White Paper

IT Service Management Process Maps

Select Your Route to ITIL® Best Practice

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Introduction

The Information Technology Infrastructure Library (ITIL®) has become the de facto standard in IT Service Management (ITSM) best practice and the lens through which the value of IT service is viewed and measured. From its humble beginning as a collection of best practices in 1988, ITIL has almost achieved 'cult' status in IT operations management. And while global adoption rates vary, many IT organizations are turning to ITIL to improve the quality and cost effectiveness of the services they provide to the business.

Many IT organizations, however, start on their IT Service Management journey believing the ultimate goal and destination is to implement ITIL. But as the old adage says, "If you don't know where you are going, any road will get you there". ITIL is a vehicle used to help reach the ultimate destination, which is to improve service. What are really needed are maps that chart a course towards these goals.

This paper presents a unique approach to charting the ITIL journey through a visual representation of the ITIL framework and its interdependent processes, utilizing the concept of an urban underground transport system. Using ITSM process maps as a set of resource guides, it provides IT executives, strategists and implementers with a common reference point for ITIL understanding, communication and successful project planning and implementation.

ITIL Revisited

ITIL can be applied in any organization, regardless of size, type and structure. Like many business quality initiatives, it is based on the principles of W. Edwards Deming, an American statistician who argued that supplying products or services require activities, and the quality of a service depends upon the way activities are organized. Deming's quality cycle (see Figure 1) proposed a system of continuous improvement, with the appropriate levels of quality delivered by adhering to the following steps:

- **PLAN.** Design or revise components to improve results.
- **DO.** Ensure the plan is implemented
- **CHECK.** Determine if the activities achieved the expected results
- **ACT.** Adjust the plan based on results gathered during the check phase.

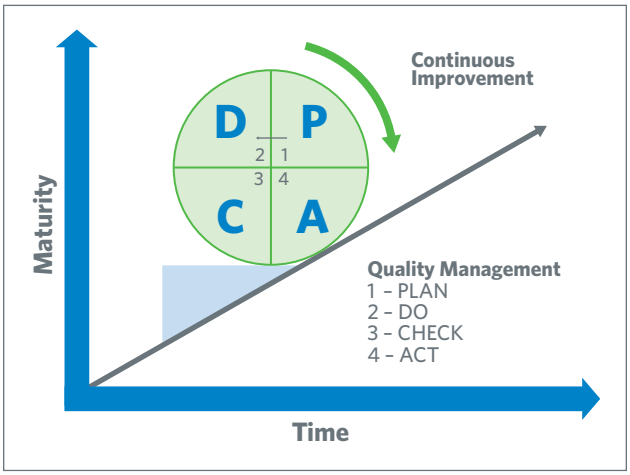

Figure 1. Deming's Quality Circle.

ITIL provides information on numerous ITSM best practices, including detailed process activity requirements, procedures, roles and responsibilities which can be tailored to any organization. These practices have been defined as a series of processes covering the major activities that should be provided by any IT organization. These processes are grouped into two major areas: service support and service delivery.

Service Support. This describes how customers can access the appropriate IT services to support their business. In many ways, service support describes the day-to-day operational foundation services used to meet customer needs (see Figure 2). Service support processes include:

- **Incident Management.** To restore services with minimal business disruption.
- **Problem Management.** To minimize the adverse affect of IT problems.
- **Change Management.** To determine required changes, and implement with minimum adverse impact.
- **Configuration Management.** To identify, control and verify configurations supporting IT services.
- **Release Management.** To ensure that only tested and correct versions of hardware and software are provided.
- **Service Desk (function).** To provide a single, central point of contact for all users of IT within the organization. At a minimum, the service desk function handles all incidents, service and changes requests and provides an interface to all of the other service support processes.

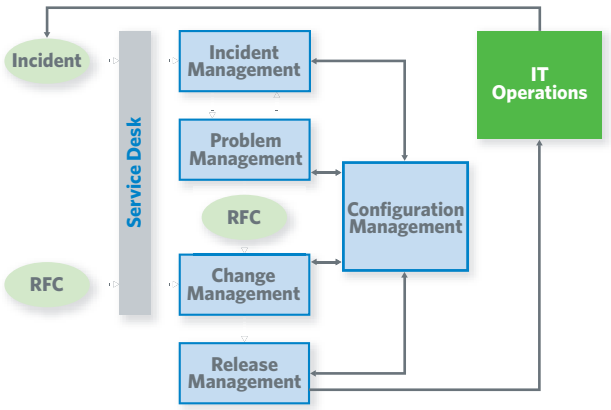

Figure 2. Service Support Processes.

Service Delivery. This describes the five processes that help IT organizations deliver the requisite business services (see Figure 3). Transformational in nature, the processes are concerned with the planning and delivery of quality IT services. Service Delivery processes include:

- **Service Level Management.** To make service agreements with customers about IT services, and to implement and monitor those agreements.
- **Availability Management.** To ensure the appropriate level of resources to support the availability of IT services.
- **Financial Management for IT Services.** To provide cost effective control over IT assets and resources.

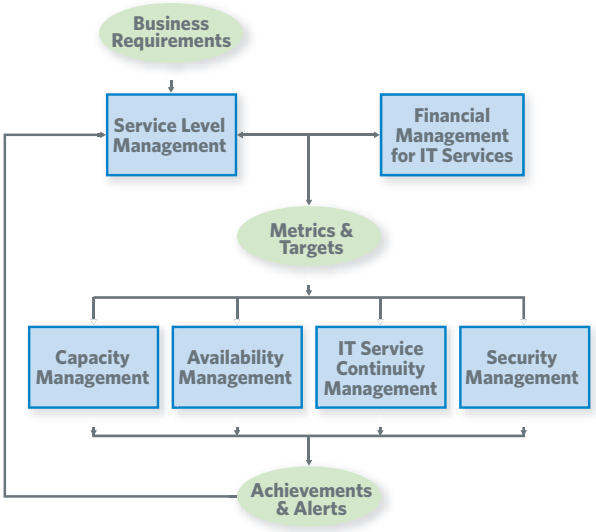

Figure 3. Service Delivery Processes.

- **Capacity Management.** To ensure that adequate capacity is available to meet business requirements, balancing supply with demand.
- **IT Service Continuity Management.** To address the preparation and planning of disaster recovery procedures for IT services.

The ITIL Journey

Many IT organizations are looking to ITIL as a solution without really understanding the problem. A common misconception is that ITIL can be implemented like any technology or application. This may be due, in part, to the technology-centric nature of the acronym (ITIL), or process names themselves (e.g. availability management).

ITIL is a catalyst to change the way an organization operates. Traditionally, IT has operated in functional silos with separate goals and objectives. But in today's environment, IT must become a service oriented culture, where cross-functional teams are unified in the common pursuit of service excellence. ITIL is founded on this premise, but ITIL itself cannot change an IT organizational culture. Senior IT and business management must also endorse ITIL. Endorsement from the business is particularly critical for success since ITIL is not an IT project, but a program focused on driving business growth and aligning business and IT processes. Confining ITIL to the IT department is a recipe for disaster, since there will be no mutual agreement on overall business objectives and deliverables. In addition, the optimization of many ITIL processes, such as Service Level Management, is dependent on the collaboration between business and IT

ITIL—Descriptive –v- Prescriptive

For the most part, ITIL describes what needs to be done to improve service without explaining how to do it. Simply having ITIL documentation describe repeatable management processes will not translate into actual service improvement. Organizations need to take the descriptive elements of ITIL and prescribe the actionable guidelines and blueprints to put ITIL theory into IT Service Management best practice. In many ways, navigating ITIL can be like trying to find your way across an urban underground transit system using a multi-volume street atlas. You know where you want to go, but too much detail and superfluous information will not help you optimize your journey, especially if you have to change lines to arrive at your destination.

A Lesson from Engineering History

London's massive underground transit system is a marvel of engineering. Similar to the ITIL framework it comprises a series of linked tracks (like ITIL processes), with careful consideration to given to the placement of junctions that would facilitate optimum transportation. Much like the ITIL framework, the whole was perceived to be an integrated piece, with many moving parts to coordinate and manage.

For the benefit of travellers a single map of the entire underground system was produced. It presented every track and junction point in a clear and simple way, ignoring irrelevant details and enabling everyone to easily navigate their way across the network.

Continuous Improvement

Many organizations start their ITIL journey with a narrow focus on service support processes. But planning to implement just one process without thinking of the impact on other processes will lead to "continuously revisiting" instead of continuously improving." For example, ideal Incident Management is difficult to achieve if most incidents are the result of unauthorized change activities. In this case, a journey towards improvement in one process will involve many side-routes.

ITIL implementations should be looked at holistically, using the principles of Deming to drive and ensure that continuous improvement is always being applied. The relationships between ITIL processes must always be considered with rigorous attention to their place and role in a continuous improvement cycle of PLAN, DO, CHECK and ACT (P-D-C-A).

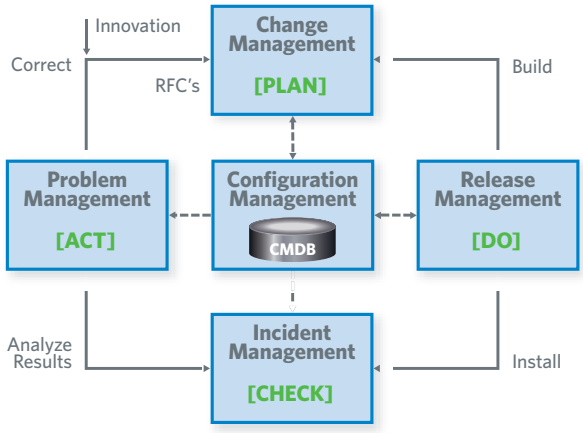

Figure 4. Continuous Process Improvement.

Consider Figure 4, and the relationship between Change, Release, Incident and Problem Management. Here we can see that Change Management should be considered as a PLANning type process, with the specific goal of introducing IT improvements, often based on business imperatives. Release Management implements the changes (a DO activity), and Incident Management is a CHECKing process, determining if the activities achieved the desired results, by monitoring any incidents introduced as a result of the change.

Problem Management finds the root-cause of any problems introduced and feeds this back, often in the form of Request for Changes (RFC's) to the Change Management process. Thus, the continuous improvement cycle starts again.

The ITSM Subway or Underground System

Of course, IT Service Management is far more complex than an underground transit system However, the analogy of a transit map—be it the London Underground, New York subway system or Paris Metro—can be applied to good effect in ITSM.

By visualizing the ITIL framework in a similar fashion to the underground transit maps, it is possible to clearly illustrate every process (or track), each activity (or station) and the key interfaces (junctions) that are needed to chart and navigate a journey of continuous IT service improvement.

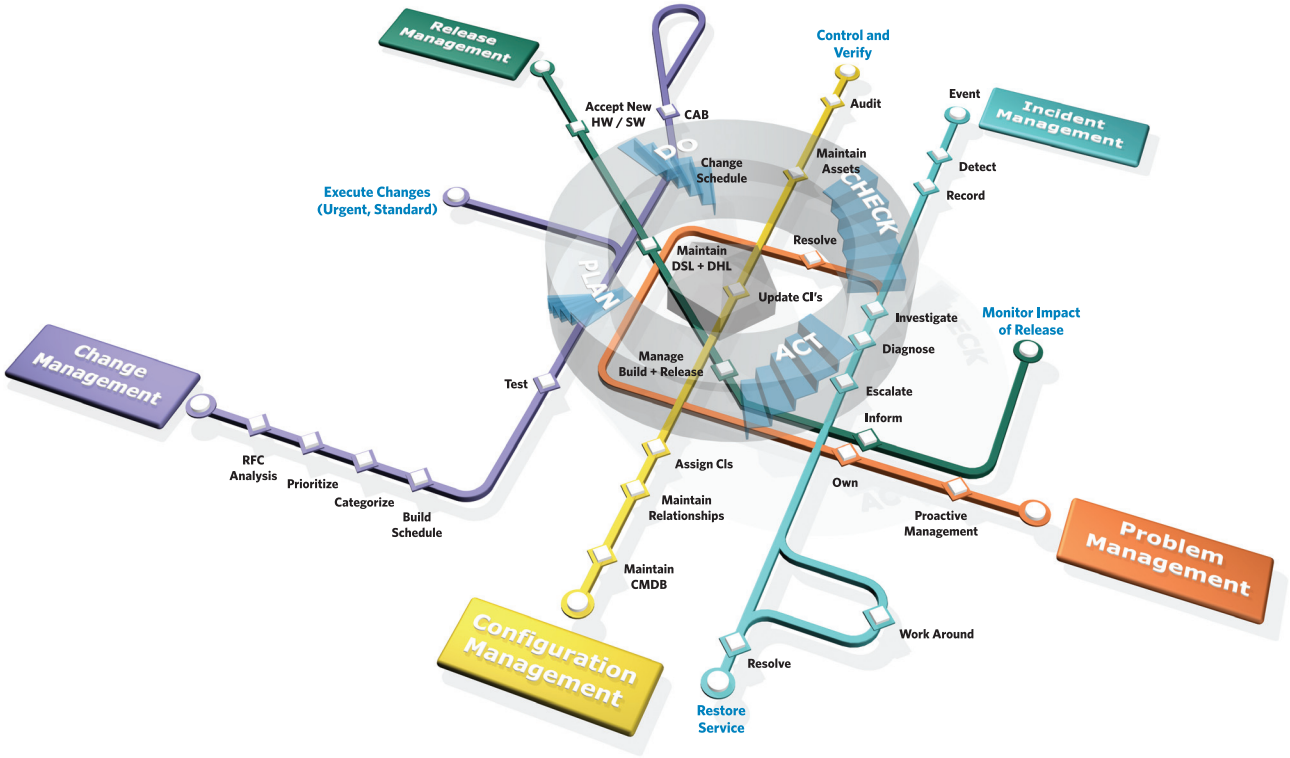

Figure 5. The Service Support Subway.

ITIL is Simple (Really, it is)

Two basic concepts explain how ITSM and ITIL can be viewed in the same way as a subway system or underground transport map. First, as discussed above, best practices—including ITIL—are based on the Deming quality cycle of 'Plan-Do-Check-Act; and focus on gradual continuous improvement using this approach. The second is a means to assess and measure improvement.

In IT, the most common method is to assess levels of maturity using the capability maturity model (CMM) developed by Carnegie Mellon University or one of the models based on similar principles. This approach is relevant for the current and next release of ITIL, which will continue to be based on the Deming principles and levels of maturity.

CA's ITSM Process Maps

With the ITSM process map concept, we are simplifying ITIL in terms of abstracting and presenting a sensible, clear, and easy-to-understand visual framework. As with subway and underground transit maps, CA's ITSM process maps provide only the relevant information needed to chart a journey.

We have created two process maps: Service Support (see Figure 5) and Service Delivery (see Figure 6), since most ITSM discussions are focused around these two critical areas.

The Service Support map represents a journey of improving day-to-day IT service support lines that are the foundation upon which to build business value.

The Service Delivery journey is more transformational and shows the processes that are needed to support future business requirements.

The two maps also illustrate how increased organizational maturity 'levels' are achieved by planning holistically so that operational, tactical and strategic processes are discussed at the outset. With proper planning to how the "levels" will be achieved, the goals of both business and IT will be considered for your ITIL and ITSM projects.

Close examination of the maps shows that the P-D-C-A cycle has, in effect become a 'circle' or 'central' line of the continuous improvement cycle. The ITIL process 'tracks' are located in the most appropriate location to a P-D-C-A 'junction' to illustrate both process inter-relationships and 'direction'. Notice too, how major ITIL process activities become the 'stations' on the route towards a goal or 'destination'.

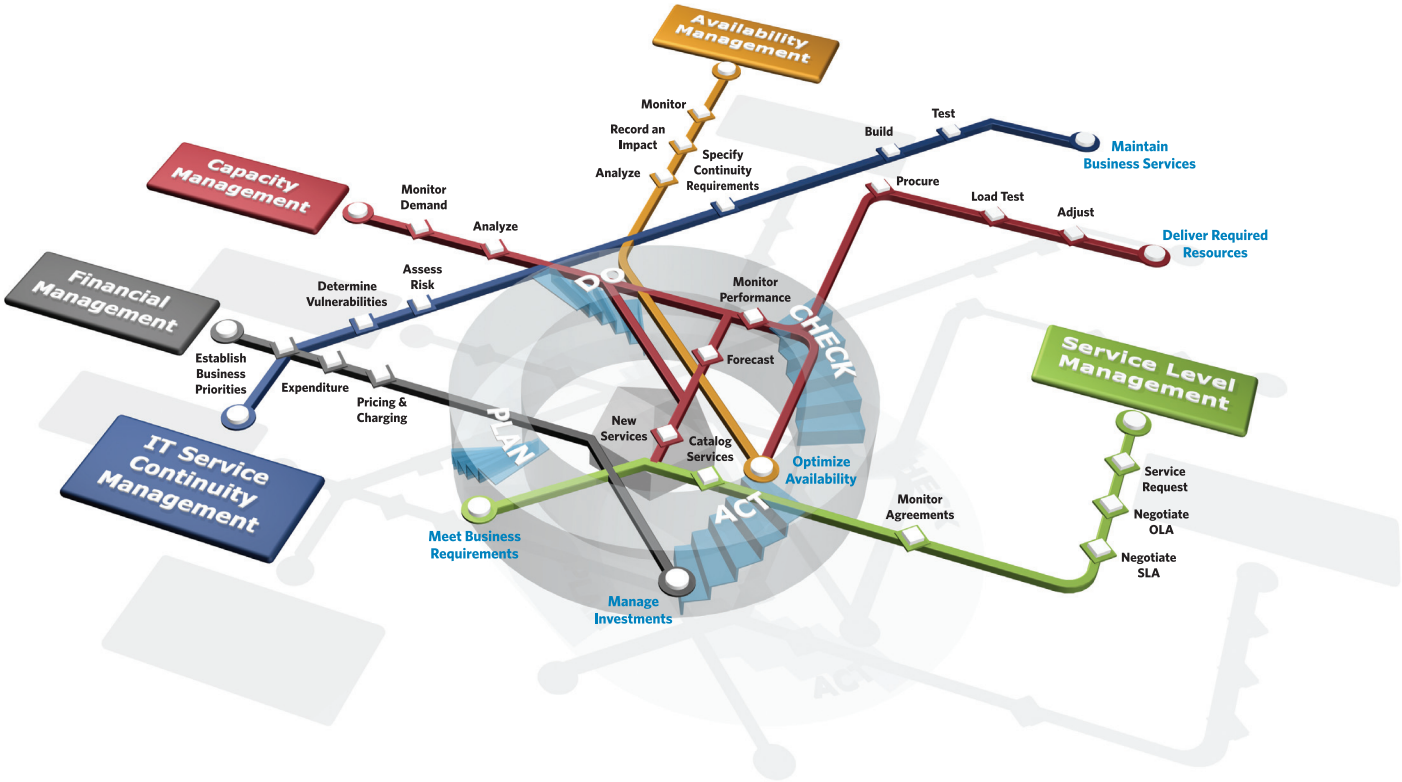

Figure 6. The Service Delivery Subway.

ITIL can't be definitive because of the broad nature of the guidance—but it can be illustrated in a manner that enables us to think about the big picture journey without getting too distracted by the all the ITIL documentation and detail.

If we select a 'track' that we feel is most important to our organization, the P-D-C-A junctions also serve as reference points to ascend or descend to another track level, or as a means to think about the planning implications or review issues when deciding to implement a process in isolation.

An Example Journey

The most commonly 'implemented' ITIL process is Incident Management. The track shows the most important sub-processes, or stations, but it doesn't attempt to contextualize the business issues or IT support. It crosses the CHECK junction because it gauges the effectives of other processes. Of course, the main purpose of Incident Management is to restore services so it makes sense that the ACT junction station is also crossed.

Along the route towards the destination or Incident Management terminus ('Restore Service') all the stations or process activities that need to be in place for process optimization are illustrated. Notice too, how the major P-D-C-A junctions serve as a means to gather inputs from other process tracks, or even change direction if the need arises. For example, Incident Management will never be optimized if unauthorized changes are introducing more incidents. Finally, these junctions also serve as 'elevators' to higher levels of IT service management maturity. For example, a baseline of support performance can be used to better negotiate Service Level Agreements.

As ITSM continues to mature, most organizations will want to link Incident and Problem management. From Figure 5, you will see that the Problem Management track starts out at the ACT junction because it is a process focused on eradicating problems. It then proceeds right through the P-D-C-A cycle. Why? Because we need to consider how process relationships will drive continuous improvement. For example finding the root-cause of a problem will result in the need for a change request, which when accepted will need to be deployed by the Release Management process.

And what holds everything together? Configuration Management, which drives right through the heart of Change Management and the P-D-C-A cycle. Notice too how the Release Management track ends near the start of Incident Management. This is because every time a change is released, we could see more incidents.

CA's ITSM process maps provide an excellent way of visualizing the journey of continuous improvement and can serve as a common point of reference for managers, practitioners and implementers alike. To support more detailed analysis, CA's ITIL experts have prepared individual ITIL process track white papers. Each white paper illustrates the major process goals, and illustrates each process activity or 'station' throughout the journey that needs to be optimized. Additionally, the role of technology is discussed as a means of integrating and automating ITIL processes, activities and workflows. Thought leadership and white papers are available in the following areas:

Service Support

Incident Management. Discusses the journey towards restoring service, the major process activities, and the critical role technology plays in rapid incident detection, diagnosis and resolution.

Problem Management. Shows what is needed to proactively prevent the occurrence and reoccurrence of major IT problems, taking into consideration techniques for rapidly identifying the root cause of infrastructure breakdown.

Change Management. Discusses the critical methods and procedures needed for the efficient handling of all changes with minimal adverse impact on the business.

Release Management. Examines the activities needed to support the implementation of authorized software changes within IT.

Configuration Management. Guides the reader along the critical journey of identifying, controlling, and verifying configuration components supporting IT services.

Service Delivery

Organizations that are planning to implement service delivery generally have either implemented most service support processes, or have recognized delivery issues to the business as being more critical. In both instances, the organization is at a higher level of planning and maturity. Unfortunately, most ITSM reference material provides little guidance on these more transformational processes. To help fill this void, CA is providing thought leadership material in the following areas:

Service Level Management. Guides the reader on the journey towards agreeing, reporting and monitoring IT service achievements in accordance with business objectives, Here the critical role a Service Catalog plays in building and presenting customer facing IT services is discussed.

Financial Management for IT Services. Takes the reader on a journey of 'managing IT as a business', discussing strategies in costing IT services, budgeting, and chargeback.

Capacity Management. Describes the activities that enable IT to understand future business requirements of IT resources, balancing supply and demand.

Availability Management. Discusses the journey of delivering sustainable and cost effective availability of services.

IT Service Continuity Management. Examines the measures that need to be in place to support overall business continuity.

Conclusion

The destination of any Service Management project is to improve service by optimizing technology, controlling costs and utilizing the appropriate level of resources. To this end, ITIL provides an excellent vehicle upon which to develop a program of continuous improvement.

Remember, though, that ITIL is a series descriptions and guidelines, and doesn't prescribe a solution. Failure to look at ITIL goals holistically and consider the bigger picture will result in constantly revisiting completed work.

CA's ITSM process maps present the big picture. By establishing a comprehensive, visual representation of the overall ITIL framework and the interdependent processes, IT staff of all levels of expertise can be easily guided during the course of their IT planning and implementation efforts. CA's unique process maps are a strategic component of CA Service Management Accelerator, a solution designed specifically to unify people, process and technology in common pursuit of IT service excellence.

By standardizing and automating the full range of ITSM processes, CA Service Management Accelerator enable ITIL processes to be optimized, enabling low-cost delivery of consistently superior service.

To deliver value quickly and assuredly, CA provides a rich set of software solutions for ITIL process automation, ITIL education, workshops, maturity assessment services and implementation blueprints — both directly and through world-renowned ITIL partners

For more information please visit www.ca.com/itil

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