ITIL 4

Network Intelligence
ChinaNetwork Corporation

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ITIL的基本脉络

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课程建议

ITSM

探讨ITIL4的方式建议：

- 范围不限于ITIL，融入IT4IT，借鉴SAFe；
- 问题导入；
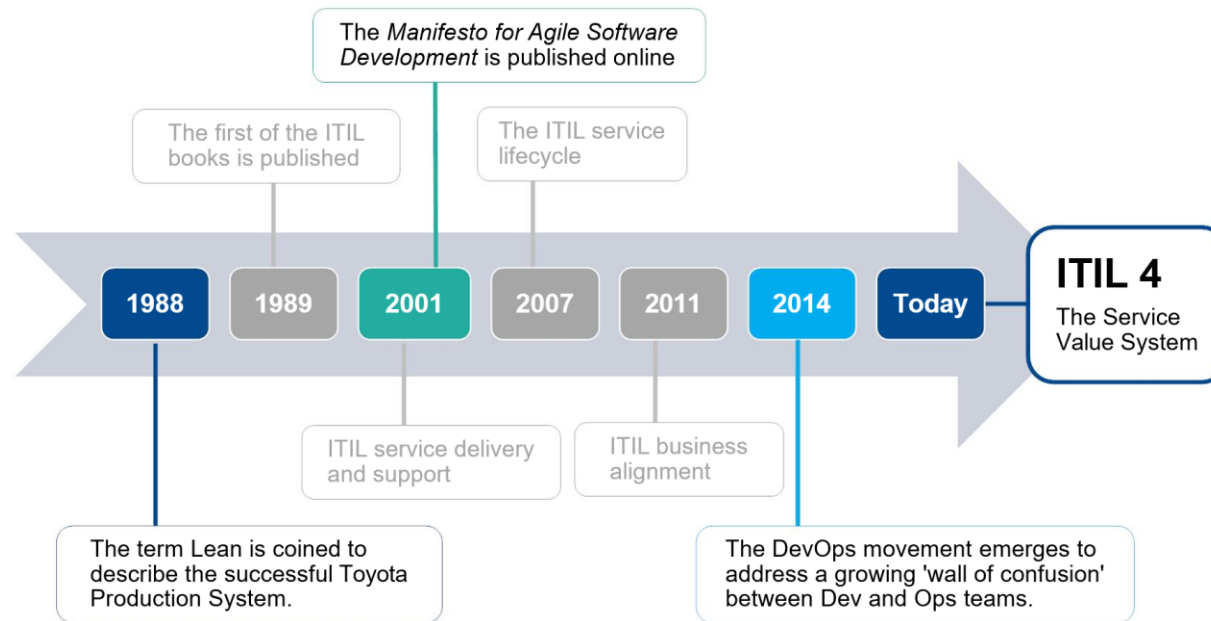- 理论结合日常工作；

对于ITIL的态度，我们的建议是 **"得其意，即其思想精髓，而不必计较其表现形式"**。

ITIL的基本脉络

Service management is evolving, and so is ITIL, the most widely adopted guidance on IT service management (ITSM) in the world.

The *Manifesto for Agile Software Development* is published online

The first of the ITIL books is published

The ITIL service lifecycle

| 1988 | 1989 | 2001 | 2007 | 2011 | 2014 | Today |

ITIL 4
The Service Value System

ITIL service delivery and support

ITIL business alignment

The term Lean is coined to describe the successful Toyota Production System.

The DevOps movement emerges to address a growing 'wall of confusion' between Dev and Ops teams.

ITIL is the most popular IT service management (ITSM) body of knowledge in the world.

Back in the 1980s no one truly understood IT service management (ITSM), although it was clear that it was a concept that needed to be explored. Hence a UK government initiative was instigated and ITIL® was born.

ITIL 概念出现于二十世纪八十年代, 当时英国政府确定, 提供给他们的 IT 服务质量水平还不够。目前被称为政府商务办公室 (OGC) 的中央计算机和电信机构 (CCTA) 的任务是制定一个框架, 以便在英国政府内有效和财政上负责任地使用 IT 资源。他们的目标是发展一个提供高效率和高质量的 IT 服务的框架。
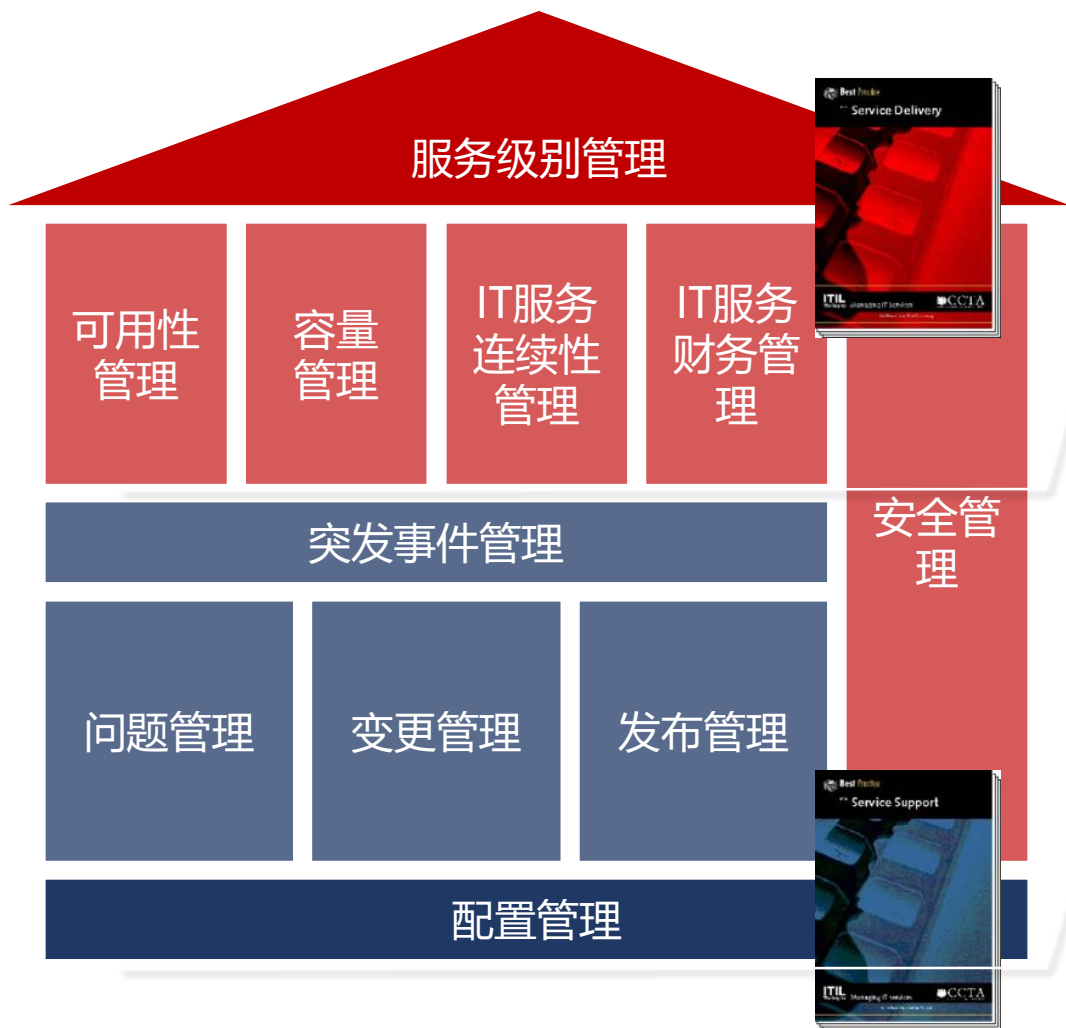
这项研究包括采访来自不同行业的2500多个不同规模的组织, 并跨越公共和私营部门。ITIL 的第一版是非常技术性的 (包括布线技术、备用电源和办公室声学等主题), 并跨越了40卷的集合。

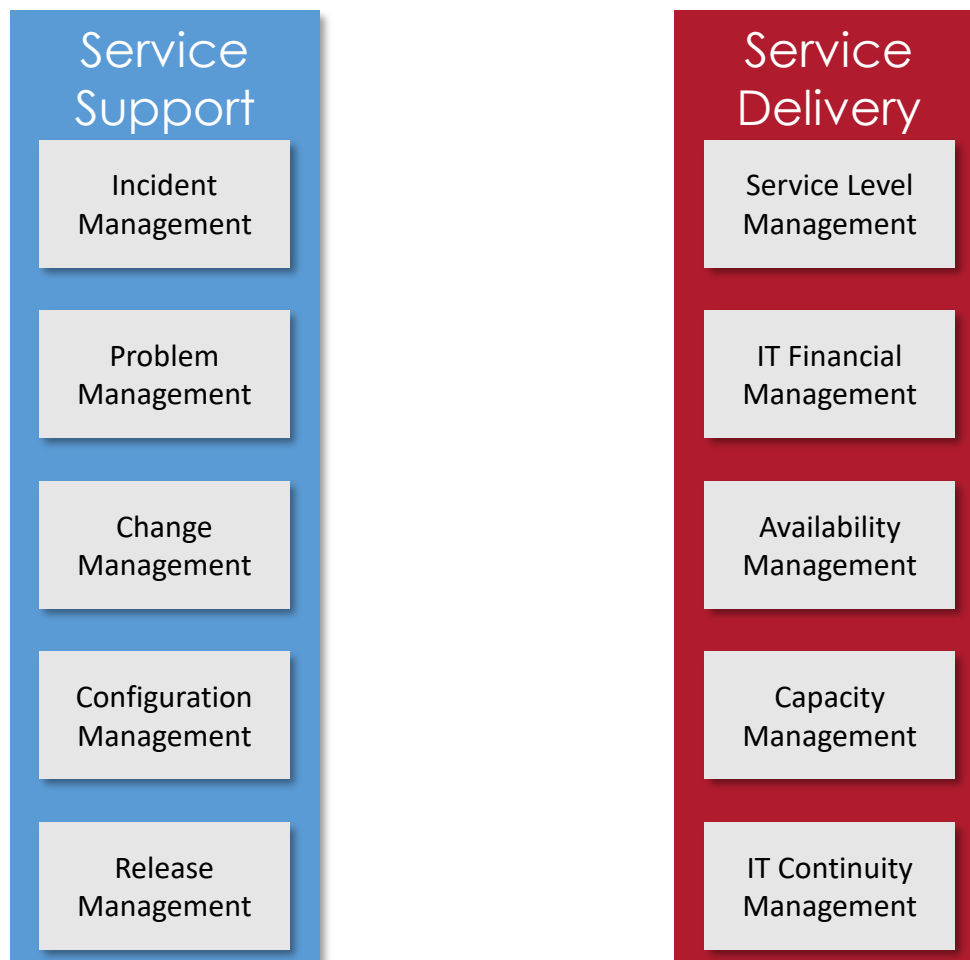**提高信息化管理的质量** | 发展一个提供高效率和高质量的 IT 服务的框架。

服务级别管理

可用性管理	容量管理	IT服务连续性管理	IT服务财务管理	安全管理
突发事件管理				
问题管理	变更管理	发布管理		
配置管理				

面向客户：长时间的计划和改进IT服务质量。

面向用户：日复一日的进行流程化工作

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汉远网智 www.ITILmap.com

ITIL V2
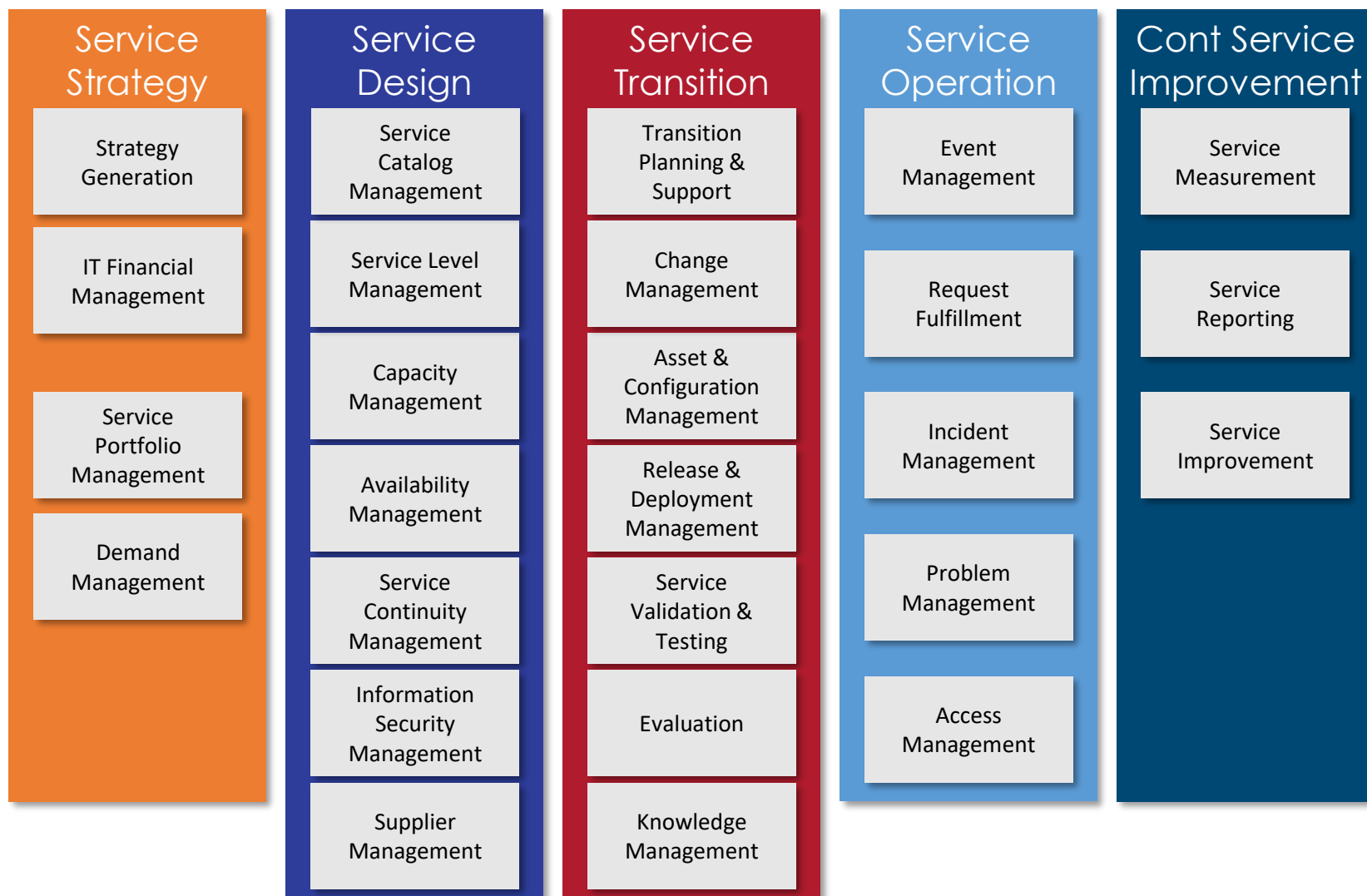
每一个价值流都有自己的周期和逻辑，并且一个无法归于另一个。

价值流	管理机制	价值的流动周期
从主题到计划	架构、主题规划、系统逻辑蓝图、项目	月\年
从需求到部署	业务需求、构建、投产发布、评价	周\月
从监测到纠正	监测和事态、故障处理、问题沉淀、整改	小时\天\周
从请求到优化	服务请求、问题沉淀、优化整改	小时\天\周

概念或管理对象	变化周期
IT服务	年
IT资产	年
合同	年
厂家\供应商	年
人员	年
项目	数月
投产发布	天/数周
整改	天/数周
服务请求	小时/天
故障	分钟/小时
问题	天/周
需求	天/周/月
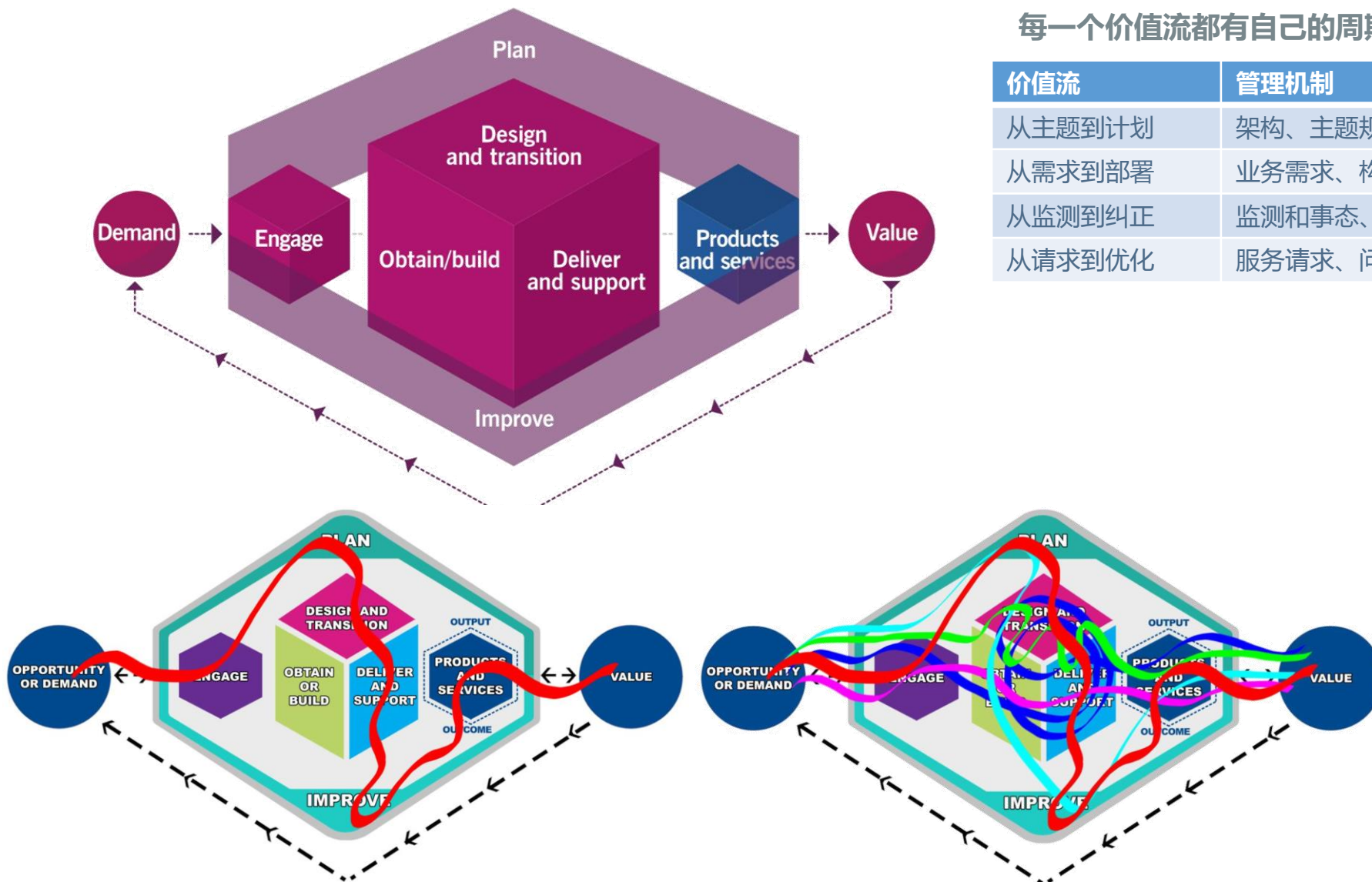
A classification scheme for the complete set of primary and supporting activities that contribute to the lifecycle of creating net value of a market offering. Originates from Michael Porter's book Competitive Advantage.有助于创造市场产品价值生命周期的一整套主要和辅助活动的分类方案。源自迈克尔·波特的书《竞争优势》。

A value chain is a series of activities that an organization performs in order to deliver something valuable, such as a product or service.价值链是组织为了交付有价值的东西，如产品或服务而进行的一系列活动。
Products pass through activities of a chain in order and, at each activity, the product gains some value. 产品按顺序通过一个链的活动，在每一个活动中，产品都获得一些价值。
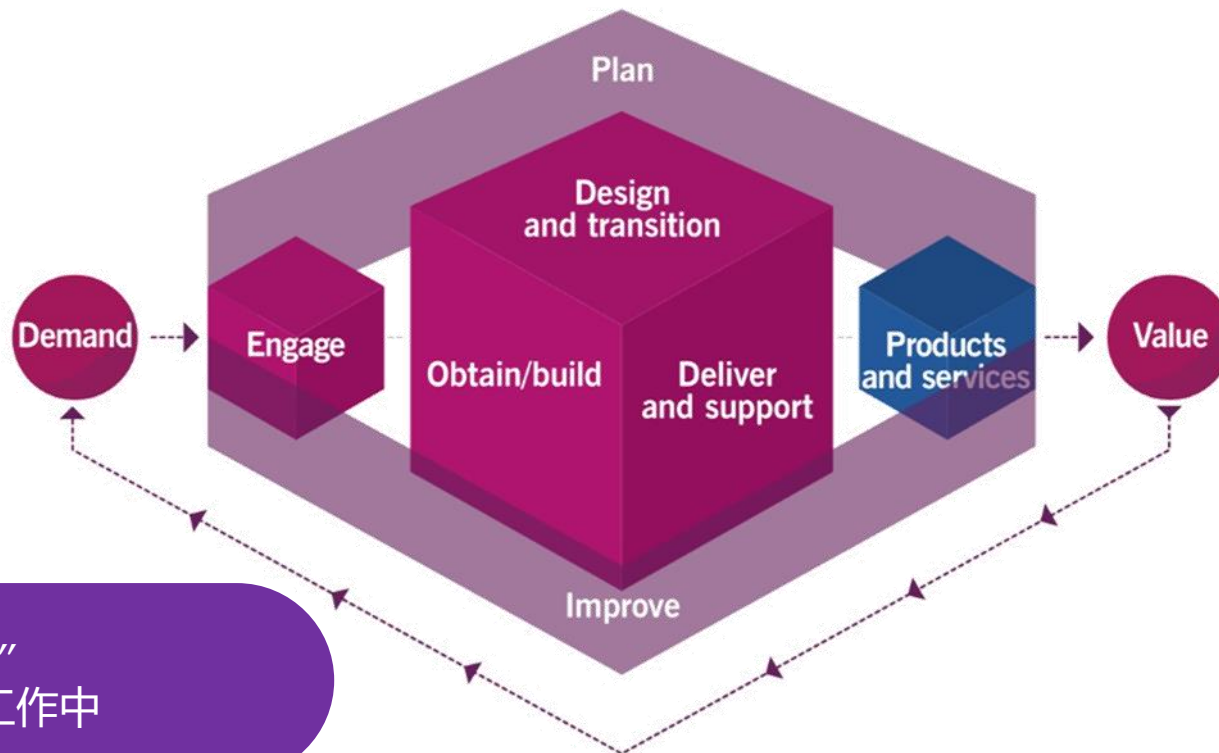
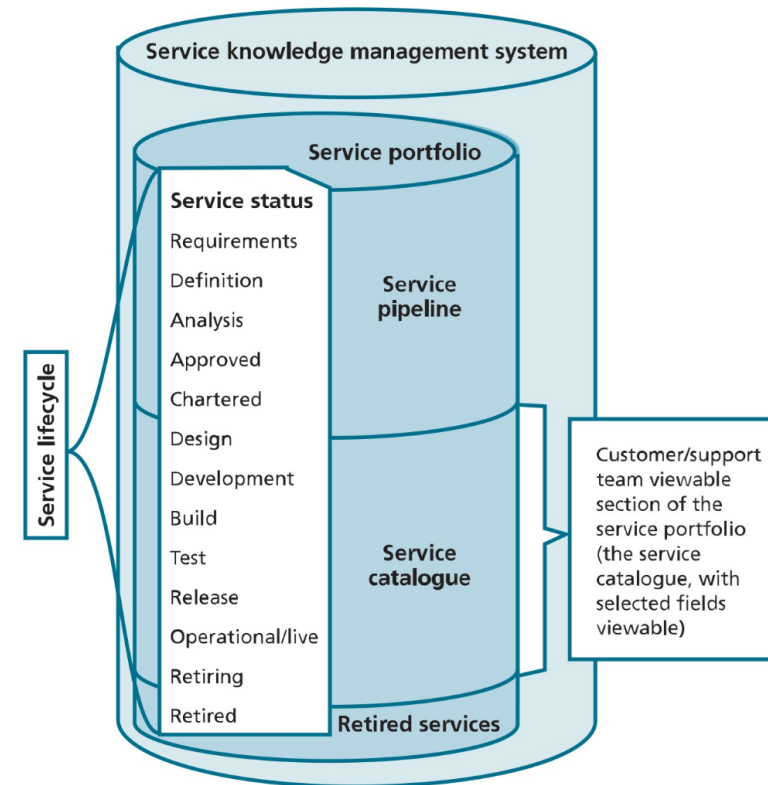**?** 为什么是"价值链"

Michael E.Porter

《竞争优势》 1985

汉远网智 www.ITILmap.com

The ITIL service value chain includes six value chain activities which lead to the creation of products and services and, in turn, value. ITIL 服务价值链包括六个价值链活动，这些活动促成产品和服务的创建，进而是价值。

? "价值链"
怎么落实在工作中

汉远网智的注释：" 价值链"**是六个互不相同，但又相互关联的活动，共同构成了一个创造价值的动态过程。**

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Definition: Value stream
A series of steps an organization undertakes to create and deliver products and services to consumers. 一个组织负责创建产品和服务并将其交付给消费者的一系列步骤。

A value stream is a long-lived **series of steps** used to deliver value, from concept or customer order to delivery of a tangible result for the customer.价值流是用于交付价值的一系列长期步骤, 从概念或客户订单到为客户交付有形结果。
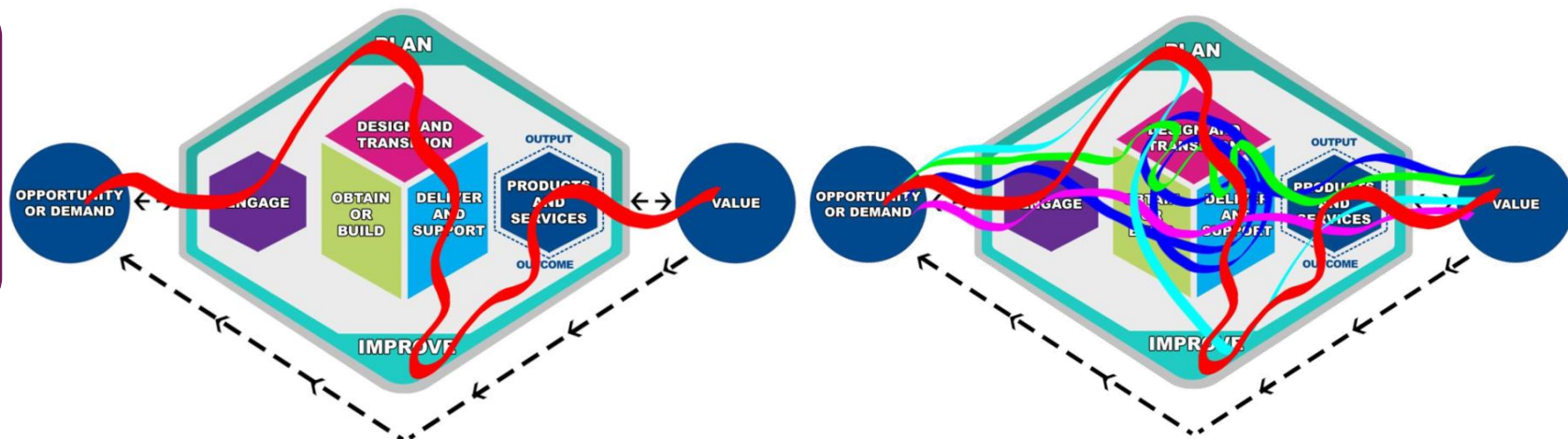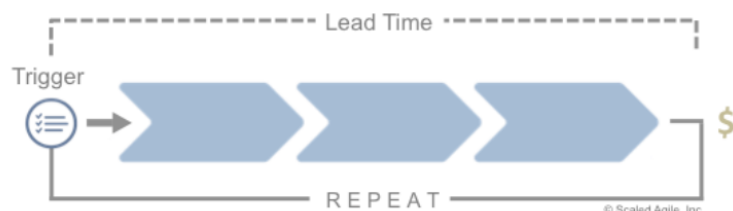
There are many different value streams, because various types of work follow different routes.各种不同类型的工作，遵循不同的路线。

The overall goals and expectations for a product or service should be described from **end-to-end**, that is, from demand to value, rather than simply describing the use of each team in a disparate or un-coordinated set of activities. 产品或服务的总体目标和期望应该是端到端的（即从需求到价值）进行描述，而不是简单地描述每一个单独团队在不同或不协调的一组活动中的使用情况。

? "价值流"与"流程"有什么不同。

Each IT Value Stream is centered on an essential element of the Service Model and the constellation of key data objects (Information Model) and functional components (Functional Model) that support it. Together, the four value streams play a vital role in helping IT holistically manage the full service lifecycle:每个信息技术价值流都集中在服务模型的一个基本元素以及支持它的关键数据对象(信息模型)和功能组件(功能模型)的星座上。这四个价值流共同在帮助信息技术全面管理整个服务生命周期方面发挥着至关重要的作用：

- The **Strategy to Portfolio (S2P) Value Stream** receives strategic demands for new or improved services from the business or IT itself and develops the Conceptual Service Blueprint to represent the new or enhanced business/IT service that is requested. The Conceptual Service Blueprint is the bridge between business and IT in that it provides the business context for the service along with the high-level architectural attributes.投资组合战略(S2P)价值流从业务或信息技术本身接收对新的或改进的服务的战略需求，并开发概念服务蓝图来代表所请求的新的或增强的业务/信息技术服务。概念服务蓝图是业务和信息技术之间的桥梁，因为它为服务提供了业务背景以及高级架构属性。

- The **Requirement to Deploy (R2D) Value Stream** receives the Conceptual Service Blueprint and designs and develops the Logical Service Model with more detailed requirements that describe how the newly requested business/IT service and its components shall be designed. The Logical Service Model can be thought of as what is traditionally expressed in IT terms as the "system design". The Logical Service Model together with the Service Release make up the Logical Service Blueprint. The R2D Value Stream builds, tests, and delivers the deployable service (Service Release Blueprint) to the R2F Value Stream.部署需求(R2D)价值流接收概念服务蓝图，并设计和开发具有更详细需求的逻辑服务模型，描述如何设计新请求的业务/信息技术服务及其组件。逻辑服务模型可以被认为是传统上用信息技术术语表达的"系统设计"。逻辑服务模型和服务发布一起构成了逻辑服务蓝图。R2D价值流构建、测试并向R2F价值流交付可部署的服务(服务发布蓝图)。

- The **Request to Fulfill (R2F) Value Stream** receives the Logical Service Blueprint after it has gone through development, test, and release approval. For repeatedly consumable services, the R2F Value Stream is responsible for the tasks to transition the service into production and make it consumable by the business including creating the Service Catalog Entry.完成请求(R2F)价值流在经过开发、测试和发布批准后会收到逻辑服务蓝图。对于可重复消费的服务，R2F价值流负责将服务转变为生产，并使其可由企业消费，包括创建服务目录条目。

- The **Detect to Correct (D2C) Value Stream** provides a framework for integrating the monitoring, management, remediation, and other operational aspects associated with realized services and/or those under construction. It also provides a comprehensive overview of the business of IT operations and the services these teams deliver. "检测到纠正(D2C)"价值流为整合监控、管理、补救和与已实现服务和/或正在建设的服务相关的其他运营方面提供了一个框架。它还全面概述了信息技术运营的业务以及这些团队提供的服务。

Development of a new service
新的系统或功能

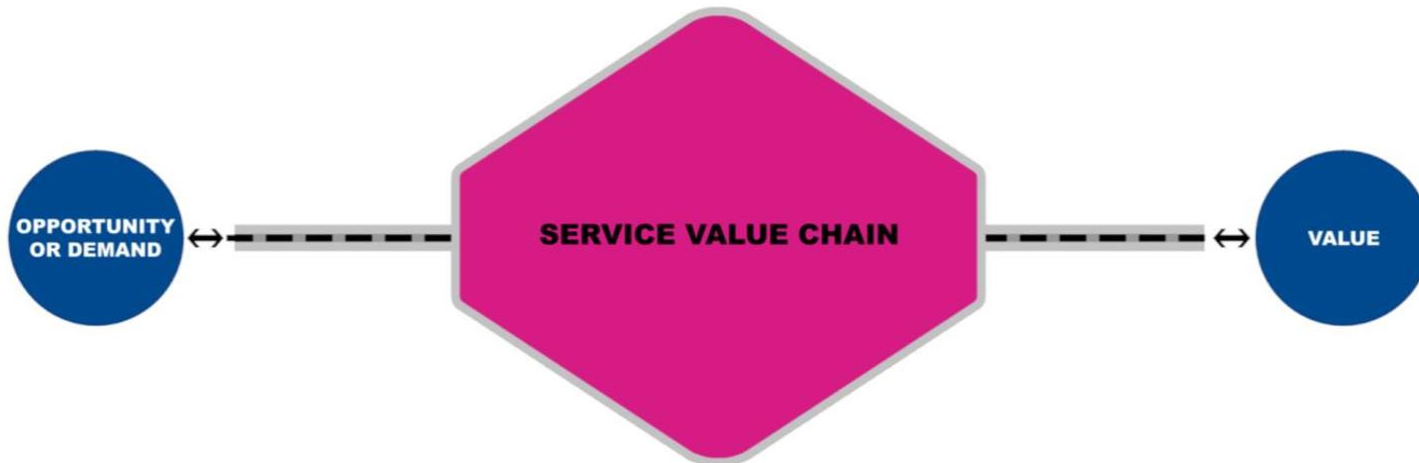**Restoration of a live service**
恢复运营中的系统或功能

Key message：Opportunity and demand trigger activities within the ITIL SVS, and these activities lead to the creation of value. "机会" 和〝需求〞触发 了ITIL SVS 中的活动, 这些活动促成了价值的创造。

汉远网智的注释：
- 一方面来自于业务需求;
- 一方面来自于持续改进。

OPPORTUNITY OR DEMAND ↔ SERVICE VALUE CHAIN ↔ VALUE

Opportunity represents options or possibilities to add value for stakeholders or otherwise improve the organization. There may not be demand for these opportunities yet, but they can still trigger work within the system.机会表示为利益相关方增值或以其他方式改进组织的选择或可能性。对这些机会的需求可能还没有, 但它们仍然可以触发体系内的工作。

Demand represents the need or desire for products and services from internal and external customers.需求代表了对内部和外部客户的产品和服务的需求或期望。
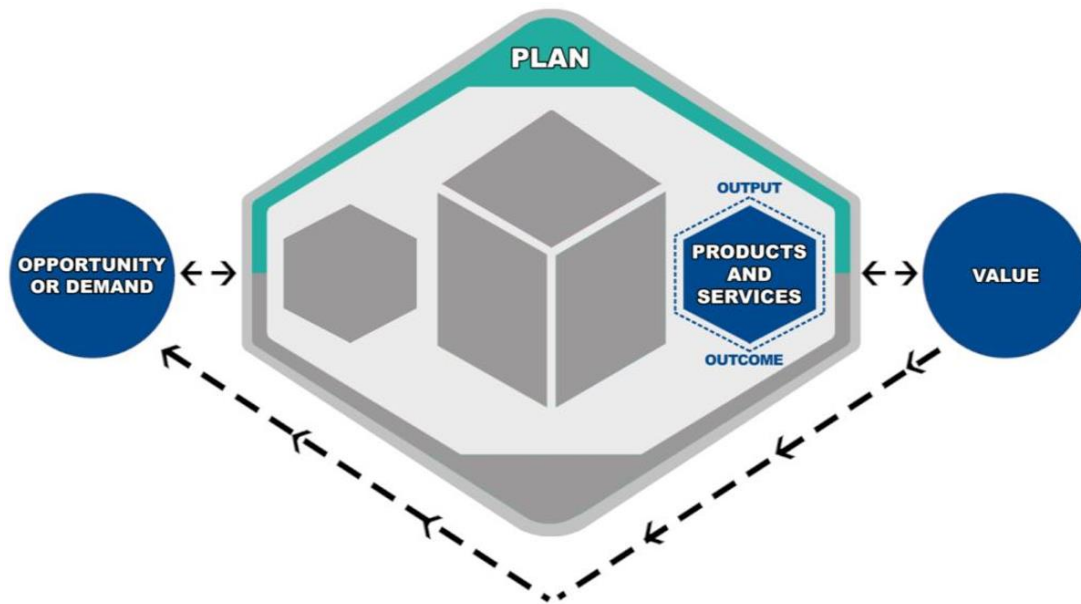
价值链的〝触发〞和〝目的〞

扩展阅读
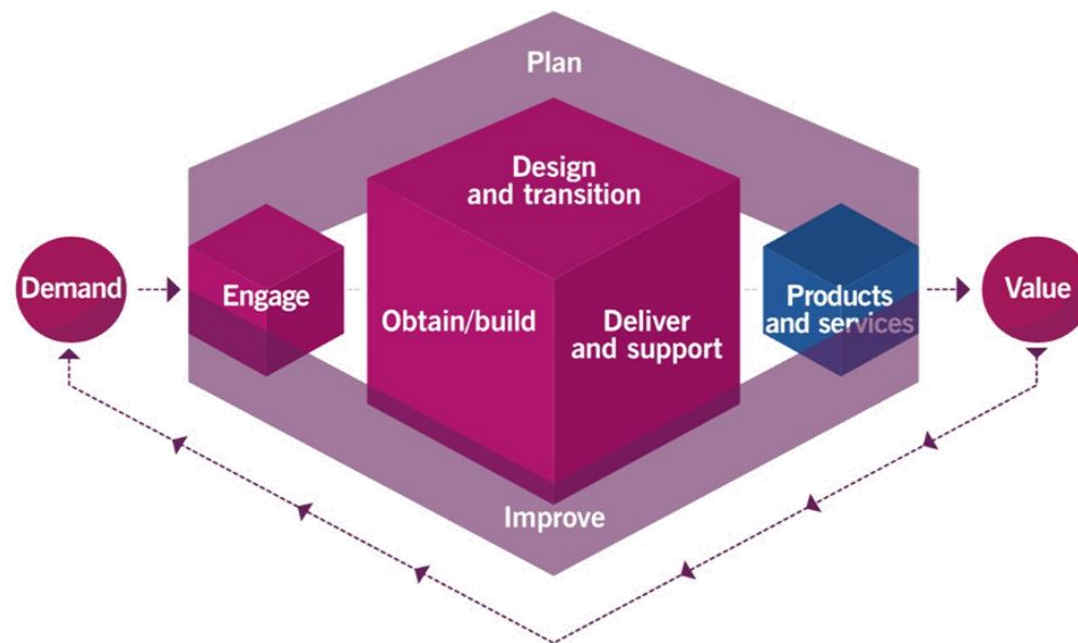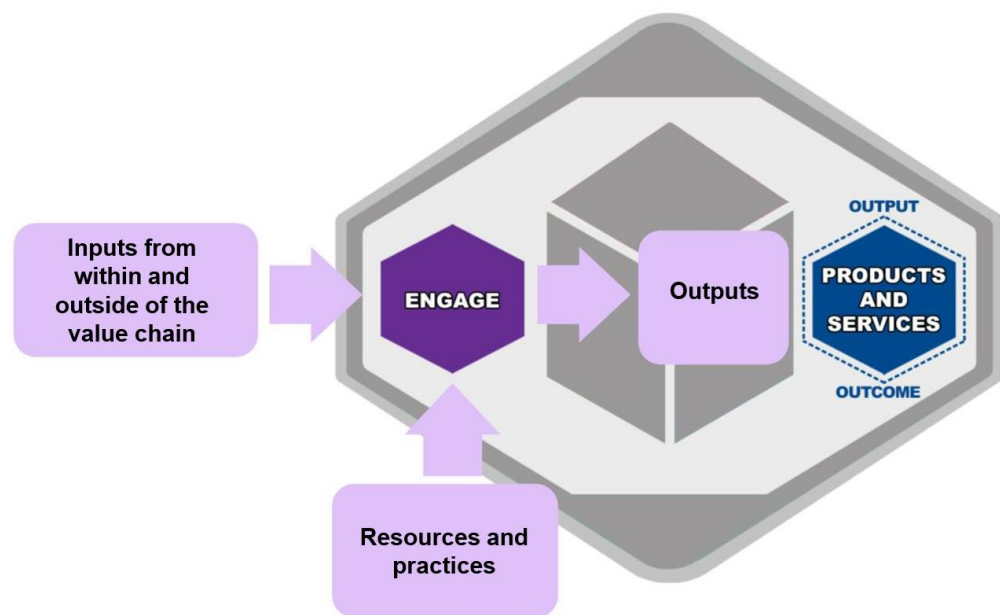
Service value chain activities represent the steps an organization takes in the **creation of value**. Each activity contributes to the value chain by transforming specific inputs into outputs. *服务价值链活动代表了一个组织在创造价值方面采取的步骤。每项活动都通过将特定的投入转化为产出, 为价值链做出贡献。*

Input and Output of the **Plan** Activity

PLAN

OPPORTUNITY OR DEMAND

OUTPUT

PRODUCTS AND SERVICES

OUTCOME

VALUE

Key message

The purpose of the plan value chain activity is 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.

"计划（Plan）" 价值链活动的目的是确保对整个组织的所有四个维度和所有产品和服务的愿景、现状和改进方向有着共同的理解。
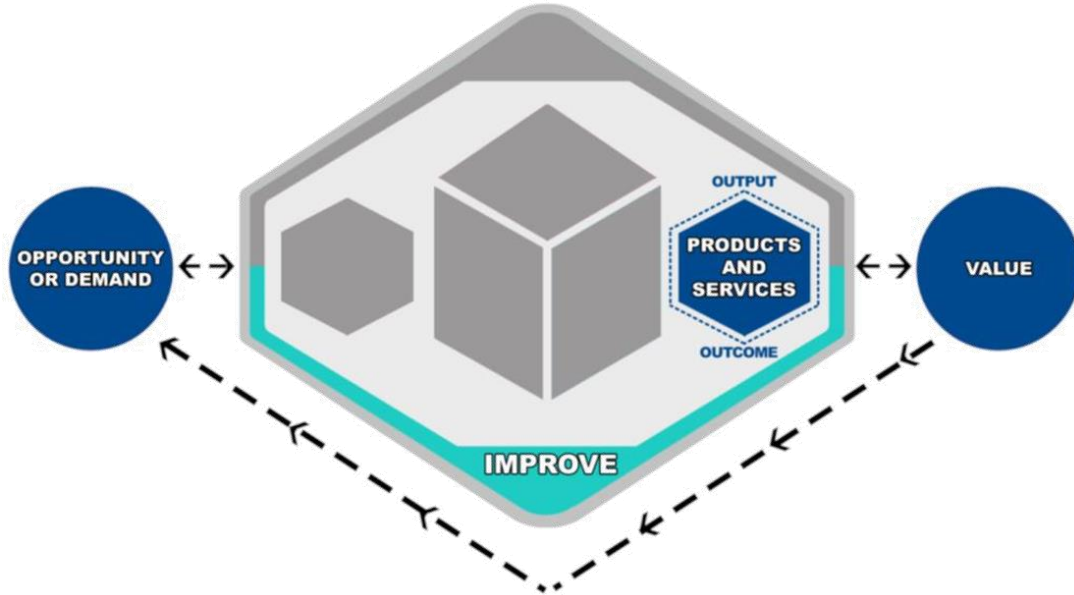
汉远网智的注释：响应变化 高于 遵循计划。但不代表可以没有计划。

汉远网智的注释：现状与方向。

- 政策性的要求，例如电子病历评级，安全等保。
- 行业监管的要求，例如社康的建设。
- 组织高层的要求。
- 信息化改进的方向，例如我院无纸化做的不够。

If they are not committed to agreed, shared objectives, their actions are likely to be fragmented and ineffective, and progress will be sporadic.如果他们不致力于商定的共同目标，他们的行动很可能是支离破碎和无效的，进展将是零星的。
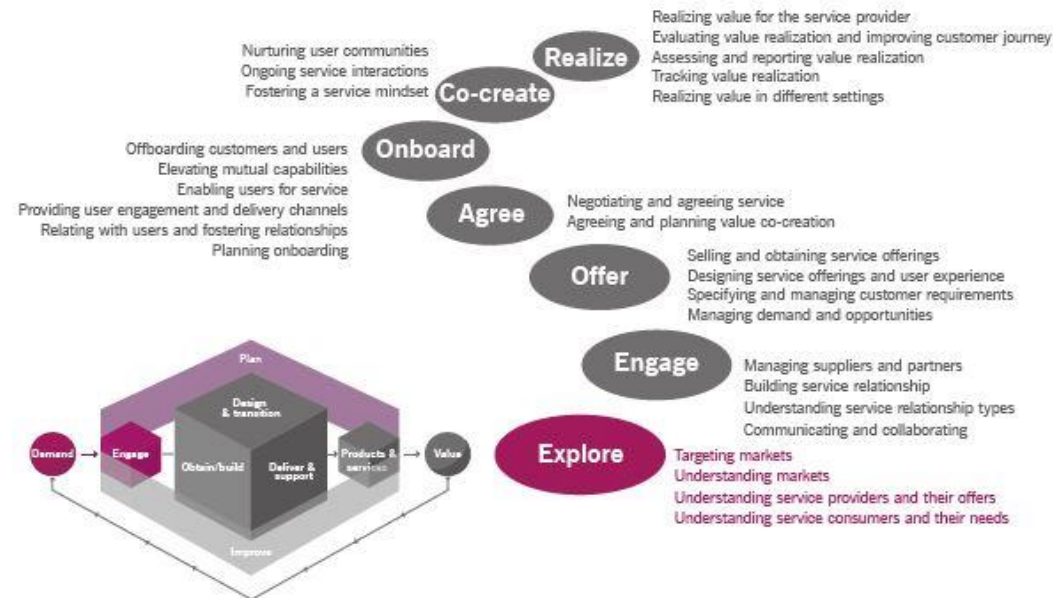
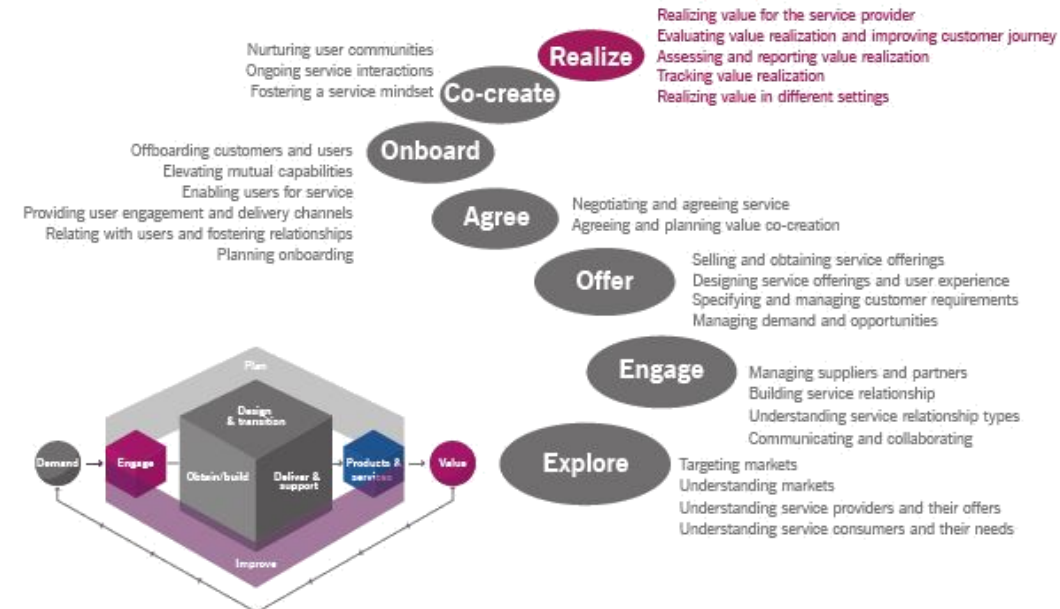# Input and Output of the **Improve** Activity

Key message

? 为什么需要
"持续改进"。

The purpose of the improve value chain activity is to ensure continual improvement of products, services, and practices across all value chain activities and the four dimensions of service management.

改进价值链活动的目的是确保在所有价值链活动和服务管理的四个层面对产品、服务和实践进行持续改进。

Through the improve activity, the service provider ensures that the lessons learned through operating the service value chain are transformed into improvement.通过改进活动，服务提供商可以确保通过运营服务价值链获得的**经验教训可以转化为改进**。

The purpose of this step is to **track**, **assess**, and **evaluate** whether the value that the stakeholders expected and planned for is realized throughout all steps of the journey and to continually identify improvements to the journey and the services. 此步骤的目的是跟踪，评估和评价利益相关者预期和计划的价值是否在整个旅程的所有步骤中实现，并不断确定对旅程和服务的改进。

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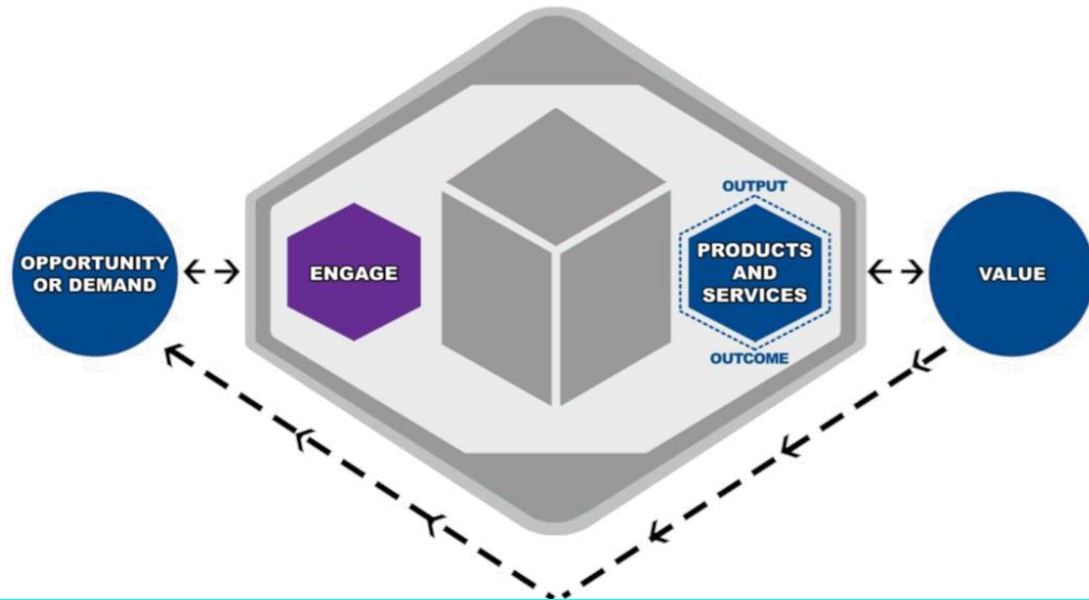
Key message

? 为什么需要〝持续互动〞。

The purpose of the engage value chain activity is to provide a **good understanding** of **stakeholder needs**, **transparency**, and **continual engagement** and **good relationships with all stakeholders**.

〝互动（Engage）〞价值链活动的目的是让人们很好地了解利益相关方的需求、透明度以及与所有利益相关方的持续互动和良好关系。

In most cases, it is not enough for a service to meet a stakeholder's actual need for outcomes. The stakeholder also needs to trust that the service provider will continue to provide a certain level of service and improve it over time. The parties must have a shared understanding of expectations, not only in terms of outcomes but also in experience and preferences. 在大多数情况下，服务不足以满足利益相关者对成果的实际需求。利益相关者还需要相信，服务提供者将继续提供一定水平的服务，并随着时间的推移不断改进各方必须对期望有共同的理解，不仅在成果方面，而且在体验和偏好方面。

A good service relationship fosters and reveals an understanding of each stakeholder's expectations of outcomes, experience, and preferences. Since prejudices and wrong assumptions are primary threats to the mutual endeavour for success, it is always a good idea to engage as early as possible in the journey in order to start clarifying and communicating mutual assumptions and expectations. 良好的服务关系促进并揭示了对每个利益相关者对成果、体验和偏好的期望的理解由于偏见和错误的假设是共同努力取得成功的主要威胁，因此尽早互动起来，以便开始澄清和交流共同的假设和期望，总是一个好主意。
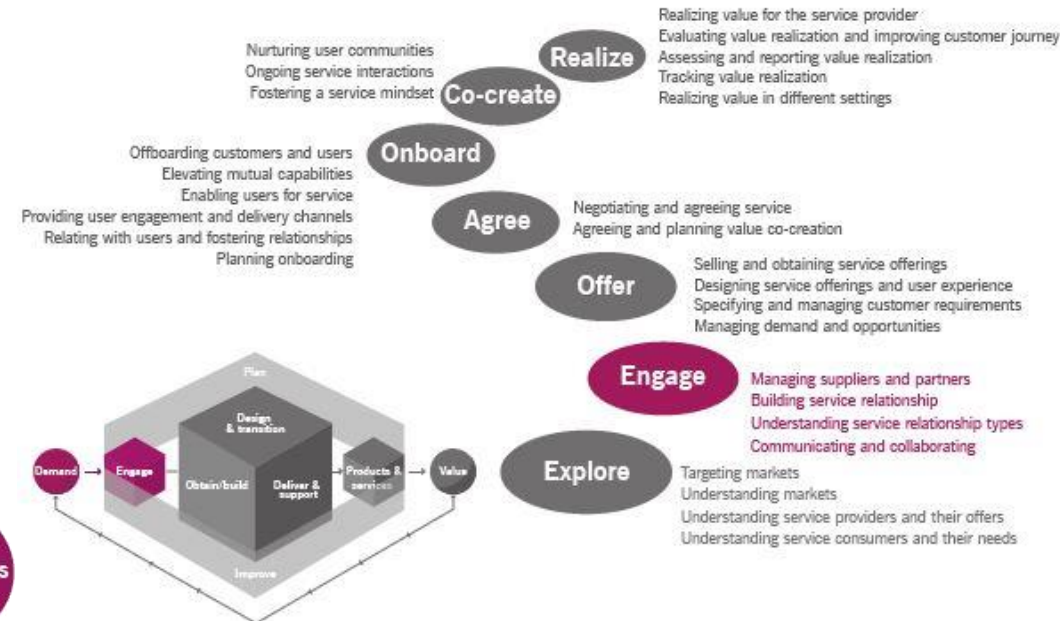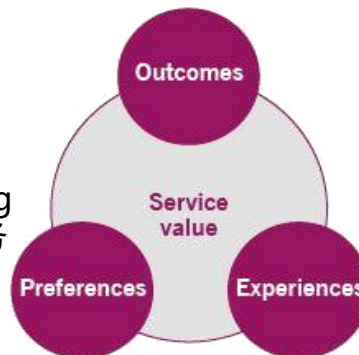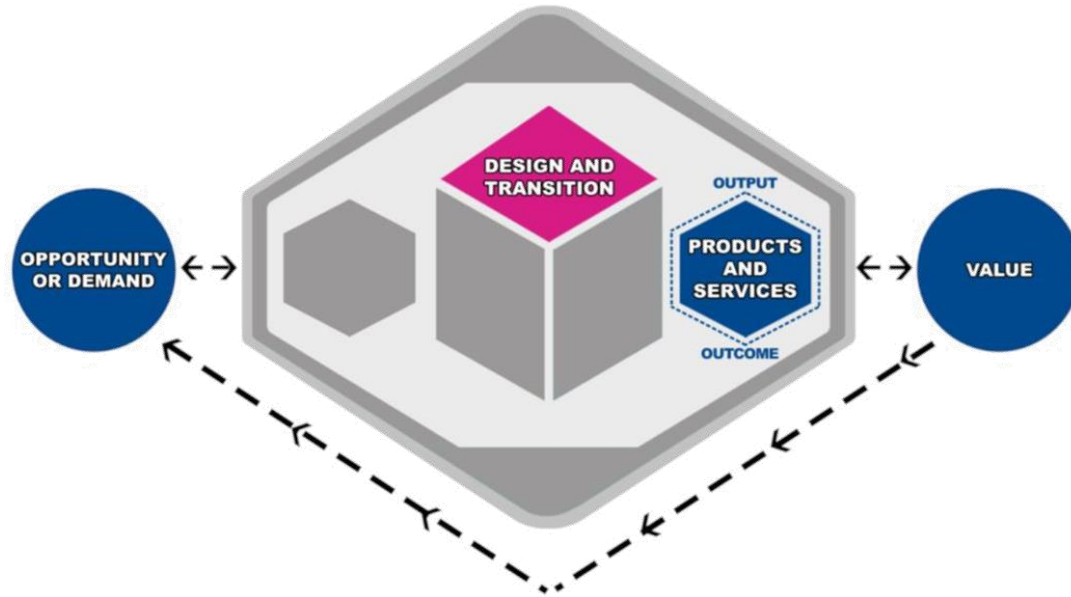
汉远网智 www.ITILmap.com

Key message

The purpose of the design and transition value chain activity is to ensure that products and services continually **meet stakeholder expectations** for **quality**, **costs**, and **time to market**.

"设计和转换"价值链活动的目的是确保产品和服务不断满足利益相关者对质量、成本和速度的期望。

Having obtained a closer service relationship, the customer and the service provider can further shape customer demand and service offerings. This step helps the customer to articulate its needs and demands and the service provider to design matching service offerings. 在获得更紧密的服务关系后，客户和服务提供商可以进一步塑造客户需求和服务提供。此步骤有助于客户阐明其需求和要求，并帮助服务提供商设计匹配的服务选项。
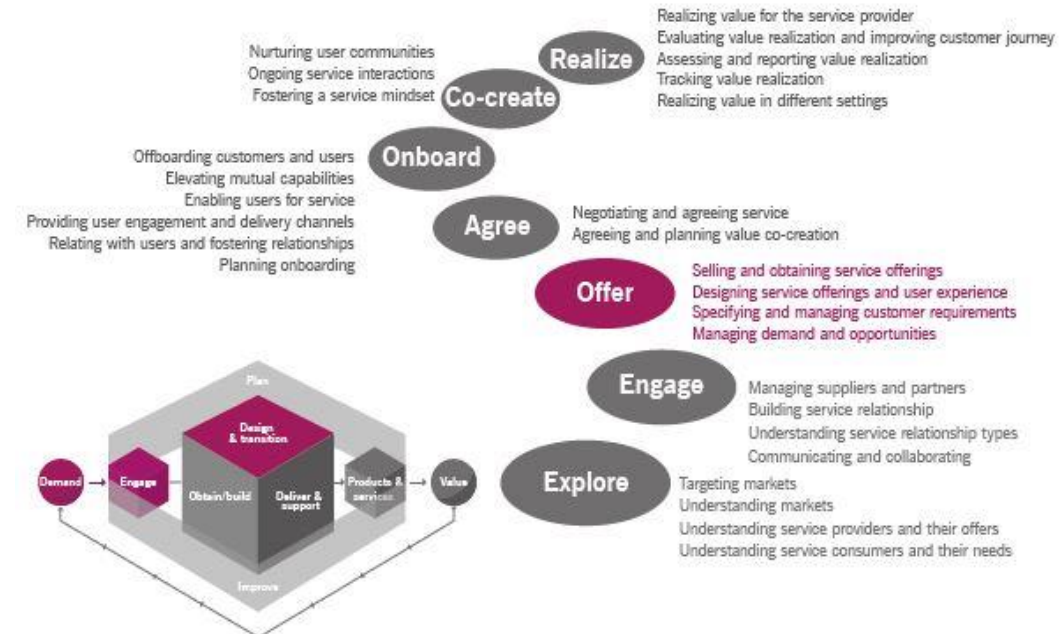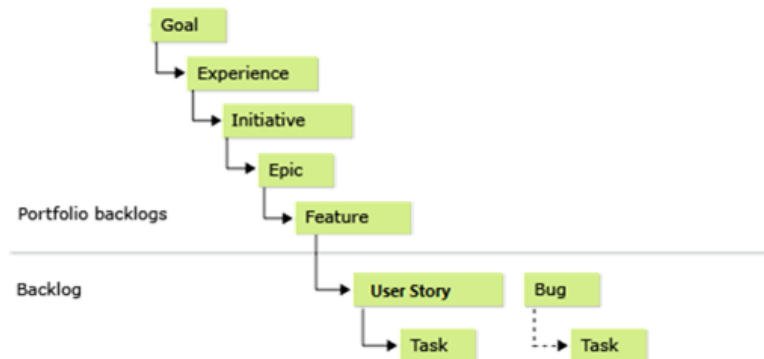
Input and Output of the **Obtain or Build** Activity

Key message

The purpose of the obtain/build value chain activity is to ensure that service components are available **when and where they are needed**, and **meet agreed specifications**.

"获取或构建" 价值链活动的目的是确保服务组件在需要时随时随地可用, 并符合商定的规范。

All new resources are obtained through obtain/build所有新的资源都是通过〝 获取或构件（Obtain/Build）〞 获得的

Example inputs	Example outputs
• **Architectures** and **policies** provided by 'plan' "计划"提供的体系结构和策略 • **Contracts** and **agreements** with external and internal suppliers and partners provided by 'engage' 由 "互动（Engage）"提供的与外部和内部供应商和合作伙伴的合同和协议 • **Goods** and **services provided** by external and internal suppliers and partners 外部和内部供应商和合作伙伴提供的货物和服务 • **Requirements** and **specifications** provided by 'design and transition' "设计和转换"提供的要求和规格 • Improvement **initiatives** and **plans** provided by 'improve' "改进"提供的改进举措和计划 • **Change requests** provided by 'deliver and support' 通过 "交付和支持"提供的变更请求	• Service **components** for 'deliver and support' 用于 "交付和支持" 的服务组件 • Service **components** for 'design and transition' 用于 "设计和转换" 的服务组件 • **Contract** and **agreement requirements** for 'engage' "互动（Engage）"的合同和协议要求

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Input and Output of the **Deliver and Support** Activity
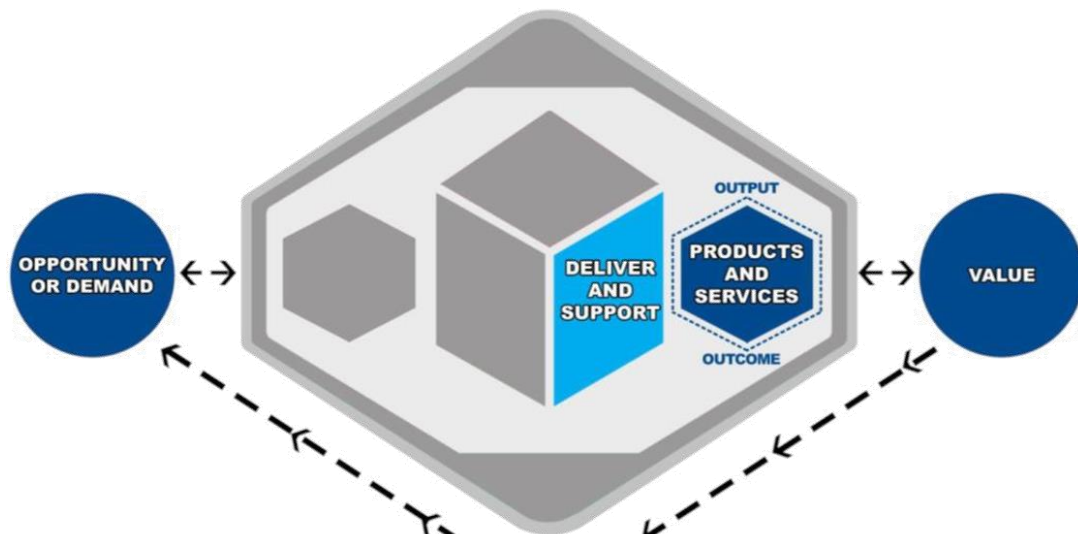
Key message

The purpose of the deliver and support value chain activity is to ensure that services are delivered and supported according to agreed **specifications** and **stakeholders' expectations**.

"交付和支持"价值链活动的目的是确保按照商定的规格和利益相关方的期望，提供和支持服务。

Service desk interactions

Customer and user feedback

When things go wrong

投诉 & 点赞

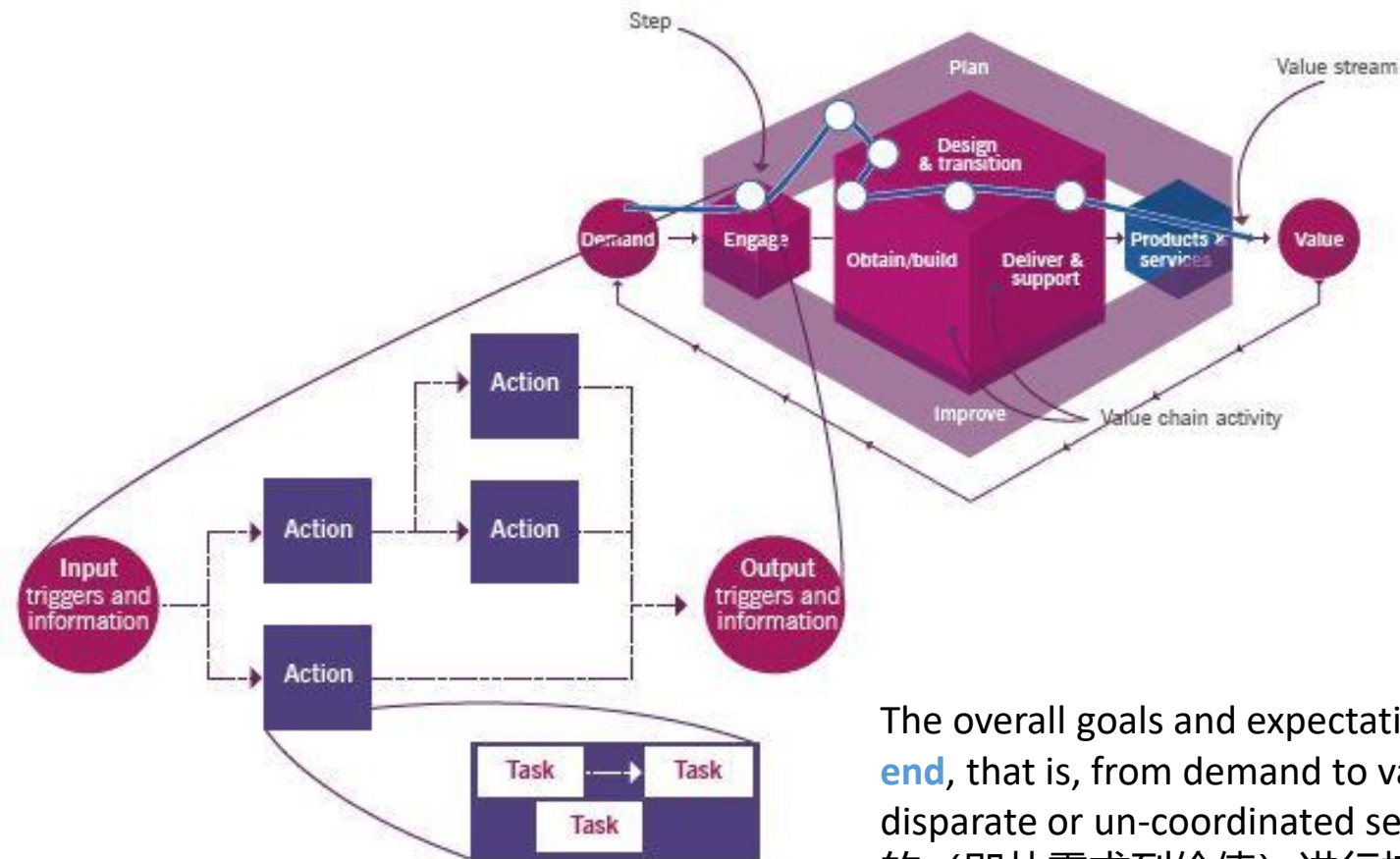👍 0 个   👎 0 个

占比 0%

Service request

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Definition: Value stream
A series of steps an organization undertakes to create and deliver products and services to consumers. 一个组织负责创建产品和服务并将其交付给消费者的一系列步骤。

The key **differences between value streams and processes** relate to their **focuses** and **how they are used**.价值流和流程之间的关键区别在于它们的焦点和使用方式。

- Many sets of interrelated activities that transform inputs into outputs could be considered processes. 可以将一组输入转化为输出的相互关联的活动视为过程。

- Value streams are focused around the flow of activity from demand or opportunity to customer value.价值流是集中于从需求或机会到客户价值的活动流。

The overall goals and expectations for a product or service should be described from **end-to-end**, that is, from demand to value, rather than simply describing the use of each team in a disparate or un-coordinated set of activities. 产品或服务的总体目标和期望应该是端到端的（即从需求到价值）进行描述，而不是简单地描述每一个单独团队在不同或不协调的一组活动中的使用情况。
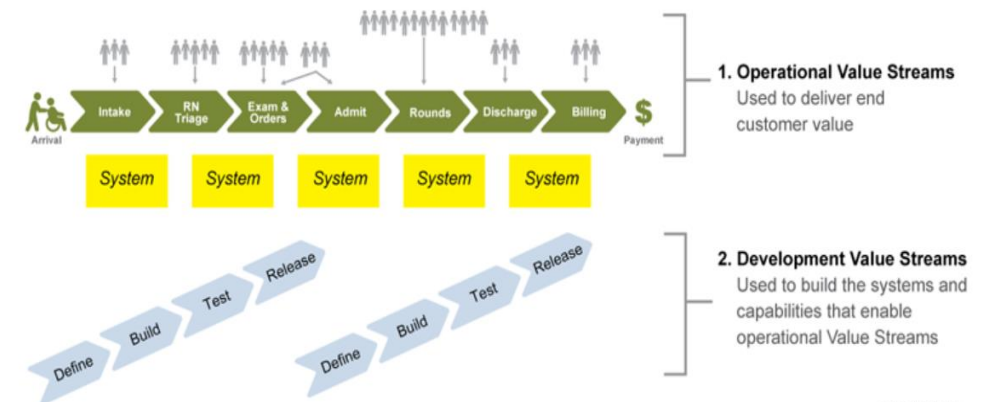
- **Development of a new service** Organizations often find it necessary to create, modify, or retire services. This value stream reflects the common patterns of work required to create a new service and so usually involves significant effort and coordination across the organization. 组织经常发现有必要创建、修改或停用服务。此价值流反映了创建新服务所需的通用工作模式。因此，这通常会涉及到整个组织中付出的大量努力和协调。

- **Restoration of a live service恢复运营中的服务** 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. 在现代化的，复杂的IT组织中，会有故障是意料之中的事，必须迅速处理。该价值流关注在检测和解决故障时预期的典型活动，以及如何利用这些活动来改进服务。

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Types of Value Streams：
Operational value streams – The steps used to provide goods or services to a customer, be they internal or external.
Development value streams – The steps used to develop new products, systems, or services capabilities.

1. **Operational Value Streams**
Used to deliver end customer value

2. **Development Value Streams**
Used to build the systems and capabilities that enable operational Value Streams
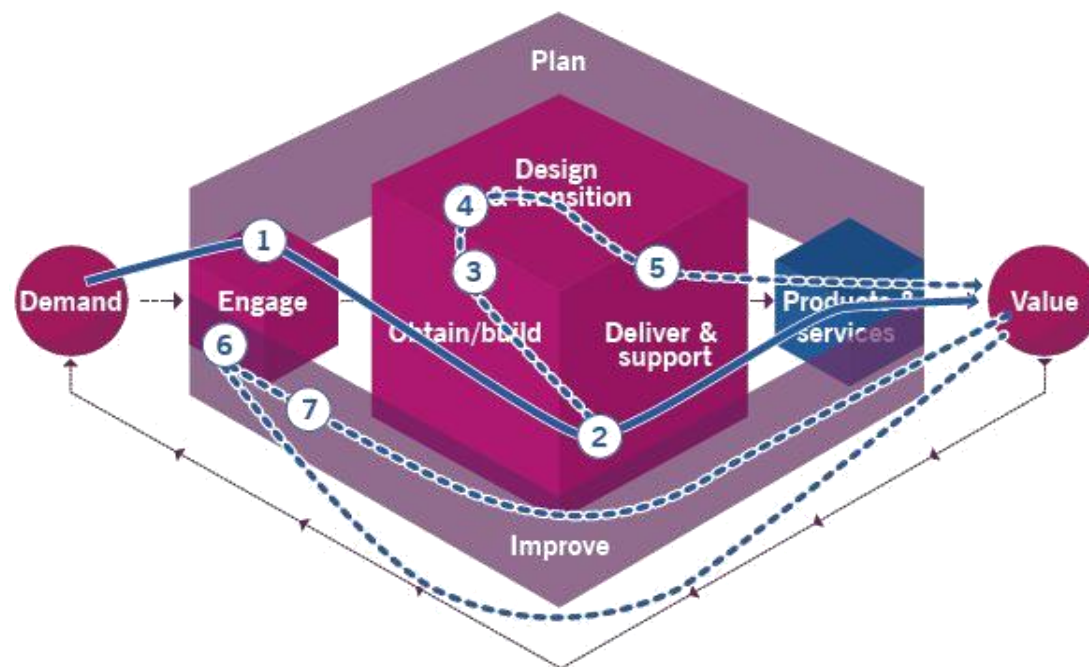
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概览：两类价值流

The journey from demand to value
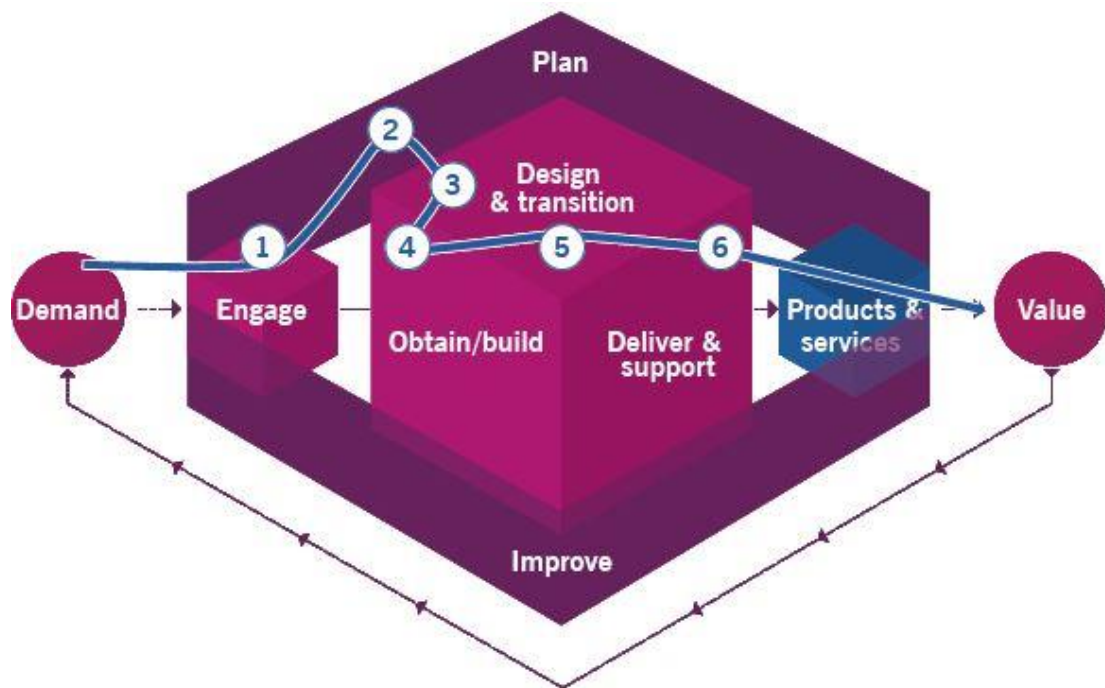
Upgrading or restoration of a live service

The journey from demand to value
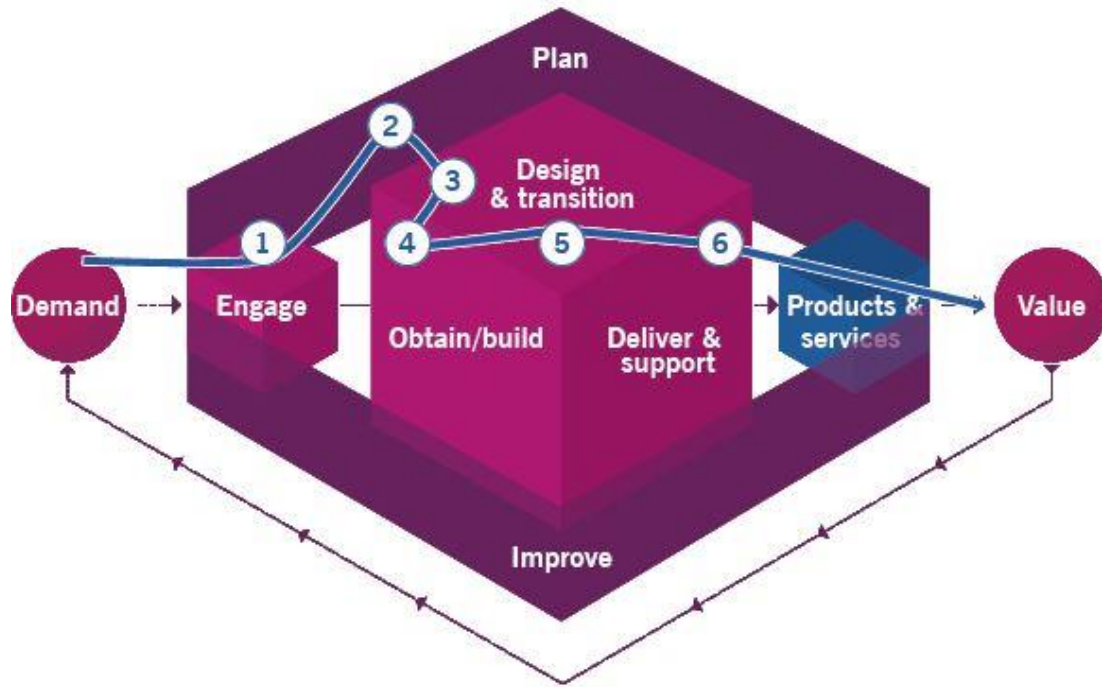
1. **Acknowledge** and **document** service the service **requirements** (engage) 确认并记录服务的需求（Engage）

2. **Decide** whether to invest in the new service (plan) 决定是否投资新服务（计划）

3. **Design** and **architect** the new service to meet customer requirements (design and transition) 设计和架构新服务，以满足客户需求（设计和转换）

4. **Build**, **configure**, or **buy** service components (obtain/build) 构建、配置或购买服务组件（获取/构建）

5. **Deploy** service components in preparation for launch (design and transition) 部署服务组件以准备发布（设计和转换）

6. **Release** new service to customers and users (deliver and support). 向客户和用户发布新服务（交付和支持）。对应NI的"发布与投产"。

Any request for a new product or service feature starts by acknowledging and documenting the demand. Generally, business case methods are used to collect and assess requirements. It is important to remember that the objective is to collect enough information to submit a business case. 对一个新产品（或者叫新系统）或服务功能（或者叫子系统或功能）的任何请求都是从确认和记录需求开始的。通常，业务案例方法用于收集和评估需求重要的是要记住，目标是收集足够的信息来提交一个商业案例。

Successful completion of this step requires the organization to **engage** with the requester and other stakeholders (e.g. marketing and sample users), using surveys and polls to complete the business case template with high-level information about the requirement, **benefits** (both quantitative and qualitative), **costs**, and **risks**. 成功完成此步骤需要组织与请求者和其他利益相关者（如市场营销和样本用户）展开互动，使用调查和投票来完成包含**需求**、**收益**（定量和定性）、**成本**和**风险**的高级信息的业务案例模板。

汉远网智的注释：初始需求的管理重点是，根据需求的时长，成本，性质，界定该需求是走向"主题"的评估，还是走向Story的一般化软件需求。关心的信息是：
- 是否跨业务；
- 时长；
- 成本；
- 性质；

The MoSCoW method is a simple prioritization technique for managing requirements. It allows stakeholders to explicitly agree on the different priorities. 莫斯科方法是管理需求的一种简单的优先级技术。它允许利益相关者明确商定不同的优先事项。

The MoSCoW acronym stands for:

· Must **必须** The mandatory requirement covering the most important needs. 涵盖最重要需求的强制性要求。

· Should **应该** The requirements that should be included if possible. 如果可能，则应该具有的功能（需求）。

· Could **尽量（可能）** The requirements that could be included if they do not affect the 'should' or 'must' requirements. 如果不影响'必须'和'应该'的需求，是否**可能**实现这些需求。

· Won't **未来**Requirements that will not be included this time but may be included in a future release.本次不包含但可能包含在未来版本中的需求。
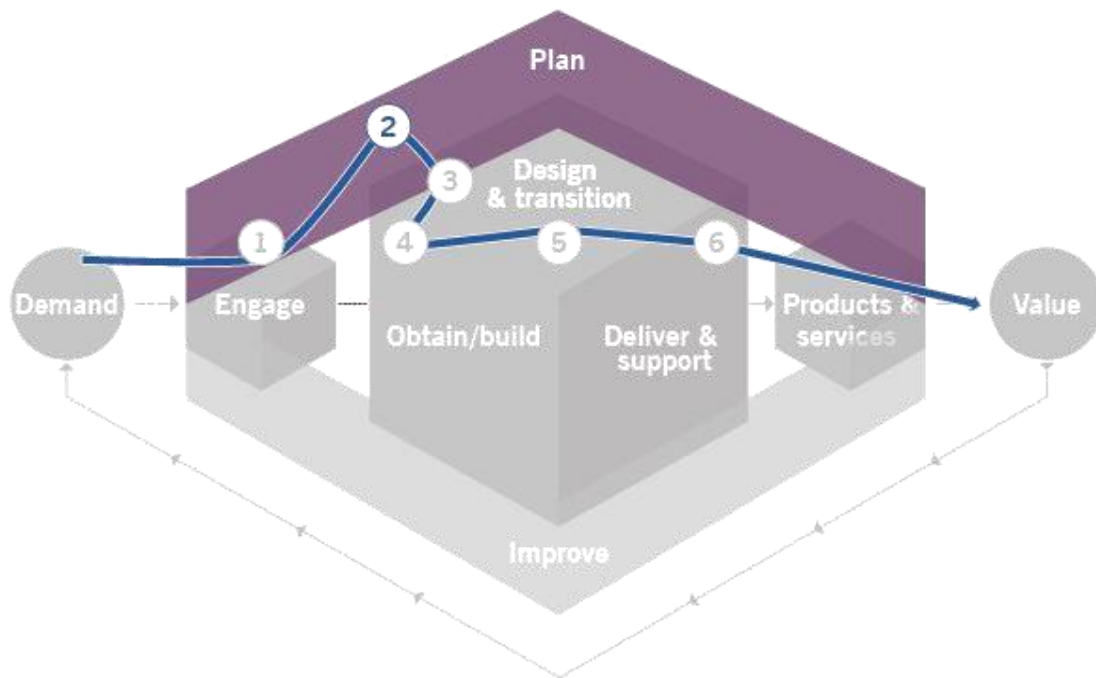
The purpose of a business case is to establish a foundation for **informed decision-making**, **but it is based on assumptions**.
"决定"是基于前期在"互动（Engage）"收集的信息。

When the request has been refined and documented in the business case, it might be necessary to clarify the initial **cost**, **benefit**, and **risk** assessments so that the organization can plan the work. This would require more detailed discussions with various internal teams, and possibly ongoing conversations with customers and other external stakeholders. When completed, the business case can be considered by the management team, who will then decide whether to grant approval. 当请求已在业务案例中得到完善和记录时，可能需要澄清初始成本、收益和风险评估，以便组织能够规划工作这将需要与不同的内部团队进行更详细的讨论，可能还需要与客户和其他外部利益相关者进行持续的对话完成后，管理团队可以考虑业务案例，然后由管理团队决定是否批准。

Definition: Business case
A justification for expenditure of organizational resources, providing information about costs, benefits, options, risks, and issues. 组织资源支出的理由，提供有关成本、效益、选项、风险和问题的信息。

汉远网智的注释："主题管理"的管理重点是，根据价值有多大，风险有多高，成本是多少论证这个事的可行性，决定做不做。关心的信息是：

• 价值及Outcome；
• 风险及对策；
• 成本；
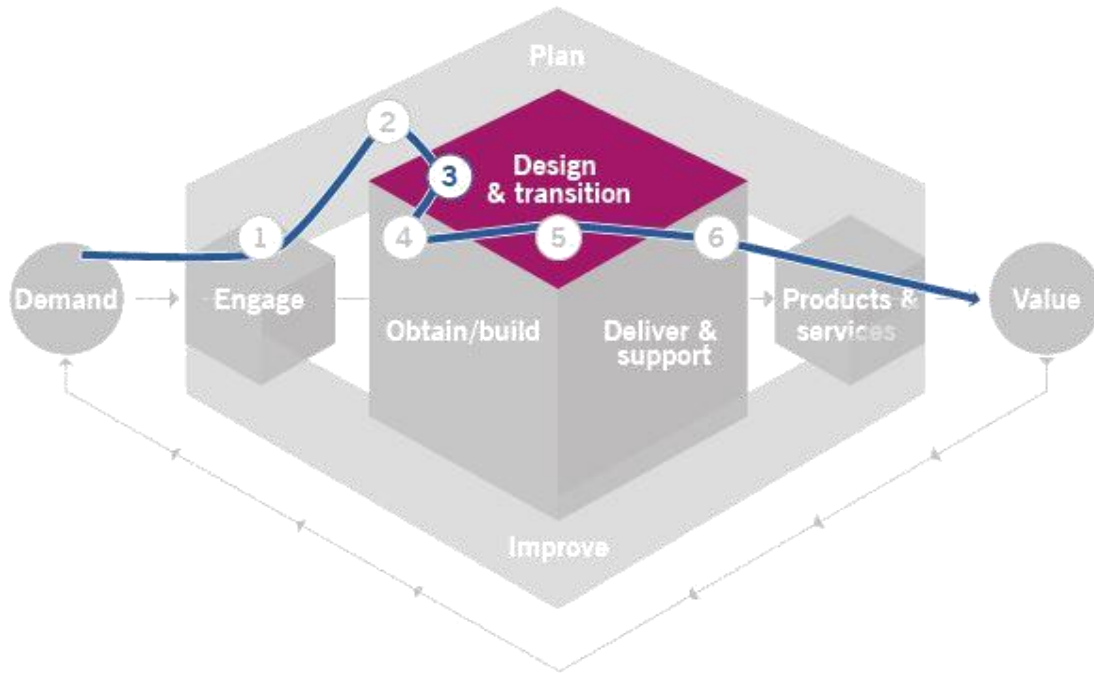
- **other products** and services其他产品和服务
- all relevant parties, including customers and suppliers所有相关方, 包括客户和供应商
- the existing **architectures**现有的体系结构
- the required **technology**所需的技术
- the service **management practices**服务管理实践
- the necessary measurements and **metrics**. 必要的测量和指标。

Requirement specification should occur within the band of visibility. Ideally, the customer should involve the service provider in an open and transparent requirement specification process. If requirements are sealed too early in the process, the service provider may be unable to shape the best possible service and meet the service consumer needs. 需求规范应该出现在可见性范围内。理想情况下，客户应该让服务提供者参与到一个公开透明的需求规范过程中。如果在此过程中过早地封闭了需求，则服务提供者可能无法形成尽可能最佳的服务并满足服务使用者的需求。
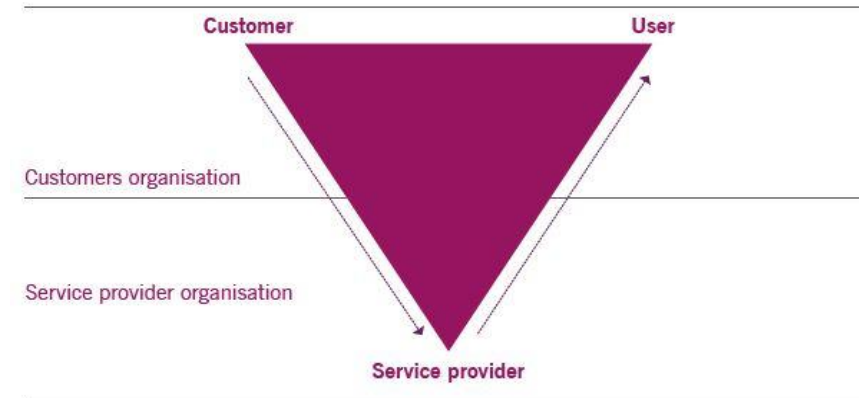
扩展阅读：Epic-Feature-Story
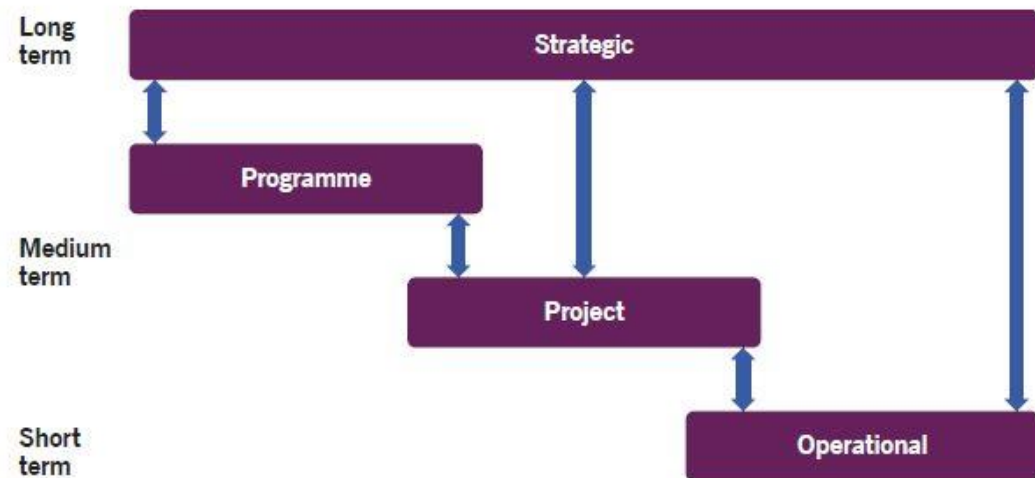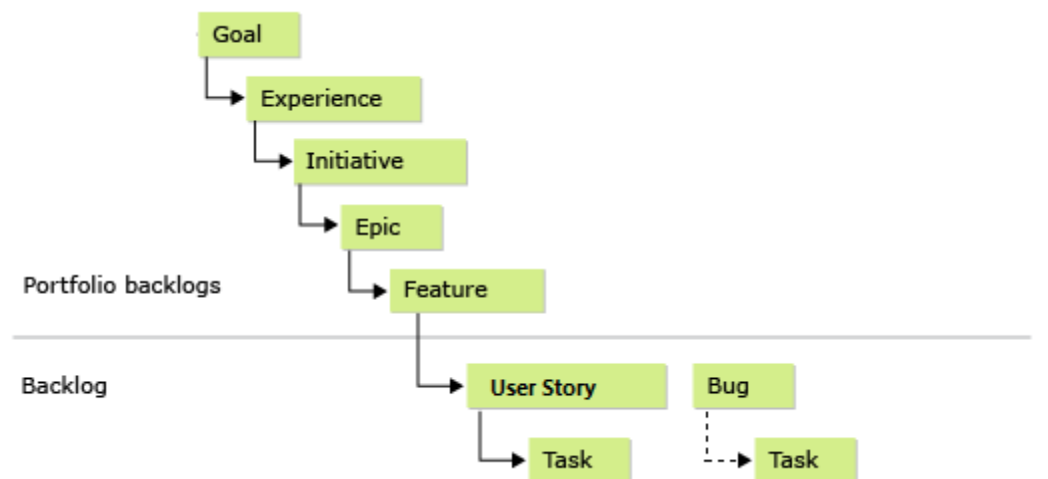
Story mapping is done differently in diverse environments. A common way to map the requirements for a product or service is to describe the product or service as an epic, and then break the epic down into features and further down into user stories. 在不同的环境中，故事映射是不同的映射产品或服务需求的一种常见方法是将产品或服务描述为EPIC，然后将EPIC分解为功能并进一步分解为用户故事。
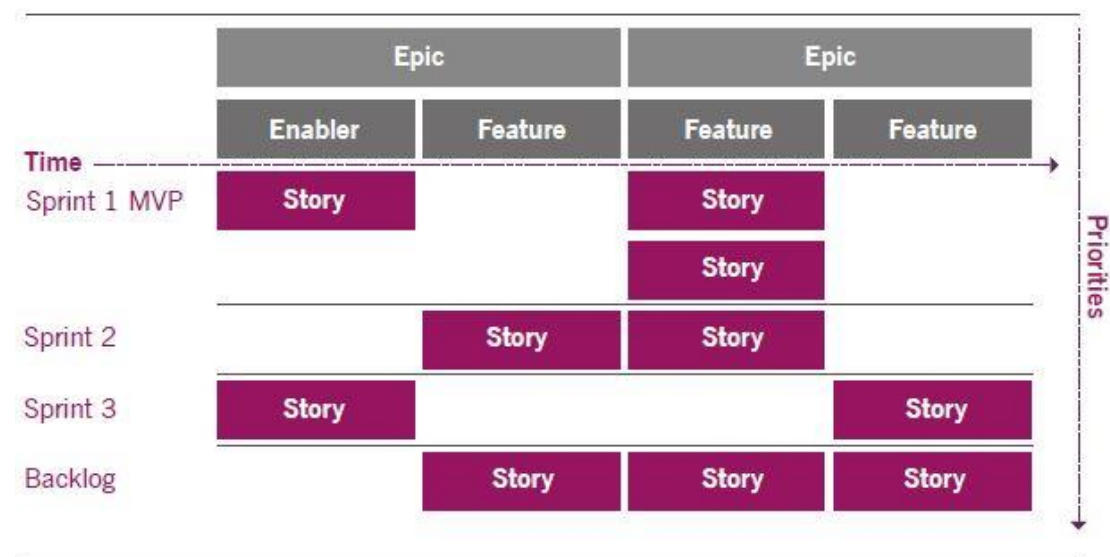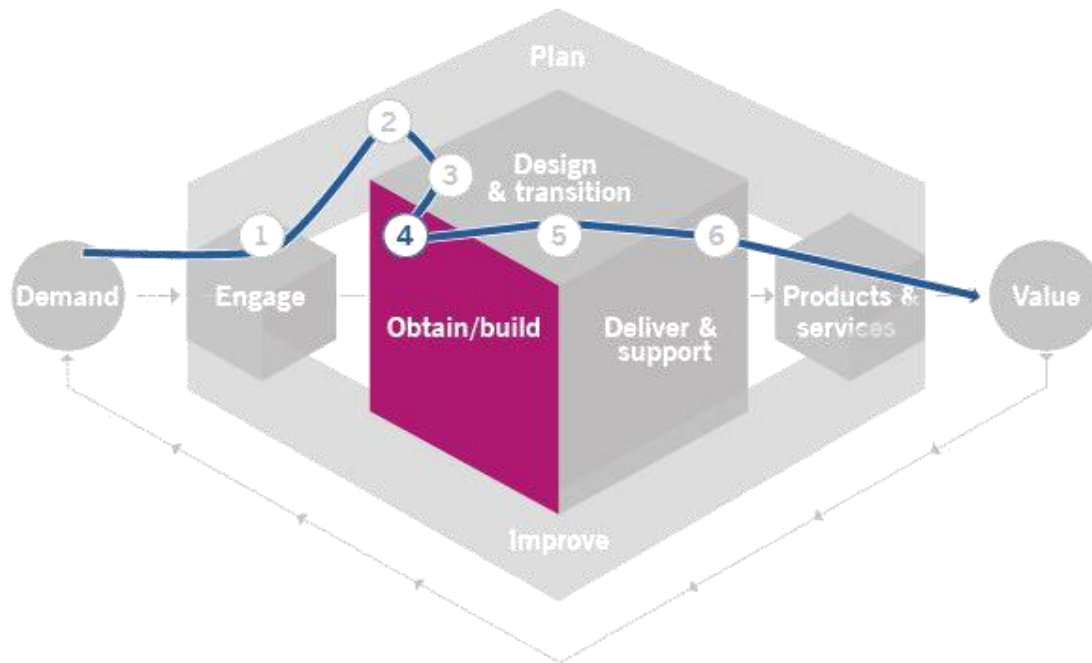
Project management Provides cross-team coordination of activities, issue and risk tracking, and regular status updates to the project board. 向项目委员会提供跨团队活动协调、问题和风险跟踪以及定期状态更新。

- the updating and communication of training documents for customer support agents and provision of simple scripts to help customers更新和交流客户支持代理的培训文件，并提供简单的脚本来帮助客户
- the updating and communication of release notes that can be used to promote the new service更新和交流可用于推广新服务的发布说明

Plan the release of the service When most of the development and configuration work is complete, it is possible to finalize the release plans. Depending on the context and need, it may be more effective to add another step to the value stream (i.e. returning to the plan value chain activity), where the outputs are the release plans. 当大多数开发和配置工作完成时，就有可能最终确定发布计划根据背景和需求，向价值流添加另一个步骤（即返回到计划价值链活动）可能更有效，其中输出是发布计划。

- **Project management** Provides cross-team coordination of activities, issue and risk tracking, and regular status updates to the project board. 向项目委员会提供跨团队活动协调、问题和风险跟踪以及定期状态更新。
- **Release management** Provides the skills, tools, and other resources needed to finalize the release (launch) plan, working with other groups in the organization (e.g. sales and marketing departments) to communicate these plans to users and customers. 提供完成发布（发布）计划所需的技能、工具和其他资源，与组织中的其他团队（如销售和市场营销部门）合作，将这些计划传达给用户和客户。

- **Service desk** Ensures that all customer-facing support roles are adequately trained in the new features, known defects, and workarounds. 确保所有面向客户的支持角色在新功能、已知缺陷和解决方案方面得到了充分的培训。

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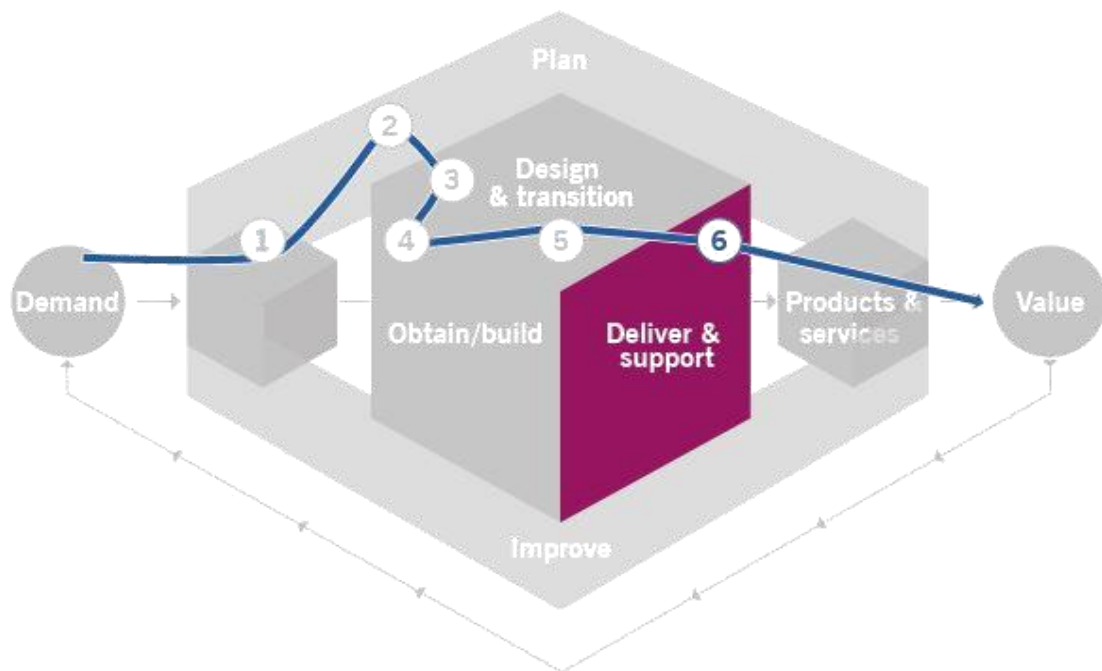
When the service components have been released, customers and users can interact with them through the service relationship, thus generating the required outcomes and co-creating value. 当服务组件发布后，客户和用户可以通过服务关系与它们交互，从而产生所需的结果并共同创造价值。

- 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. 与请求者合作，以确定新服务中的任何差距，或在价值流活动期间未确定的任何结果、成本和风险。
- identifying opportunities to improve the service, value stream, and contributing practices. 确定改进服务、价值流和贡献实践的机会。

汉远网智的注释：项目也许结束了，但是客户和用户使用你的产品，你和他的关系才刚刚开始。
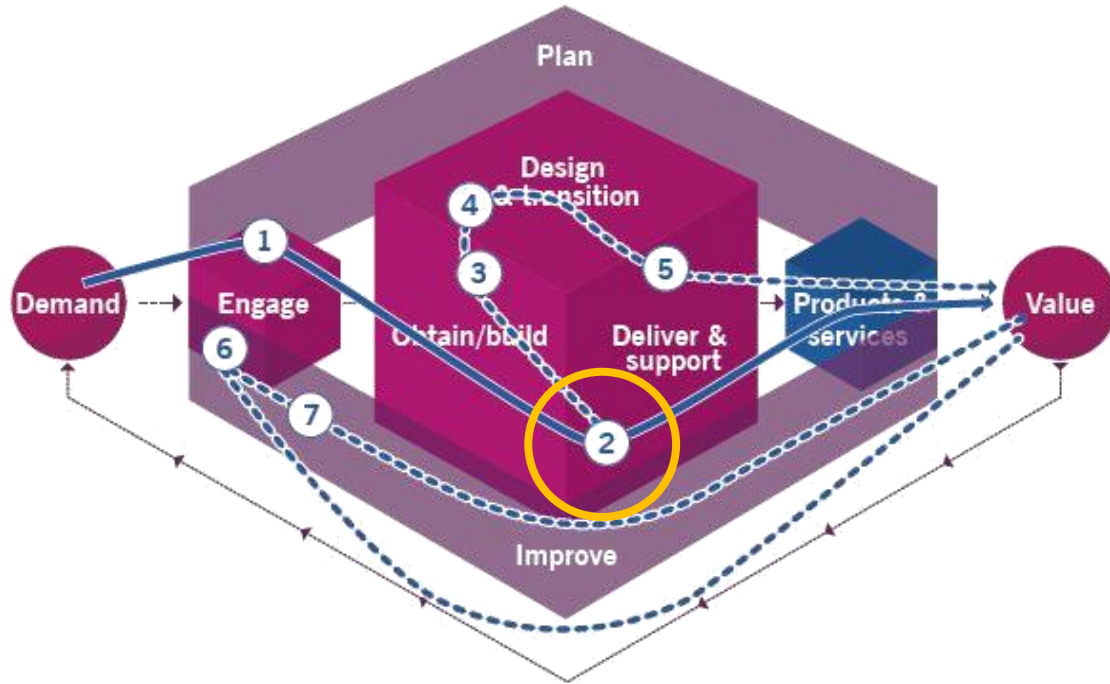
This value stream is triggered by a user who is unable to use a live product or service.此价值流由无法使用活动产品或服务的用户触发。

1. **Acknowledge** and **register** the user query (engage) 确认并记录用户的询问（Engage）

2. **Investigate** the query, **reclassify** it as an incident, and attempt to **fix** it (deliver and support) 调查，将其重新分类为故障，并尝试修复该故障（交付和支持）

3. Obtain a fix from the **specialist team** (obtain/build) 从专业团队获得修复

4. Deploy the **fix** (design and transition) 部署修复

5. **Verify** that the incident has been resolved (deliver and support) 确认故障得到解决（交付和支持）

6. Request **feedback** from the user (engage) 请求用户反馈（Engage）

7. Identify **opportunities** to improve the overall system (improve). 确定持续改进机会（改进）

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? 为什么需要服务台
这个单一联系点

Practices that commonly contribute to this step include:

- **Service catalogue management** Provides the information, skills, tools, and other resources needed to optimize the registration of the query. 提供优化查询注册所需的信息，技能，工具和其他资源。
- **Service desk** Provides the skills, tools, and other resources needed to allow the customer or user to contact service support, enable customer support agents to empathize and manage communications with the customer or user, and retrieve and communicate information about expected resolution time. 提供所需的技能、工具和其他资源，以允许客户或用户联系服务支持，使客户支持代理能够同情和管理与客户或用户的通信，并检索和交流有关预期解决时间的信息。

汉远网智的注释：**ITIL不等于流程**。硬性的流程，可以对闭环机制，以及风险的管控起到固化的作用。但是，硬性的流程无法替代日常工作中大量的〝互动〞。

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When a user-initiated incident is registered, an attempt to quickly identify its nature and apply a known solution is usually made. 当用户发起的故障后，通常会尝试快速识别其性质并应用已知的解决方案。
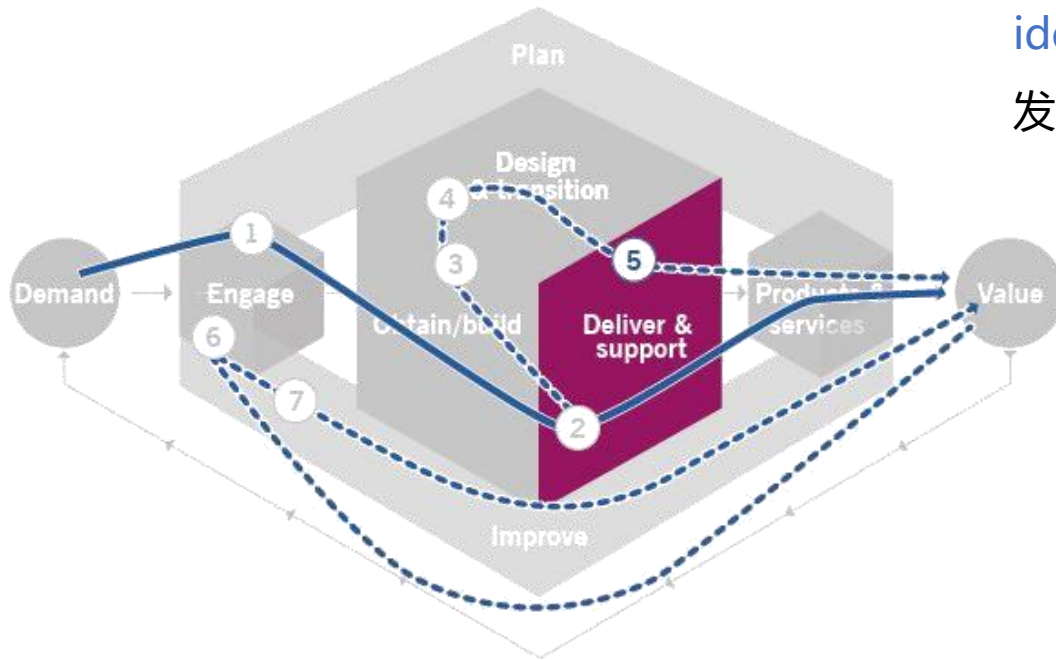
- **Knowledge management** Provides the skills, tools, and other resources needed to find technical information and workarounds that can help in the investigation, diagnosis, and fixing of the incident. 提供查找技术信息和变通办法所需的技能，工具和其他资源，以帮助调查，诊断和解决事件。
- **Monitoring and event management** Provides access to monitoring tools and logs to assist in the investigation and diagnosis of the incident. 提供对监视工具和日志的访问，以帮助调查和诊断事件。

In this step, the incident is escalated to, or referred to, a specialist team because initial attempts to restore the service were unsuccessful. 在此步骤中，由于最初尝试恢复服务失败，因此该故障将升级为专家团队，或转介给专家团队。

- The support agent raises an incident with a vendor. **This does not pass** control of the user's incident, but instead creates a parallel incident ticket managed by the vendor. 支持服务台人员与供应商提交的故障。这不会把用户故障的控制权传递给供应商，而是创建由供应商管理的并行（平行）的故障票证。

- The support agent escalates the incident to an internal engineering team. **This passes** control of the incident to the engineering team. 支持人员将故障上报给内部工程团队。这会将事件的控制权交给工程团队。

- The support agent asks an **outsourced engineering team** to provide a fix. This may or may not involve passing control of the incident to the engineering team. 支持代理要求外包的工程团队提供修复程序。 这**可能会或可能不会**涉及将故障的控制权交给工程团队。

? 是否应将〝故障单〞
直接转给〝服务商〞？
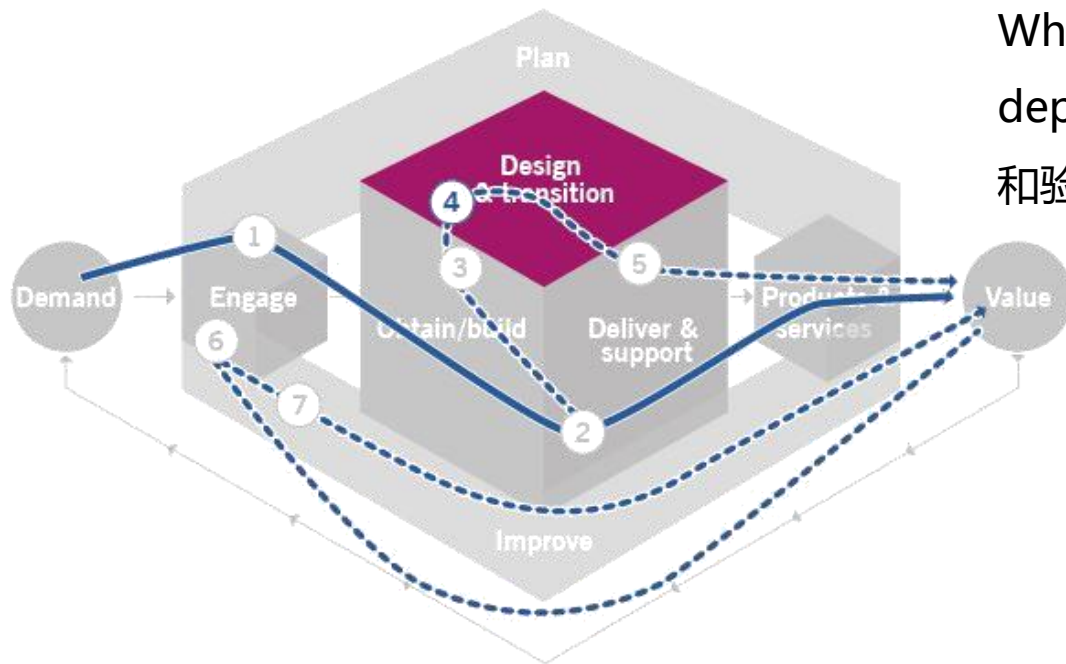
When the fix has been obtained, tested, and validated, it can be deployed to the user or to a production environment. 获得，测试和验证了修订后，可以将其部署到用户或生产环境。

- delivering a hardware component (e.g. a new hard disk) to a data centre, where it is subsequently provisioned将硬件组件（例如新硬盘）交付到数据中心，随后在该中心进行配置
- remotely logging on to the user's PC to install a patch from a network drive. 远程登录用户的PC，以从网络驱动器安装补丁。
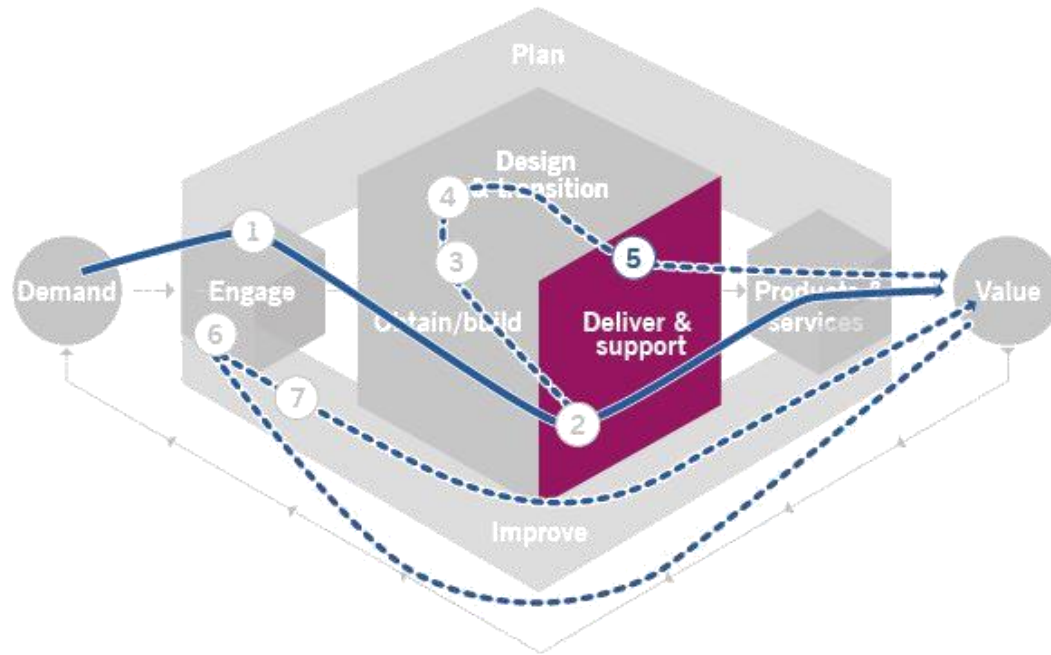
When the fix has been deployed, the next step is to verify that the incident has been resolved. 部署此修复程序后，下一步是验证故障是否已解决。
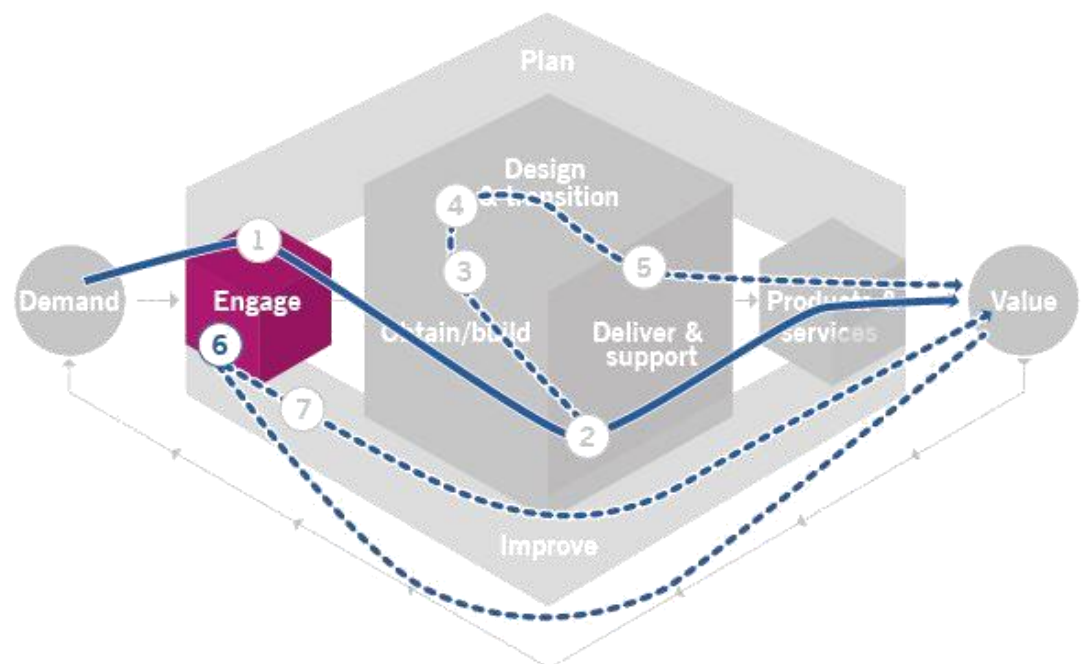
Many organizations ask for feedback from users after incidents have been resolved in order to identify opportunities to improve the service, the way they communicate with the users, the procedures used to fix the incident, or the key practices. 许多组织在故障解决后要求用户提供反馈，以确定改进服务的机会、他们与用户的通信方式、用于修复故障的过程或关键实践。
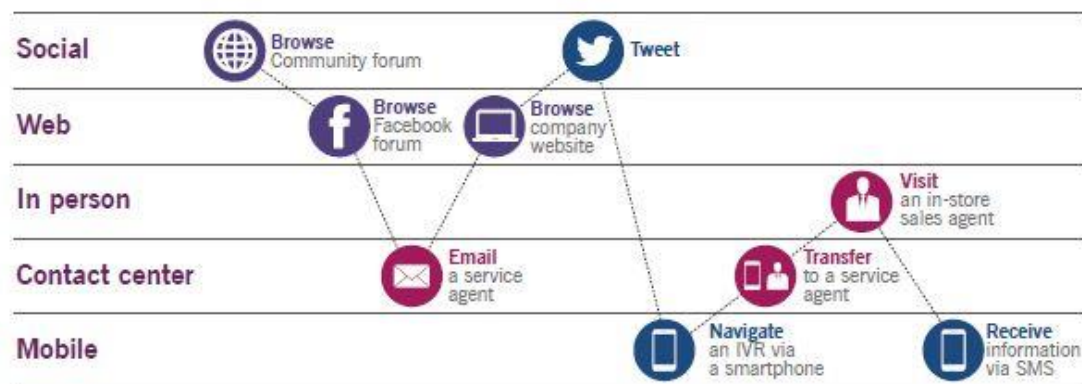
Customer and user feedback
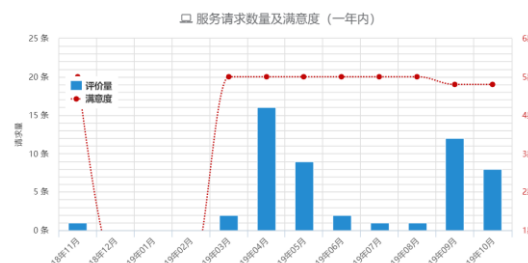
When things go wrong

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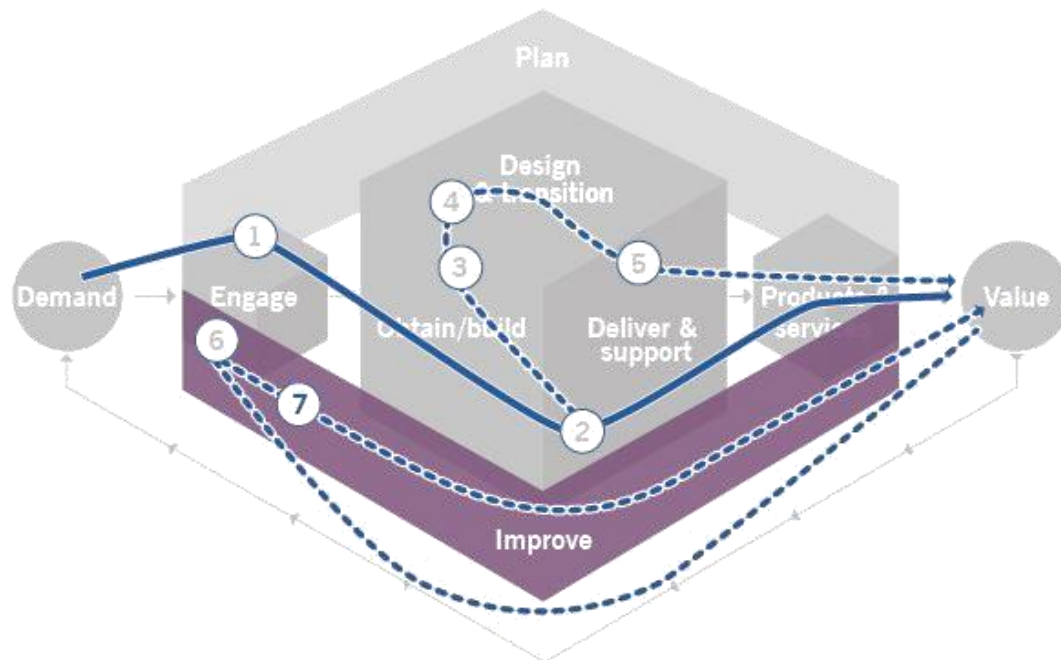
Any improvements identified should be logged in the service provider's continual improvement register, thus creating value for both the service provider organization and the provider's SVS. When logged in the register, improvement opportunities can be prioritized against other work in the SVS. 任何确定的改进都应记录在服务提供商的持续改进登记簿中，从而为服务提供商组织和提供商的SVS创造价值。当记录到注册表中时，改进机会可以优先于SVS中的其他工作。

? 为什么需要〝问题管理〞

The key differences between value streams and processes relate to their focuses and how they are used. Many sets of interrelated activities that transform inputs into outputs could be considered processes.**价值流和流程之间的关键区别在于它们的焦点和使用方式。可以将许多输入转化为输出的相互关联的活动视为过程。**

Cascading value streams to lower-level value streams and/or processes allows organizations to: 将价值流级联到较低级别的价值流和/或流程，使组织能够：

- **focus on value for the higher-level value stream, combining value streams and processes of participating parties将价值流和参与方的流程结合起来，关注于更高层次的价值流的价值。**

- 通过〝价值流〞使得岗位之间的协作更加面向交付成果，**并推动持续改进**。

- **collaborate and promote visibility into how work flows across the organizations and teams协作并提高在组织和团队中，工作流程的可见性 我的理解是："价值流"形成了一处输入，全程共享的〝数据流〞，并进一步提高可视化能力，促进端到端的全程协作，提高追溯和跟踪的能力；**

- **think and work holistically by understanding how the wider organization or ecosystem works and benefits from work being done by the participating parties通过了解更广泛的组织或生态系统如何工作以及从参与方所做的工作中受益，而进行整体思考和工作。我的理解是：〝价值流〞将紧密相关的流程进行无缝衔接，使岗位之间形成跨流程的〝端到端协作〞面向价值交付，面向持续改进为最终成果。以此，促进整体的思考和协作；**

目录

Network Intelligence
ChinaNetwork Corporation

ITIL 4 Guiding principle
Service value system overview

Network Intelligence
ChinaNetwork Corporation

For service management to function properly, it needs to work as a system.服务管理要正常运行, 就需要作为一个体系来运作。
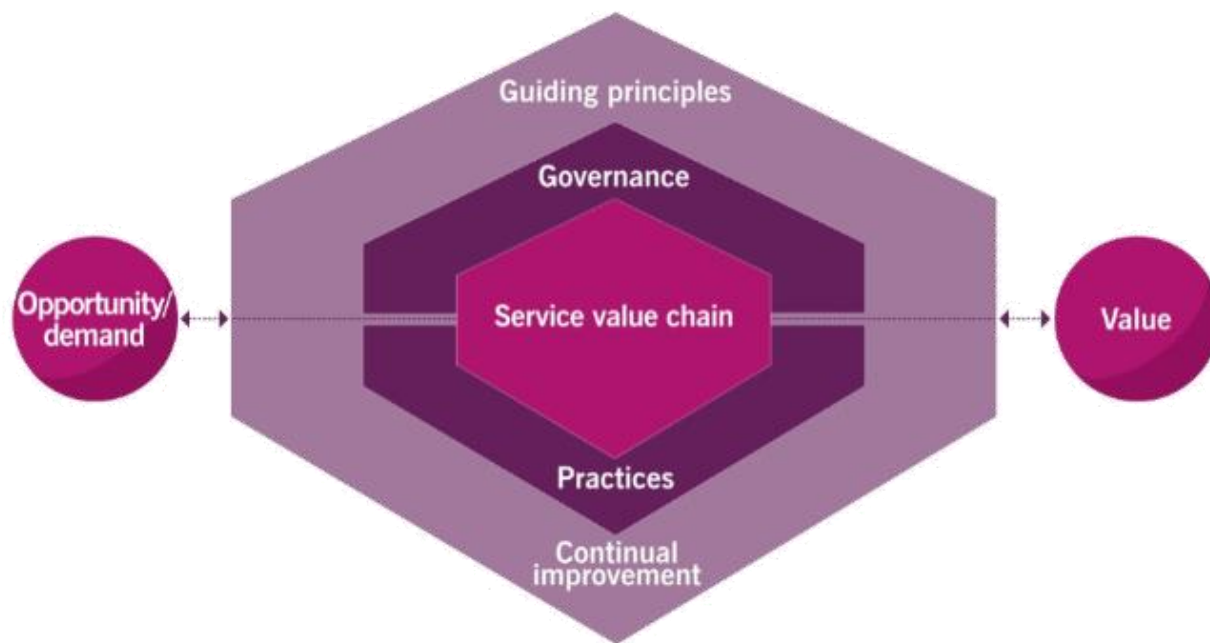
The ITIL SVS describes the inputs to this system (**opportunity and demand**), the elements of this system (**organizational governance**, **service management**, **continual improvement**, and the **organization's capabilities** and **resources**), and the outputs (**achievement of organizational objectives** and **value for the organization**, its customers, and other stakeholders). ITIL SVS描述了对该系统的投入 (机会和需求)、该系统的要素 (组织治理、服务管理、持续改进以及组织的能力和资源) 以及产出 (实现组织的目标和价值)。

The key inputs to the SVS are **opportunity** and **demand**. Opportunities represent options or possibilities to add value for stakeholders or otherwise improve the organization. Demand is the need or desire for products and services among internal and external consumers.

SVS 的关键输入是"机会"和"需求"。"机会"表现为利益相关方可能的增值或者以其他方式改进组织的选择。"需求"是内部和外部消费者对产品和服务的需求或愿望。
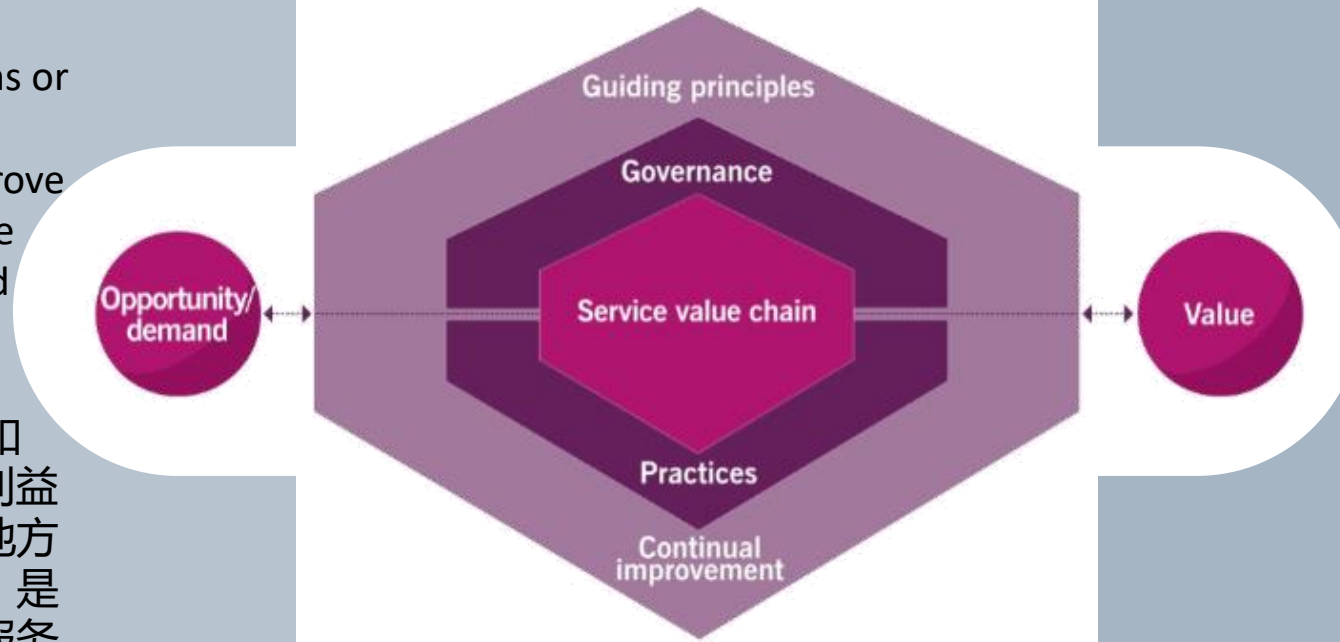
The **outcome** of the SVS is **value**, that is, the **perceived benefits**, **usefulness**, and **importance** of something. The ITIL SVS can enable the creation of many different types of value for a wide group of stakeholders. SVS 的"成果"是价值, 即感知的好处、有用性和事物的重要性。ITIL SVS可以为广泛的利益干系人群体创建许多不同类型的价值。

Guiding principles

Governance

Service value chain

Practices

Continual improvement

Opportunity/ demand

Value

Service value system overview

Guiding principle

Key message：A guiding principle is a recommendation that guides an organization in all circumstances, regardless of changes in its goals, strategies, type of work, or management structure. A guiding principle is universal and enduring. 指导原则是在任何情况下指导组织的建议, 而不论其目标、战略、工作类型或管理结构的变化如何。指导原则是普遍和持久的。

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Focus on value	• **Who** is the service consumer?
	• The consumer's **perspectives** of value
	• The customer **experience**
Start where you are	• **Assess** where you are
	• The role of **measurement**
Progress iteratively with feedback	• The role of **feedback**
	• **Iteration** and **feedback** together
Collaborate and promote visibility	• **Whom** to collaborate with
	• **Communication** for improvement
	• Increasing urgency through **visibility**

Think and work holistically

Keep it simple and practical	• Judging what to **keep**
	• **Conflicting** objectives
Optimize and automate	• The **road** to optimization
	• Using **automation**

All activities conducted by the organization should link back, directly or indirectly, to value for itself, its customers, and other stakeholders. 组织开展的所有活动都应直接或间接地联系起来, 为自己、客户和其他利益相关方提供价值。

The focus on value principle encompasses many perspectives, including the experience of customers and users. 对价值原则的关注包括许多视角, 包括客户和用户的体验。
- **Who** is the service consumer?
- **The consumer's perspectives of value**
- **The customer experience**

When focusing on value, **the first step is to know who is being served.** 在关注价值时, 第一步是知道谁是服务的消费者。

customer experience (CX) or user experience (UX)

In the process of eliminating old, unsuccessful methods or services and creating something better, there can be great temptation to remove what has been done in the past and build something completely new. This is rarely necessary, or a wise decision. This approach can be extremely wasteful, not only in terms of time, but also in terms of the loss of existing services, processes, people, and tools that could have significant value in the improvement effort. **Do not start over without first considering what is already available to be leveraged.** 在消除旧的、不成功的方法或服务并创造更好的东西的过程中, 可能会有很大的诱惑, 去删除过去所做的事情, 建立一些全新的东西。这很少是必要的, 也很少是明智的决定。这种方法可能是极其浪费的, 这不仅在时间方面如此, 在现有服务、流程、人员和工具的损失方面也是如此, 而这些服务、流程、人员和工具可能对改进工作具有重大价值。**在没有首先考虑已经可以利用的东西的情况下, 不要重新开始。**

Do not start from scratch and build something new without considering what is already available to be leveraged. There is likely to be a great deal in the current services, processes, programmes, projects, and people that can be used to create the desired outcome. 在不考虑已经可以利用的东西的情况下, 不要从零开始, 构建新的东西。在目前的服务、流程、方案、项目和人员中, 很可能会有很多的东西可以用来创造预期的成果。

The current state should be investigated and observed directly to make sure it is fully understood. 应直接调查和观察目前的状况, 以确保其得到充分理解。

- **Assess where you are**
- **The role of measurement**

It is extremely rare for a situation to involve a real beginning, one with nothing before it. Almost every activity in an organization can, therefore, be seen as an improvement activity. 对于一种情况来说, 很少有真正的开始, 一个之前什么都没有的开始。因此, 几乎组织中的每一项活动都可以被看作是一项改进活动。

1

Assess where you are

↓
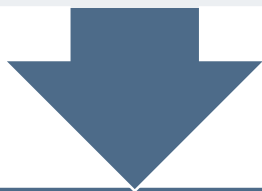
2

Understand the role of measurement and how the act of measuring can affect results

" When a measure becomes a target, it ceases to be a good measure "
Goodhart's Law

当一个政策变成目标，它将不再是一个好的政策。

Services and methods already in place should be **measured** and/or **observed** directly to properly understand their current state and what can be re-used from them.应该对已经到位的服务和方法进行"**测量**"和"**观察**"，或直接观察这些服务和方法, 以正确了解它们的现状以及可以从它们中重用的内容。

Within organizations there is frequently a discrepancy between reports and reality. This is due to the difficulty of accurately measuring certain data, or the unintentional bias or distortion of data that is produced through reports. 在组织内部, 报告与现实之间往往存在差异。这是由于难以准确测量某些数据, 或者是通过报告生成的数据的无意偏差或失真造成的。

The use of measurement is important to this principle. It should, however, **support but not replace what is observed**, **as over-reliance on data analytics and reporting can unintentionally introduce biases and risks in decision-making.**测量的使用对这一原则很重要。但是, **它应该支持而不是取代所观察到的情况, 因为过度依赖数据分析和报告可能会无意中给决策带来偏见和风险。**

Resist the temptation to do everything at once. Even huge initiatives must be accomplished iteratively. By organizing work into **smaller**, **manageable sections** that can be **executed and completed** in a timely manner, the focus on each effort will be sharper and easier to maintain. 抵制同时做任何事情的诱惑。即使是巨大的倡议也必须反复完成。通过将工作组织成更小、可管理的部分，可以及时执行和完成，每项工作的重点将更加清晰，维护起来更加容易。

Each individual iteration should be both manageable and managed, ensuring that tangible results are returned in a timely manner and built upon to create further improvement. 每个单独的迭代都应该是能够管理且被管理起来的，确保及时返回实际成果，并在此基础上创建进一步的改进。

Working in a timeboxed, iterative manner with feedback loops embedded into the process allows for: 通过在流程中嵌入反馈循环的时间盒装、迭代方式工作，可以：

- greater flexibility更大的灵活性
- faster responses to customer and business needs 更快的响应客户和业务的需求
- the ability to discover and respond to failure earlier更早发现和应对故障的能力
- an overall improvement in quality. 质量的整体改进。

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It's a fixed timebox for building and validating a full system increment, demonstrating value, and getting fast feedback.这是一个固定的时间箱，用于构建和验证一个完整的系统增量，展示价值，并获得快速反馈。
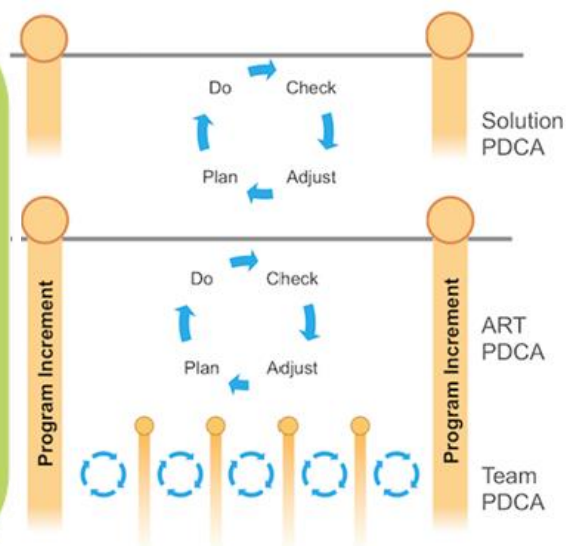
Solution PDCA

Program Increment

ART PDCA

Program Increment

Team PDCA

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Progress iteratively with feedback

Working together across boundaries produces results that have greater buy-in, more relevance to objectives, and increased likelihood of long-term success. 跨边界合作产生的结果有更大的支持, 与目标有更大的相关性, 并增加了长期成功的可能性。
Achieving objectives requires information, understanding, and trust. Work and consequences should be made visible, hidden agendas avoided, and information shared to the greatest degree possible. 实现目标需要信息、理解和信任。应使工作和后果显现出来, 避免隐藏的议程, 并最大限度地分享信息。

- **Whom to collaborate with**

- **Communication for improvement**

- **Increasing urgency through visibility**

Every person in the organization should have a clear understanding of their contribution towards creating value for the organization, its customers, and other stakeholders. Promoting a focus on value creation is an effective method of breaking down organizational silos. 组织中的每个人都应该清楚地了解他们对为组织、其客户和其他利益相关者创造价值的贡献。促进对价值创造的关注是打破组织孤岛的有效方法。

SAFe® | PROVIDED BY SCALED AGILE®

Break down barriers between departments.打破部门之间的障碍。

—W. Edwards Deming

MARKETING　ENGINEERING　IT DEPARTMENT

Service provider	⬌	Customers
Developers	⬌	Operations
Suppliers	⬌	Organization
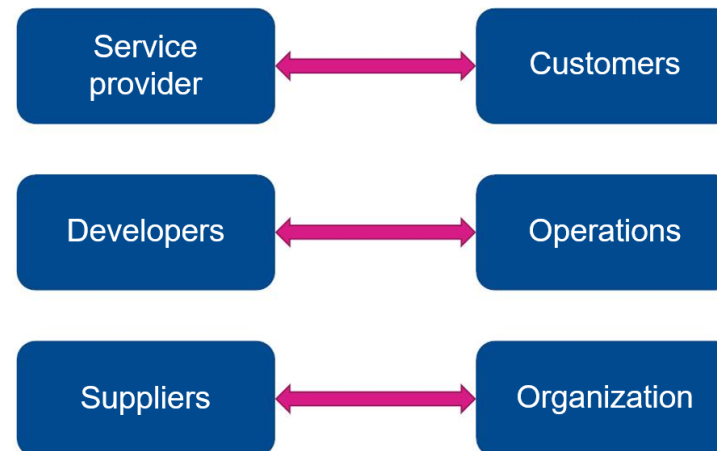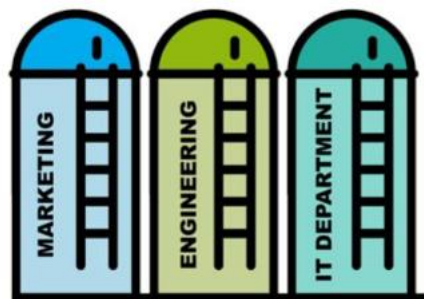
The ITIL guiding principles : Collaborate and promote visibility

Cooperation and collaboration are better than isolated work, which is frequently referred to as 'silo activity'.

1. **Whom to collaborate with**
2. **Communication for improvement**
3. **Increasing urgency through visibility**

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Collaborate and promote visibility

No service, practice, process, department, or supplier stands alone. The outputs that the organization delivers to itself, its customers, and other stakeholders will suffer unless it works in an integrated way to handle its activities as a whole, rather than as separate parts. All the organization's activities should be focused on the delivery of value. **没有任何服务、实践、流程、部门或供应商是独立的。** 除非组织以综合方式整体而不是作为单独的部分处理其活动, 否则组织向自己、客户和其他利益相关方提供的产出将受到影响。本组织的所有活动都应侧重于交付价值。

Failing to consider costs and risks For example, many organizations build in-house products without considering the cost of maintenance and continual improvement. The ITIL guiding principles of think and work holistically and collaborate and promote visibility address this issue. 没有考虑成本和风险，例如，许多组织在构建内部产品时没有考虑维护和持续改进的成本。ITIL的整体思考和工作、协作和提高可见性的指导原则解决了这个问题。

Organizations and people
Partners and suppliers
Strategy
Information and technology
Value streams and processes

Political factors
1 Organizations and people
2 Information and technology
Economic factors
Environmental factors
Products and services
Value
Social factors
Partners and suppliers 3
Value streams and processes 4
Legal factors
Technological factors

Factors
Every dimension is affected by multiple factors

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Think and **work holistically**

Services are delivered to internal and external service consumers through the coordination and integration of the four dimensions of service management. 通过协调和整合服务管理的四个维度, 向内部和外部服务消费者提供服务。

Taking a holistic approach to service management includes establishing an understanding of how all the parts of an organization work together in an integrated way. It **requires end-to-end visibility** of how demand is captured and translated into outcomes. In a complex system, the **alteration of one element can impact others** and, where possible, these impacts need to be identified, analysed and planned for. 对服务管理采取整体方法包括了解组织的所有部分如何以综合方式协同工作。它要求端到端的可见性, 了解需求是如何捕获并转化为成果的。在一个复杂的系统中, 一个要素的改变会影响到其他要素, 在可能的情况下, 需要查明、分析和规划这些影响。

Work towards **end-to-end visibility** of how demand is captured and translated into outcomes

Demand

Value

Establish an understanding of how all parts of an organization work together in an integrated way

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Think and **work holistically**

Organizations must maximize the value of the work carried out by their human and technical resources. The four dimensions model provides a holistic view of the various constraints, resource types, and other areas that should be considered when designing, managing, or operating an organization. Technology can help organizations to scale up and take on frequent and repetitive tasks, allowing human resources to be used for more complex decision-making. However, technology should not always be relied upon without the capability of human intervention, as automation for automation's sake can increase costs and reduce organizational robustness and resilience. 各组织必须最大限度地发挥其人力和技术资源所做工作的价值。四维模型提供了设计、管理或操作组织时应考虑的各种约束、资源类型和其他方面的整体视图。**技术可以帮助组织扩大规模并承担频繁和重复的任务**, 从而使人力资源能够用于更复杂的决策。然而, 如果没有人为干预的能力, 就不应该总是依赖技术, 因为自动化会增加成本, 降低组织的稳健性和复原力。

Optimize and **automate**

KEY CONCEPTS OF SERVICE MANAGEMENT

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The ITIL guiding principles :Focus on Value

Service relationship

Who is the service consumer?
When focusing on value, the first step is to know who is being served.

Value can be subjective

Definition: Value
The **perceived benefits, usefulness**, and **importance** of something. 感知的好处、有用性（起到的作用）和重要性。

SERVICE PROVIDER
服务提供者

SERVICE CONSUMER
服务消费者

CUSTOMER

SPONSOR

USER
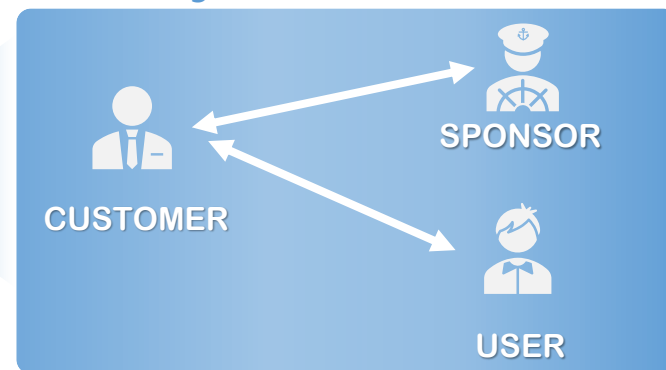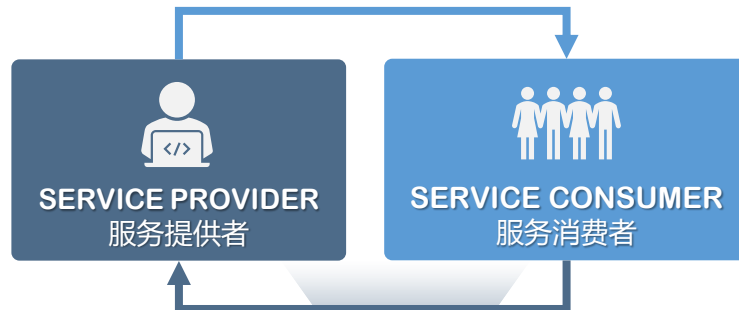
Value

Co-creation

Service

服务关系 Service Relationships

服务提供 Service Offerings

Goods

Access to Resources

Service Actions

产品 Product

资源 Resource

Achieving desired **outcomes** requires **resources** (and therefore **costs**) and is often associated with **risks**.

Services are a means of enabling value co-creation by facilitating outcomes that customers want to achieve, without the customer having to manage **specific costs** and **risks**. 服务是通过促进客户希望实现的成果来实现价值共同创造的一种手段, 而客户不必管理特定（额外）的成本和风险。

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Mind map of key Concepts

Value can be subjective

Definition: Value
The **perceived benefits, usefulness,** and **importance** of something. 感知的好处、有用性（起到的作用）和重要性。

An important element of value is the experience that service consumers have when they interact with the service and the service provider. This is frequently called customer experience (CX) or user experience (UX) depending on the adopted definitions, and it must be actively managed. 一个重要的价值要素是服务使用者在与服务和服务提供者交互时的体验。这通常称为客户体验 (CX) 或用户体验 (UX), 具体取决于采用的定义, 并且必须对其进行主动管理。

Value **Co-creation**

The ITIL guiding principles : Focus on value

When focusing on value, the first step is to know who is being served.

Definition: Value 价值：感知到的好处，有用性和重要性。

The perceived benefits, usefulness, and importance of something.

Inherent in this definition is the understanding that **value is subject to the perception of the stakeholders**, whether they be the customers or consumers of a service, or part of the service provider organization(s). 这一定义的内在含义是, 价值取决于利益相关方的感知, 无论他们是服务的客户还是消费者, 还是服务提供者组织的一部分。
Value can be subjective.价值是主观的。

Definitions

- **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.

- **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 level**s 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.

Utility

The functionality offered by a product or service to meet a particular need
What the service does
Can be used to determine whether a service is **fit for purpose**
Requires that a service support the performance of the consumer or remove constraints from the consumer

Warranty

Assurance that a product or service will meet agreed requirements
How the service performs
Can be used to determine whether a service is **fit for use**
Requires that a service has defined and agreed conditions that are met

- 产品或服务为满足特定需求而提供的功能。〝 效用〞可以概括为 "服务的作用", 并可用于确定服务是否 "符合用途"。若要具有〝 效用〞, 服务必须增加使用者的绩效或从使用者中减少约束。许多服务同时执行这两种服务。

- 保证产品或服务符合商定的要求。保障可以概括为 "服务如何使用", 并可用于确定服务是否 "符合使用"。保障通常与符合服务使用者需求的服务级别相关。这可能基于正式协议, 也可能是营销信息或品牌形象。保障通常涉及服务的可用性、容量、安全级别和连续性等方面。如果符合所有定义和商定的条件, 一项服务可以说是提供可接受的保证, 或 "保障"。

ITIL V3：The value of a service is created by combining two primary elements: utility (fitness for purpose) and warranty (fitness for use). 从客户的角度来看，价值由两个主要因素组成：效用（适用于目的），保障（适用于使用）。

为什么要建立这个服务?
这个服务是否达成了业务成果?

UTILITY

Performance supported?
Constraints removed?

OR   T/F

Fit for purpose?

AND   Value created
       T/F

Fit for use?

Available enough?
Capacity enough?
Continuous enough?
Secure enough?

AND   T/F

WARRANTY

T: True
F: False

如何使该服务可靠、可用?
这个服务的性能是否足够可用?
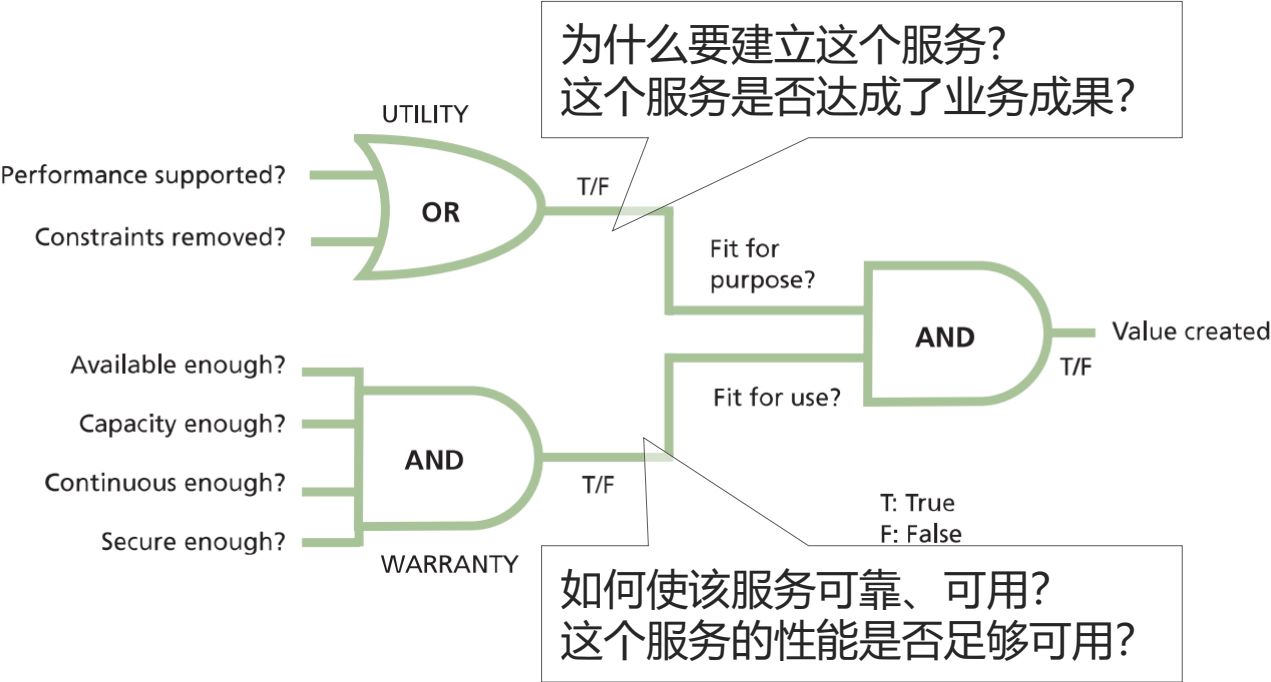
ITIL 4： *Value is the perceived benefits,usefulness, and importance of something.*

Three Dimensions of Value

Cost - is often measured against how much the customer is willing to pay. Services need to be affordable to the customer and profitable or within budget for the provider.

Quality - customer requirements and the warranty around service delivery.

Speed – a growing demand for increased time to market and time to value. Quality and cost demands may be met but this may not be sufficient if the service takes too long to deliver.

Cost   Speed   Quality

VALUE

Service relationship

PARTNERS AND SUPPLIERS	SERVICE PROVIDER 服务提供者	SERVICE CONSUMER 服务消费者

Value   **Co-creation**

CUSTOMER
SPONSOR
USER

Definitions

- **Customer** A person who defines the requirements for a service and takes responsibility for the outcomes of service consumption.
- **User** A person who uses services.
- **Sponsor** A person who authorizes budget for service consumption.
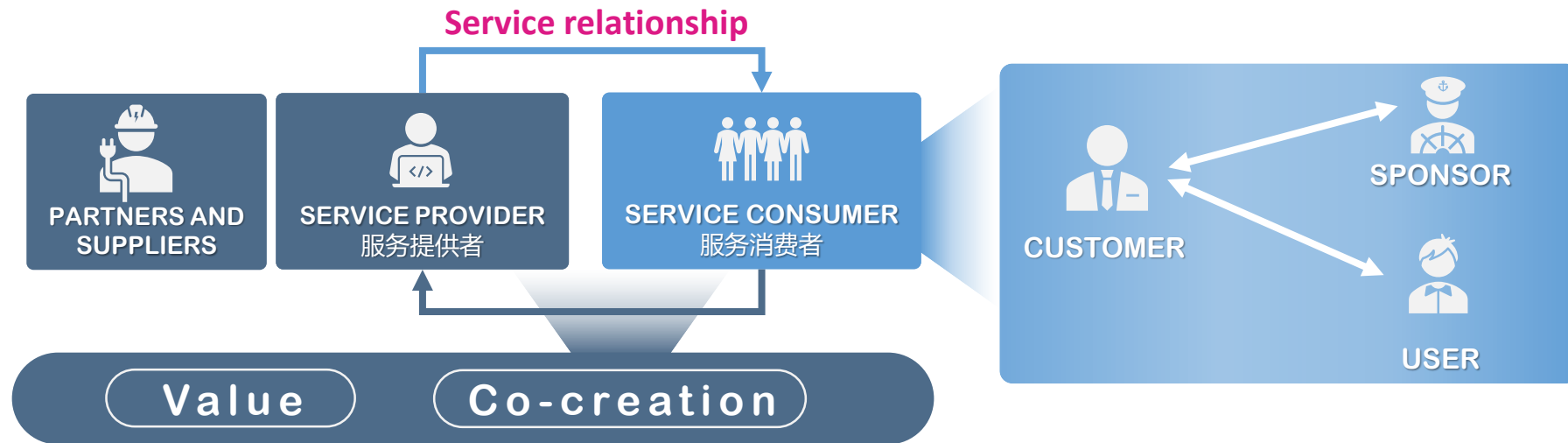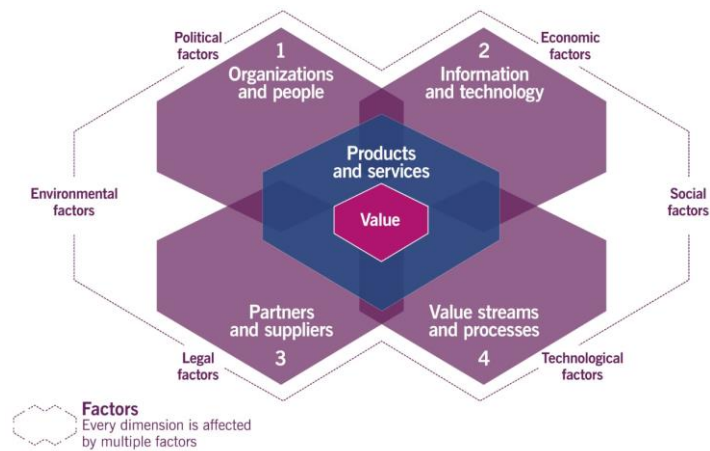
The ITIL guiding principles :Collaborate and promote visibility

When improvement activity occurs in relative silence, or with only a small group being aware of the details, assumptions and rumours can prevail.

- 内部：组织内部的参与，设计的参与，共同测试，满意度的反馈；
- 外部：供应商的参与，设计的参与，故障的处理，问题的贡献，持续改进建议的贡献；

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Value co-creation

Definitions

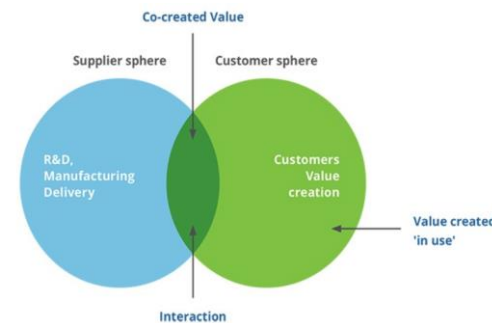- **Services** A means of enabling value co-creation by facilitating outcomes that customers want to achieve, without the customer having to manage specific costs and risks.
- **Product** A configuration of an organization's resources designed to offer value for a consumer.

Products are typically complex and are not fully visible to the consumer. The portion of a product that the consumer actually sees does not always represent all of the components that comprise the product and support its delivery.产品通常很复杂, 消费者并不完全可见。消费者实际看到的产品部分并不总是代表构成产品和支持其交付的所有组件。

Value Co-creation

Service

Service Relationships

Service Offerings

Goods **Access to Resources** **Service Actions**

Product

Resource

Plan
Design and transition
Engage
Obtain/build
Deliver and support
Products and services
Value
Demand
Improve

Definition: Service offering

A formal description of one or more services, designed to address the needs of a target consumer group. A service offering may include **goods**, access to resources, and **service action**s.

GOODS ACCESS TO RESOURCES SERVICE ACTIONS

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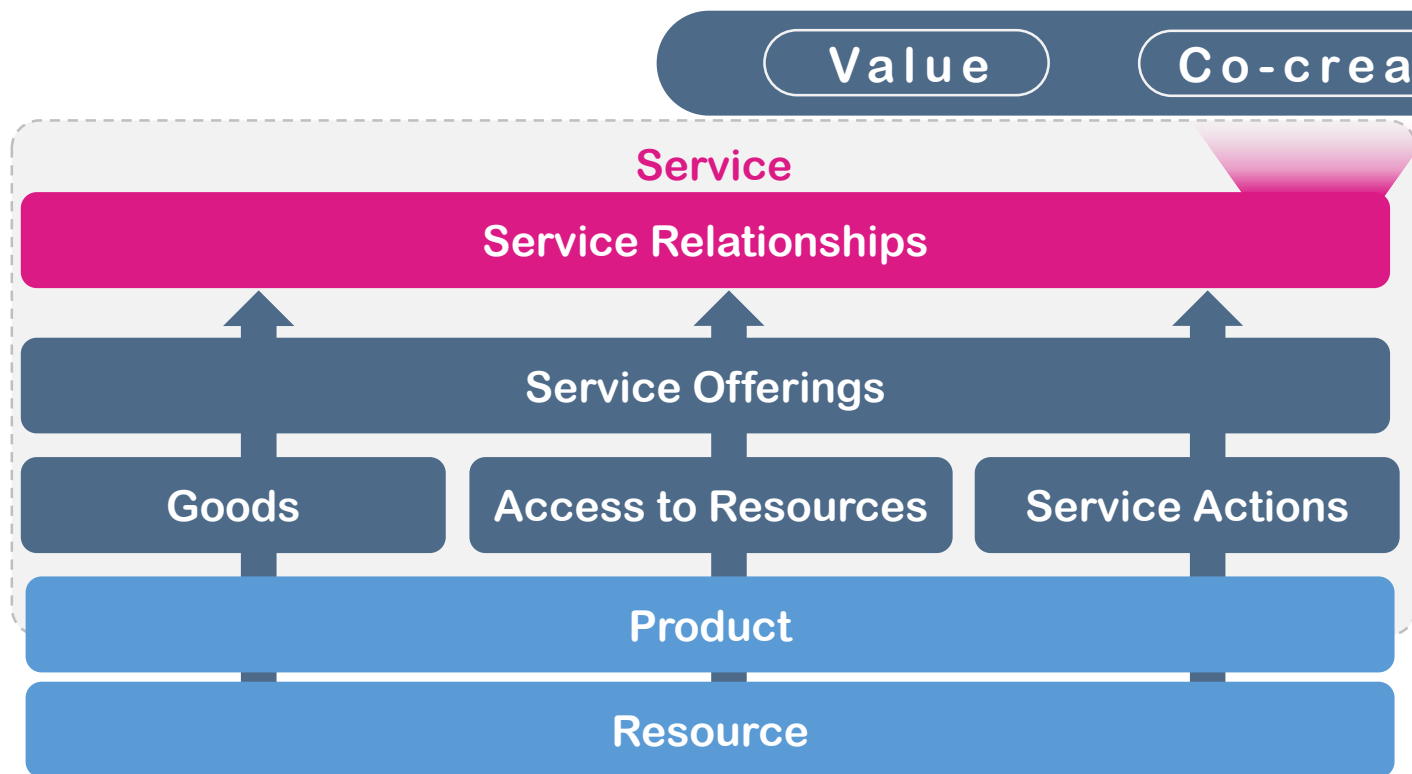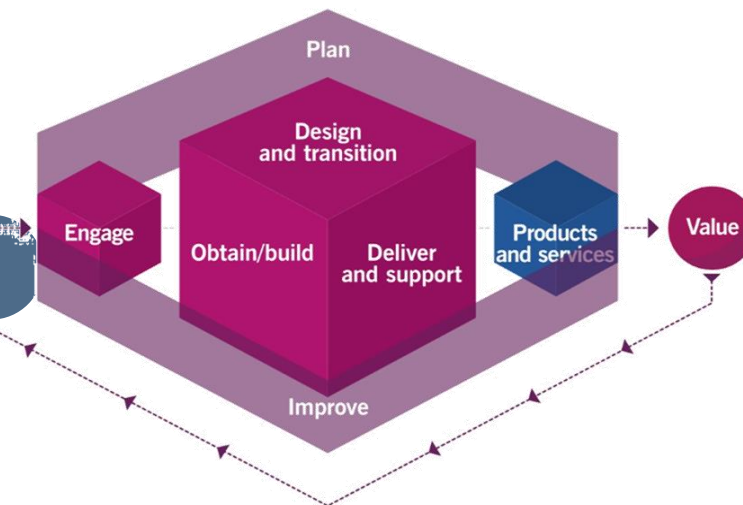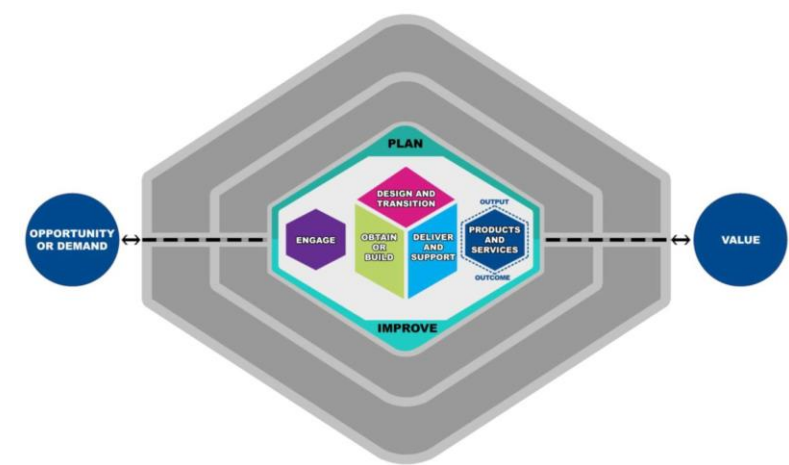ChinaNetwork Corporation

Products and services

Definitions

- **Services** A means of enabling value co-creation by facilitating outcomes that customers want to achieve, without the customer having to manage specific costs and risks.
- **Product** A configuration of an organization's resources designed to offer value for a consumer.

ITIL V3：One of the most common mistakes is to use the application portfolio as the service portfolio. 最常见的错误之一是使用应用程序组合作为服务组合。

Although all applications are represented in the service portfolio, they are usually not, in and of themselves, services. 尽管所有应用程序都在服务组合中表示, 但它们本身通常不是服务。

Utility is the **functionality** offered by a product or service to meet a particular need.效用是产品或服务提供的满足特定需求的**功能**。Utility can be summarized as 'what the service does', and can be used to determine whether a service is able to meet its **required outcomes**, or is 'fit for purpose'.效用可以概括为"**服务的内容**"，并可用于确定服务是否能够满足其所需的成果。

Products are typically complex and are not fully visible to the consumer. The portion of a product that the consumer actually sees does not always represent all of the components that comprise the product and support its delivery.产品通常很复杂, 消费者并不完全可见。消费者实际看到的产品部分并不总是代表构成产品和支持其交付的所有组件。

IT Service

"IT服务"是价值的载体，**单个软件或硬件资源无法独自承载价值。**一组软件资源、硬件资源、人力资源共同构成了IT服务。
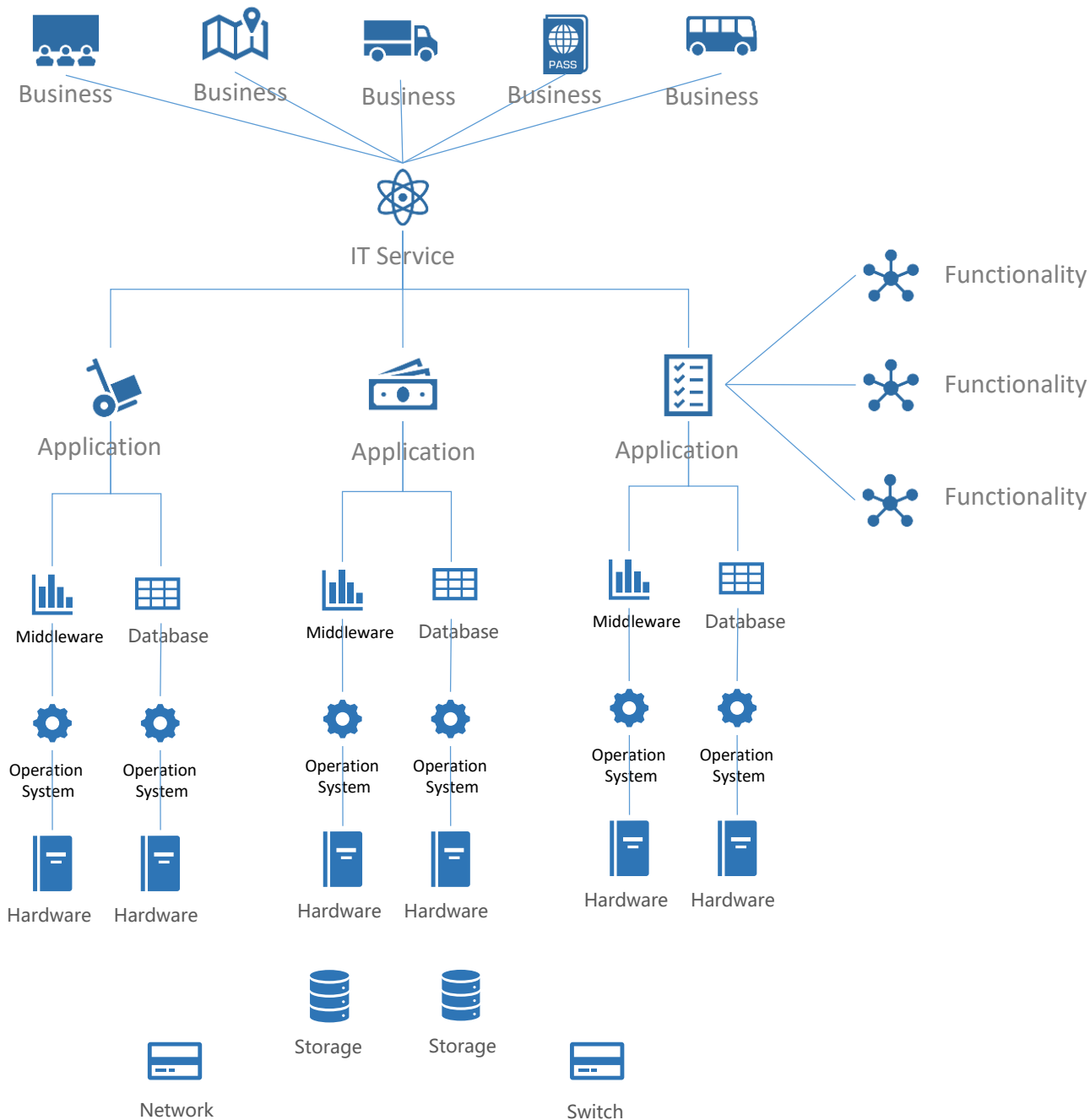
IT Service

信息化服务≠应用系统

从表面上看，一个"应用系统"有许多与IT服务的相似之处，例如、"应用系统"具有支撑它的软件和硬件。还有若干具体的功能，这些特点都很类似一个IT服务。而且，有的时候，确实一个"应用系统"就能够支撑一个"IT服务"。

但是，在很多情况下单个"应用系统"无法独自支撑一个业务。有的"应用系统"虽然支撑了一个业务的主要部分，但往往还需要另外一个应用负责处理数据统计或报告。

One of the most common mistakes is to use the application portfolio as the service portfolio. 最常见的错误之一是使用应用程序组合作为服务组合。
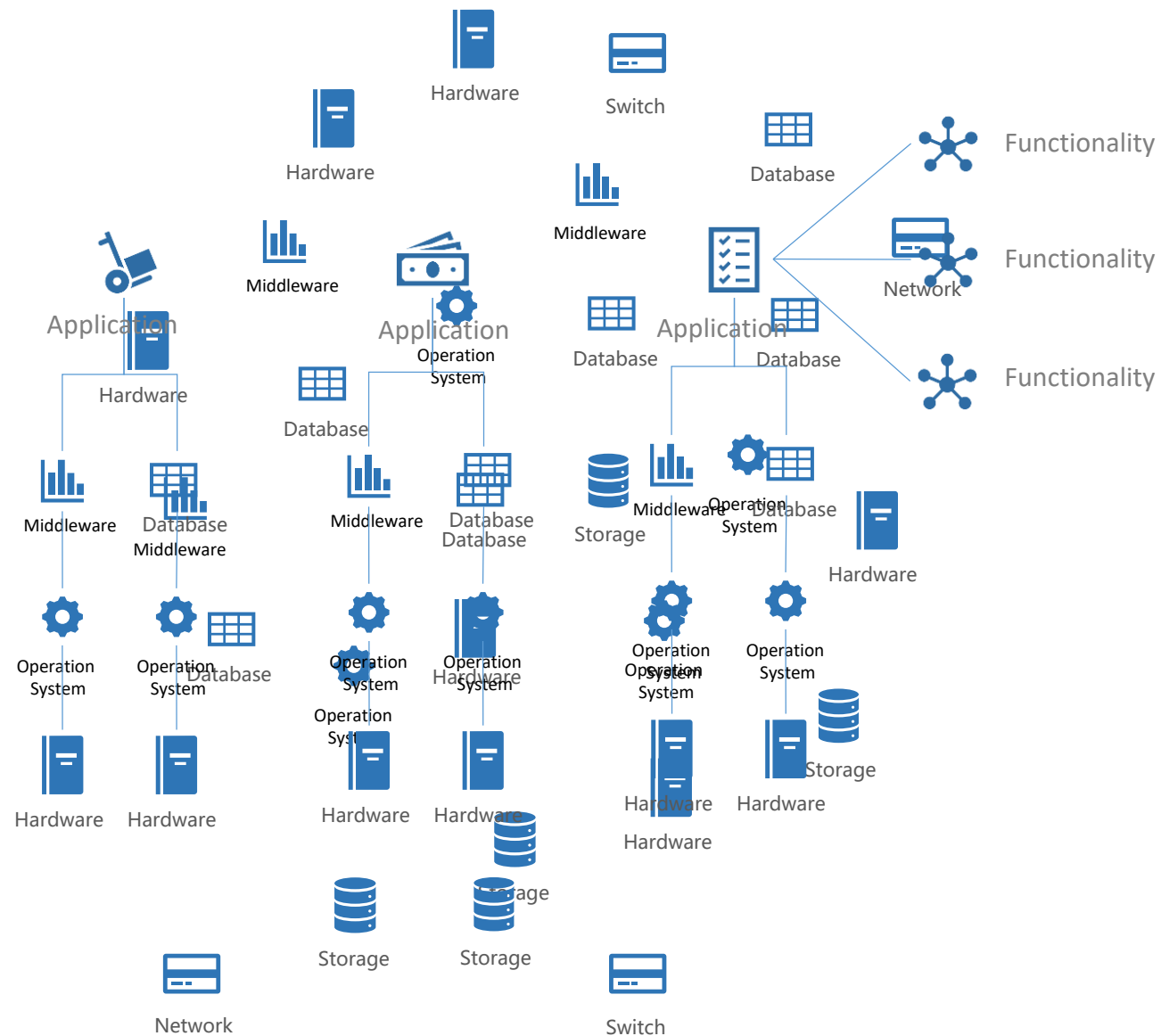Although all applications are represented in the service portfolio, they are usually not, in and of themselves, services. 尽管所有应用程序都在服务组合中表示, 但它们本身通常不是服务。
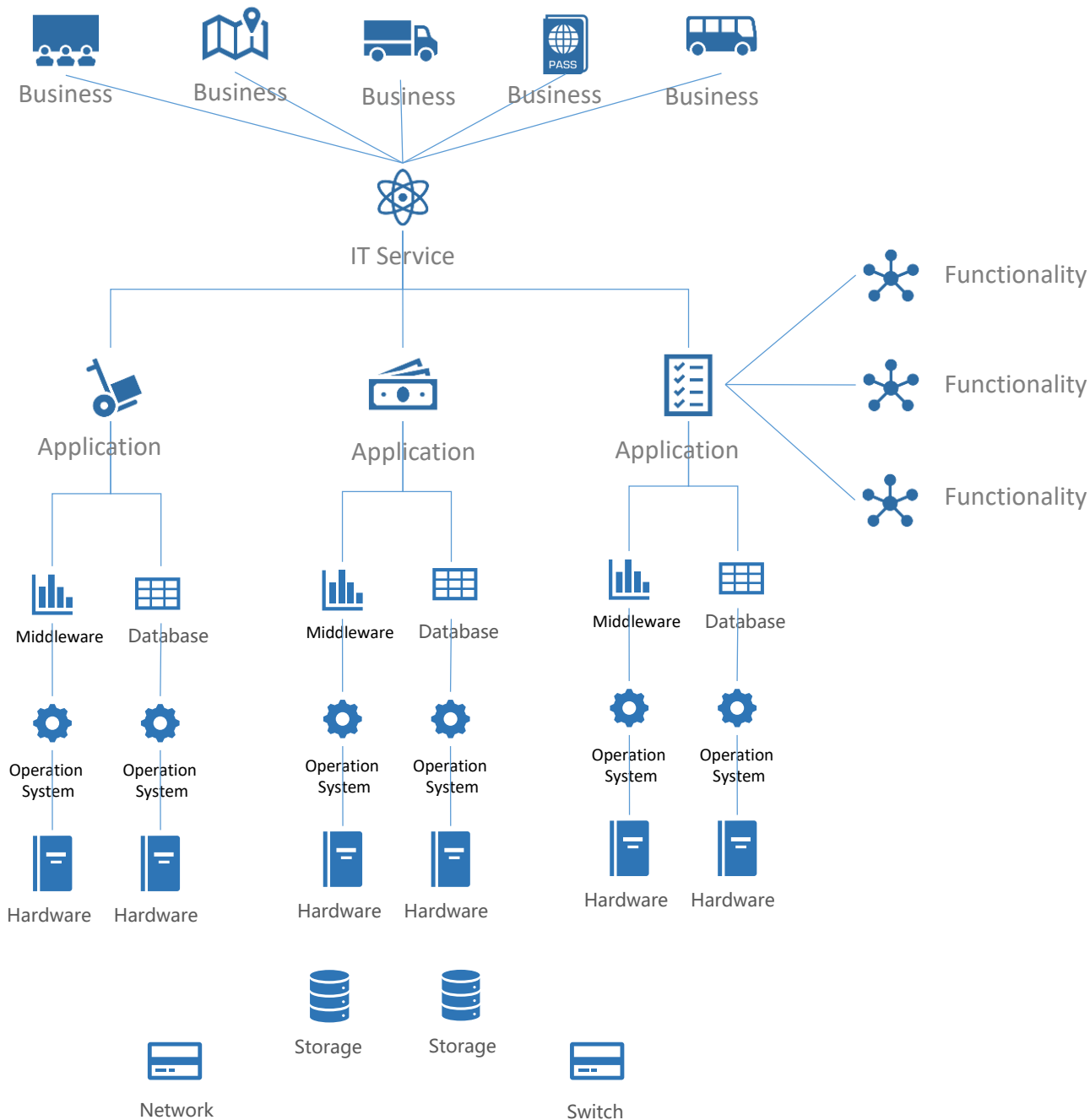
IT Service

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For example, a single service might use several applications (a company price list draws data from the manufacturing control application, warehousing and distribution applications and the shipping application). Alternatively, a service might be just one of the many outputs of a single application. 例如, 单个服务可能会使用多个应用程序 (公司价目表从制造控制应用程序、仓库和分发应用程序以及装运应用程序中抽取数据)。或者, 服务可能只是单个应用程序的许多输出之一。

For example, the payroll application provides several different services, such as paying employees, tracking benefits, producing tax statements etc. Each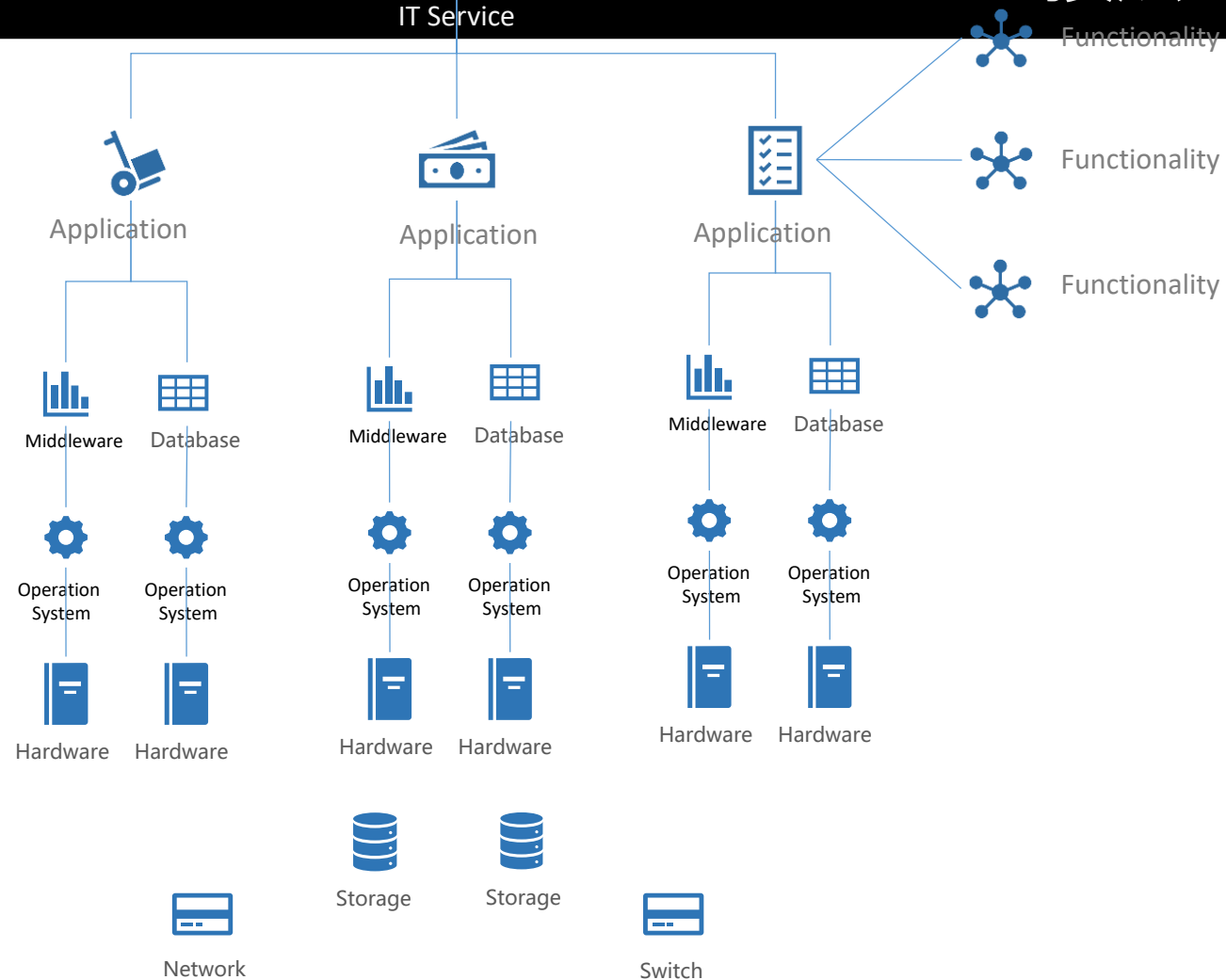 of these is viewed as a different service by different people or groups in the organization. 例如, 工资单应用程序提供了几种不同的服务, 如支付员工、跟踪福利、生产纳税报表等。其中每一个都被组织中不同的人员或组视为不同的服务。

Business Business Business Business Business

IT Service

Application Application Application

Functionality Functionality Functionality

Middleware Database Middleware Database Middleware Database

Operation System Operation System Operation System Operation System Operation System Operation System

Hardware Hardware Hardware Hardware Hardware Hardware

Storage Storage

Network Switch

IT Service

"IT服务"是IT与业务的"**接点**"，一个"IT服务"是支撑同一个业务流程的几个"应用系统"的

汇总，且包括应用系统之下的各类资源。

什么是〝IT服务〞：接点

Service ≠ Application

"IT service: A service provided by an IT service provider. IT服务：有IT服务提供商提供的服务。An IT service is made up of a combination of information technology, people and processes. IT服务由信息技术、人员和流程的组成。

- A **customer-facing IT service** directly supports the business processes of one or more customers and its service level targets should be defined in a service level agreement. 面向客户的IT服务直接支持一个或多个客户的业务流程，其服务级别目标应在服务级别协议中定义。

- Other IT services, called **supporting services**, are not directly used by the business but are required by the service provider to deliver customer-facing services.其他IT服务 (称为支持服务) 不直接由业务部门使用, 而是由服务提供商要求提供面向客户的服务。"
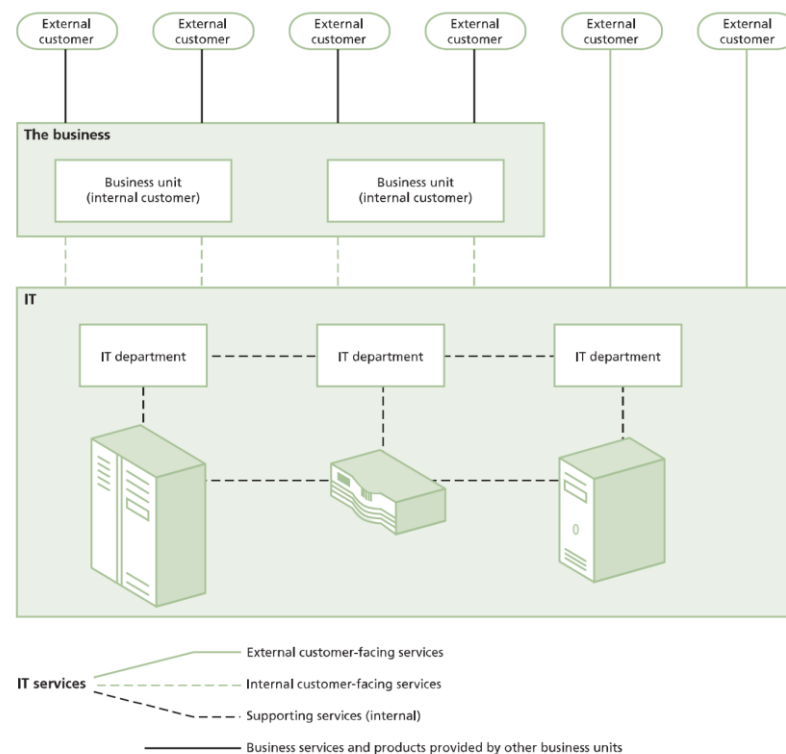
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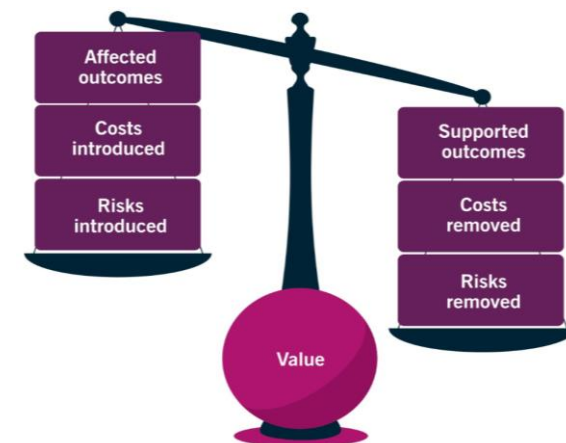
Definitions

- **Output** A tangible or intangible deliverable of an activity.
- **Outcome** A result for a stakeholder enabled by one or more outcomes.

Output A tangible or intangible deliverable of an activity. 一项活动的有形或无形的可交付物。

Outcome A result for a stakeholder enabled by one or more outputs. 由一个或多个输出的为利益干系人所使用的结果。

Value **Co-creation**

Service

Service Relationships

Service Offerings

Goods | **Access to Resources** | **Service Actions**

Product

Resource

Affected outcomes
Costs introduced
Risks introduced

Supported outcomes
Costs removed
Risks removed

Value

Achieving desired **outcomes** requires **resources** (and therefore **costs**) and is often associated with **risks**.

Services are a means of enabling value co-creation by facilitating outcomes that customers want to achieve, without the customer having to manage **specific costs** and **risks**. 服务是通过促进客户希望实现的成果来实现价值共同创造的一种手段, 而客户不必管理特定（额外）的成本和风险。

汉远网智
www.ITILmap.com
Network Intelligence ChinaNetwork Corporation
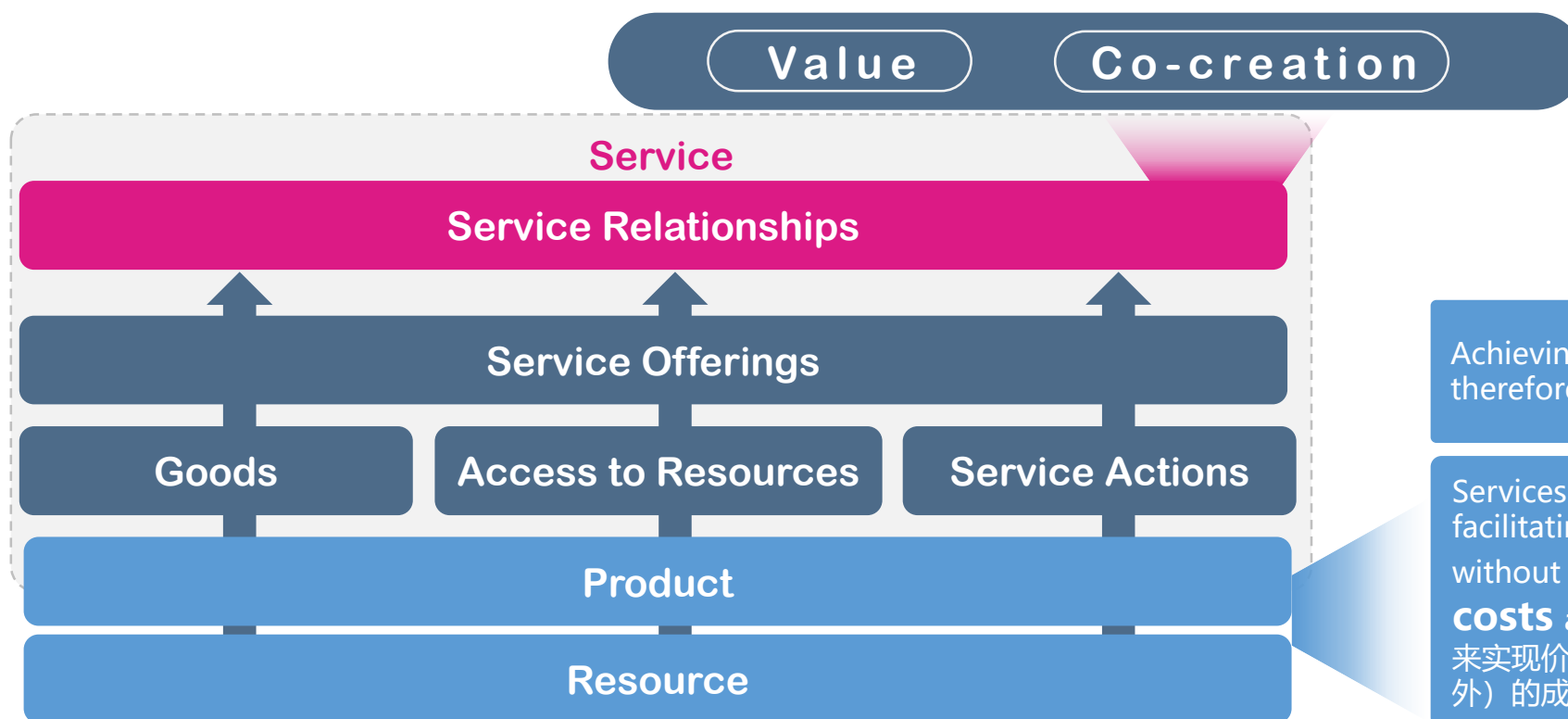
Value and Resource: outcomes, costs, and risks

Output A tangible or intangible deliverable of an activity. 一项活动的有形或无形的可交付物。

Outcome A result for a stakeholder enabled by one or more outputs. 由一个或多个输出的为利益干系人所使用的结果。

Value   Co-creation

Affected outcomes
Costs introduced
Risks introduced

Supported outcomes
Costs removed
Risks removed

Value

Service

Service Relationships

Service Offerings

Goods   **Access to Resources**   **Service Actions**

Product

Resource

Work towards **end-to-end visibility** of how demand is captured and translated into outcomes

Demand → Value

Establish an understanding of how all parts of an organization work together in an integrated way

Value and Resource: outcomes, costs, and risks

Configuration management provides information on the CIs that contribute to each service and their relationships: how they interact, relate, and depend on each other to create value for customers and users. This includes information about dependencies between services. This high-level view is often called a service map or service model, and forms part of the service architecture. 配置管理提供了有关每个IT服务及其关系的信息，包括：它们之间如何交互、关联，并相互支撑和依赖，从而为客户和用户创造价值。这包括有关IT系统之间的依赖关系，这种高级视图通常称为服务映射或服务模型，并构成服务体系架构的一部分。

业务过程	
业务数据	
信息化服务	
应用系统	
中间件和数据库	
服务器系统	
服务器硬件	
存储系统	
网络系统	
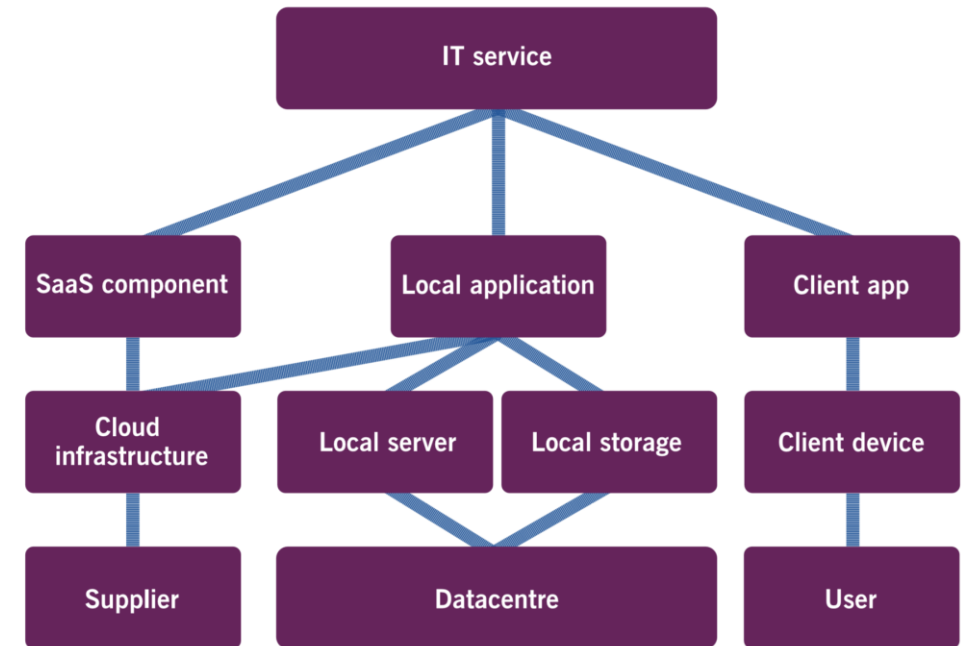
The real power of service asset and configuration management's logical model of the services and infrastructure is that it is the model.

在各个管理过程之间共享的数据被称为〝主数据〞，例如、各个IT服务、应用系统、基础软件、硬件、业务机构、客户和用户、人员和角色。描述一次管理过程的数据被称为〝交易数据〞或者〝工单数据〞，例如、变更单、变更记录、服务请求单、测试单、故障单、事态单。

全生命周期要的是Full History，而Full History是PDCA持续改进的基础。
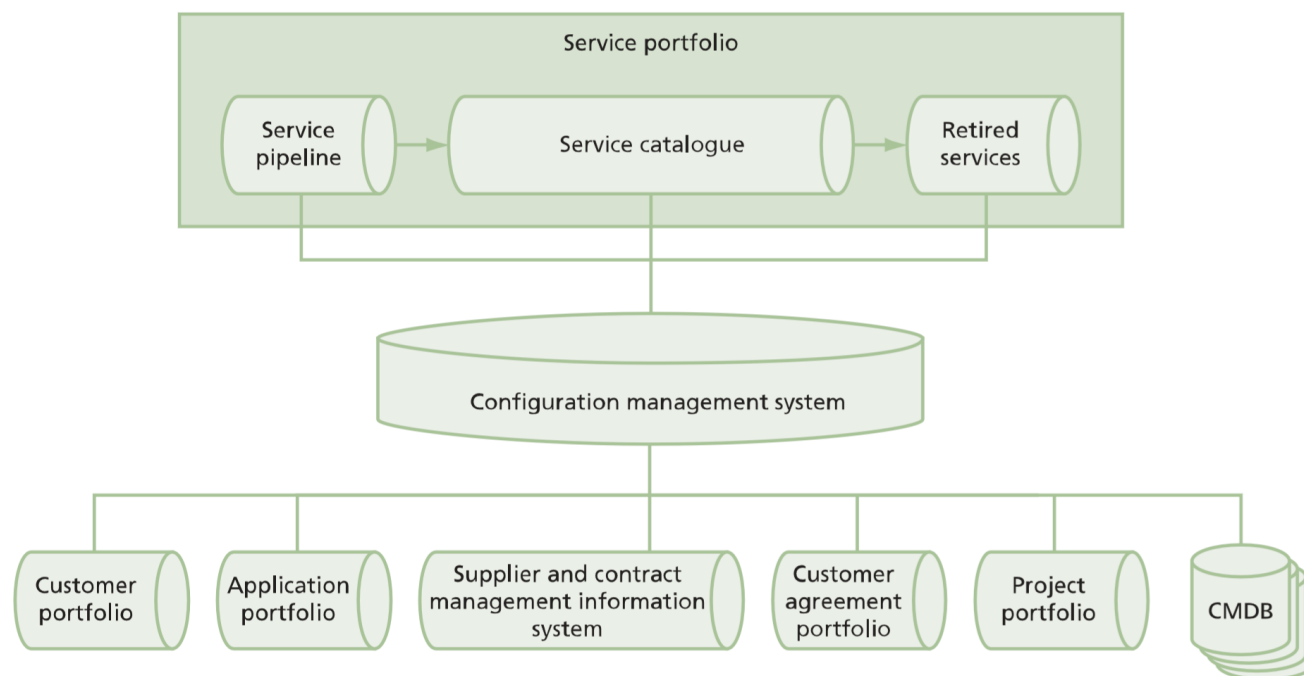
广义CMDB（Master Data）

Definition: Configuration item

Any component that needs to be managed in order to deliver an IT service.

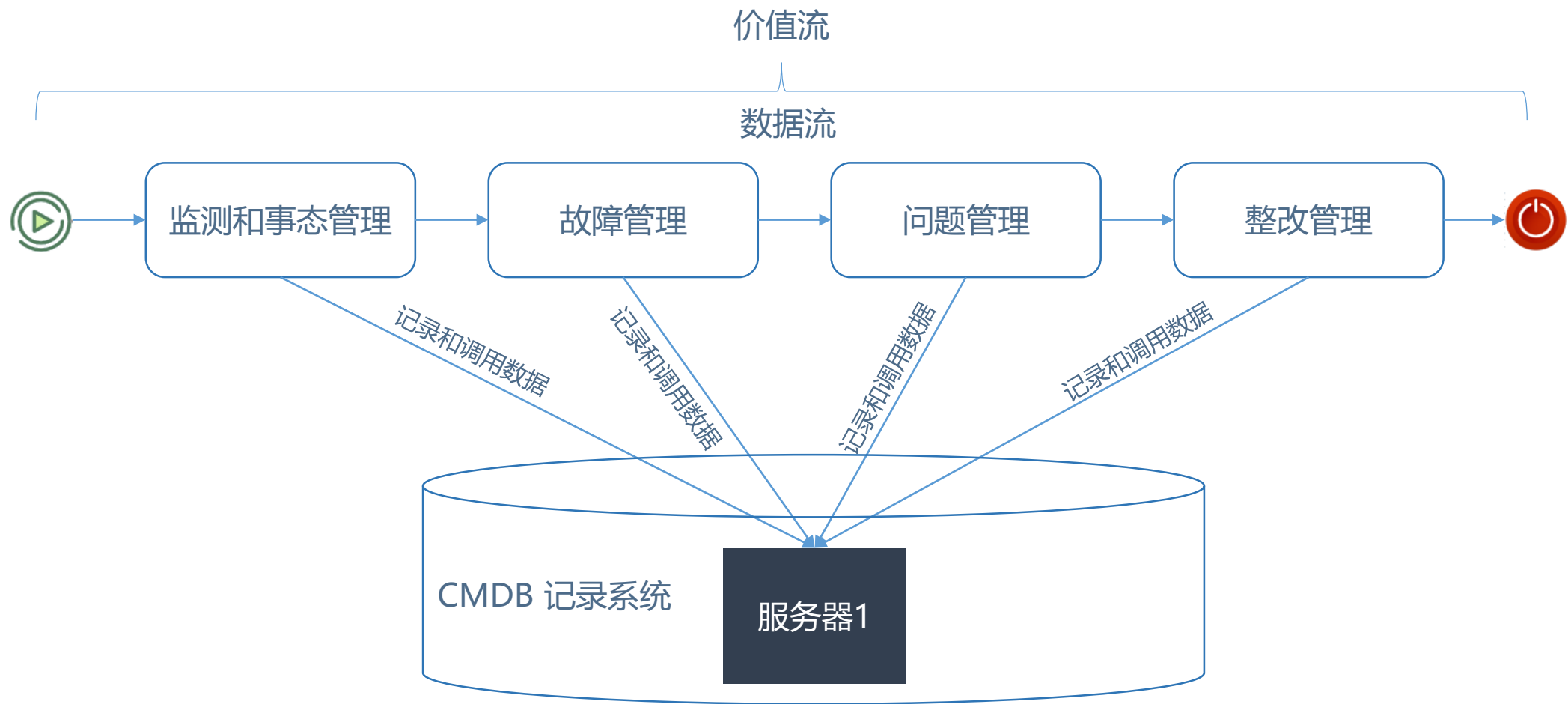"配置管理" 和 "资产管理" 之间有什么不同?

?

- **Service lifecycle CIs** such as the Business Case, Service Management Plans, service lifecycle plans, Service Design Package, release and change plans, and test plans. They provide a picture of the service provider's services, how these services will be delivered, what benefits are expected, at what cost, and when they will be realized.

- **Service CIs** such as:
  - **Service capability assets:** management, organization, processes, knowledge, people
  - **Service resource assets:** financial capital, systems, applications, information, data, infrastructure and facilities, financial capital, people
  - Service model
  - Service package
  - Release package
  - Service acceptance criteria.

- **Organization CIs** – Some documentation will define the characteristics of a CI whereas other documentation will be a CI in its own right and need to be controlled, e.g. the organization's business strategy or other policies that are internal to the organization but independent of the service provider. Regulatory or statutory requirements also form external products that need to be tracked, as do products shared between more than one group.

- **Internal CIs** comprising those delivered by individual projects, including tangible (data centre) and intangible assets such as software that are required to deliver and maintain the service and infrastructure.

- **External CIs** such as external customer requirements and agreements, releases from suppliers or sub-contractors and external services.

- **Interface CIs** that are required to deliver the end-to-end service across a service provider interface (SPI).

数据

文档

人

环境

硬件　服务　软件

价值流

数据流

监测和事态管理 → 故障管理 → 问题管理 → 整改管理

记录和调用数据

记录和调用数据

记录和调用数据

记录和调用数据

CMDB 记录系统

服务器1

目录

ITIL的基本脉络

ITIL4的7个原则和基本概念

ITIL4的管理实践

Network Intelligence
ChinaNetwork Corporation

ITIL Management Practices

Network Intelligence
ChinaNetwork Corporation
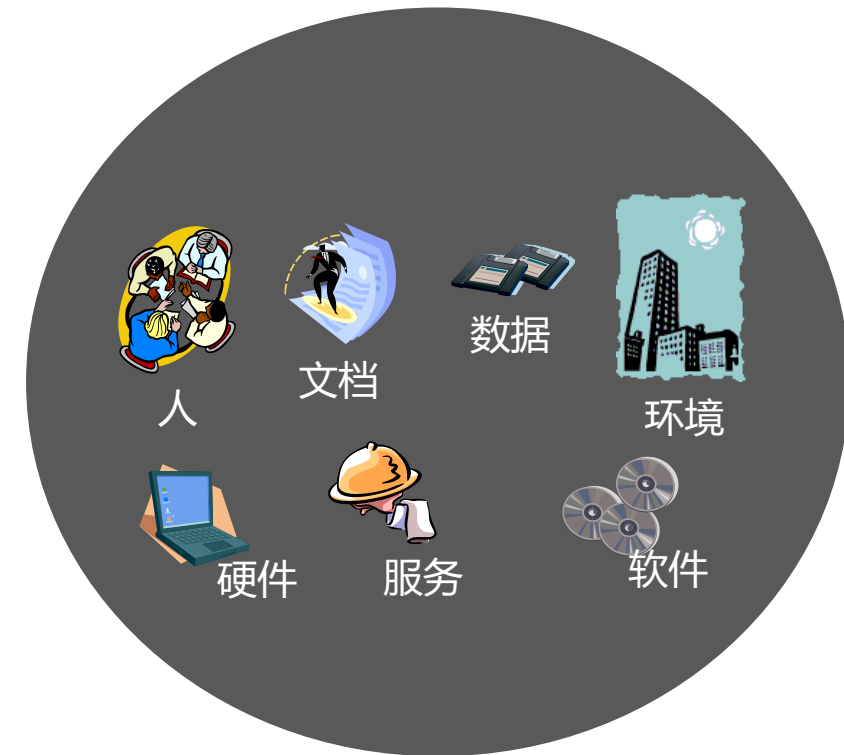
计划 Plan

Key message：The purpose of the plan value chain activity is 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. "计划（Plan）"价值链活动的目的是确保对整个组织的所有四个维度和所有产品和服务的愿景、现状和改进方向有共同的理解。

Policies, requirements, and Constraints provided by the organization's governing body

治理机构提供的政策、要求和约束

Strategic, tactical, and operational plans

战略、战术和运营计划
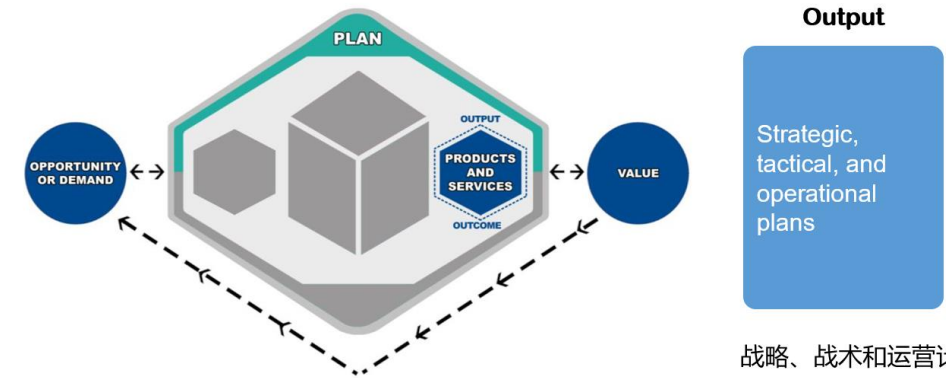
架构管理 Architecture management

The purpose of the architecture management practice is to provide an understanding of all the different elements that make up an organization and how those elements interrelate, enabling the organization to effectively achieve its current and future objectives. It provides the principles, standards, and tools that enable an organization to manage complex change in a structured and Agile way. "架构管理（Architecture）"实践的目的是，理解构成一个组织的不同要素以及这些要素如何相互关联，使该组织能够有效地实现其当前和未来的目标。这个实践方法提供了使组织能够结构化和敏捷的方式，管理复杂变更的原则、标准和工具。
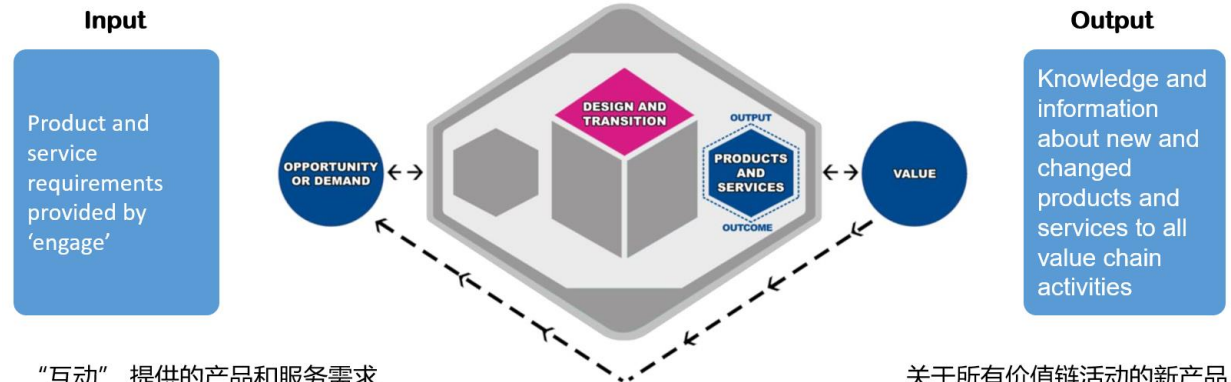
组合管理 Portfolio management

The purpose of the portfolio management practice is to ensure that the organization has the right mix of programmes, projects, products, and services to execute the organization's strategy within its funding and resource constraints. 投资组合管理做法的目的是确保本组织对方案、项目、产品和服务的具有适当的组合, 以便在其资金和资源限制范围内执行本组织的战略。
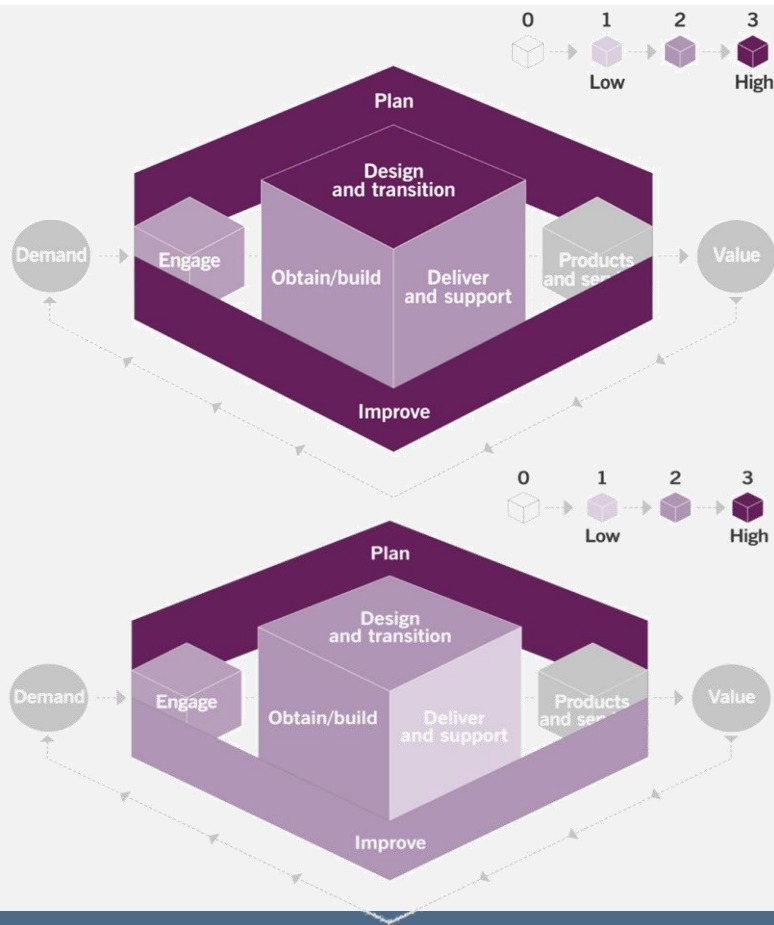
设计和转换 Design and transition

Key message：The purpose of the design and transition value chain activity is to ensure that products and services continually meet stakeholder expectations for quality, costs, and time to market. "设计和转换"价值链活动的目的是确保产品和服务不断满足利益相关者对质量、成本和交付时间的期望。

Input

Product and service requirements provided by 'engage'

Output

Knowledge and information about new and changed products and services to all value chain activities

"互动"提供的产品和服务需求

关于所有价值链活动的新产品和服务的知识和信息。

项目管理 Project management

Key message：The purpose of the project management practice is to ensure that all projects in the organization are successfully delivered. This is achieved by planning, delegating, monitoring, and maintaining control of all aspects of a project, and keeping the motivation of the people involved. 项目管理实践的目的是确保组织中的所有项目成功交付。这是通过对项目各个方面的计划、授权、监控和维护控制，以及保持相关人员的积极性来实现的。

发布管理 Release management

Key message：The purpose of the release management practice is to make new and changed services and features available for use. 发布管理实践的目的是使新的和变更的服务和功能可供使用。
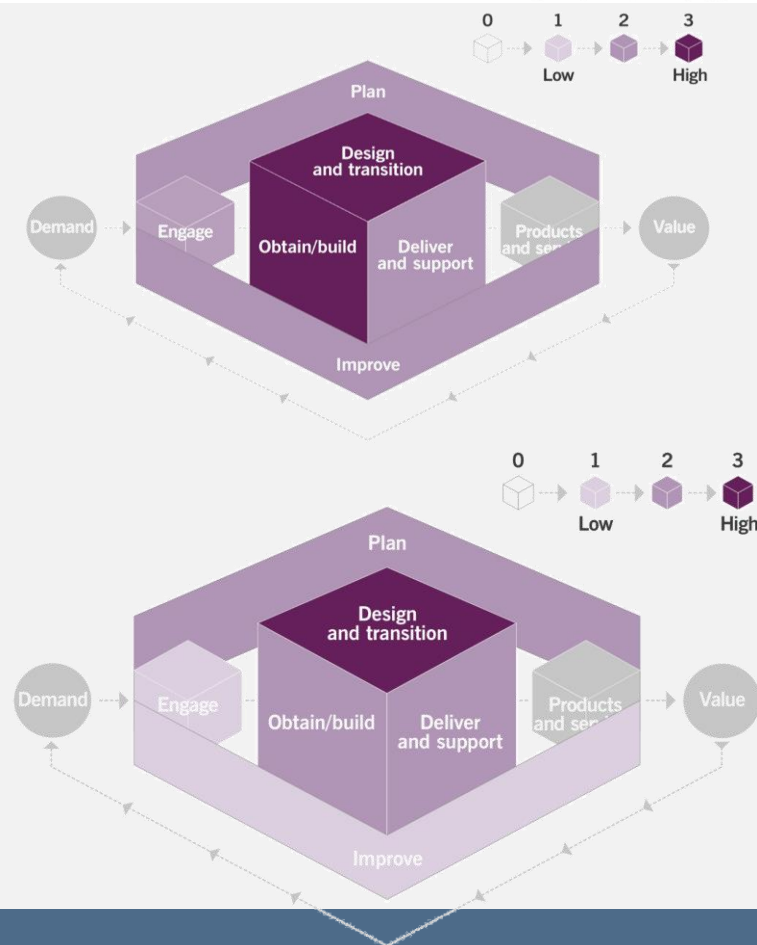
互动
Engage

The purpose of the engage value chain activity is to provide a good understanding of stakeholder needs, transparency, and continual engagement and good relationships with all stakeholders. "互动（Engage）"价值链活动的目的是让人们很好地了解利益相关方的需求、透明度以及与所有利益相关方的持续参与和良好关系。

Input

Requests and feedback from customers

Feedback provided by partners and suppliers

客户的要求和反馈
合作伙伴和供应商提供的反馈
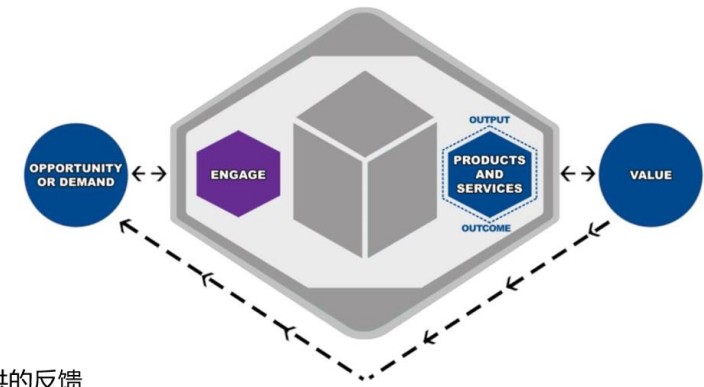
Output

Product and service requirements for 'design and transition'

"设计和转换"的产品和服务要求

业务分析 Business analysis

Key message：The purpose of the business analysis practice is to analyse a business or some element of it, define its associated needs, and recommend solutions to address these needs and/or solve a business problem, which must facilitate value creation for stakeholders. Business analysis enables an organization to communicate its needs in a meaningful way, express the rationale for change, and design and describe solutions that enable value creation in alignment with the organization's objectives. 业务分析实践的目的是分析企业或其某些要素, 定义其相关需求, 并提出解决这些需求的解决方案, 或解决业务问题, 这必须促进利益相关方创造价值。业务分析使组织能够以有意义的方式传达其需求, 表达变更的理由, 并设计和描述能够根据组织目标创造价值的解决方案。
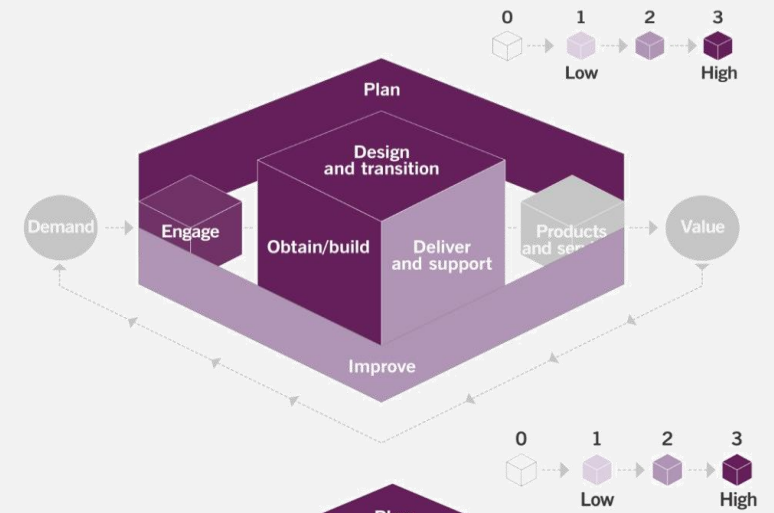
关系管理 Relationship management

Key message：The purpose of the relationship management practice is to establish and nurture the links between the organization and its stakeholders at strategic and tactical levels. It includes the identification, analysis, monitoring, and continual improvement of relationships with and between stakeholders.关系管理实践的目的是在战略和战术层面建立和培育本组织与其利益相关方之间的联系。它包括识别、分析、监测和持续改善与利益相关方的关系和利益相关方之间的关系。
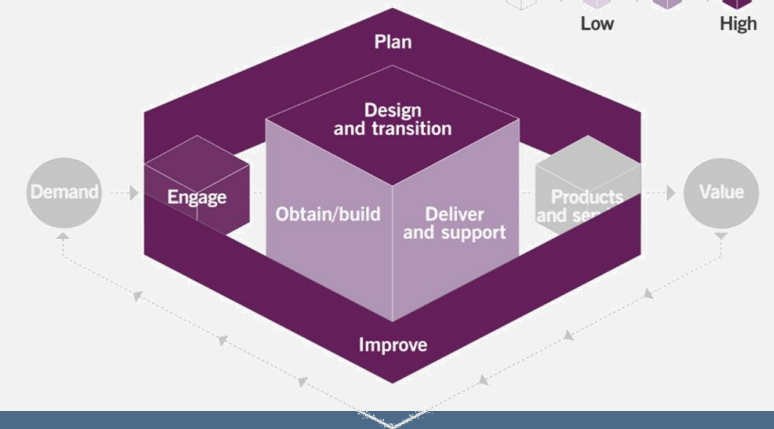
获取和构建
Obtain/build

Key message：The purpose of the obtain or build value chain activity is to ensure that service components are available when and where they are needed, and meet agreed-upon specifications. "获取或构建"价值链活动的目的是确保服务组件在需要时随时随地可用, 并符合商定的规范。

Input

Requirements and specifications provided by 'design and transition'

OPPORTUNITY OR DEMAND

OBTAIN OR BUILD

OUTPUT / OUTCOME

PRODUCTS AND SERVICES

VALUE

Output

Knowledge and information about new and changed service components to all value chain activities

变更控制 Change control

Key message：The purpose of the change control practice is to maximize the number of successful service and product changes by ensuring that risks have been properly assessed, authorizing changes to proceed, and managing the change schedule. 变更控制实践的目的是通过确保风险得到适当评估、授权变更继续进行和管理变更时间表，最大限度地增加成功的服务和产品变更的数量。

- **Standard change** A pre-authorized change that is low risk, relatively common and follows a procedure or work instruction. 标准变更是低风险、相对常见且遵循程序或工作指令的批准变化。
- **Emergency change** A change that must be implemented as soon as possible, for example to resolve a major incident or implement a security patch. 紧急情况更改必须尽快实施的更改, 例如解决重大事件或实施安全修补程序。
- **Normal change** Any service change that is not a standard change or an emergency change. 正常更改不是标准更改或紧急更改的任何服务更改。
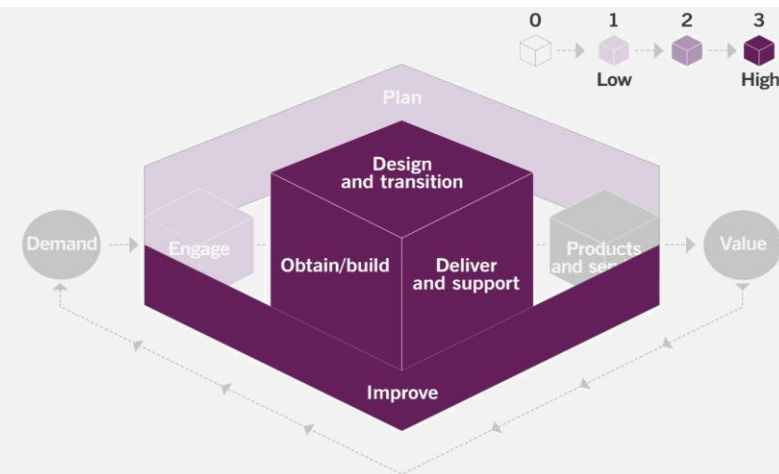
Major changes that involve significant cost, risk or organizational impact will usually be initiated through the service portfolio management process. 涉及重大成本、风险或组织影响的重大变化通常会通过服务组合管理过程来启动。
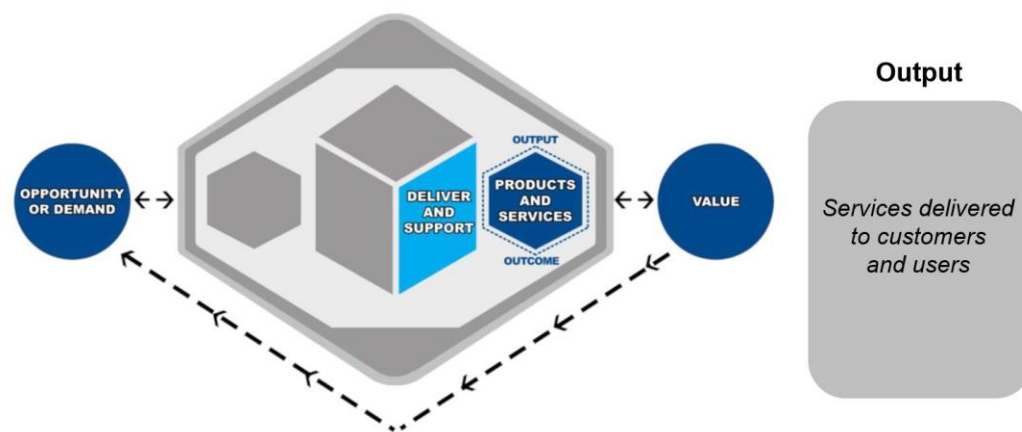
交付和支持
Deliver and Support

Key message：The purpose of the deliver and support value chain activity is to ensure that services are delivered and supported according to agreed-upon specifications and stakeholders' expectations. "交付和支持"价值链活动的目的是确保按照商定的规格和利益相关方的期望提供和支持服务。

服务台 Service desk

Key message：The purpose of the service desk practice is to capture demand for incident resolution and service requests. It should also be the entry point and single point of contact for the service provider with all of its users. 服务台实践的目的是获得对故障解决和服务请求的请求。服务台还应该是服务提供商（信息化部门）及其所有用户的单一联系点。

服务请求管理 Service request management

The purpose of the service request management practice is to support the agreed quality of a service by handling all pre-defined, user-initiated service requests in an effective and user-friendly manner. 服务请求管理实践的目的是通过以有效和方便用户的方式处理所有预定义的、用户发起的服务请求，来支持协定的服务质量。
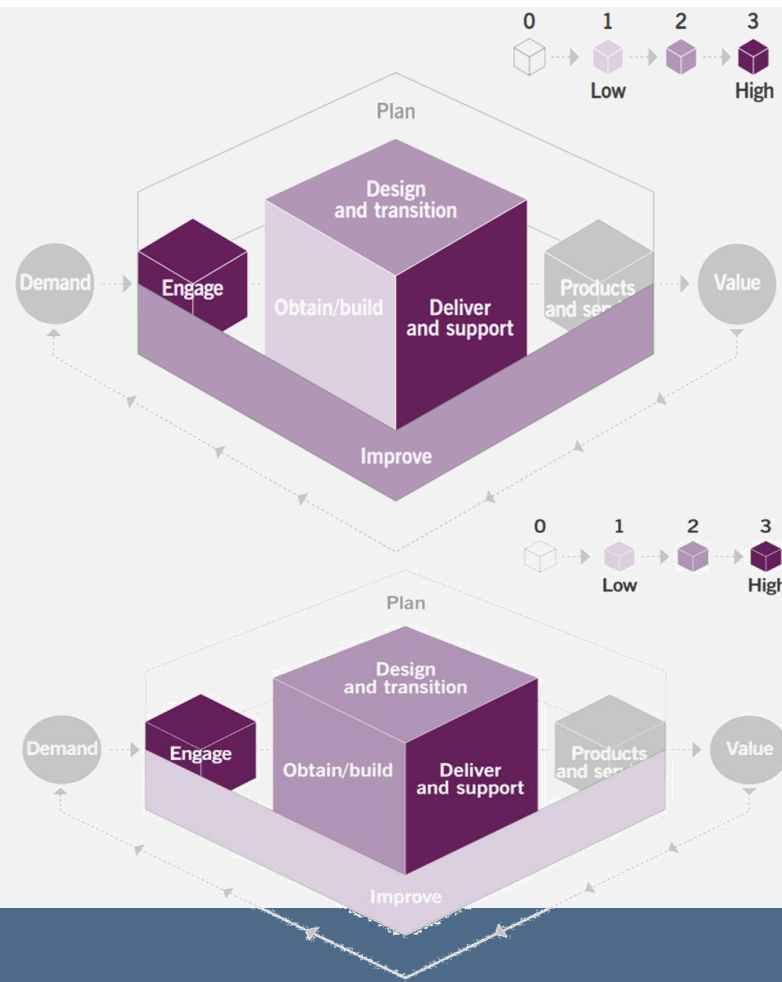
Service Request

Their scale and frequent, low-risk nature means that they are better handled by a separate process. 服务请求的规模大和频率高，且低风险的性质，意味着更适合一个单独的管理过程。

The term 'service request' is used as a generic description for many different types of demands that are placed upon the IT organization by the users. "服务请求" 一词用作用户对 IT 组织的许多不同类型的需求的通用描述。

Many of these are typically requests for small changes that are low risk, frequently performed, low cost etc. (e.g. a request to change a password, a request to install an additional software application onto a particular workstation, a request to relocate some items of desktop equipment) or may be just a request for information.其中许多通常是对低风险的小的更改的请求, 经常执行, 低成本等 (例如, 请求更改密码、在特定工作站上安装附加软件应用程序的请求、重新定位某些桌面设备的请求) 或可能只是请求信息。

Service Request

Incident & Service Request

that there is a significant difference here - an incident is usually an unplanned event, whereas a service request is usually something that can and should be planned!

这里有一个重要的区别：一个故障通常是一个未计划的事态，而服务请求通常是可以并且应该被计划的!

Some organizations will be comfortable letting the service requests be handled through their incident management process (and tools) - with service requests being handled as a particular type of 'incident' (using a high-level categorization system to identify those 'incidents' that are in fact service requests). Note, however, that there is a significant difference here - an incident is usually an unplanned event, whereas a service request is usually something that can and should be planned! 一些组织将舒适让服务请求是通过事件管理流程处理（和工具）和服务请求作为一种特定类型的事件处理（使用一个高层次的分类系统来识别那些"事件"，实际上是在服务请求）。但是请注意，这里有一个重要的区别：一个故障通常是一个未计划的事态，而服务请求通常是可以并且应该被计划的!
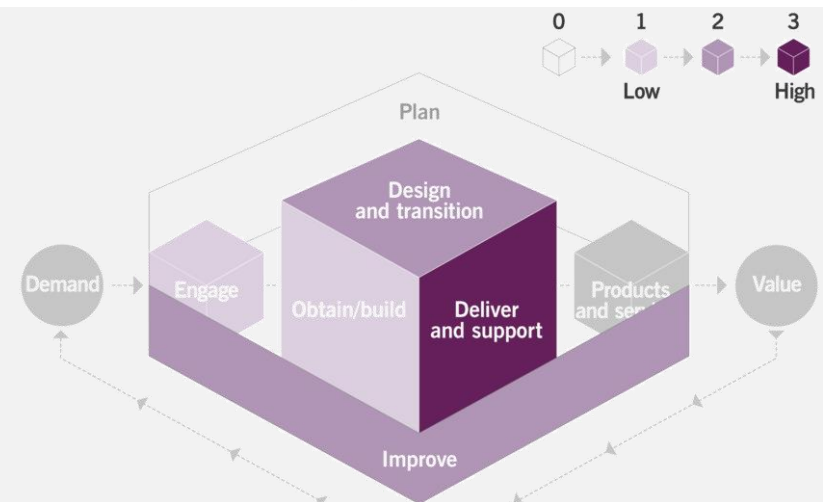
Service Request

交付和支持
Deliver and Support

Key message：The purpose of the deliver and support value chain activity is to ensure that services are delivered and supported according to agreed-upon specifications and stakeholders' expectations. "交付和支持"价值链活动的目的是确保按照商定的规格和利益相关方的期望提供和支持服务。

Input

Knowledge and information about new and changed service components and services from 'design and transition' and 'obtain or build'

OPPORTUNITY OR DEMAND

DELIVER AND SUPPORT

PRODUCTS AND SERVICES

OUTPUT

OUTCOME

VALUE
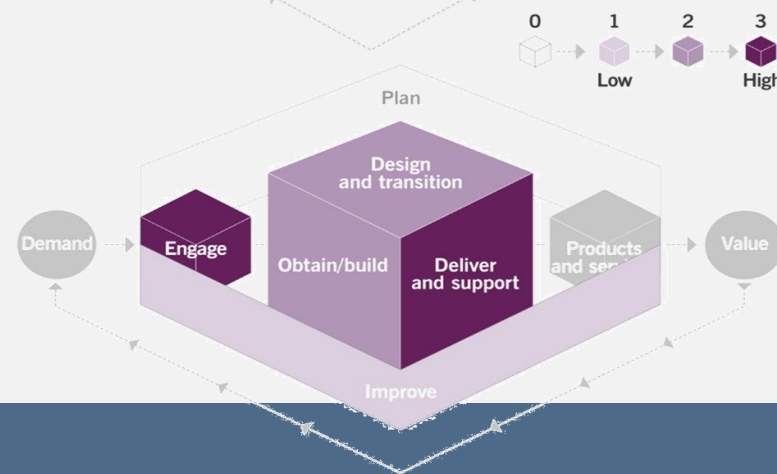
Output

Services delivered to customers and users
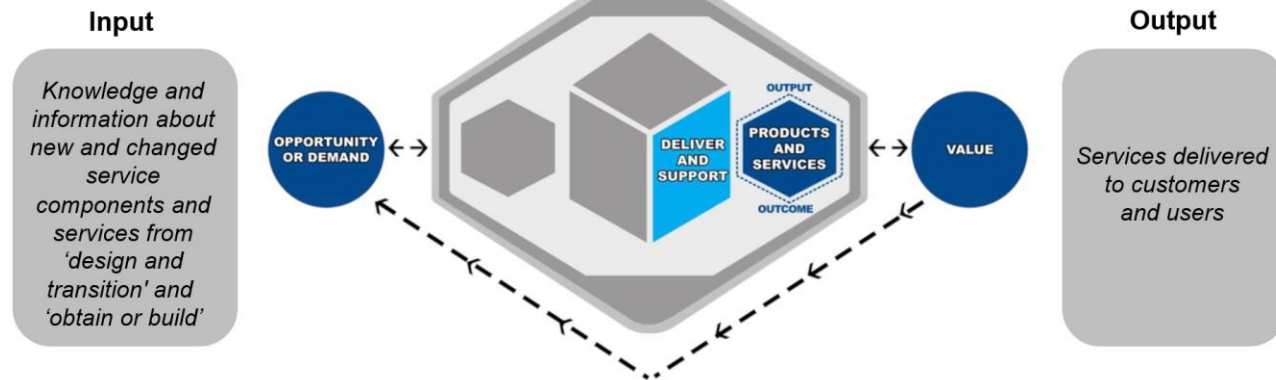
监测和事态管理 Monitoring and event management

Key message：The purpose of the monitoring and event management practice is to systematically **observe** services and service components, and **record** and **report** selected changes of state identified as events. This practice identifies and prioritizes infrastructure, services, business processes, and information security events, and establishes the appropriate response to those events, including responding to conditions that could lead to potential faults or incidents. 监测和事态管理实践的目的是系统化的观测服务和服务组件，记录和报告被识别为事态的状态变化。这个实践**定义**了基础设施、服务、业务流程和信息安全的事态并确定了其**优先级**，并确定了对这些事态的适当响应，包括对可能导致的潜在事故或故障的条件做出响应。

0 1 2 3
Low   High

Plan

Design and transition

Demand → Engage

Obtain/build

Deliver and support

Products and se...

Value

Improve

故障管理 Incident management

Key message：The purpose of the incident management practice is to minimize the negative impact of incidents by restoring normal service operation as quickly as possible. 故障管理实践的目的是通过尽快恢复正常的服务运行，最大限度的减少故障带来的负面影响。

0 1 2 3
Low   High

Plan

Design and transition

Demand → Engage

Obtain/build

Deliver and support

Products and se...

Value

Improve

Basic Concept：Event \ Incident \ Problem

- **Event**；
- **Incident**；
- **Know error**；
- **Service Request**；
- **RFC（Request for Change）**；
- **Requirement**；
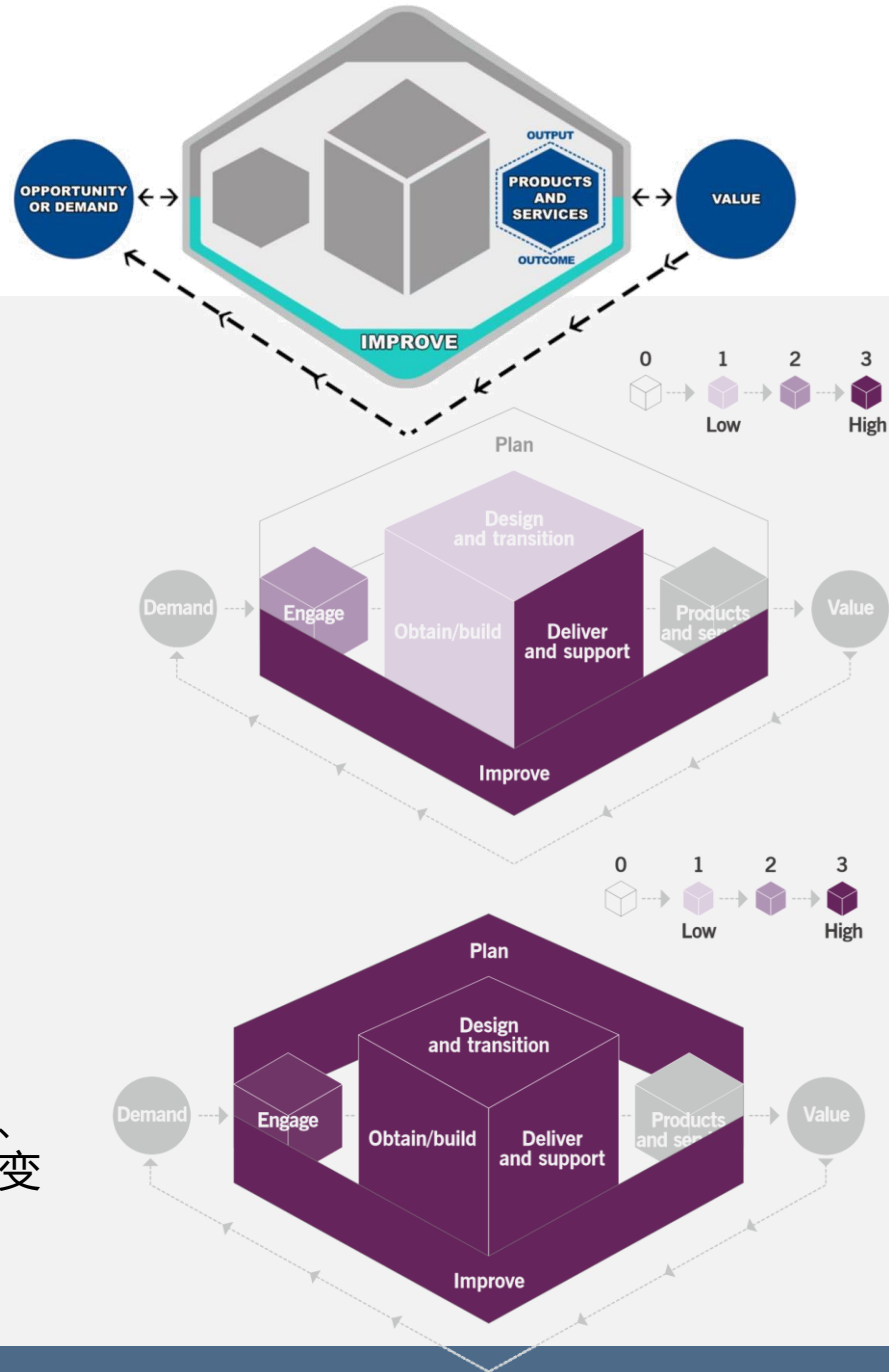
Event ≠ Incident ≠ Problem

改进
Improve

The purpose of the improve value chain activity is to ensure continual improvement of products, services, and practices across all value chain activities and the four dimensions of service management.改进价值链活动的目的是确保在所有价值链活动和服务管理的四个层面对产品、服务和实践进行持续改进。
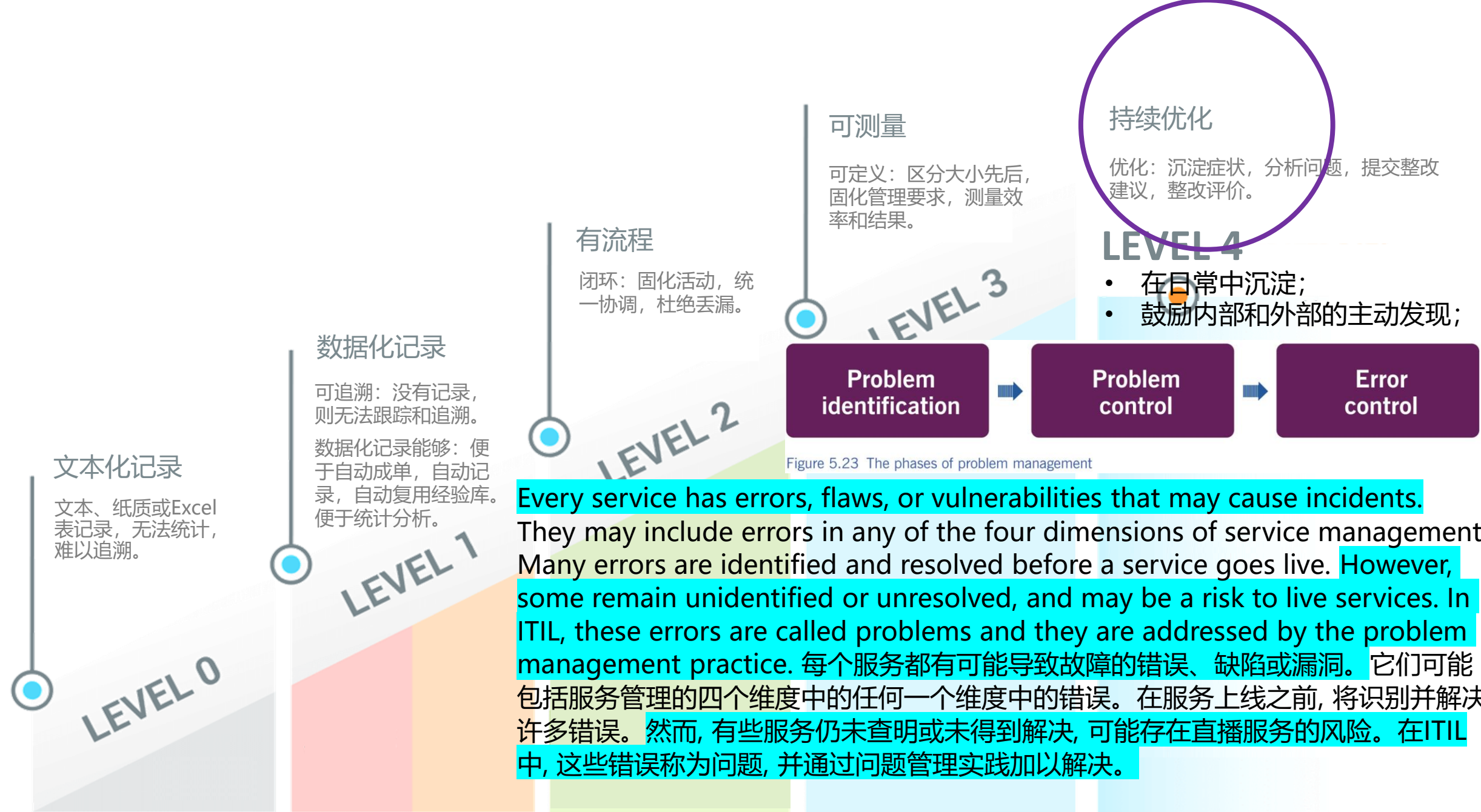
问题管理 Problem management

Key message：The purpose of the problem management practice is to reduce the likelihood and impact of incidents by identifying actual and potential causes of incidents, and managing workarounds and known errors. 问题管理实践的目的是通过识别事件的实际和潜在原因, 以及管理变通办法和已知错误, 减少故障的可能性和影响。

持续改进 Continual improvement

The purpose of the continual improvement practice is to align the organization's practices and services with changing business needs through the ongoing improvement of products, services, and practices, or any element involved in the management of products and services. 持续改进实践的目的是通过持续改进产品、服务和实践，或涉及产品和服务管理的任何要素，使组织的实践和服务与不断变化的业务需求保持一致。

IMPROVE

持续优化

优化：沉淀症状，分析问题，提交整改建议，整改评价。

LEVEL 4
- 在日常中沉淀；
- 鼓励内部和外部的主动发现；

可测量

可定义：区分大小先后，固化管理要求，测量效率和结果。

LEVEL 3

有流程

闭环：固化活动，统一协调，杜绝丢漏。

LEVEL 2

数据化记录

可追溯：没有记录，则无法跟踪和追溯。

数据化记录能够：便于自动成单，自动记录，自动复用经验库。便于统计分析。

LEVEL 1

文本化记录

文本、纸质或Excel表记录，无法统计，难以追溯。

LEVEL 0

| Problem identification | ➡ | Problem control | ➡ | Error control |

Figure 5.23 The phases of problem management

Every service has errors, flaws, or vulnerabilities that may cause incidents. They may include errors in any of the four dimensions of service management. Many errors are identified and resolved before a service goes live. However, some remain unidentified or unresolved, and may be a risk to live services. In ITIL, these errors are called problems and they are addressed by the problem management practice. 每个服务都有可能导致故障的错误、缺陷或漏洞。它们可能包括服务管理的四个维度中的任何一个维度中的错误。在服务上线之前, 将识别并解决许多错误。然而, 有些服务仍未查明或未得到解决, 可能存在直播服务的风险。在ITIL中, 这些错误称为问题, 并通过问题管理实践加以解决。
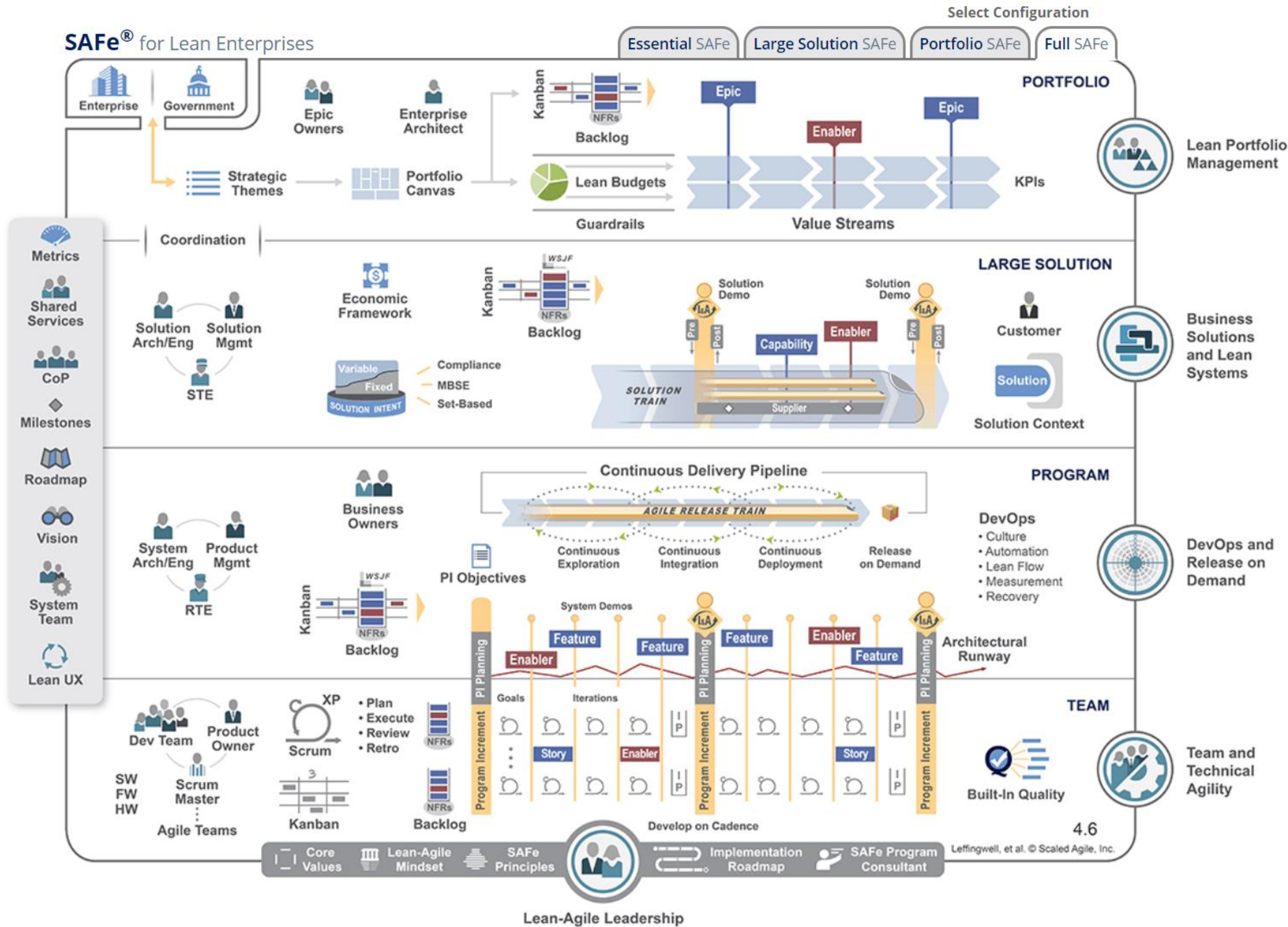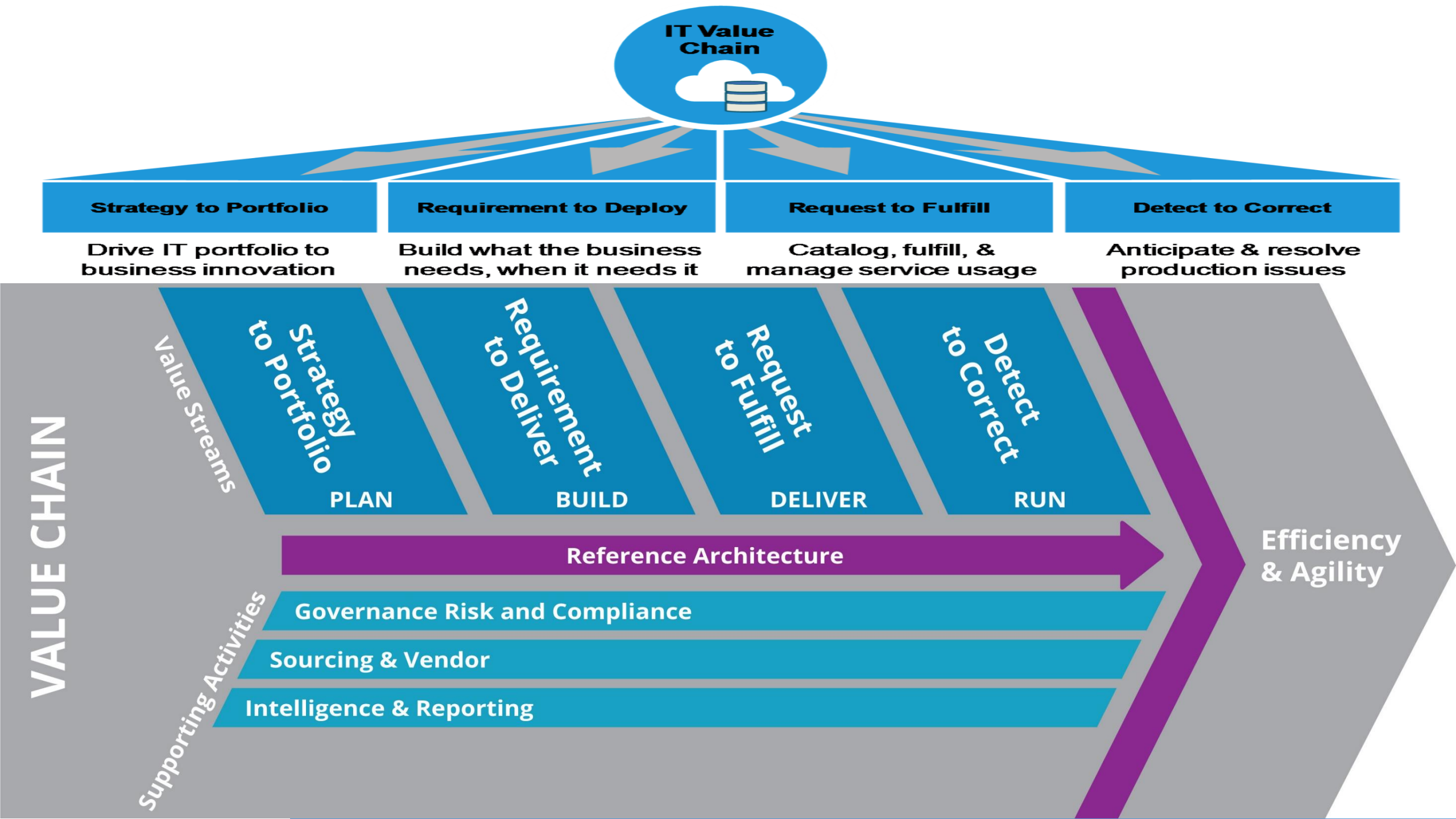
IT4IT

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Management Mesh

DEFINE PRODUCE PROVIDE RESPOND

CONSUMER
verify Review Improve

Service Management Principles

Value Streams

Strategy to Portfolio — Plan

Requirement to Deploy — Build

Request to Fulfill — Deliver

Detect to Correct — Run

Service Model Backbone

Finance & Assets

Finance & Assets

Sourcing & Vendor

Intelligence & Reporting
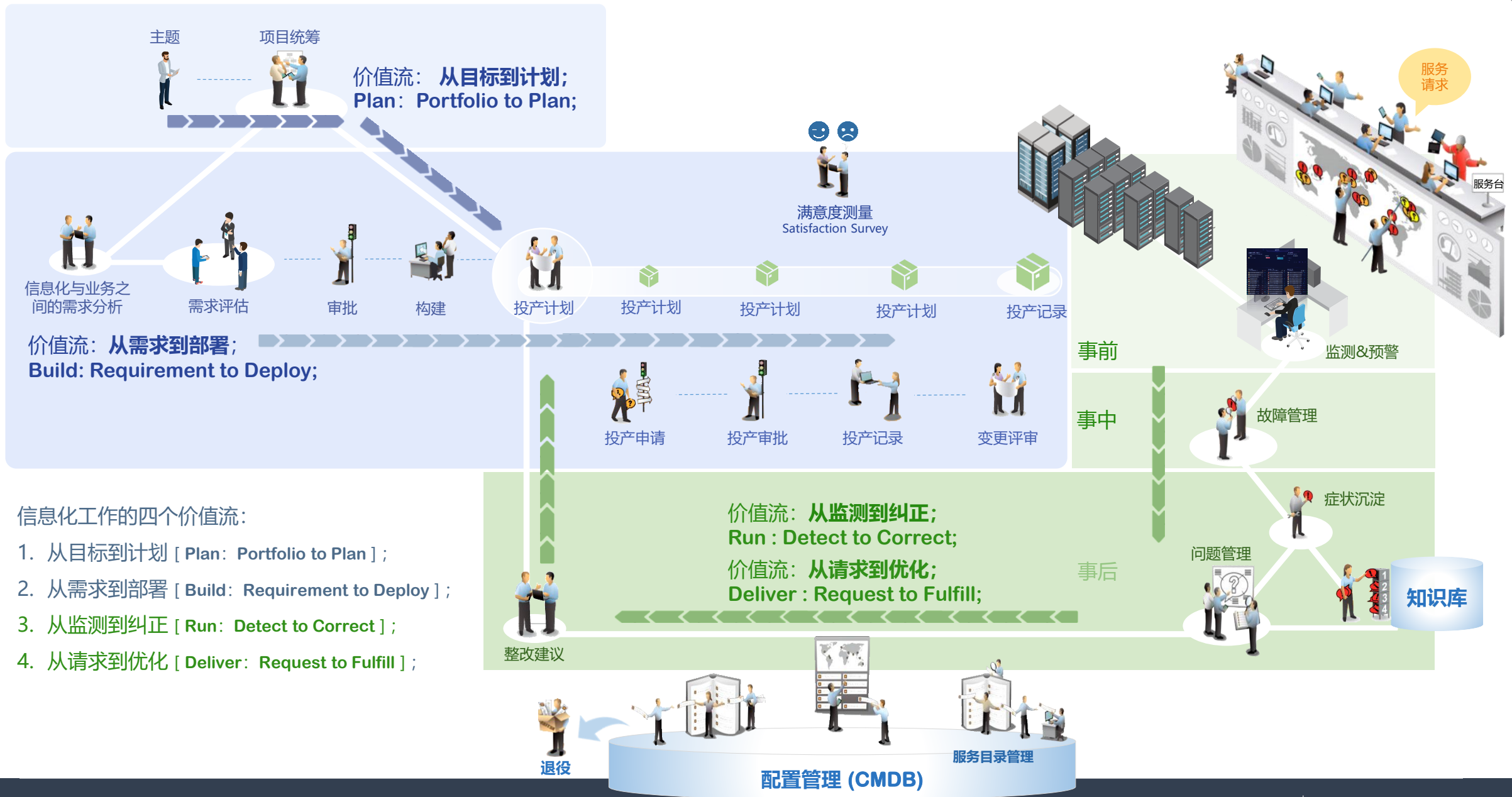
Resource & Project

Governance, Risk & Compliance

Service

GOVERNANCE (including Strategy)

价值流：**从目标到计划**；
Plan：Portfolio to Plan；

主题　　项目统筹

服务请求

满意度测量
Satisfaction Survey

服务台

信息化与业务之间的需求分析　需求评估　审批　构建　投产计划　投产计划　投产计划　投产计划　投产记录

价值流：**从需求到部署**；
Build: Requirement to Deploy；

投产申请　投产审批　投产记录　变更评审

事前

监测&预警

事中　故障管理

症状沉淀

信息化工作的四个价值流：

1. 从目标到计划［Plan：Portfolio to Plan］；
2. 从需求到部署［Build：Requirement to Deploy］；
3. 从监测到纠正［Run：Detect to Correct］；
4. 从请求到优化［Deliver：Request to Fulfill］；

价值流：**从监测到纠正**；
Run : Detect to Correct；

价值流：**从请求到优化**；
Deliver : Request to Fulfill；

事后

问题管理　知识库

整改建议

退役　配置管理 (CMDB)　服务目录管理

Network Intelligence
ChinaNetwork Corporation
汉远网智 IT服务全生命周期管理解决方案

ITIL并不是一把万能钥匙，更不是一个用来解决局部问题的工具。但从来也没有放之四海而皆准的方法，更没有经久不衰的工具。

ITIL虽然不是一把万能钥匙，但信息化的管理不能处于就事论事的阶段。ITIL带给信息化管理一套完整的思想体系。

ITIL is not a panacea to all problems. It is, however, a tried and tested approach that has been proven to work. ITIL并不是解决所有问题的灵丹妙药。然而, 它是一个久经考验的方法。

对于ITIL的态度，我们的建议是**"得其意，即其思想精髓，而不必计较其表现形式"**。

如果体系和流程没有经过设计，那么，它们将会自然发展。如果它们的自然发展没有得到适当的控制，那么这只是对所处环境的被动反应，而非在清晰远景和需求的情况下，做出的正确决策。

我们建立了一个关于信息化管理体系的资料性网站　　www.ITILmap.com

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ITIL V3 音频课程

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