organization co-creates value with its customers and other stakeholders, as well as how the organization runs itself.

operation

The routine running and management of an activity, product, service, or other configuration item.

operational technology

The application of digital technology for detecting or causing changes in physical devices through monitoring and/or control.

organization

A person or a group of people that has its own functions with responsibilities, authorities, and relationships to achieve its objectives.

paradoxical intervention

A management technique that relies on asking staff for something in order to achieve the opposite result; for example, asking for more risks to be taken to decrease their impact.

peer review

A judgement on a piece of scientific or other professional work by others working in the same area. When applied in software development, a work product is examined by its developer and one or more colleagues in order to evaluate its technical content and quality. This contributes to assured conformance.

plan

The value chain activity that ensures a shared understanding of the vision, current status, and improvement direction for all four dimensions and all products and services across an organization.

product owner

A role in a Scrum team that is responsible for: defining user stories and acceptance criteria; prioritizing user stories in a backlog; clarifying requirements and answering questions from the development team; and assisting with demonstrations to customers.

RACI

A model used to help define roles and responsibilities. RACI stands for responsible, accountable, consulted, and informed.

reconstructing for service agility

An approach to organizing knowledge work and service provision that reflects its complex and social nature.

report

A detailed communication of information or knowledge about a topic or event.

rich data

Data that is accurate, precise, and subjected to rigorous quality control.

risk

A possible event that could cause harm or loss or make it more difficult to achieve objectives. Can also be defined as uncertainty of outcome and can be used in the context of measuring the probability of positive outcomes as well as negative outcomes.

role

A role is a set of responsibilities, activities, and authorizations granted to a person or team in a specific context.

safety culture

A climate in which people are comfortable being (and expressing) themselves.

Scrum

An iterative, timeboxed approach to product delivery that is described as 'a framework within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value' (*The Scrum Guide* by Ken Schwaber and Jeff Sutherland, updated 2017).

service empathy

The ability to recognize, understand, predict, and project the interests, needs, intentions, and experiences of another party, in order to establish, maintain, and improve the service relationship.

service integration and management

The coordination and orchestration of work across all suppliers involved in the development and delivery of products and services.

service interaction

A reciprocal action between a service provider and a service consumer that co-creates value.

service level

One or more metrics that define expected or achieved service quality.

service level agreement (SLA)

A documented agreement between a service provider and a customer that identifies both the services required and the expected level of service.

service management

A set of specialized organizational capabilities for enabling value for customers in the form of services.

service mindset

An important component of the organizational culture that defines an organization's behaviour in service relationships. A service mindset includes the shared values and guiding principles adopted and followed by an organization.

service quality

The totality of a service's characteristics that are relevant to its ability to satisfy stated and implied needs.

service value system (SVS)

A model representing how all the components and activities of an organization work together to facilitate value creation.

service-dominant logic

A mental model of an (economic) exchange in which organizations co-create value by applying their competencies and other resources for the benefit of each other.

shift-left approach

An approach to managing work that focuses on moving activities closer to the source of the work, in order to avoid potentially expensive delays or escalations. In a software development context, a shift-left approach might be characterized by moving testing activities closer to (or integrated with) development activities. In a support context, a shift-left approach might be characterized by providing self-help tools to end-users.

Simian army

An open-source toolset for chaos engineering developed by Netflix®.

single-loop learning

The type of learning that takes place when fixing problems within the present organizational structure so that the system will function better without altering its structure.

site reliability engineering (SRE)

A discipline that incorporates aspects of software engineering and applies them to infrastructure and operations problems with the goal of creating ultra-scalable and highly reliable software systems.

sprint

A fixed timeframe (typically of 2–4 weeks) for creating selected features from the backlog.

stakeholder

A person or organization that has an interest or involvement in an organization, product, service, practice, or other entity.

strategy

A broad approach or course of action defined by an organization for achieving its objectives.

stress prevention

The prevention, monitoring, and remediation of unhealthy tension in the workplace.

systems thinking

A holistic approach to analysis and decision-making that focuses on the relationship between a system's components and the way the system works, both as a whole and within the context of larger systems.

technical debt

The total rework backlog accumulated by choosing workarounds instead of system solutions that would take longer.

theory of constraints

A methodology for identifying the most important limiting factor (i.e. constraint, often referred to as a bottleneck) that stands in the way of creating value, and then systematically correcting that constraint until it is no longer the limiting factor.

time value profile

A depiction of the change in value of a requirement, output, or outcome over time.

Toyota Kata

A mental model and behaviour pattern for scientific thinking and routines for practice and coaching.

user experience (UX)

The sum of the functional and emotional interactions with a service and service provider as perceived by a user.

user story

A technique in Agile software development that uses natural language to describe desired outcomes and benefits from the point of view of a specific persona (typically the end-user), usually in the form of 'who, what, and why'.

utility

The functionality offered by a product or service to meet a particular need. Utility can be summarized as 'what the service does' and can be used to determine whether a service is 'fit for purpose'. To have utility, a service must either support the performance of the consumer or remove constraints from the consumer. Many services do both.

value

The perceived benefits, usefulness, and importance of something.

value proposition

An explicit promise made by a service provider to its customers that it will deliver a particular bundle of benefits.

value stream

A series of steps an organization undertakes to create and deliver products and services to consumers.

value stream map

A visual representation of a service value stream which shows the flow of work, information, and resources.

value stream mapping

A Lean management technique to visualize the steps needed to convert demand into value, used to identify opportunities to improve.

version control

The administrative management of sources and artefacts of information systems, products, and services.

vision

A defined aspiration of what an organization would like to become in the future.

warranty

Assurance that a product or service will meet agreed requirements. Warranty can be summarized as 'how the service performs' and can be used to determine whether a service is 'fit for use'. Warranty often relates to service levels aligned with the needs of service consumers. This may be based on a formal agreement, or it may be a marketing message or brand image. Warranty typically addresses such areas as the availability of the service, its capacity, levels of security, and continuity. A service may be said to provide acceptable assurance, or 'warranty', if all defined and agreed conditions are met.