

Information
Technology
Infrastructure
Library (ITIL)

Ing. Jitka Novotná, Ph.D.

Co je ITIL a historie

Information Technology Infrastructure Library (ITIL) je soubor praxí prověřených konceptů a postupů, které umožňují lépe plánovat, využívat a zkvalitňovat využití informačních technologií (IT), a to jak ze strany dodavatelů IT služeb, tak i z pohledu zákazníků.

Projekt vznikl ve Velké Británii v letech 1985 až 1995.

- V letech 2000 – 2004 byl projekt přepracován, novou verzi 2 (ITIL V2) a začaly ho využívat společnosti v dalších zemích jako standard v poskytování IT služeb.
- V roce 2007 vznikla rozšířená třetí verze (ITIL V3). Je to metodika založená na procesním řízení organizace a je určena hlavně pro střední a vyšší management.
- 2019 – ITIL V4 klade důraz na výstupní hodnotu a zohledňuje agilní přístup.

Charakteristické rysy

▪ Procesní řízení

ITIL přináší procesně orientovaný přístup k řízení IT služeb. Proces je logický sled činností transformujících nějaký vstup na nějaký výstup, přičemž plnění jednotlivých činností v procesu je zajišťováno rolemi s jasně definovanými odpovědnostmi. Celý proces je řízen, monitorován, měřen, vyhodnocován a neustále vylepšován, což je odpovědností vlastníka procesu.

▪ Zákaznický orientovaný přístup

Tento rys vyplývá přímo ze samotné podstaty ITSM (IT service management); všechny procesy se navrhují s ohledem na potřeby zákazníka, tzn. každá aktivita, každý úkon v každém procesu musí přinášet nějakou přidanou hodnotu pro zákazníka - pokud ne, pak je taková činnost nadbytečná.

▪ Jednoznačná terminologie

Jednoznačná terminologie je někdy málo doceňovanou nebo úplně opomíjenou charakteristikou ITIL, ale jen do té doby, než je v praxi potřeba řešit nedorozumění plynoucí z toho, že někdo používá stejný termín v jiném významu, než očekáváme.

▪ Nezávislost na platformě

Rámec ITSM procesů podle ITIL je nezávislý na jakékoliv platformě. Dokonce je možné ITIL použít i pro navržení procesů (úplně mimo oblast ICT) v jakékoliv firmě, která podniká ve službách.

▪ Public Domain

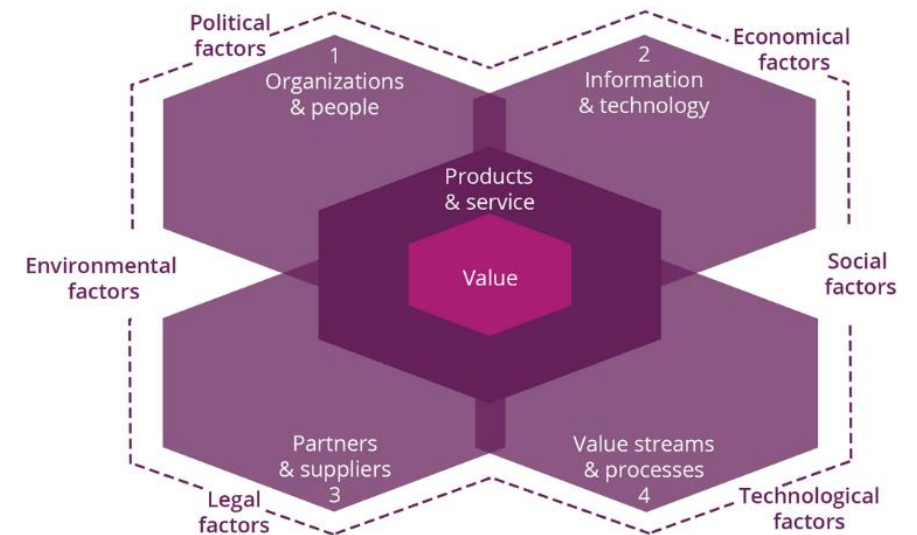
Knihovna je volně dostupná, což znamená, že každý si může knihy ITIL koupit a procesy ITSM podle ITIL ve svém podniku implementovat, aniž by musel platit jakékoliv další licenční poplatky. Tato skutečnost mj. přispěla k rychlému celosvětovému rozšíření ITIL.

Základní pohled – 4 dimenze

- Musím vědět co chci – hodnotu dodává organizace prostřednictvím produktů a služeb
- Musím vědět co vše řídit

4 základní dimenze manažerského pohledu

1. Organizace a lidi
2. Informace a technologie
3. Partneři a dodavatelé
4. Hodnotové toky a procesy



Vnější faktory

Politické vlivy

Ekonomické faktory

Sociální faktory

Technologické faktory

Právní faktory

Faktory prostředí

PESTLE factors

P – political f.

E – economical f.

S – social f.

T – technological f.

L – legal f.

E – environmental f.

Service value sytem - Komponenty

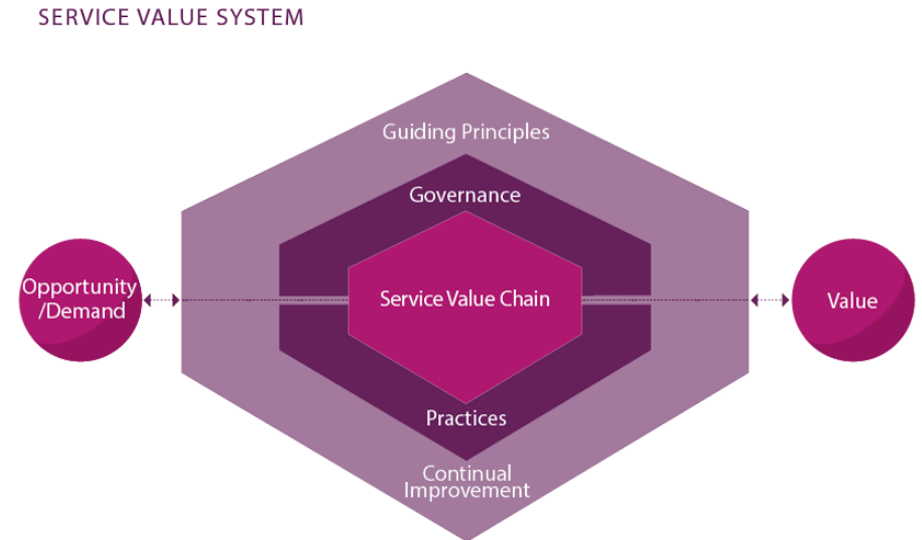
Guiding principles - Recommendations that guide an organization and its people on how to work flexibly in all circumstances

Governance - The means by which an organization is directed and controlled

Service value chain - an operating model which outlines the key activities required to respond to demand and facilitate value creation through the creation and management of products and services

Practices - sets of organizational resources designed for performing work or accomplishing an objective, including process and capabilities

Continual improvement - a recurring organizational activity performed at all levels to ensure that an organization's performance continually improves in meeting stakeholders' expectations



Guiding principles

A guiding principle is a recommendation that's going to guide an organization in all circumstances.



Focus on value



Start where you are



Progress iteratively with feedback



Collaborate and promote visibility



Think and work holistically



Keep it simple and practical



Optimize and automate

Governance

= A guiding principle is a recommendation that's going to guide an organization in all circumstances.



Service Value Chain

Plan - To ensure a shared understanding of the vision, current status and improvement direction for all four dimensions and all products and services across the organization

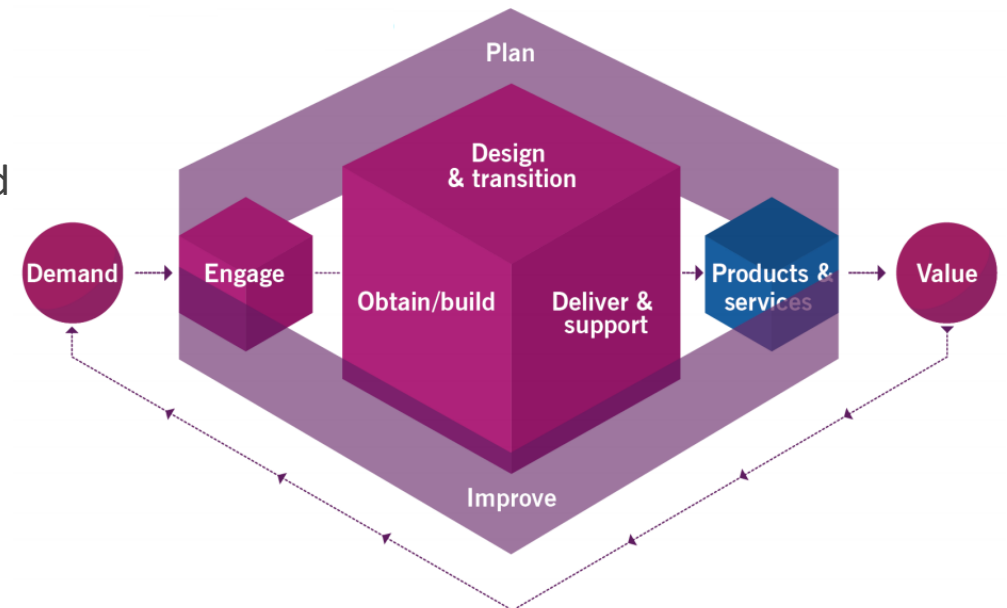
Improve - To ensure continual improvement of products, services and practices across all value chain activities and the four dimensions of service management

Engage - To provide a good understanding of stakeholder needs, continual engagement with all stakeholders, transparency and good relationships with all stakeholders

Design and Transition - To ensure that products and services continually meet stakeholder expectations for quality, costs and time to market

Obtain/build - To ensure that service components are available when and where they are needed, and meet agreed specifications

Deliver and support - To ensure that services are delivered and supported according to agreed specifications and stakeholders' expectations



Zdroje:

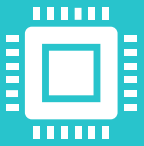
www.axelos.com

www.tx.cz + aplikace tayllorcox

www.bmc.com



Service – have been developed in service management and ITSM industries



Technical - have been adapted from technology management domains for service management purposes by expanding or shifting their focus from technology solutions to IT services



General - have been adopted and adapted for service management from general business management domains

34 Practices

ITIL® 4 Management Practices

High-velocity service delivery is the need of the modern business (& service) environment which influences all the practices of a service provider by;

- Focusing on fast delivery of IT services; both new and changed; in time
- Establishing the mechanism to analyse the feedback on performance of IT service continually throughout its lifecycle
- Adopting the concepts of agility for continual and fast improvement in IT services, by processing the feedback quickly and timely.
- Visualizing and defining an end-to-end approach (i.e. entire service lifecycle, from ideation, through creation and delivery, to consumption of services)
- Integrating the product and service management practices
- Digitalizing the IT infrastructure by adopting the modern technology practices like cloud computing, microservices, containerization etc.
- Seeking opportunities (continually) to enable automation across the service delivery value chain.

ITIL[®]4 Management Practices

The management practices can be defined as a [set of organizational resources designed for performing work or accomplishing an objective](#). The management practices are segregated into three parts. They are;

General management practices (14) which are applicable across the organization for the success of business and services provided by the organization.

Service management practices (17) which are applicable for specific services being developed, deployed, delivered and supported in an organization environment.

Technical management practices (3) have been adapted from technology management domains for service management purposes by expanding or shifting their focus from technology solutions to IT services.

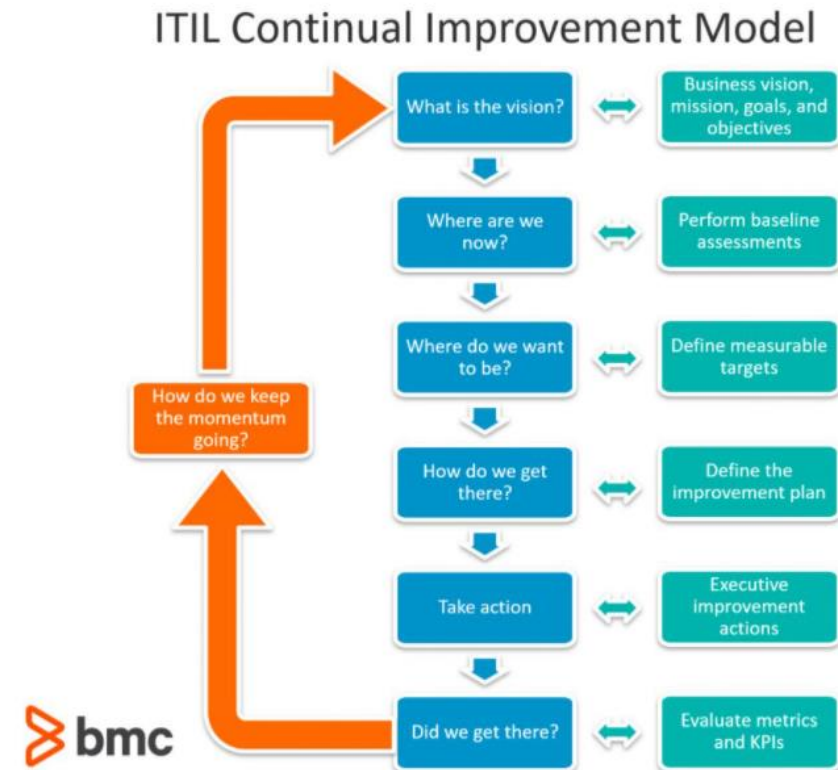
ITIL® 4 Management Practices

General Management Practices (14)	Service Management Practices (17)	Technical Management Practices (3)
Architecture management	Availability management	Deployment management
Continual improvement	Business analysis	Infrastructure and platform Management
Information security management	Capacity and performance management	Software development and Management
Knowledge management	Change control	
Measurement and reporting	Incident management	
Organizational change management	IT asset management	
Portfolio management	Monitoring and event management	
Project management	Problem management	
Relationship management	Release management	
Risk management	Service catalogue management	
Service financial management	Service configuration management	
Strategy management	Service continuity management	
Supplier management	Service design	
Workforce and talent management	Service desk	
	Service level management	
	Service request management	
	Service validation and testing	

Continual improvement

= To align the organisations practices and services with changing business needs through the ongoing **improvement** of products, services and practices.

Continual improvement register = a database or structured document to track & manage improvements.



Service level management

= to **set clear** business-based **targets** for service levels, and to ensure the delivery of service is properly assessed and managed against these targets.

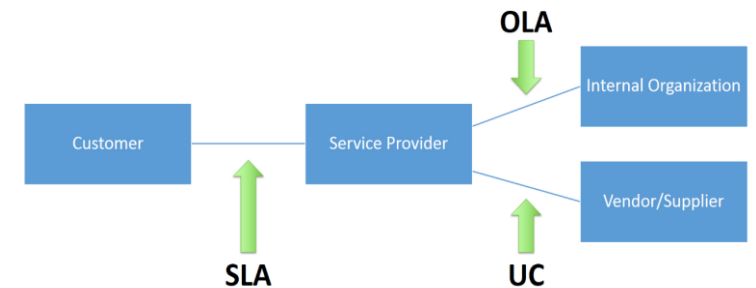
Service level – metrics that define expected service quality.

Service level agreement = external agreements between a service provider and customer that identifies both services required and expected level of service.

OLA = **operating level agreement** (internal agreements that a service provider defines for internal users to meet SLAs). The OLAs would be used to track internal service commitments such as the following service targets:

- Response time for incidents or problems assigned to IT groups
- Availability of servers supporting various applications

UC = **underpinning contract** (agreements that are used to track performance between an external service provider and a vendor).



Incident management

= minimize the negative impact of incidents by restoring normal service operation as quickly as possible.

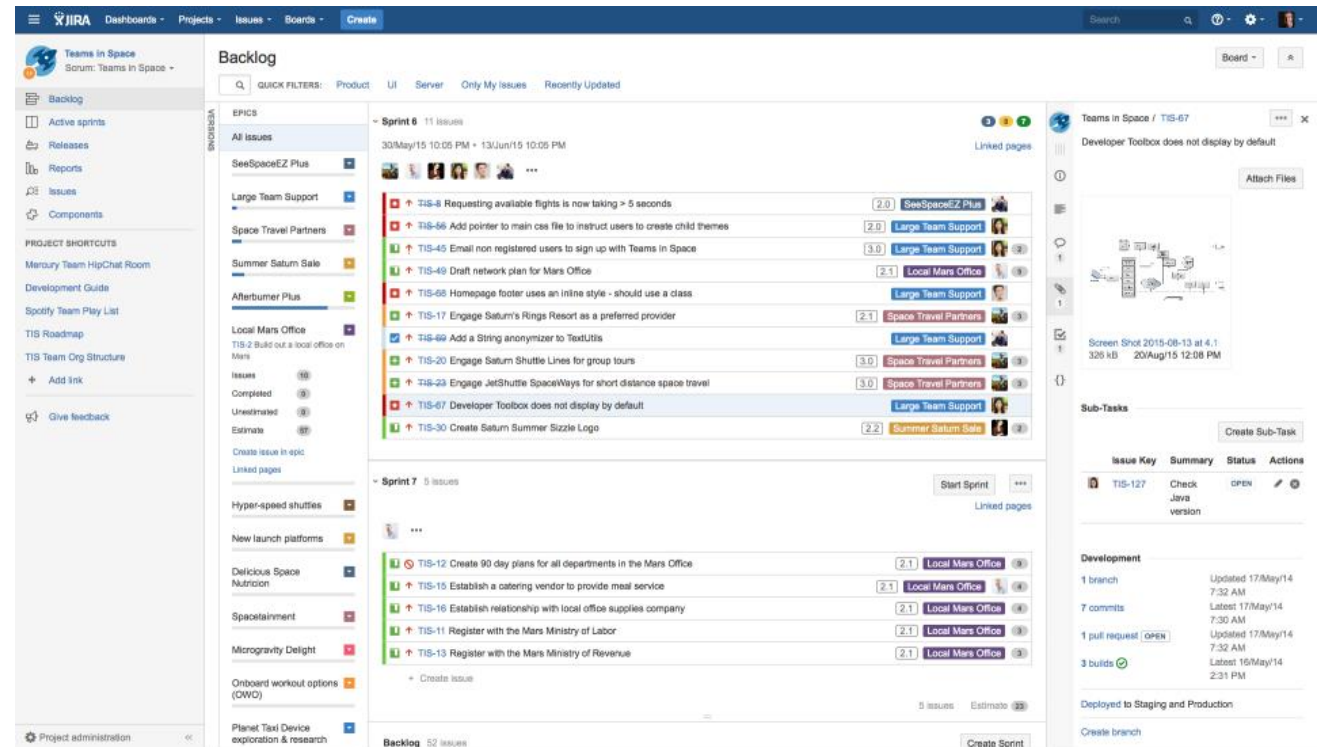
- User and customer satisfaction
- Your credibility and reputation
- The value you create in your relationships

Incident = an unplanned interruption to a service or reduction in quality of that service.

Incident workflow:

1. logging incident (detection)
2. ticket creation (registration)
3. incident categorisation (classification)
4. incident prioritisation (diagnosis)
5. incident resolution
6. incident closure

Main factors: urgency + impact



The screenshot displays the JIRA Backlog interface for a project named 'Teams in Space'. The interface is divided into several sections:

- Left Sidebar:** Contains navigation options like 'Backlog', 'Active sprints', 'Releases', 'Reports', 'Issues', and 'Components'. It also lists 'PROJECT SHORTCUTS' such as 'Mercury Team HipChat Room', 'Development Guide', and 'Spotify Team Play List'.
- Top Bar:** Shows the JIRA logo, navigation tabs (Dashboards, Projects, Issues, Boards, Create), and a search bar.
- Main Content Area:** Titled 'Backlog', it shows a list of issues grouped into sprints. The current sprint is 'Sprint 6' (30/May/15 10:05 PM - 13/Jun/15 10:05 PM). Issues are listed with their keys (e.g., TIS-8, TIS-56), titles, and assignees. A 'Sprint 7' section is also visible below.
- Right Sidebar:** Shows a detailed view of a specific issue, 'TIS-67: Developer Toolbox does not display by default'. It includes a 'Screenshot' of the error, 'Sub-Tasks', and a 'Development' section with a table of build and deployment information.

Issue Key	Summary	Status	Actions
TIS-127	Check Java version	OPEN	[Icon]

Development	Updated
1 branch	Updated 17/May/14 7:32 AM
7 commits	Latest 17/May/14 7:30 AM
1 pull request [OPEN]	Updated 17/May/14 7:32 AM
3 builds [OK]	Latest 16/May/14 2:31 PM

Problem management

= to reduce the likelihood and impact of incidents by identifying actual and potential causes of incidents.

Problem = cause or potential cause of one or more incidents.

Known error = a problem that has been analysed but not been resolved.

Error control

- Activities manage known errors, which are problems where initial analysis has been completed
- Also includes identification of potential permanent solutions which may result in a change request for implementation

Problem management

Workaround = a solution that reduces or eliminates the impact of an incident or problem for which a full resolution is not yet available.

Problem mng activities = is a key practice that can elevate a service provider from a purely “break-fix” mentality and customer perception.

➤ 3 phases: 1. Problem identification 2. Problem control 3. Error control

Problem solutions = can be in some causes be treated as improvement opportunities so they are included in Continual improvement registr (CIR).

Change control

= to **maximise** the number of **successful service** and product changes by ensuring that risk have been properly assessed, authorizing changes to proceed, and managing the change schedule.

Change = the addition, modification, or removal of anything that could have a direct or indirect effect on services.

Change authority = who authorizes change

Types of change

1. **Standard** change = low-risk pre-authorized change
2. **Normal** change = need to be scheduled, assessed and authorized
3. **Emergency** change = must be implemented as soon as possible, often part of incident

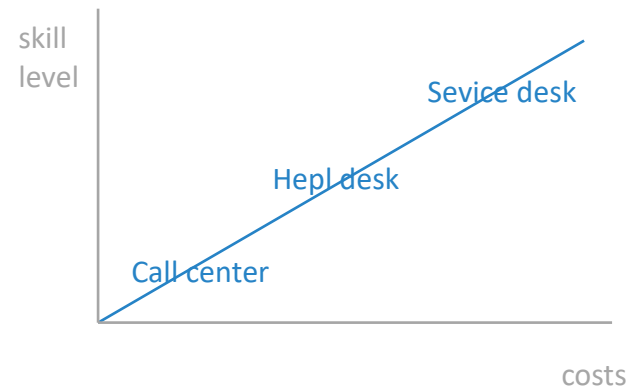
Change advisory board

Emergency change advisory board

Service desk

= to **capture demand for incident resolution and service requests**. It should be the entry point and single point of contact for the service provider with all of its users.

Service desk should also be the entry point and **Single point of contact (SPOC)** for the service provider with all its users.



Service desk can support the organization for a single location (centralized), virtual (agents work from multiple geographical locations).



Service request management

= s to **support the agreed quality of a service** by handling all pre-defined, user initiated service requests in an effective and user-friendly manner.

Service Request = a request from a user or a user's authorized representative that initiates a service action which has been agreed as a normal part of service delivery.

Deployment management

The purpose of the deployment management practice is **to move** new or changed hardware, software, documentation, processes, or any other component **to live environments**.

Deployment management works under the direction and guidance of the change control and release management practices. Its key activity is to deploy into live environments as and when directed (it also includes deployment between environments such as testing to staging/pre-acceptance).

Release is a collection of hardware, software, documentation, processes or other components, required to implement one or more approved changes to IT services.

Infrastructure and Platform Management

= to **oversee the infrastructure and platforms** used by an organization.

The scope of the IT infrastructure includes physical and/or virtual technology resources, these include servers, storage, networks client hardware, middleware and operating systems.

Software Development and Management

= to **ensure** that applications **meet internal and external stakeholder needs**, in terms of functionality, reliability, maintainability, compliance and auditability.

Whether software applications are purchased by an organization as commercial off the shelf products (COTS) or developed with in house resources they are crucial to the creation of value for the service provider and service consumer. This practice is pivotal to ensuring applications are both fit for purpose (**utility**) and fit for use (**warranty**).