

White Paper



Manage Risk, Monitor Performance, and Deliver Results

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Abstract

Today's global economic environment poses unprecedented challenges to Logistics Service Providers (LSPs) in particular. In an ever-changing international trade scenario, a reactive approach to risk management could severely affect a logistics organization's ability to withstand current and future economic shocks.

This paper discusses how a planned approach to risk by measuring and monitoring operational and financial metrics can enable logistics organizations to grow their product footprint, offer customer centric solutions, and ultimately grow revenues and margins.

Risk Management – In the Eye of the Storm

The economic crisis of 2008 and 2009, the recent air traffic disruption in Europe, and the ongoing financial meltdown in Greece have precipitated the need for the transportation and logistics industry to create a more robust mechanism to identify risk and manage it.

Moreover, these events will prove that only organizations that take a proactive approach to risk by managing and monitoring operational and financial metrics are best placed to withstand current and future global economic shocks.

The Unique Risks of the Logistics Industry

Logistics Service Providers (LSPs) operate in a highly dynamic environment subjected to ever-changing international trade scenarios.

The major areas of risk in the logistics industry include:

- Carrier delays and non-performance on delivery
- Capacity and allocation volatility
- Port and land network congestion
- Environmental regulations
- Regulatory and trade compliance
- Customs and security compliance
- Carrier mergers and acquisitions
- Loss due to damage and pilferage
- Customer claims
- Financial instability of large global accounts

Changing scenarios in global trade, overcapacity of trade lanes, and unpredictable networks not only impact shippers, but also impact third-party logistics providers (3PLs) who are dependent on carrier networks. In addition, carrier operational and financial performance needs to be monitored closely, especially in the backdrop of new regulations, country stability, route security, and overall service delivery. Investment decisions in infrastructure such as warehouses, terminals, and new ship builds also need to be more scientific to enable value realization.

The emergence of newer operating models, integrated service providers, game changing products, private equity participation, and the trend of near-sourcing have all introduced additional challenges and opportunities to the logistics operators.

Aligning risk and performance is critical to the way LSPs operate in the present and future. In the existing business context, it is clear that the ability to identify and manage risk will become a critical component in sustaining and growing business in developed and emerging markets. With most 3PLs and freight forwarders focused on expanding their network and establishing their presence in niche markets, the challenge of gaining early visibility to the associated risks is very real.

A planned approach to risk will enable logistics organizations grow their product footprint, offer customer-centric solutions, and ultimately grow revenues and margins.

The Current Approach to Risk

Most logistics organizations, today, adopt a reactive approach to risks posed by changing global trade, economic, political, and environmental scenarios. The approach predominantly involves mitigating and managing the risk after the event has occurred instead of setting up a mechanism to anticipate risks.

Whether it is continued bookings to a third party agent who has negative cash flows or servicing a large global account where certain subsidiaries have defaulted on payments and exceeded credit limits, the risk of customer claims, cargo re-routing, and customs penalties often runs high. The result – adverse operational and financial impact, and an eroding topline.

This retrospective learning occurs because of a lack of systems, tools, and processes to enable LSPs to proactively identify risks, quantify these risks, and mitigate them.

Another problem that logistics organizations grapple with is their piecemeal approach to risk management. Instead of taking an enterprise-wide perspective, business units tend to focus purely on issues relevant to their respective domains like customer claims and disputes, or regulatory compliance, or supplier risks. As a result, organizations are unable to interlink risks and monitor these dependencies.

An integrated view of all the risks that a LSP faces help the organization to establish performance benchmarks and risk mitigation-related cost targets.

Leveraging Tools and Frameworks to Manage Risk

The risk management tools and frameworks depend on the approach that the logistics organization seeks to follow.

There are approaches based on decision analysis, historical scenarios as well as perception-based methodologies. There are also business case-driven frameworks to assess and manage risk. This helps in arriving at the value propositions for the initiatives that the organizations embark on.

Irrespective of which risk mitigation strategy an organization chooses to follow, information technology (IT) remains vital in enabling the right decisions. IT provides accurate and timely visibility to risk- and performance-related data across the enterprise and facilitates proactive decision-making.

Logistics organizations should identify and define key performance indicators (KPIs) that directly impact value erosion and monitor this set of risk KPIs.

Infosys proposes the I-A-M approach to Identify, Assess, and Monitor risk as represented below:



Operational metrics related to processes such as turnaround times, network performance and reliability, and asset and capacity utilization can be easily translated into business risks, which can be measured using financial metrics. External metrics that measure the performance of an industry or a market can also determine the risks associated with having a customer base from that industry or market.

Irrespective of the metrics used, the data that supports the metrics should be consistent across the enterprise, a challenge in a scenario where logistics organizations usually operate in a disparate application landscape.

The Infosys Approach – Defining Metrics to Measure Operational and Financial Risks

At Infosys, we understand that deriving only risk-related KPIs and metrics are not sufficient. Information needs to be delivered to decision-makers in a format that empowers them to respond to changing market conditions and realtime alert messages quickly and accurately.

With an ideal combination of visual indicators, real metrics, and bottom line numbers, a user-friendly dashboard delivers the much needed intelligence for logistics organizations to measure and monitor enterprise-wide risk.

Furthermore, a dashboard view enables senior management to maintain an overview of business operations, identify and react to risks faster, and analyze KPIs.

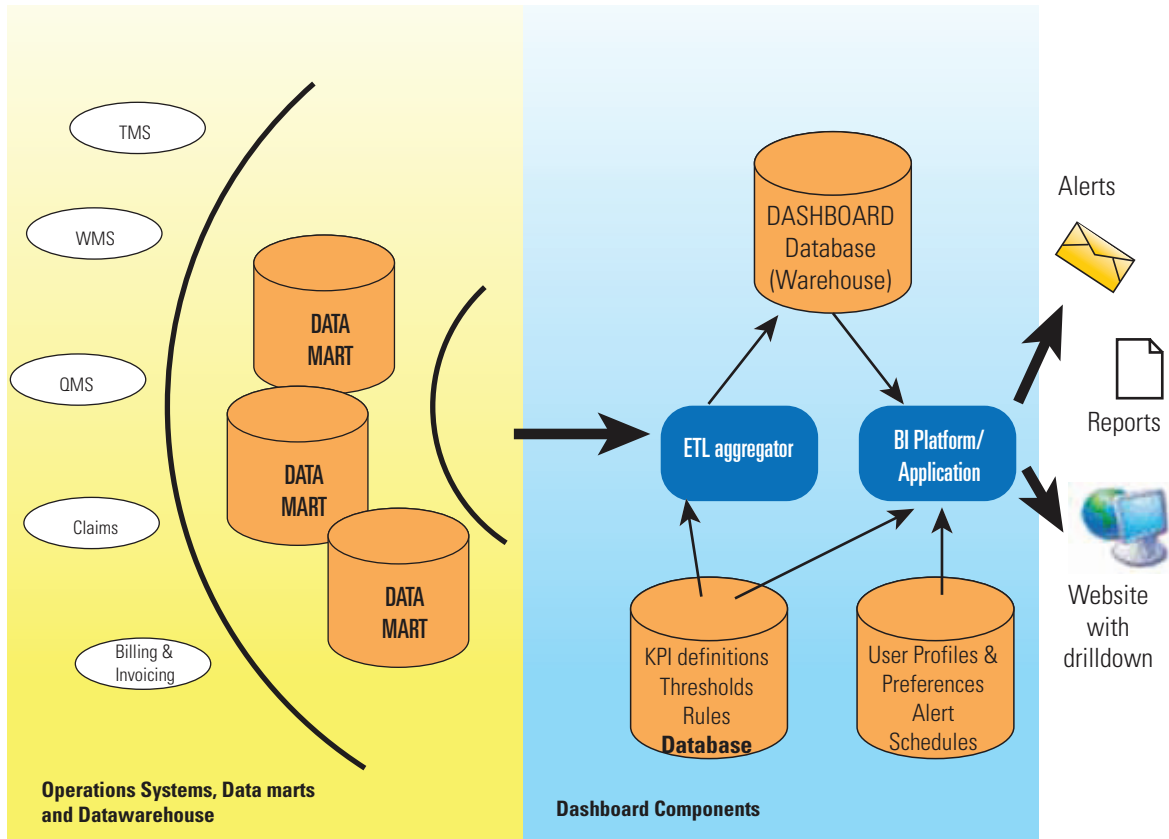
Delivery mechanisms

KPIs can be delivered by displaying them on a web interface, by uploading standard interfaces, and via email. In an enterprise, various cross-sections of KPIs might need to be sent through different channels.

An analysis of KPIs, cross-sectional views of KPIs, and appropriate delivery mechanisms are needed before implementing the dashboard.

Technology

Developing a risk management dashboard involves the development of various components which collect data, collect risk-related KPI definitions, and much more. A high level view of the components needed for a dashboard solution is illustrated below:



- Operational systems, data marts, and data warehouse: An enterprise typically has various operational systems, associated data marts, and possibly, a data warehouse. These are the source systems for the dashboard.
- KPI definitions, thresholds, rules database: This database contains the definitions and rules for computing various risk related KPIs. The thresholds for KPIs and how they need to be calculated is also stored here.
- Dashboard database: This forms the data store for all the KPIs which are computed.
- Extract, Transform and Load (ETL) aggregator: This is the workhorse of the dashboard system. It aggregates the data from various operational systems using the rules and computations defined in the KPI definitions database. All the data is stored in the dashboard database.
- User profiles and preferences, Alert schedules database: Details about users, their access permissions, customizations by the user on KPIs they are interested in as well as customization of thresholds are stored here. Details about the schedules for alerts are also stored here.
- Alerts and web delivery using business intelligence (BI) platform/application: This is the visible aspect of the dashboard system. This system creates alert e-mails and scheduled reports. The web application, which has the visualization capabilities as described above, forms a part of this component.

Conclusion

A risk management dashboard, if designed and implemented properly, can be a valuable reporting and monitoring tool for an organization to move forward strategically and competitively.

A KPI identification, selection, and measurement strategy will:

- Help identify bottle-necks in investments within the enterprise and analyze reasons for below par performance of some processes.
- Improve risk visibility across all systems and processes and enable quick response times to business risks through a dashboard solution.
- Help in BI standardization and improving organization efficiency. Metrics and analytics will improve the process lead times and increase overall efficiencies.
- KPIs can also be distilled or consolidated and enable the LSP to provide relevant performance reports to customers.

About the author

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Harish has around 14 years of experience working with leading logistics and distribution practice. He is currently leading a large transformation program for a global Logistics service provider. He has authored multiple white papers and point of views, and also have spoken at the Logistics CIO Summit, Amsterdam. He specializes in Risk Management, Supply Chain Visibility, Process Off shoring, Network Management, Pricing, Customer Hierarchy Management, Cold Chain Logistics.



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