WHAT IS...?

ITIL® Create, Deliver & Support (CDS)

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Focusing on Value

Service management is about co-creating value. Technology is used to support value co-creation, but defining value can be challenging in the IT industry. In the past, much of the focus has been on cost effectiveness, basic functionality, or innovation. Currently, speed and flexibility are the differentiators between valuable and less valuable services. This may shift in the future to areas such as security, human centricity, or increased automation.

Because what is perceived as of value is continually changing, it should be continually reviewed and clarified. Common characteristics in service provider organizations focusing on value co-creation include:

- A focus on value, quality, and operational excellence
- Client, customer, and consumer orientation
- Strong team composition within a structured organization
- Investment in people and communication/collaboration tools
- Continuous alignment with the organization's vision, mission, and strategic objectives

These, or similar, characteristics are expected to be shared by every member and team within the organization.

ITIL® 4: Create, Deliver and Support addresses the cultural and team management aspects of product and service management, provides an overview of the tools and technologies which support service management, and demonstrates how to integrate management practices into end-to-end value streams.

Continue reading to learn more....

Planning and Building Value Streams

It is important to understand the concepts and challenges that enable organizations to optimize around value streams. This begins with the need for a service mindset. A service mindset is an outlook that focuses on creating customer value, loyalty, and trust. An organization with this outlook aims to go beyond simply providing a product or service, it wants to create a positive impression on the customer. To do this, an organization has to understand and improve the customer's experience. A topic discussed in greater detail in ***ITIL 4: Drive Stakeholder Value***.

VALUE STREAM

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

From a service provider perspective, service mindset is also known as customer orientation. A customer-oriented organization places customer satisfaction at the core of its business decisions.

This includes decisions related to concepts such as:

- Organizational structure
- Integrated/collaborative teams
- Team capabilities, roles, competencies
- Team culture and differences
- Employee satisfaction measurement
- The value of positive communications

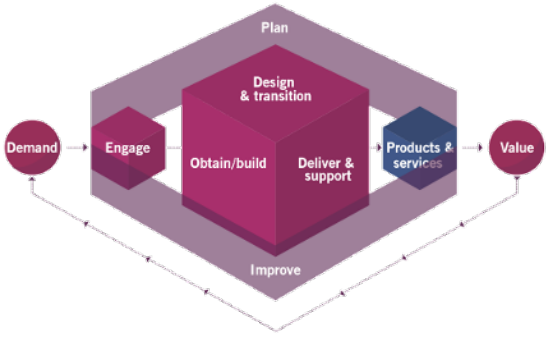
In a customer-oriented organization, management and employees align their individual and team objectives around satisfying and retaining customers. These organizations are transitioning away from a mechanistic point of view to using highly empowered and self-organizing teams. They are also grappling with how to integrate multiple ways of working.

Successful organizations think holistically about the four dimensions of service management (organizations and people, partners and suppliers, value streams and processes, and information and technology) when designing and operating products and services. These organizations are alert to employee morale and satisfaction, recognizing that internal stakeholders are as important as external ones. They are able to create a culture of cooperation and collaboration, often breaking down silos and aligning or sharing goals across multiple teams. Which brings us back to value streams.

Value streams are focused around the flow of activity from demand or opportunity to customer value.

Using Value Streams and Practices

The ITIL service value chain includes six archetypal activities: engage, plan, improve, design and transition, obtain/build, and deliver and support. A useful way of thinking about value streams is as visualizations of journeys through the activities in the service value chain for specific scenarios or types of demand.



For example, different types of incidents may require different value streams to describe the work required in a given situation. Or, different types of consumer demand may require different value streams, such as:

- A need for a new product or service feature to increase the efficiency of business operations
- A request for a team member to access a product or service
- A request for new infrastructure capacity to keep a product or service operating normally

Regardless of the scenario, every value stream starts with demand and ends with value. A value stream can:

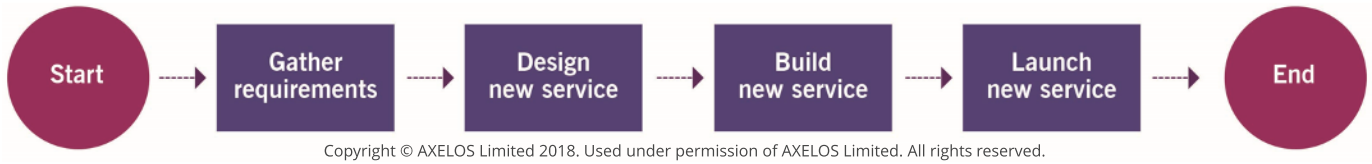
- Touch on one, some, or all value chain activities
- Repeat value chain activities

A value stream will act on demand for value and generate outputs that can be used to create intended outcomes. A value stream may also create outputs that serve as input triggers for other value streams within or outside the organization.

It is crucial to understand that value streams are simple, but not necessarily simplistic, representations of work. There are many different value streams, because various types of work follow different routes. The same resources, such as individuals, tools, suppliers, or processes, can appear in different parts of the value stream.

For example, a support agent can be part of user engagement, support investigation, handle the deployment of a fix to restore service, and trigger an improvement action.

The value stream can also represent work across different teams, impacting different stakeholders, using different processes, tools and people, and sometimes even different suppliers.



The value of a value stream is that it describes the flow of work for a product or service from end to end; that is, from demand to value, rather than simply describing the use of each team in a disparate or uncoordinated set of activities.

Each step in a value stream could be reframed as a process, or as a value stream. The latter is typical for large enterprises and ecosystems where multiple enterprises are involved. A high-level value stream that adds a new functionality to an IT service may involve a third-party vendor, an internal software development team, a site reliability engineering team, other IT teams, and a user team. Steps performed by the external vendor are likely to be managed as the vendor's own value stream. Steps performed within the organization are formalized and managed as processes using resources provided by the organization's practices.

Cascading value streams to lower-level value streams and/or processes allows organizations to collaborate and promote visibility into how work flows across the organizations and teams. It also makes it possible to think and work holistically by understanding how the wider organization or ecosystem works and benefits from work being done by the participating parties.

Designing a Value Stream

A value stream can be documented from one of two perspectives. It can either be designed to reflect the aspirations of the service provider, or it can be explored to document the ways work is being done. After it has been documented, it can be compared against observed behaviors.

Deviations between the design and the observed behaviors are likely to trigger improvements. These may include:

- Updating the value stream documentation to reflect actual work patterns
- Optimizing the workflow by reducing the time taken to convert demand into value, and automating repeatable work

A technique frequently used to document and optimize value streams is **value stream mapping**.

Value stream mapping is a method of visualizing the flow from demand/opportunity to value and planning how that flow can be improved.

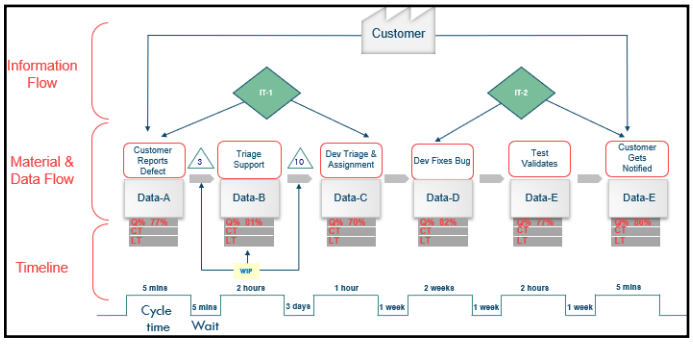
Value stream mapping has its origins in Lean manufacturing techniques. In Lean, the core idea is to maximize customer value while minimizing waste. In other words, Lean involves creating more value for service consumers with fewer resources.

A Lean organization understands the value of a service to the consumer and focuses its key processes on increasing that value. To accomplish this, Lean thinking changes the focus of management from optimizing separate technologies, assets, and vertical departments to optimizing the flow of products and services to the consumer through entire value streams that flow horizontally across technologies, assets, and departments.

Value stream mapping is used to gain insight into an organization's workflow. It can be used to identify both value-adding activities and non-value-adding activities in a value stream, while providing insight into opportunities for optimization and automation. Value stream mapping includes assessment (e.g. documenting the current state of the workflow from demand/opportunity to value) and planning (e.g. planning the changes that will be made to improve the workflow).

In many organizations, focusing on an individual process leads to optimizing only the steps in the process within a small scope of control, such as for a single team or department, while overlooking the impact of this local optimization on the whole value stream. Local optimization can create a bottleneck further down the value stream and potentially make the overall performance of the value stream worse, not better.

A value stream map is a great tool for optimizing the complete value chain, not just the local steps. This larger view is in perfect alignment with the guiding principle of thinking and working holistically. The elimination of waste along entire value streams, instead of at isolated points, creates processes that require less human effort, space, capital, and time, at far less cost and with fewer defects when compared with traditional business systems.



Source: Value Stream Mapping Fundamentals

Key Value Stream Metrics

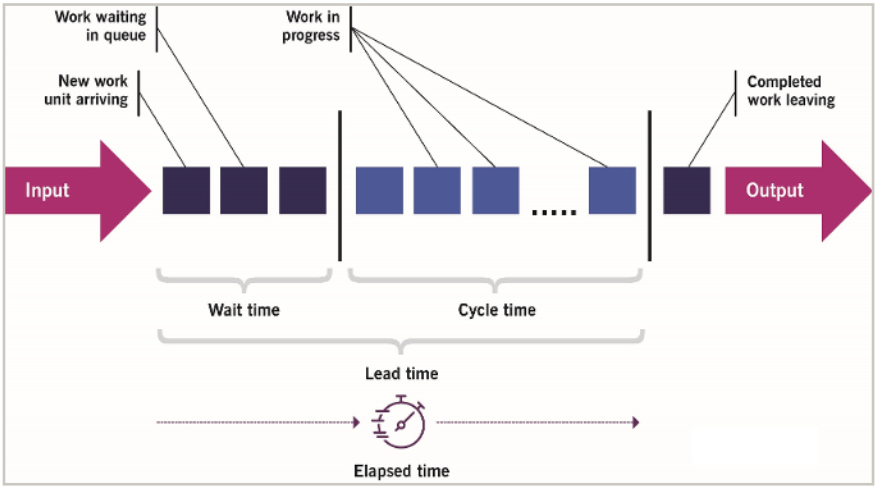
There are several important metrics that can be defined for any workflow and activity and that can be used to manage value stream performance. These include:

Lead time	The sum of cycle time(s) and wait time(s) from start to finish
Cycle time	The amount of time required to complete a discrete unit of work
Wait time	The amount of time a discrete unit of work waits in a queue before it is worked on
Throughput	The rate at which work enters or exits the system
Work in progress (WIP)	The number of discrete units of work currently being operated on, but which are not yet completed
Queue	The number of discrete units of work waiting to be operated on by the step, action, or task

These terms originate from Little's Law and can also be used to show the relationship between work in progress, throughput, and lead time. Little's Law can be simplistically represented as:

Work in progress = Throughput × Lead time (Cycle time + Wait time) or

Lead time = Work in progress/Throughput



These metrics can be used to both baseline and measure the performance of value streams, as well as demonstrate the results of improvement efforts. For example:

- Reducing the number of times work is transferred, whether by increasing the level of automation, up-skilling staff to increase the range of tasks they can undertake, or reorganizing teams (often referred to as breaking down silos) helps to reduce lead time
- Using statistical analysis to estimate patterns of activity can help optimize capacity
- Improving cycle time (i.e., the time it takes to complete a unit of work) can help to reduce the time work waits in a queue

To create a more predictable cycle time, it may be necessary to limit the work in progress. This technique is a part of the Kanban method and works well in environments where the intake of work is predictable. For example, a team might limit their work in progress to three requests at a time and delay working on any additional requests if the work in progress crosses this limit.

The key is to make these metrics visible and to continually ensure your value stream maps and metrics are up-to-date. If the data is static, if no one is checking on the progress of improvement efforts, and if your culture is not data-driven, occasional value stream mapping sessions or the use of methods such as Kanban will not fix the problem.

Common Value Streams

ITIL 4 Create, Deliver and Support explores two common value stream models that can be found in nearly all organizations:

- **Development of a new service** – organizations often find it necessary to create, modify, or retire services. This value stream reflects the common patterns of work required to create a new service and so usually involves significant effort and coordination across the organization.
- **Restoration of a live service** – in modern, complex IT organizations, failure is to be expected and must be managed quickly. This value stream is concerned with the typical activities that are expected when detecting and resolving failures and how these activities can be leveraged to improve the service.

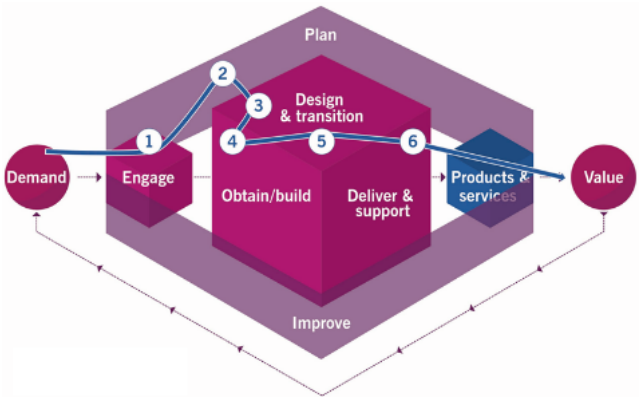
These value stream models should be adapted to the needs of each organization because the context, complexity, level of granularity, number of steps, inputs, and outputs of each step will be different from those depicted here.

Development of a New Service

This value stream archetype explores the activities that organizations commonly undertake to create or significantly modify an existing service. It is indifferent to the nature of the service and can be used to describe a value stream for creating services that are either provided to the customers within the organization or external to the organization.

It describes the journey from demand through the service value chain in six key steps:

1. Acknowledge and document the service requirements (engage)



2. Decide whether to invest in the new service (plan)
3. Design and architect the new service to meet customer requirements (design and transition)
4. Build, configure, or buy service components (obtain/build)
5. Deploy service components in preparation for launch (design and transition)
6. Release new service to customers and users (deliver and support)

Demand and Value

The demand to create or significantly modify an existing service may originate from:

- A service consumer (e.g., a sponsor, customer, or user)
- An external stakeholder such as a supplier or regulator
- A member of one of the service provider's business functions
- Members of the organization's governing body

The demand can be recognized in many ways, depending on the context and the tools. Generally, the demand is a request made to the senior managers or their authorized representatives.

It is important that the demand articulates both desired outcomes and expected value from the service. A useful technique is to adapt the commonly used Agile software development template for epics and user stories, which breaks down the need as follows:

As a <persona> I want <outcome> so that <value>.

For example:

- As a business development manager, I want to track my sales pipeline so that I can focus on closing new deals
- As an infrastructure engineer, I want to be able to group monitoring alerts so that I can correlate alerts and eliminate duplicates

The steps in this value stream culminate in the release of service components that customers and users can interact with to generate the required outcomes and to co-create value. It is possible to extend this value stream to include additional activities after the components have been released, for example:

- Engaging with the requester to identify any gaps in the new service, or any outcomes, costs, and risks that were not identified during the value stream activities
- Identifying opportunities to improve the service, value stream, and contributing practices

Related Practices

The *ITIL 4 Create, Deliver and Support* publication describes how each step in this value stream contributes to creation of a new service or significantly modified service. It also describes the many ITIL practices that contribute to each step of the value stream by providing resources based on the four dimensions of service management.

In the context of this value stream, the Create, Deliver and Support certification course focuses on the following subset of practices:

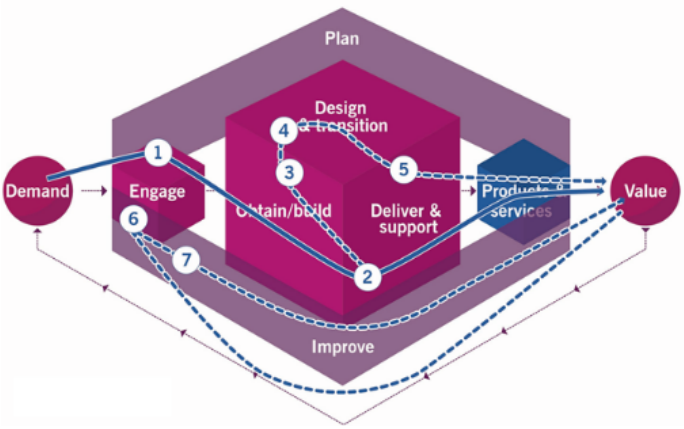
- Service design
- Software development and management
- Deployment management
- Release management
- Service validation and testing

- Change enablement

Restoration of a Live Service

This value stream archetype examines the typical activities that organizations undertake to support an existing service. It is indifferent to the nature of the service and can be used to describe a value stream to support services provided to consumers within the organization or external to the organization.

This value stream describes the journey from demand through the service value chain in seven key steps:



1. Acknowledge and register the user query (engage)
2. Investigate the query, reclassify it as an incident, and attempt to fix it (deliver and support)
3. Obtain a fix from the specialist team (obtain/build)
4. Deploy the fix (design and transition)
5. Verify that the incident has been resolved (deliver and support)
6. Request feedback from the user (engage)
7. Identify opportunities to improve the overall system (improve).

This value stream branches at Step 2. If the initial attempt to fix the incident is successful, then value is restored without any further activity. This is represented as the dashed line from Step 2 to value.

The restoration of value after Step 5 could be the end of the value stream, but there are further activities, described in Steps 6 and 7, which ask for and process feedback. For example, it is common for organizations to request feedback from a random sample of customers.

Demand and Value

This value stream is triggered by a user who is unable to use a live product or service. This loss of productivity leads to value leakage, with the service consumer being unable to derive maximum value from the sub-optimal product or service.

Demand could also originate within the service provider, when monitoring tools proactively alert the organization to failures that may or may not have impacted users. In this scenario, the value stream may bypass Step 1 or switch the order of Steps 1 and 2. In other words, the service provider may if required:

- Start working to resolve the incident without being prompted to do so by a user
- Proactively contact users to notify them of an ongoing incident
- Approach users after the incident has been resolved

The demand for value to be restored drives this value stream.

Related Practices

The *ITIL 4 Create, Deliver and Support* publication describes how each step in this value stream contributes to the restoration of a live service. It also describes the many ITIL practices that contribute to each step of the value stream by providing resources based on the four dimensions of service management. In the context of this value stream, the Create, Deliver and Support certification courses focuses on the following subset of practices:

- Service desk
- Incident management
- Problem management
- Knowledge management
- Service level management
- Monitoring and event management

Creating, Delivering and Supporting Services

ITIL 4 Create, Deliver and Support introduces a number of activities associated with creating, delivering and supporting services. These activities include:

Buy vs. Build Considerations

Service providers have the option of building service components using existing resources, or buying (or otherwise acquiring) service components from partners and suppliers. A myriad of factors influence which works better in a given context. As biases and pressures can arrive, these decisions should be made using data and evidence rather than emotion, rumor, or unconfirmed reports. It is also important to consider the current level of 'commodification' of service components and ongoing industry trends to commodify the components.

Sourcing Considerations and Options

Organizations use a sourcing strategy to reduce the complexity of build vs. buy decisions. Sourcing models (e.g., insourcing, outsourcing) are a component of that sourcing strategy. An organization may have many sourcing models, which reflect factors such as line of business, budget accountability, type of service component, or reporting, auditing, and compliance requirements. The selection of a particular sourcing model will reflect the organization's framework for managing, reporting, auditing, and ensuring compliance with the organization's vision, mission, ethics, and values across its service supply chain.

Service Integration and Management

Service integration and management refers to the approach organizations use to manage and integrate multiple suppliers in a value stream. It can be delivered using different models and there are a myriad of factors that must be considered. When an organization chooses a service integration and management approach, it should regard the approach as a strategic imperative and tender service integration and management contracts separately from individual vendor

contracts. A clear organizational structure, with an appropriate governance and management model, is also required.

Coordinating, Prioritizing and Structuring Work

Organizations are rarely able to balance capacity and demand, leading to queues or backlogs of work, which increases the risk of unhappy customers, users, and other stakeholders. In order to mitigate this risk, organizations have a wide variety of techniques that can be used to either manage demand or prioritize the various types of demand. If demand is created when idle capacity exists, then there is no need to prioritize work. When demand exceeds capacity, however, there are ways that organizations can manage demand and customer and user expectations.

Using Information and Technology

In this age of consumer and enterprise automation, investments in IT are critical for the delivery of valuable products and services. The technology landscape is changing rapidly and diversifying into niche domains. To help navigate this complex ecosystem, organizations are now actively investing in tools to:

- Facilitate the flow of work across multiple functional domains
- Promote collaboration
- Aid in advanced analytics and decision-making
- Progress the automation of repetitive low-skilled work

This frees organizations to invest in advanced service management capabilities that add value to diverse stakeholders. The use of multiple tools and platforms drives the need for a common information and data model across the organization, as well as the need for effective integration.

ITIL 4 Create, Deliver and Support details a variety of the available technologies that can be used in modern service environments such as

- Integrated service management toolsets
- Robotic process automation
- Artificial intelligence and machine learning
- Continuous integration and continuous delivery/deployment (CI/CD)

It is important that professionals maintain a good level of knowledge and understanding about these technologies and their potential to improve service efficiency, enable cost savings, provide a competitive edge, and so on.

Using ITIL Guidance

To get the most out of the *ITIL 4: Create, Deliver and Support* publication, or the **ITIL Specialist: Create Deliver and Support** certification course, it is important to also study the ITIL practice guides. The practice guides are available online via the My ITIL subscription service and provide detailed, practical recommendations for all 34 practices. They also include hands-on guidance that can be applied in the context of all of the ITIL 4 publications.

Obtain a free one-year subscription to My ITIL with your CDS certificate.

Contact us to schedule time with a subject matter expert.

Make a Difference!

Any service management related initiative will affect organizational culture. Effective communication plans, training, and clear policies and procedures are all needed to achieve the desired performance outcomes and enable collaboration between the many different people involved.

Contribute to your organization's IT service management effort by expanding your knowledge of best practices and by enthusiastically using what you learn to lead transformational and continual improvement activities.

BE A CHANGE CHAMPION!

Culture change and progress cannot happen without the support of people like you. **Take action!**

Want to Learn More?

Training helps individuals and organizations build and maintain their capabilities. Training also provides individuals the knowledge, skills and information needed to fill their role in the organization or achieve their career goals, along with a place to test and develop the confidence to use these skills in the workplace.

The ITIL 4 qualification scheme provides a role-based, modular approach that is comprised of qualifications focused on different aspects of ITIL best practice to various degrees of depth and detail.

The structure of the ITIL qualification scheme offers individuals flexibility relating to the different disciplines and areas of ITIL and the ability to focus their studies on key areas of interest.

Read **WhatIs ITIL 4 Qualification Scheme**.

See ITSM Academy's individual **class options and dates** or download our **course catalog.**

Contact us to schedule time with a subject matter expert.

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Additional Resources:

- ITSM Professor Blog - a WEALTH of knowledge published weekly since 2008
- Webinar Archives - Monthly since 2007
- ITSM Academy Resource Center

ITSM Academy

We are a female owned small business, established in 2004. Our extensive catalog contains accredited and sustainable IT Service Management (ITSM) education and advice including; ITIL®, DevOps, Process Design (CPDE), Agile, Site Reliability Engineering (SRE), Value Stream Mapping (VSM) and Experience Level Agreement (XLA). Our business values are founded on trust, loyalty, professionalism and long term relationships.

...educate and inspire is not just our corporate slogan, it speaks to our core mission and goal.

Follow our founder and CXO, Lisa Schwartz, on **LinkedIn**.

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Every ITSM Academy instructor is certified to the highest levels in the areas they train. They have years of hands-on IT practitioner experience, enabling them to effectively intertwine theory and real-life stories and scenarios. Using the highest quality content, this engaging training style encourages active group participation, allowing all learners to bring from class a wealth of practical and actionable knowledge.

Accreditations

All of ITSM Academy's certification courseware is developed or enhanced in-house and is accredited by independent, international organizations where applicable.

Game On! - Interactive Learning

Involves students in active learning, using the engaging qualities of a game, fueled by our subject matter experts.

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In addition to our public and corporate/onsite training, our courseware is available for licensing / co-branding under our flexible licensing program, including Train-the-Trainer (for qualifying organizations).

my.itsmacademy.com (digital portal)

Extends the learning experience with games, videos, exercises, sample exams, and course materials. It also provides instructors a vast repository of information and guidance to successfully prepare for and teach our courses.

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ITSM Academy is proud to make it possible for individuals who attend our classes to earn professional education hours. (e.g., CPDs, PDUs, CPEs, CEUs). These professional education hours can be submitted to associations such as PeopleCert, the Project Management Institute and ISACA, if applicable.

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The Story of the Academy

Today, ITSM Academy is widely recognized for its expertise in multiple IT frameworks (ITSM, ITIL, Process Engineering (CPDE), DevOps, Agile Service Management, Lean) and, more importantly, how they work together. But that's not where we started.