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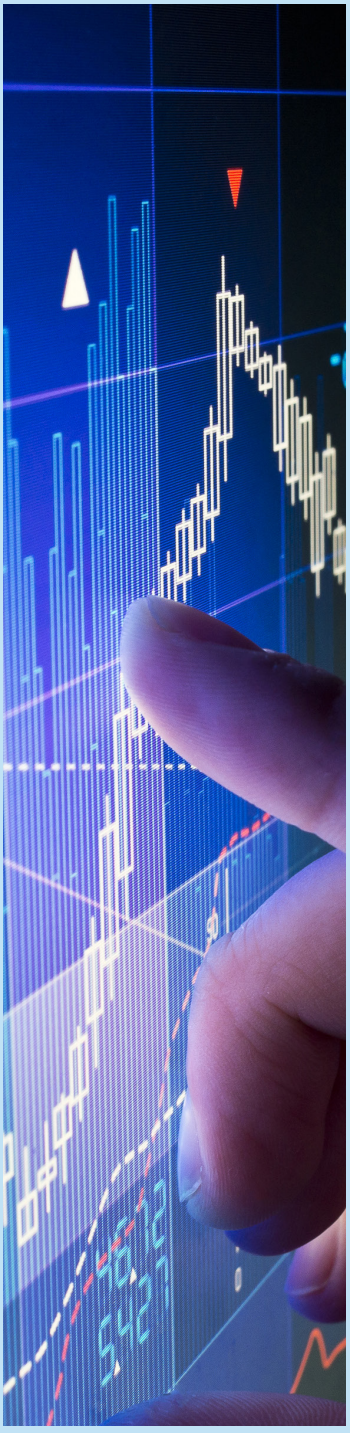

ENTERPRISE IT MONITORING STRATEGY

5 Best Practices

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Introduction

Technology is an essential part of today's world, and it is imperative for enterprises to rely on their IT ecosystem to provide seamless customer experience, and promote new capabilities.

With customer at the center of everything, enterprises built new digital cutting edge systems while also retaining legacy systems where it made sense. This resulted in enterprises grappled with heterogeneous complex systems and it became increasingly challenging to keep these systems stable and avoid potential reputational, financial and client base loss due to unknown disruptions.

The challenges are enormous, and so are the opportunities and the trend is pretty evident as we see an influx of various IT products aimed at streamlining monitoring and promising keep systems stable and secure while improving customer experience. However, even when enterprises started investing and adopting monitoring products to solve these challenges they often found themselves struggling with cost overhead and not achieving the desired outcome. The solution to this problem lies in not only purchasing right product, but also having clear vision, and adoption of right enterprise monitoring strategy.

This Point of View dwells into 5 best practices that can help safeguard investments and reap true benefits of the monitoring products for enterprises that are starting or reinventing their stabilization journey.

1. Understand Technology Landscape

Initial phases of strategy definition should focus on discovering current state architecture, roadmap, and gaps associated with critical business processes, and identify right use cases (refer to figure 1).

Results of **Application discovery and dependency mapping** exercise will help identify current landscape variations and challenges which may include but are not limited to:

Scale and complexity:
What are the technologies used? (Windows, Linux, .Net, Java etc.)

What are the type of architecture elements used? (for e.g. Micro services, Hybrid involving 3rd parties, Cloud etc.)

Type of Applications:
Are there many Custom Off the Shelf (COTS) applications? Does the 3rd party vendor allow access to their infrastructure and code?

Are these online applications, middle tier or batch interfaces?

Are there many SAAS (Software As a Service) and PAAS (Platform As a Service) applications where monitoring scope may be limited?

Is there a roadmap and plan to decommission or upgrade any existing applications?

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Current State Constraints:

Any large legacy debt which would prevent or restrict monitoring coverage and make it less effective?

Are the components tightly coupled, and\or traceable?

Are there any gaps in security information and event management (SIEM) that can lead to attacks?

Knowing your landscape variations, priorities, roadmap and challenges will help lead to right product selection, and identify use cases that can be prioritized for rollout.

Figure 1: Steps to understand current state workflow and challenges

2. Evaluate and Select the Right Monitoring Product

With so many different products offering various features, it is easy to dwell into sales pitches and lose focus on what is really relevant for your enterprise. Key considerations for selecting right product should include assessment of:

Compatibility:

- Scale and technology split (Windows\ Linux heavy, on premise or cloud etc.)
- Nature of Business critical applications (Online, Batch, COTS etc.)
- Fitment against Enterprise Technology Roadmap
- Compatibility with newer technologies and frameworks (for e.g. Cloud, DevOps Tools)

Features:

- Type of monitoring supported (Business Analytics, Application Management – transaction, user experience, Performance, Security & Compliance)
- Ease of Use and Implementation (Agent\ Agent less, Cloud\On Premise)

Integration:

- Integration with Enterprise ITIL tools
- Integration with other 3rd party tools for event co-relation, aggregation
- Ability to ingest logs from other 3rd party\in-house products to provide aggregation view

Cost:

- License Cost
- Hosting Infrastructure Cost
- Proof of concept, and rollout Cost
- Training Cost
- Maintenance\Upgrade cost

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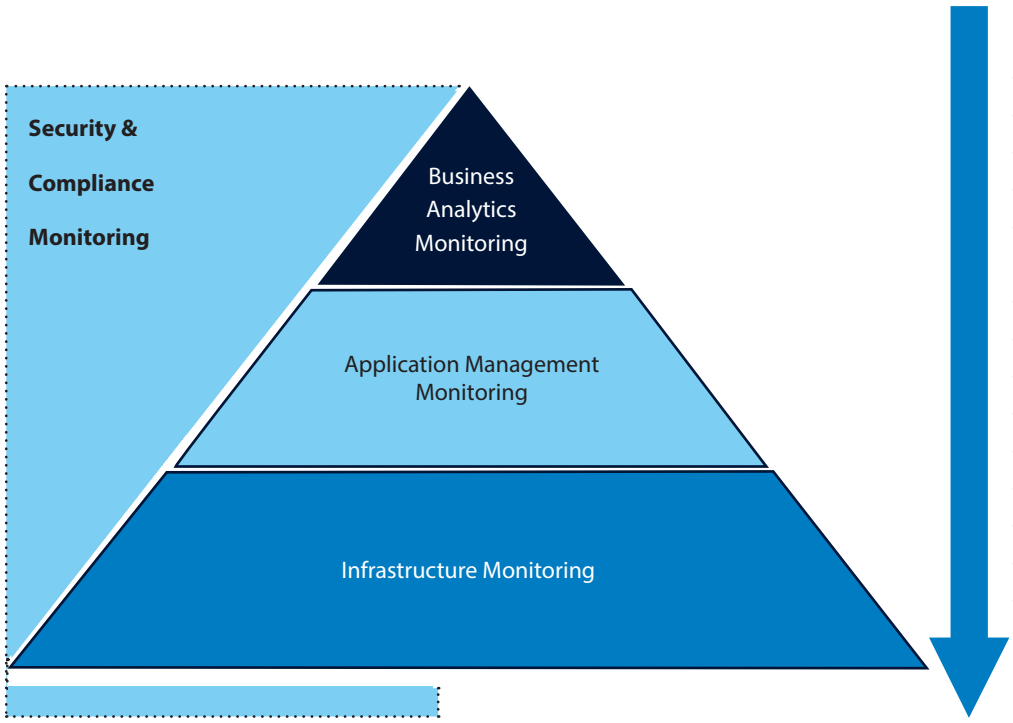
3. Devise Business Centric Requirements

After having better appreciation of technology landscape, pilot use cases, and right product at hand – next step will be to dwell into nitty gritty of the monitoring requirements. The traditional approach typically is to start bottom up, concentrate on technology stack to define and measure metrics aligned to infrastructure and application components (CPU, Memory, Disk Space, JVM utilization are some examples) and then gradually roll up to transaction and business metrics. As a result, after expensive rollouts and implementation organizations often realize that their product of choice, although an industry leader, does not however fit their specific monitoring needs and expectations.

Instead, opting for **top down approach** (refer to figure 2) will lead to the following benefits:

1. Help avoid scope creep by keeping monitoring focused on right objectives, and customer-centric metrics
2. Avoid expectation mismatch between product vendor, technology and business stakeholders
3. Identification of potential feasibility\ fitment gaps at early stages of discussion
4. Alignment from business on investment in monitoring product, and roadmap



Metrics (Illustrative)

- # of accounts opened
- # of orders fulfilled
- # of returning customers
- # of satisfied customers
- Application and associated components Availability
- End-user experience
- # of failed transactions
- Response time metrics
- Database performance
- Batch Performance
- # of systems with vulnerabilities
- # of communications ports open
- Volume of data transferred
- Infrastructure Metrics (CPU, Memory, Space)

Figure 2: Adopt Top Down Monitoring Requirements & Illustrative Metrics

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4. Decide and Measure Key Performance Indicators

With large set of systems and an infrastructure running complex systems, post instrumentation monitoring products will be ingesting huge amount of data on recurring basis and reporting back.

Unless this is simplified end users will find it challenging to interpret data due to overwhelming scale of information and that will be reflected in **adoption issues**.

Solution is to make sure **voice of the customer (VOC)** is incorporated in forming Key Performance Indicators (KPI) against which the product success will be measured. In most cases, customers for the monitoring products are IT operations team and executives – and these stakeholders will have varied requirements on what they would like to achieve through this rollout to simplify their jobs and achieve respective goals.

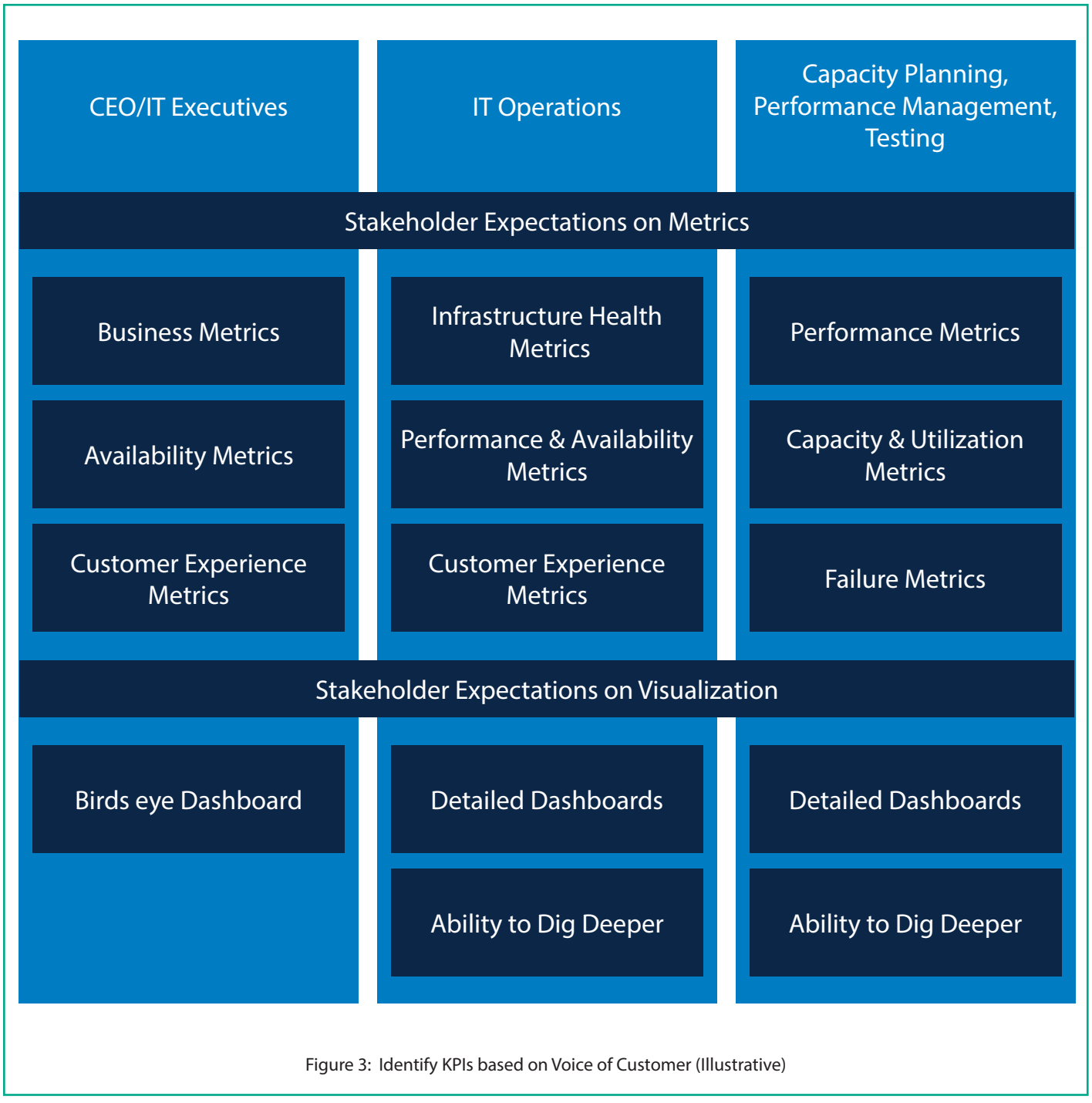

Figure 3: Identify KPIs based on Voice of Customer (Illustrative)

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5. Define Roles & Responsibilities

Defining clear roles and responsibilities of various teams during and post monitoring implementation will protect the interests of the enterprise, and maximize benefits. An illustrative list of responsibilities is given below:

Enterprise Monitoring:

- Identify Enterprise Strategy and procure stakeholders alignment
- Implement monitoring, create reports and dashboards based on requirements
- Be responsible for ongoing maintenance, license renewal and upkeep of product and associated infrastructure
- Share meaningful insights and analytics for actionizing
- Define standards, guidelines and templates for capacity planning and performance management

IT Delivery:

- Engage with Enterprise Monitoring team to finalize functional and non-functional requirements
- Onboard new capabilities and features with relevant metrics and transition to operations
- Review baseline results post production rollout to measure success\customer experience

IT Operations:

- Review and share client experience and availability metrics with IT executives on ongoing basis
- Identify gaps in dashboards and alerting, and remediate
- Submit monitoring black out requests for planned deployments

Risk & Compliance, Data & Analytics:

- Analyze data to understand customer experience, thread analysis, usage patterns, and\or success of new rollouts
- Identify strategies (risk mitigation, cross-sell, expand etc.) backed by data

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Conclusion

Disruptions causing inconvenience to customers and their ability to use services\product can result in decline in trust and brand reputation. Emphasis on these critical steps while deriving enterprise monitoring strategy can lead to following benefits:

1. **Higher availability** of mission critical IT systems
2. **Reduced risk** of business disruptions that can lead to reputational and financial risks
3. **Customer delight** resulting in increase in customer retention, and business growth
4. **Cost savings** due to reduction in mundane efforts spent by IT operations teams in manual monitoring and upkeep tasks

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About the Author

Harita Modi – Harita is a Sr. Project Manager having 18+ years of global experience of managing services and support for fortune 500 clients. She has played diverse roles spanning across ITIL Process Consultation and implementation, Managing IT Transformation, Project and Operations management, and has demonstrated her thought leadership in delivering business growth and enhancing efficiency of Customer's IT eco system.

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