

MAXIMIZING VALUE IN ITSM PROGRAMS THROUGH SIAM

Abstract

The high operational cost of ITSM programs has been an ongoing concern for CIOs. There is consistent pressure to reduce it, year-on-year. However, ad hoc efforts for cost reduction such as resource reduction / movement and modification of service hours cause turbulence in the production environment, resulting in customer dissatisfaction. At the same time, business stakeholders expect ITSM teams to go beyond operations by maximizing the value to overall business. This paper provides proven ways of leveraging SIAM function for overall service improvement and transformation. It also supports the point of view with a strong case study of an existing ITSM program.

ITSM and service integration

IT Service Management (ITSM) programs are about implementing and maintaining IT services for customers through an appropriate mix of people, processes and technologies. The team responsible for the quality and availability of a particular service is called the service management team. It manages service transition, operations as well as continuous service improvement.

Service Integration and Management (SIAM) is a horizontal

function operating within ITSM programs for catering to multiple services. SIAM plays a key role in on boarding and integrating services and partners and providing a unified IT service view to end users and business stakeholders.

The SIAM function integrates all ITSM processes (Figure 1) across partners, delivering significant benefits (Figure 2). Problem management is a critical function undertaken by the service integration team.



Figure 1 - Typical ITSM processes

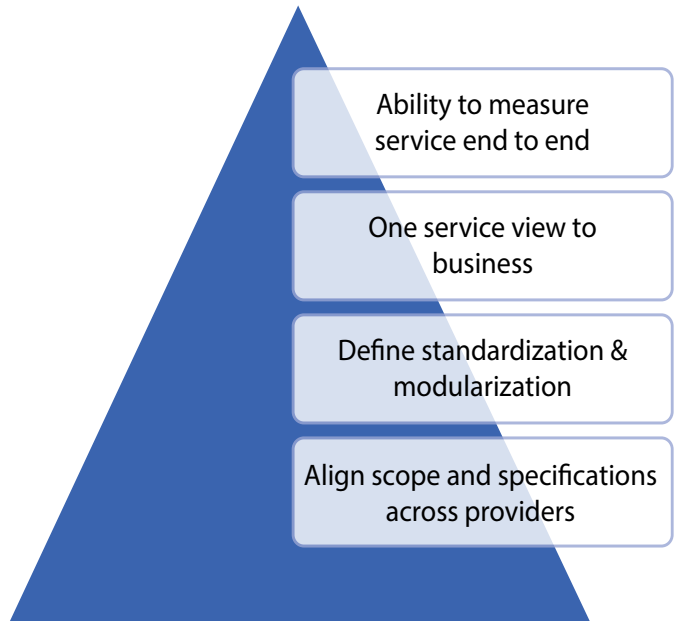


Figure 2 – Benefits of SIAM



Problem management

Problem management involves root cause analysis (RCA) of incidents, predominantly major incidents (P1/P2) that have a high impact on businesses, stakeholders and systems. Incidents are scrutinized by the respective teams via qualitative RCA. Insights from an RCA guide actions to avoid repeat incidents. Such actions may range from a request for changes in product / application code and process re-engineering to a change in user behavior. This is known as 'reactive' problem management.

Traditional ITSM programs cannot ensure 100% on-time closure rate for reactive problem tickets. Further, they do not address proactive problem management.

Proactive problem management

In the proactive approach, the root causes of incidents are identified prior to their occurrence through a historical analysis of incidents. Here, specific patterns of incidents are identified from historical data and grouped together. The incidents may not be similar to each other, but their source / trigger points could be common. Typical examples are outlined in Figure 3.

The service management then analyzes historical ticket volumes at predefined intervals (monthly or quarterly). Specific groups of incidents are identified, and then RCA is undertaken for each group of incidents. It generates resolutions / recommendations that eliminate incidents in the entire group.

Sl. No.	Pattern
1.	Specific functionality resulting in multiple incidents
2.	A specific user raising multiple incidents for an application
3.	A particular monthly release that always results in incidents

Figure 3 – Examples of patterns



Holistic problem management

Every ITSM program seeks to optimize operations and rationalize operational costs. However, the assigned service management teams are often engaged in stabilizing systems and routine operations, which prevents effective proactive problem management.

Centralized service integration teams need to step in at this juncture. They can take the lead to investigate incidents, create bespoke solutions, and share the results with service management teams to validate findings / recommendations (Figure 4). Figure 5 depicts the advantage of a service integration team vis-à-vis service management teams.

Sl. No.	Pattern	Action to eliminate incidents
1.	Specific functionality resulting in multiple incidents	Bug(s) found in the functionality should be fixed through change requests
2.	A specific user raising multiple incidents for an application	Train the user to raise requests correctly
3.	A particular monthly release that always results in incidents for existing functionalities	Enhance regression test plans

Figure 4 – Patterns and corresponding actions

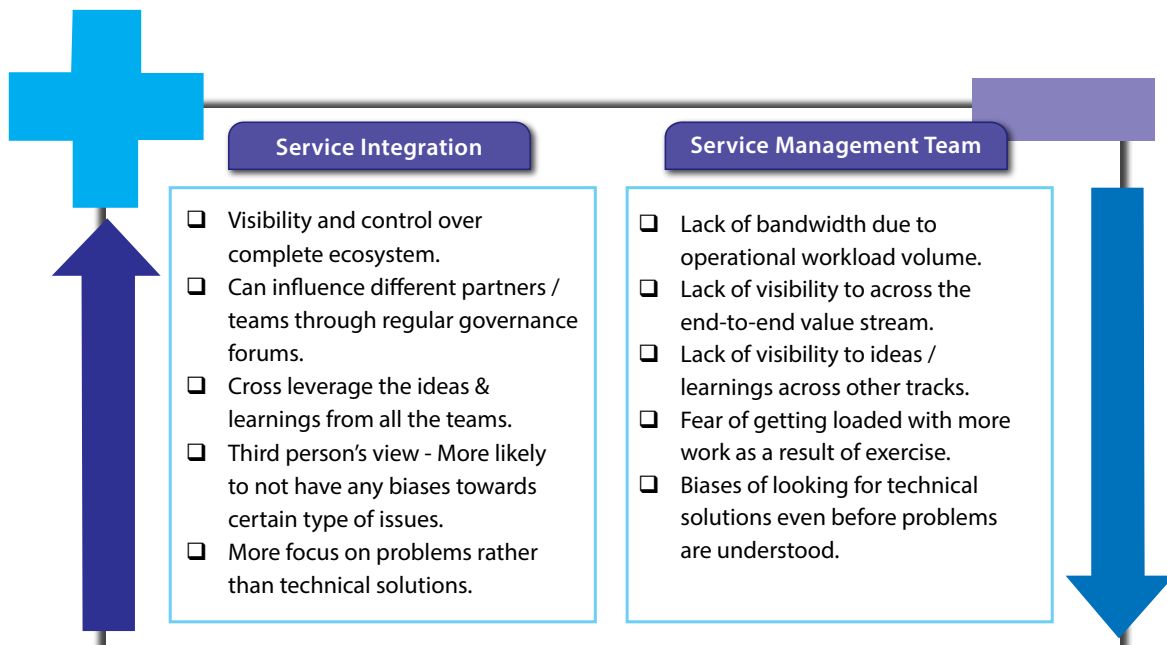


Figure 5 – Pros and cons of SIAM and service management teams

Ideally, the service integration team should drive proactive problem analysis on a periodic basis (monthly or quarterly), identify patterns, and validate the results with the respective service management teams. The SIAM team should also ensure proper governance for closure of each RCA and implementation of recommended actions (Figure 6).

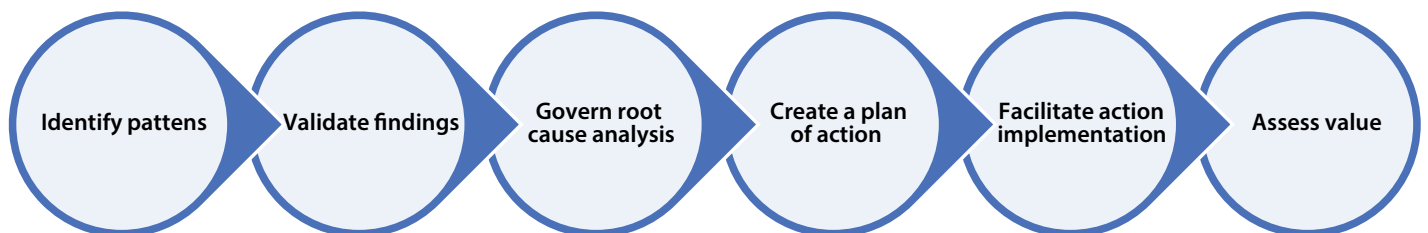


Figure 6: Proactive problem management by SIAM

Opportunity to transcend proactive problem management

The service integration team can drive service improvement by capitalizing on the investments made to analyze tickets, group tickets, and identify patterns and sources of incidents. Service improvement delivers value to customers / end users. It requires the service integration team to adopt a step-by-step approach:

- a. Undertake holistic historical data analysis periodically
- b. Extend the analysis from incidents to the entire ticket volume (incidents, service requests, alerts, events, tasks, and any other type defined in ITSM tool)
- c. Analyze all the patterns / groupings of tickets, and identify levers for service improvement (Figure 7)

Sl. No.	Levers	Recommended Action
1.	Elimination	Fix the root cause and eliminate the issue.
2.	User enablement	Empower users to resolve issues / queries on their own through training.
3.	Shift left	Train L1 / L1.5 teams to solve basic issues using SOPs.
4.	Automation	Implement automation (RPA and chatbots) to solve issues without human intervention.
5.	Design thinking	Ideate with business users to improve the usability of systems/ customer experience.
6.	Value stream mapping	Analyze end-to-end value streams to identify wastage and bottlenecks, and suggest changes to improve efficiency.

Figure 7 – CSI levers to be explored

- d. Incorporate the recommended actions in common DevOps backlogs for prioritization by the DevOps team
- e. Measure the outcomes of service improvement levers in terms of KPIs (Figure 8)

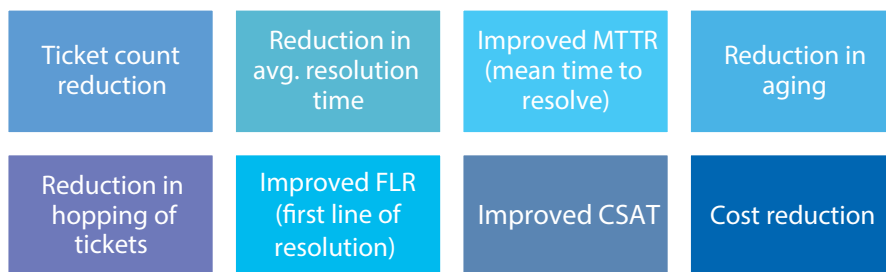


Figure 8 – KPIs to measure value to customers

This methodology ensures continuous service improvement in ITSM program, which is a critical component of the service value system recommended in the ITIL-4 framework.

Leveraging automation

Earlier, IT teams had to pore over ticket dumps with thousands of Microsoft Excel records, use filters with keywords, and produce patterns for analysis. Now, AI / ML-enabled statistical tools consume ticket data as input, analyze large data sets within minutes, and share output such as repetitive keywords, relevant grouping of tickets, and recommended solutions to optimize each category of tickets.

Infosys Live Enterprise Application Management Platform (LEAP) is a cloud-enabled, AI-driven automation platform for next-gen application management services. Infosys LEAP transforms service management through several problem management modules, including one dedicated to provide insights into ticket volumes (Figures 9, 10 and 11).

<https://www.infosys.com/services/application-modernization/offerings/application-development-platform.html>

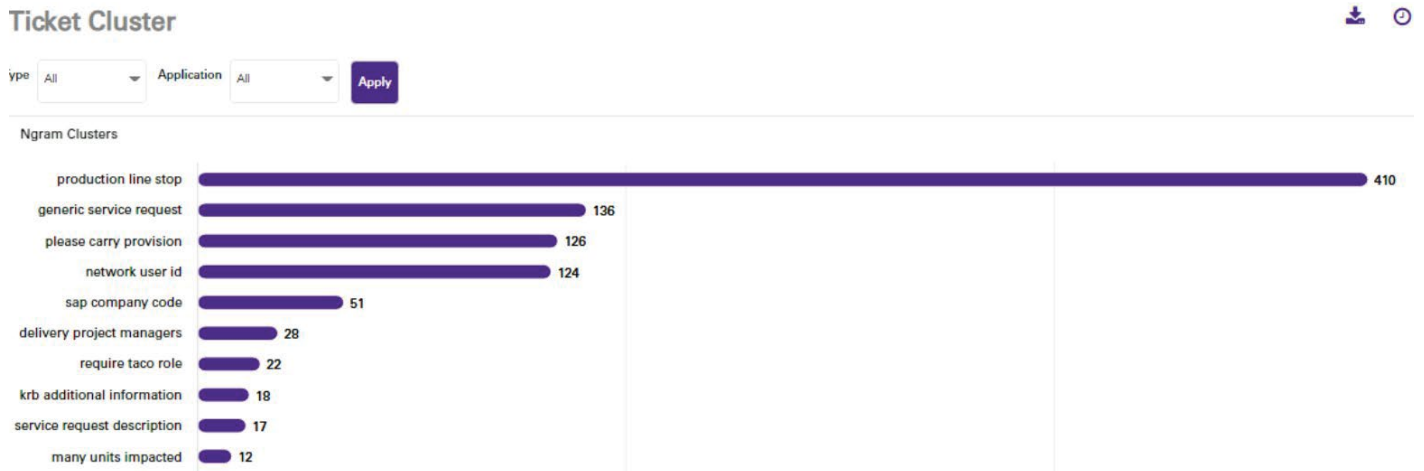


Figure 9 – Automated ticket clustering through Infosys LEAP

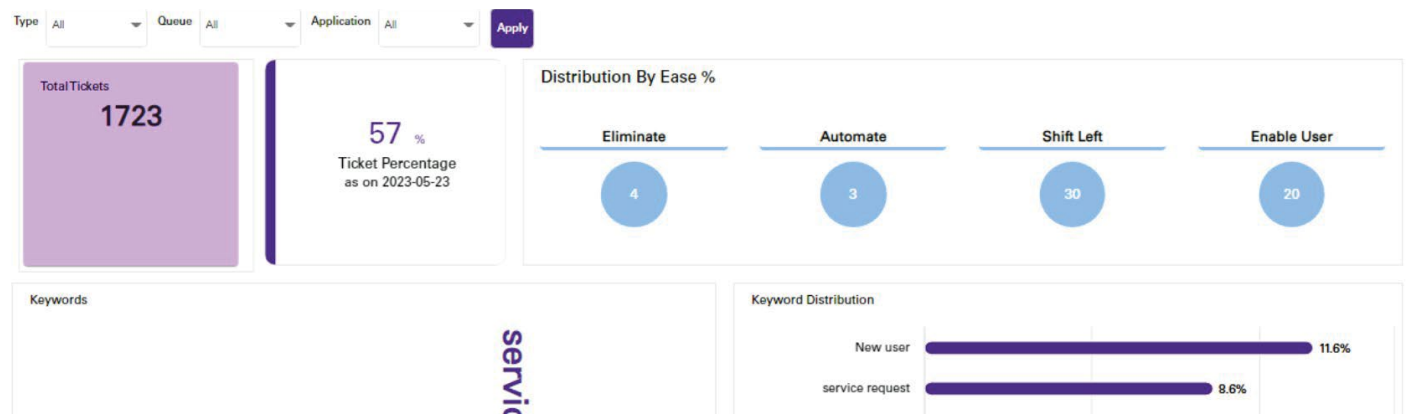


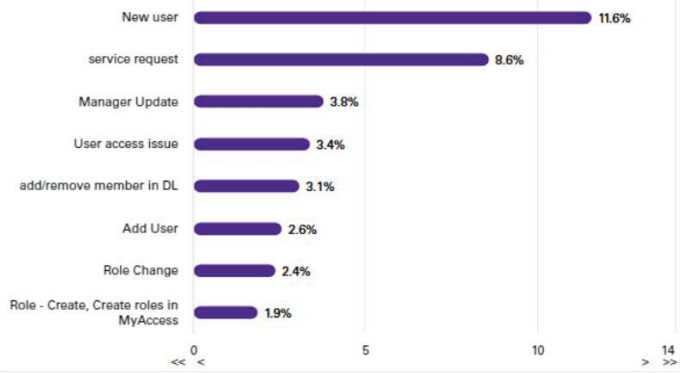
Figure 10 – EASE analytics generated by Infosys LEAP



Keywords



Keyword Distribution



Tickets

Figure 11 – Ticket grouping identified for automation by Infosys LEAP

Notably, ITSM tools such as ServiceNow generate rich insights based on patterns / grouping of ticket data.



Case Study

Customer - Elevator manufacturing company

Infosys involvement in domains: IoT – Predictive Maintenance | Servicing & Maintenance | HR & Finance | Sales & Demand Capture | Legal & Safety | CRM & Customer Experience

Infosys strength: 10 tracks for support, development | Overall

ticket volume – ~ 9000 / month | 800+ Infosys team strength | Service integration team – 12 members managing core SIAM functions

A snapshot of continuous service improvement over a period of ~ 12 months and the contribution of the proactive problem management initiative:

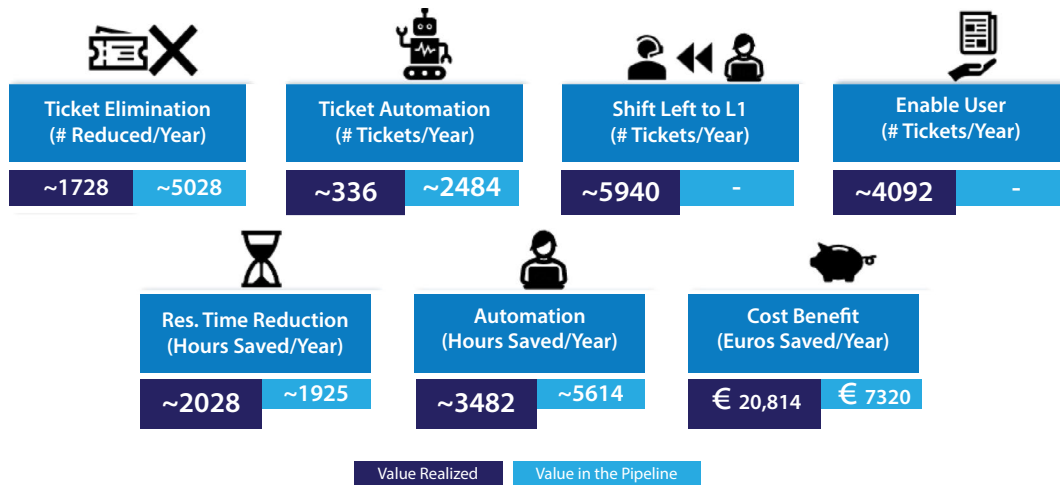
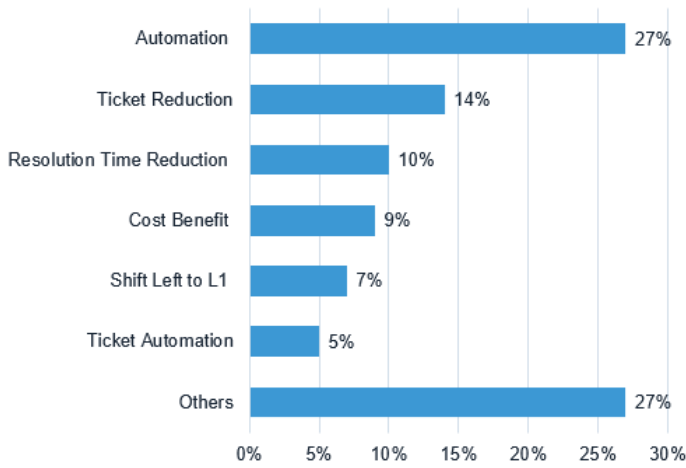


Figure 12: CSI value generated in 12 months



Idea Generation Velocity is ~40 ideas per quarter

Ideas break up across Innovation Levers



Sources for Ideas Generated

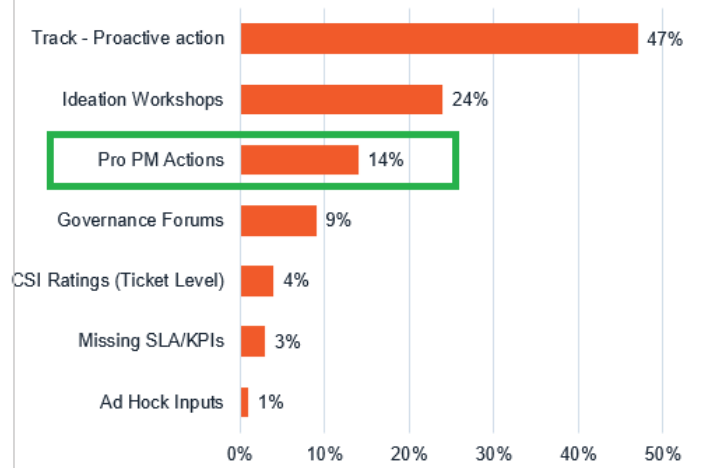


Figure 13: Classification of ideas generated in four quarters



Figure 14: Contribution of the proactive PM initiative



Conclusion

ITSM programs need to be enhanced with DevOps transformation, AI / ML-driven predictive maintenance, automation, and lean implementation to reduce the cost of IT operations. Such enhancements provide service integration teams the opportunity to maximize value by leveraging proactive problem management for end-to-end service improvement. Further, it encourages service management teams to optimize and transform operations to improve outcomes for customers / end users.



About the Author



Shailesh S. Khonde

Principal Consultant, Manufacturing and Supply Chain practice
Infosys Consulting

Shailesh is a senior program manager with two decades of experience in working with IT services. His expertise includes helping organizations scale up in service (ITIL) transformation, Agile-DevOps transformation, driving continuous service improvements (CSI), innovation, and running large complex programs

For more information, contact askus@infosys.com



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