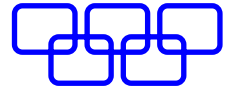RL Consulting

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Key Attributes of
IT Service Management Systems

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Overview

The following is a list of those key attributes of IT Service Management (ITSM) Systems that must be in place to help ensure its effectiveness and efficiency. These attributes can be used to determine the factors for the operations of ITSM systems as well as their evaluation for utility and warranty.

- A. Timeliness and Accuracy
- B. Data Quality and Completeness
- C. Completeness of Solution
- D. Enterprise-Wide Service Management
- E. Enterprise Relevance and Marketability
- F. Operational Availability
- G. Time to Recover
- H. Visualization and Actionable Insights
- I. Usability
- J. Productivity
- K. Extensibility
- L. Compliance
- M. Automation

A. Timeliness and Accuracy

The ability to provide data and information that is both timely and accurate is a critical criterion when selecting ITSM provisioning systems. Timeliness and accuracy is critical for all ITSM processes that a typical system supports, and in particular for Incident, Problem, Change, Release, and Configuration Management. Timely and accurate information is especially important for the Configuration Management Database ("CMDB"), because that database aligns the informational "logical" representation of all installed technology (i.e., hardware, software, telecommunications and configurations), with the "actual world" of that installed technology. Many processes and functions within IT rely on CMDB data – incorrect or out-of-date data can have a severe impact on Business Services.

This overarching theme of Timeliness and Accuracy of data and information is a critical and basic requirement that can be found in each of the other key attributes listed below. As such, the level of timeliness and accuracy directly affects the quality of Business Services, customer satisfaction, impact and cost to the customers and their businesses, and plays a larger part in the decision making processes of evaluating and ultimately purchasing the necessary and appropriate ITSM provisioning systems.

Timeliness and Accuracy is equally important to any process requiring an urgent and effective response, such as diagnosing the root cause of an incident, or making correct and appropriate changes to the environment.

B. Data Quality and Completeness

Especially relevant in the CMDB and associated data-centric capabilities, including discovery and dynamic updates, is the value of Data Quality and Completeness. Having incomplete, or oftentimes even worse, inaccurate data in a CMDB is a primary cause of disruptive change (operational incidents caused by changes in the environment). Disruptive changes are typically a

leading cause of operational downtime. Operational Availability is a top priority business services issue in IT operations - thus any capability addressing data and information Quality and Completeness is critically important.

C. Completeness of Solution

Another critical criterion when selecting an ITSM software solution is the Completeness of the Solution, where Completeness includes the ability to continuously add new capabilities and improved functionality. This is especially true for those software capabilities that are complex to implement or change. Customers ultimately choose a long-term partner when selecting complex software, especially ITSM software, relying on that partner's ability to keep up with technical and business changes over time. Any shortcutting in the areas of research and development investment and invention process falsely portrays the ability to continuously innovate.

This long-term partner relationship between ITSM vendor and customer is also based on the resources a company initially spends to implement and adopt the complex system. For this reason, previous selections of ITSM software are not easily changed, thereby impacting an ITSM company's market share. In addition, many decisions are directly influenced by input available through companies such as Gartner, which maps vision against "ability to execute", which is a direct reflection of Completeness of Solution.

The Completeness of Solution also requires end-to-end integration across all of its individual capabilities on a shared data platform. To this end, a Complete Solution needs to offer end-to-end visibility into processes and infrastructure, through a single system of record, with process and data models supporting all enterprise-wide service management. This extension of the boundaries of IT Service Management into Enterprise-Wide Service Management provides a "horizontal" solution that closely links Business Services to IT service provisioning with the same integrated benefits.

From a complexity perspective, a more complete and integrated solution means fewer discrete, "vertical" oriented point-type solutions, fewer interfaces, less architectural complexity, less cost, and, ultimately, more accountability from fewer ITSM solution vendors. A "complete" and integrated software solution creates enormous customer attractiveness but can make changing solution providers extremely challenging and costly, as the platform now covers so many of a customer's application or tool needs.

D. Enterprise-Wide Service Management

Enterprise-Wide Service Management can be described as applying an ITSM service model to use cases beyond IT to include Business Services in a "horizontal" perspective (i.e., HR, Facilities, Field Services, etc.). Such an expanded perspective greatly assists in enabling all the benefits provided by automation and end-to-end integration as applied to Business Services and associated processes.

Through this expansion, all the benefits of Extensibility and Usability are made available to all use cases of service management, both in IT and beyond into Business Services. In addition, Enterprise-Wide Service Management allows enterprises to optimize resources and to think strategically with visibility to key business information to help management personnel, projects, compliance and vendors. These added capabilities beyond IT processes include financial management, project/portfolio management, governance, security, risk and compliance, and

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vendor management. All of these business service areas take advantage of the same integrated CMDB and its advanced visualization and reporting techniques, as well as the Extensibility capabilities to tailor the processes and data to each unique set of customer requirements. In summary, it is critical that when applying an ITSM service model to align IT service provisioning to satisfy Business Service requirements, there is a reliance on an integrated CMDB, advanced visualization and reporting and Extensibility in order to make it possible.

E. Enterprise Relevance and Marketability

The above attributes generally become more relevant and critical with increasing service management implementation size and scope; the scaling of assets and configuration items from hundreds to hundreds of thousands, which directly affects the Enterprise Relevance and Marketability of the ITSM solution as well as its applicability. Larger enterprises require high degrees of automation, design, visualization, and flexibility that smaller organizations typically do not. The extent to which an enterprise could use automation capabilities, as discussed below, determines greater degrees of manual workarounds which would mean it would become increasingly uncompetitive the larger the enterprise segment becomes.

F. Operational Availability

Although cost is a critical decision making evaluator, one of the most important metrics of Business Service value for IT operations is the percentage of scheduled operational time that the service in question is operational; this metric is generally referred to as "Operational Availability." Thus, for example, a system that is designed for "24-hour, round-the-clock" operations but which is unavailable for 1 hour on a given day has Operational Availability of 96% for that day, and would therefore be unacceptable.

Conversely, any capability that helps maintain Operational Availability by reducing incidents and/or problems caused by change, or, when incidents do occur, accelerates the detection, root cause identification, and corrective action for that incident, has significant value across businesses and industries.

G. Time to Recover

As noted above, Operational Availability is one of the most important metrics of business service value for IT operations. Accordingly, when operations of the service become unavailable, it becomes critically important to restore availability as rapidly as possible. The time from when Operational Availability is lost to the time it is restored is known as Time to Recover (or Recovery Speed).

Although the impact and priority of an incident or problem can differ (i.e., downtime in a non-production environment vs. a mission-critical application), the capabilities that influence availability or recovery of business operations are critical. For example, if a mission-critical application is impacted by downtime, the organization may lose its revenue generating operations and/or important customer-facing operations. In such circumstances, the company is intensely focused on the Time to Recover those operations and the restoration of normal, agreed upon Business Service.

H. Visualization Enabling Actionable Insights

One of the most important business values associated with an integrated service management platform is that of advanced visualization with integrated metrics tracking. This visualization often presents itself as graphically oriented displays and dashboards. It enables not just effective reporting, but also improved insights that help organizations identify and address problems or potential problems sooner.

Performance Analytics include KPIs (key performance indicators) and metrics visualization that are related to any service management process and derived from Service Level Agreements (SLAs). This is a major area of focus for any viable ITSM service solution.

Some of the key values include automation of recurring metric reporting across a wide variety of users given them "actionable insights and performance scorecards" they can use to drill down and evaluate business or operational health by comparing them to agreed upon service levels.

This is an important capability requiring intelligent visualization schemes and special capabilities to identify root causes, scope of impact and other "insights" in a simple and intuitive way. This includes the extensibility of these reports both in visualization as well as their ability to consolidate metrics from external data sources.

I. Usability

Many of the functions of Service Management are performed under time-pressure and in complex environments. For this reason, Usability of software tools is paramount. The ability to easily recognize issues, solve problems and handle complexity without compromising quality means the tools need to be intelligent, easy to understand and easy to use. Time equates to money in most IT operations and is a critical criterion for all ITSM software.

J. Productivity

The capabilities of an effective and efficient ITSM solution are affected by the effort (workload, amount of resources, time and associated cost) required to perform one or more specific ITSM functions. It is typical that many ITSM issues occur repeatedly, in high volumes, such that it is essential that in an ITSM system solution it must minimize the amount of effort and work required to address these issues. Productivity or the efficiency of any effort is a critical success factor for all operations. Subsequently, it is also true that any lost productivity and unnecessary effort and associated cost of that work is amplified in larger or more complex organizations.

K. Extensibility

Especially true in the Enterprise segment, no two customers are the same. Application Environments, hardware configurations, and software tools are different across customers, and each customer has to manage across various levels of complexity. For software to successfully fit into the unique environments and requirements of each customer, some form of Extensibility or configurability is required. In this context, Extensibility represents the ability for a software capability to be customized or localized for the particular and unique requirements of each customer's environment.

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Discovery functionality plays a key role within any ITSM solution. This includes the ability to customize discovery commands, fields, tables and relationship descriptions as well as the easy bi-directional integration with other sources. The Extensibility of Discovery in particular is regarded as critical to the value proposition of that capability.

L. Compliance

As stated earlier, the accuracy of the CMDB is a critical attribute that directly impacts Operational Availability. However Timeliness and Accuracy also affects business requirements in the area of legal and regulatory compliance. For example, the accuracy of actual vs. contractually licensed usage of software products, identification and appropriate isolation of payment card industry holding assets, appropriate patching, and security provisions, etc., are all important factors in compliance. Compliance assurance is a very costly effort when done reactively and out-of-compliance penalties can have dramatically negative financial legal impact.

M. Automation

It is critically important for a competitive ITSM system to be as highly automated as possible. Automation in this context is that the ITSM solution minimizes the amount of manual (human) interaction or control, and instead works based on its own processes and functionality. Automation of technical, administrative and management processes from service requests to configuration changes to any repetitive task is a cornerstone of any viable ITSM service solutions' value proposition for IT service management, Business Service Management and other Business Service functions (such as HR, Facilities, Field Services) so its value of automation is consistently identified in all domains. There is also a strong connection between Automation of processes and the assumed, integrated quality of the database or CMDB.

Conversely said, Automation on inaccurate, untimely, or slow to access data, is appropriately identified as a major risk for many companies, and a failure from many software providers. ITSM systems generally can operate much more effectively, with more Timeliness and Accuracy if they are more Automated. For example, an ITSM system solution that can pinpoint a problem using its own built-in functionality will generally be able to do so much more quickly and more accurately than would be the case if a human operator needed to manually assess data in an attempt to pinpoint the same problem.

Automation is also important for the overall cost-effectiveness of any operation from a cost of the workforce perspective. Organizations with a high degree of automation can grow more cost effectively because the operation can scale without requiring the same growth in resources. This is a critical decision making criteria for enterprises hoping to manage their cost structure.

Most, if not all, of the key ITSM attributes described above are generally enhanced through use of Automated systems. This includes Timeliness and Accuracy, Data Quality and Completeness, Completeness of Solution, Enterprise-Wide Service Management, Enterprise Relevance and Marketability, Operational Availability, Time to Recover, Visualization and Actionable Insights, Usability, Productivity, Extensibility and Compliance.

It should be noted that a system would be able to implement new features and requirements more effectively on an Automated basis as opposed to requiring a company's personnel to implement the new features manually. As such automation reduces errors and increases efficiency.

Conclusions

Key Attributes of ITSM Systems Solutions are varied with the priority of each attribute being contingent upon customer requirement and need. However, a common theme across all attributes is how effective and efficient the solution is considered to be in both its appplicability and operational reality. In other words, these attributes can be used to determine the factors for the operations of ITSM systems as well as their viability as an evaluation of their utility and warranty.