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NextGen Application Management System

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1.   Why NextGen AMS?

Most organizations have an explicit IT strategy, which sets the company's direction and scope and guides IT decisions. A good IT Strategy should align IT with the business strategy and confirms the money being spent on IT by the organization is being used to the best outcomes to meet business goals. The spent on Application Maintenance and support represents a large percentage of IT budget particularly in those organizations where ERP systems are used as an IT backbone for recording business transactions. It is thus imperative that IT organization will look at all the avenues to cut cost while demanding no let down in the quality of services. The expectations from service provider, apart from reduction of cost, are

•   Improve Mean to Resolution

•   Improve System Stability

•   Problem Management

•   Improve User Experience

The rise of disruptive technologies has opened up new business avenues, changing market forces across industry verticals. Businesses have realized the importance of using technological advancement to support and maintenance existing IT systems, including ERP, which in turn can help enhance business process efficiency, boost customer satisfaction, and reduce costs.

2.   Our solution for NextGen AMS

The following flowchart denotes the steps applied under AMS procedure.
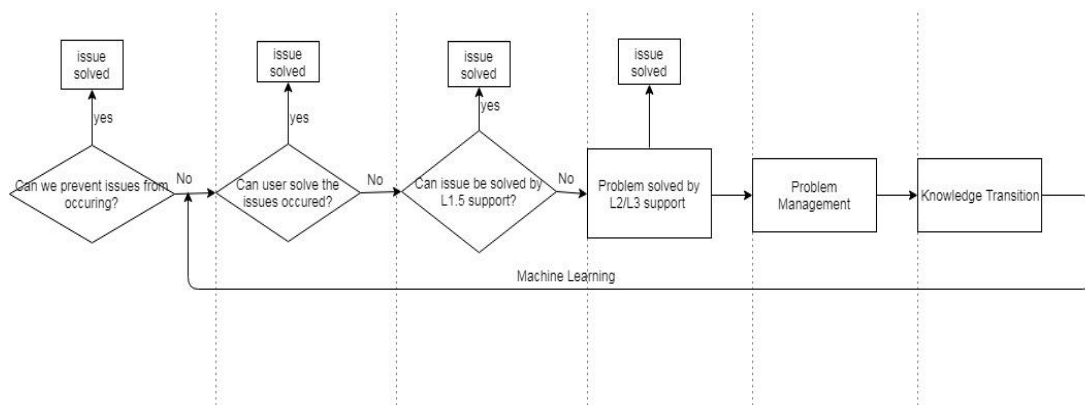
The guiding principles which form the basis of an AMS framework are:

1. Prevent generation of tickets— The system should be designed in such a way that it is problem-free. If not all, efforts should be made to at least minimize the number of tickets. Which can be done by constantly monitoring the system.
2. User Empowerment— If the problems are occurring, then try and empower the user so that they can solve their own problems. For doing so a bot can be used which can make them refer pre-written documents to solve certain issues. This bot can pinpoint minor problems and offer solution for the same. Shift Left approach is used so that pressure on L2/L3 levels can be reduced.
   L1.5 Support—L1 Support is the level where comes the help desk, we transform this level to L1.5, which is Intelligent Bots. The support system should shift from L2/L3 support to L1.5 support and majority problems to be solved by L1.5 so that staff under L2/L3 can be distributed efficiently in performing other tasks.

3. Reduce Mean Time To Repair— Integrated Incident Management is used for reducing the MTTR. Intelligent help-desks are set. This includes the L2/L3 support. These are the team who understands the system to the core and provide solution for all major problems.

4. Reactive Problem Management—Controlling all the present problems as well as preparing for possible future problems.

5. Knowledge & transition Management—The problems solved by the L2/L3 support are recorded and stored in the database by the process of machine learning, such that if the same problem is faced again then the L1 level will be able to solve them.

3. LTI Framework for NextGen AMS

All these above pillars form the basis of the framework provided by LTI. We consolidate a judicious blend of IT execution and NextGen business-IT strategy to ensure the optimum levels of industrialization and transformation in AMS engagements.

We incorporate practices such that our services become more 'Business Aware' and 'Future Proof' to deliver market-oriented objectives. The key drivers which our company aims include:

- Offering a superior value proposition and service levels to their end customers.
- Reducing time-to-market responding to changing consumer behaviour and the need to support multiple channels-to-market.
- Accelerating access to opportunities from globalization based on a relevant value proposition, while maintaining a prudent cost structure.
- Provide proactive Problem Management steps and various tools and enables that accelerates the Problem Management process.
- Administer knowledge transition to support team and giving training to end users by client specific business process certified consultants.

Our **NextGen AMS framework** is given by the following model:

Solution Principles	Prevent Incidents before they occur	Empower End users	Reduce MTTR	Ongoing Incident Elimination	Seamless Transition from Deployment to Support	Improve system Stability	Continuous Improvement
SL	SL1: Operation Command Centre	SL2: User Empowerment	SL3: Integrated Incident Mgmt.	SL4: Problem Mgmt.	SL5: Knowledge & Transition Mgmt.	SL6: Proactive Landscape Mgmt.	SL7: Innovation
Services	• Proactive Platform Monitoring • Business Process Monitoring	• Super user Program • Smart-Assist Portal	• Intelligent Help-Desk • Highly productive L2 / L3 support	• Reactive Problem Mgmt. • Proactive Problem Mgmt.	• Training to Super Users / End Users • Skill enhancement and on-boarding	• Environment Mgmt. (ESU and upgrades) • Platform health check	• Best practices • Roadmap alignment • Build tools

4. Solution Details

4.1 *SL1: Operation Command Center*

The Operation Command Center (OCC) is used for ensuring highly automated and proactive operation, improved IT services and increased business satisfaction. The OCC is a central, IT support entity that proactively monitors the productive environment. Our approach is to provide fail safe operations leveraging tools like Smart IT, Alert Manager and other monitoring tools combines Business Process Applications and CNC.
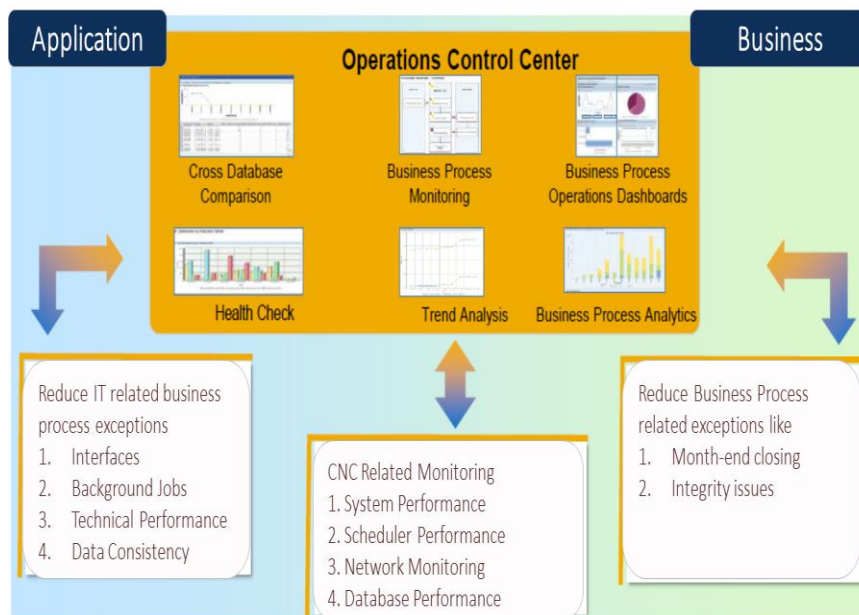
The key services that an OCC offers include:

● Integrated monitoring across business process, applications and infrastructure.

● Alert-to-action enablement through guided remediation procedures.

● Ability to monitor business process and associated KPIs vis-à-vis established thresholds

Process maturity metrics are measured which demonstrates the effectiveness of the services and the features of an OCC, they are stated as:

- % Application Availability (represented as a fraction of total time that a service needs to be up).
- % of System Alerts Automatically Diagnosed
- % of Diagnosed Alerts Automatically Resolved
- Number of Business Process Anomalies Detected

4.2 *SL2: User Empowerment*

User enablement can improve the overall effectiveness in the AMS service. If the users are empowered enough to solve their own issues, the assistance of L2/L3 levels is not required. Programmed BOTs are used which interact with the users and provide solution based on the previously solved problems.

The key service that it offers mainly is:

- AI led smart user assist using BOTs that provide a chat interface. Also powered by a purpose-built ERP specific known-error-database (KEDB)

The framework to design user enablement leverages next generation technologies for working with unstructured data and provide features as below:

1. Flexible data model to store unstructured data and accommodate new attributes with ease
2. Scalability for future data growth, use of less expensive hardware resources.

3. Capability to apply machine learning algorithms on the data
4. Capability to apply learning on the data and provide intelligence
5. Ability to perform resolutions not just by co-relation but by a combination of learning + rules
6. Business Data can also be injected onto the platform for co-relation
7. Ready set of interfaces for connecting with knowledge base and legacy systems
8. Self-healing Service using AI Agents

The figure given below depicts the high level Solution Architecture for user enablement:
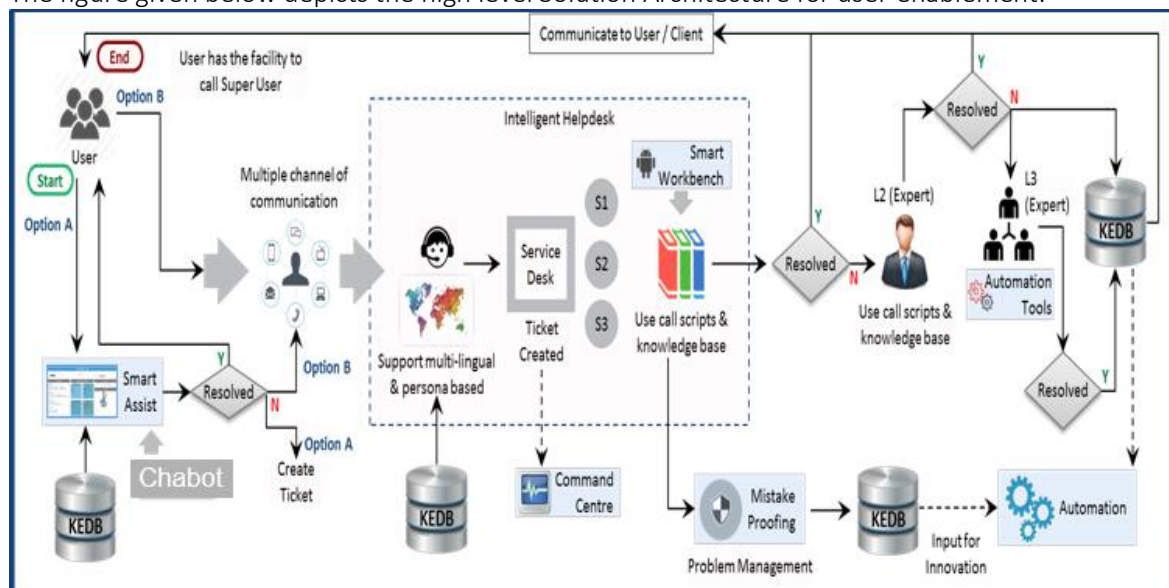
The AI solution is leveraged to perform tasks like:
- Automatic classification of tickets to a particular category and subcategory based on the problem description
- E.g. an issue ticket describing network connection problem must be directed to the network problem category and be classified as low speed problem type subcategory.
- Data enrichment of ticket attributes
- Solution recommendation based on learning and intelligence developed using historical data
- If there is no solution available then perform Automatic assignment of tickets to the right support group and support personnel

The Process Maturity Metrics can be given as:
- % of incidents due to training issues
- # of issues resolved through Chat Bot
- End-user CSAT index

4.3   SL3: Integrated Incident Management

This step is used for reducing the mean repair time in response to occurrence of any complication with the help of intelligent helpdesks or L2/L3 support. The integrated Incident Management has been carefully crafted to bring in considerable amount of improvement in key KPIs of First Contact Resolution, End User Satisfaction and Mean Time to Resolve.

The key services that it offers include:
- Advanced Diagnostic and guided resolution capability
- L2/L3 function staffed by functional SMEs in underlying applications

- Specialized support for critical business events
- Primary source for creation and update of KEDB
- A help desk which leverages AI agent to get 'Persona based' inputs for key user profiles. This can be used to query chat information and historical information based on the user profile which in turn will help L1.5 to intelligently resolve issues at a faster speed.

Integration Incident Management flow along with usage of key tools / levers is depicted below:
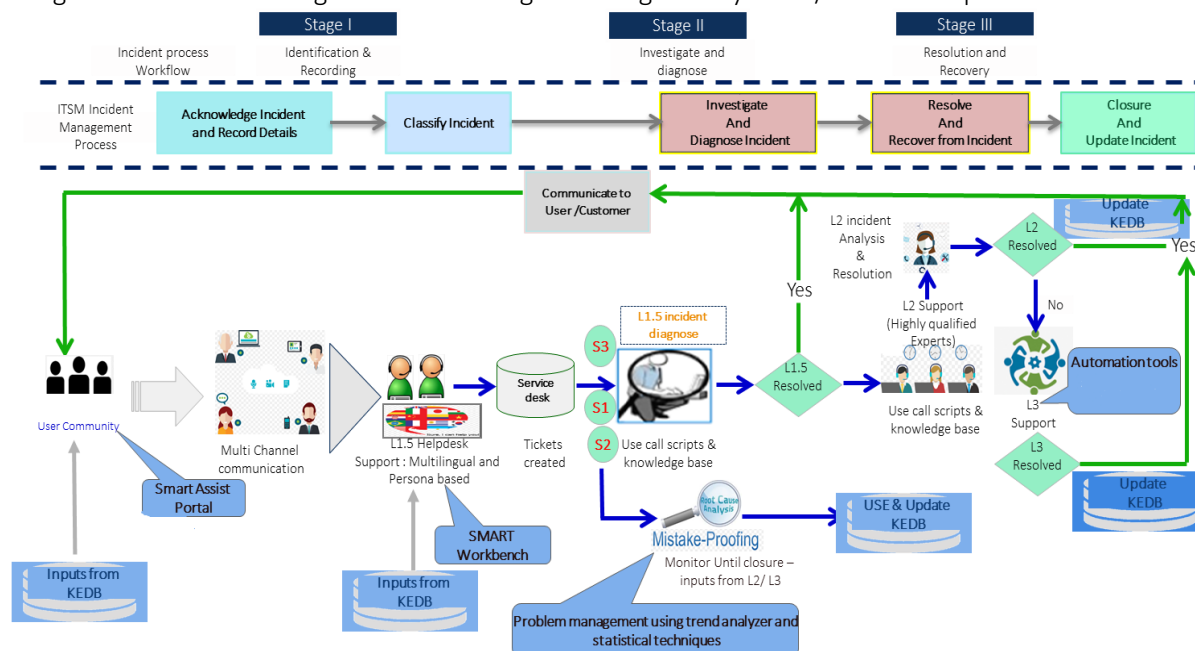
The Process Maturity Metrics can be given as:
- % incidents resolved at first contact (FCR)
- % incidents resolved within SLAs
- % reduction in MTTR
- Average incident resolution productivity
- End-user CSAT index

4.4   SL4: Problem Management

The philosophy of this engagement is based on proactively eliminating the incidents rather than reactively resolving the same. We will use the Proactive Problem management approach during the engagement for Proactive process monitoring & alerts for early detection and resolution. Proactive problem management is carried out through continuous monitoring and identification of frequent errors/pain areas. To go one step further solutions are built and collaborated with the system and process performance indicators with proper alerts, which indicate the need for attention and eventually early resolution of incidents.

The key services that it provides include:
- Trend analysis of incident history
- Transparent end to end Problem management
- Structured RRCA with statistical analysis
- Pre-built database of ERP known errors

The Process Maturity Metrics can be given as:
- % of high-severity issues with approved and implemented RRCAs
- % incident reduction (reduction in average # incidents / user or average incidents / site)
- # of improvement recommendations

Proactive Problem Management steps and various tools and enables that accelerates the Problem Management process are shown below:
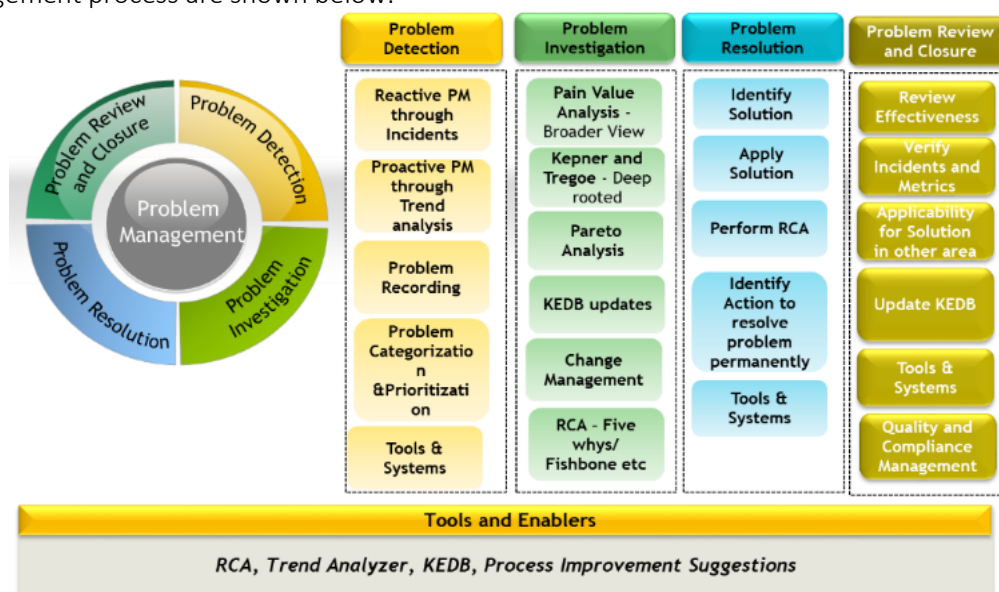
4.5 SL5: Knowledge and Transition Management

This step is employed to ensure cutover readiness, end-user enablement and to provide seamless transition from deployment to support. The process of Machine learning is used to feed in data into the L1 and L1.5 supports.

L&T Infotech understands the importance of knowledge transition to Managed services from Build Team for the new functionalities/solutions introduced and from deployment team after completion of deployment to ensure readiness of the Managed Services team to provide support to business. This will also facilitate less involvement of Global leads in providing support to business enabling them to spend more time in designing of global templates.

The key services that it offers include:
- Training to End Users
- Knowledge transition to Support team
- Client specific Business process Certified consultants

The Process Maturity Metrics can be given as:
- % reduction in day-1 incident volume (incidents/user)
- % of support team with client Business knowledge certification

4.6 SL6: Proactive Landscape Management

This step is engaged to improve system stability. Effective Landscape management is essential to establish basic levels of trust among the user community for the IT solutions. In order to handle the challenges of complex infrastructure landscape and to maintain the environments in efficient manner to optimize the operations, L&T AMS model will have an integrated approach with scalable, automated and reusable components which will help us deliver measurable service value to coincide with business goals.

The key services that it offers include:
- Proactive Health check: Environment control, risk assessment, Monitoring and Automation of processes and integrity issues
- Environment upgrades: Data conversion instances, Data Recovery activities, Perform ESU updates and upgrade planning
- Environment Maintenance: Proactive monitoring

The Process Maturity Metrics can be given as:
- % improvement in system health (measured through defined health-check parameters)
- # of system improvement recommendations per quarter
- % reduction in cycle time for standard CNC tasks
- Average cycle time for ESUs and Upgrades

4.7   SL7: Innovation

The objective of this step is to create exceptional value through an unrelenting focus on innovation as technology advances. Identification, Ideation and conceptualization is the strategy applied to crop up with innovation.
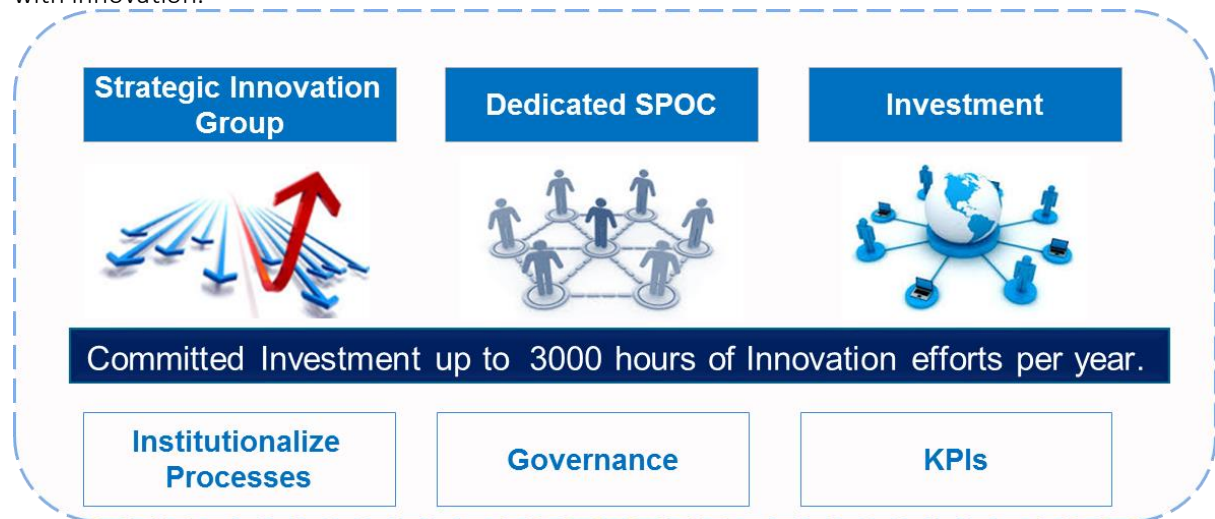
L&T works on the following emphasis areas for innovation:
a) Robotic process automation
b) back-to-standard
c) ROI enhancement
d) Automation using AI based tools

LTI