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White Paper

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How to manage
Risk in Capital Markets in an outsourced environment

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Introduction and Business Need

Outsourcing in the capital markets space has been increasing, both in terms of the volume of business involved and the range of functions outsourced. There are sound business reasons why a capital markets firm may outsource its functions. These include trade offs between the risk and benefits of outsourcing functions/processes. The industry believes that capital markets firms engaged in outsourcing should aim to ensure that operational risk is mitigated in their outsourced functions. It has been observed in the past, that some of the outsourcing firms manage operational risk by passing on the risk to a service provider/vendor through legal agreements. One of the options that are looked at by corporations globally is to open up fully owned subsidiaries (popularly known as captives) in countries like India, thus ensuring full control on movement of data. This is however, separate from the core business of the parent and operates as a cost centre. A captive centre does not always guarantee scale thus making it difficult for the parent to enjoy economies of scale. Thus more and more corporations are opting to hire third party service providers to enjoy cost arbitrage and specialization without having to deal with the perils of running their own shops. Thus, it becomes more and more essential for third party service providers to ensure absolute operational risk mitigation in order to ensure client confidence in their services and in the overall concept of outsourcing.

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The past has seen several instances where major corporations have incurred huge losses as a result of operational failures. In recent times, certain instances of internal and external fraud have led global organizations to go bankrupt. The valuable lesson learnt through this is that mitigation of operational risk must be made an integral part of the day to day operations.

Considering the volatile nature of capital market industry and high volume of high value transactions in the capital market, the outsourcing partner has to develop robust procedures and controls to ensure delivery of noise free services. This is to protect the client and also itself from risks that may arise due to operations failure. In our opinion, both the firms - service provider as well as the client organization have to operate with mutual cooperation to achieve mutual benefit through outsourcing,. The service provider should demonstrate risk mitigation to the satisfaction of the outsourcing firm. It may involve right stakeholders from both the firms. Thus, a robust risk control framework is an absolute necessity in an outsourced environment.

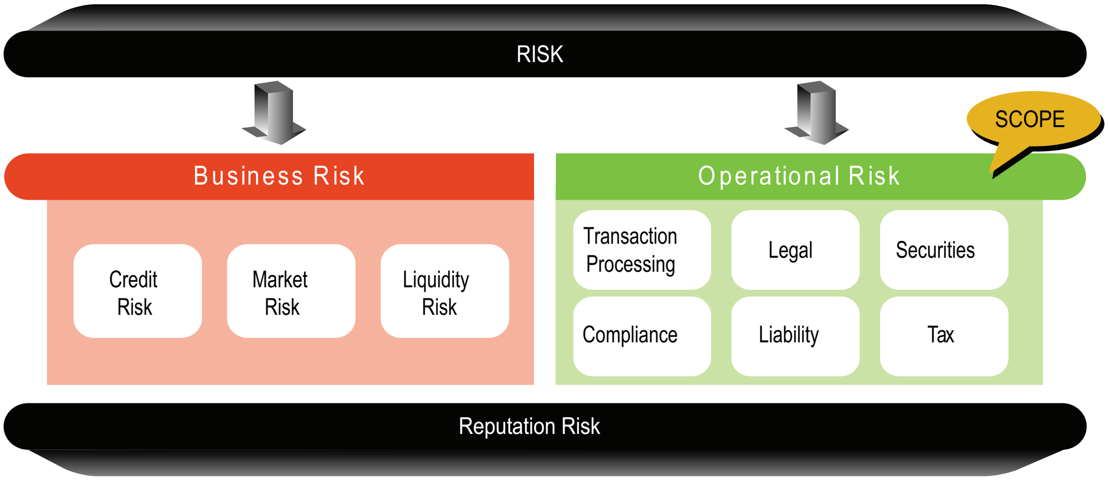

Figure 1: Risk Control Framework

The Scope

The scope of the framework presented in this paper focuses primarily upon the operational risk component and encourages the industry to further develop techniques for measuring, monitoring and mitigating operational risk. The following definition of operational risk has been adopted for this framework: "The risk of direct or indirect loss resulting from inadequate or failed internal processes, people and systems or from external events"[1]. Strategic and reputational risk is not included in the scope of this framework.

The Framework

The framework recommended in this paper revolves around three spokes. A recommended approach for is presented in Figure 2.

1. Governance Mechanism
2. Operations Checklist
3. Risk Identification Number (RIN)

First step is to establish a robust governance mechanism and operations checklist. Second step is ensuring 100% compliance of governance mechanism so as to manage risk at appropriate level.

[1] *Risk as defined in Basel II norm for International Banks for Capital Adequacy.*

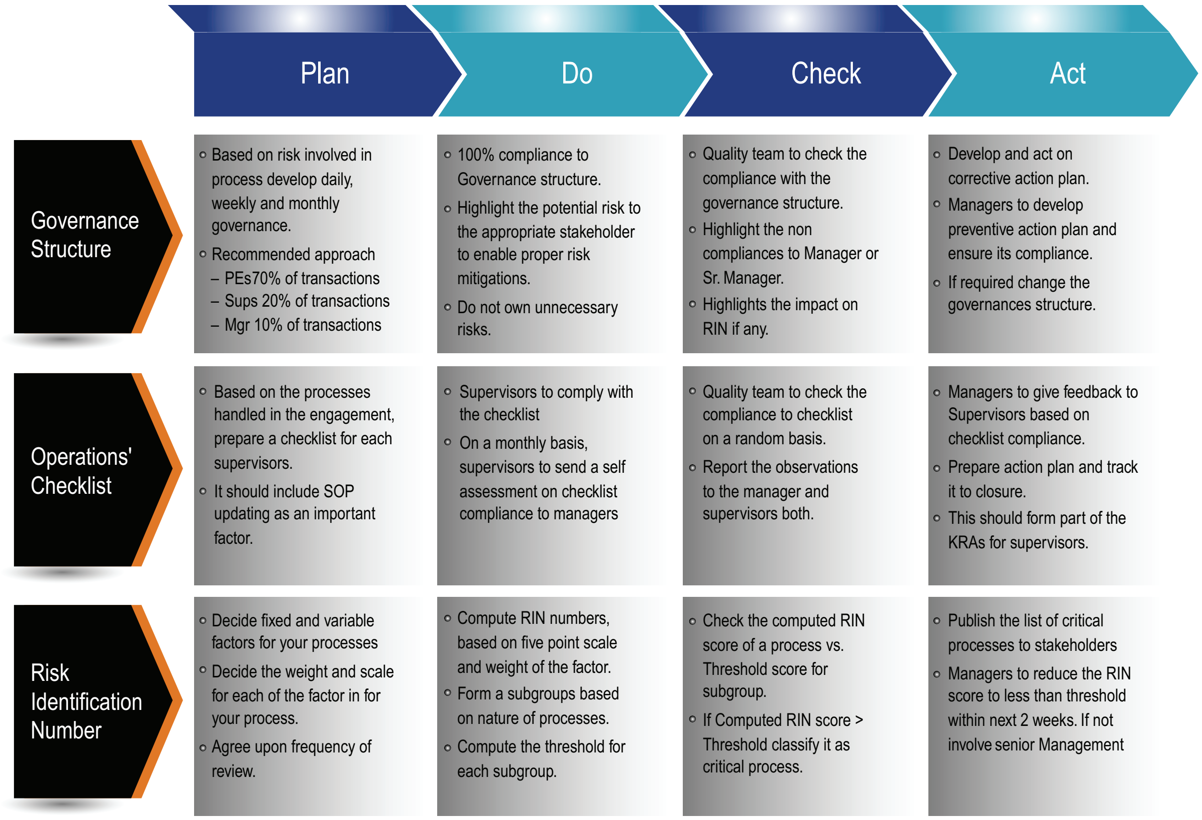

Figure 2: Approach for Framework

The next step is compute and review RIN for each process and ensure the RIN is reduced below the threshold value. If RIN is not exceeding the threshold for considerable time then it's time to revisit the threshold and move it downwards continually. The three spokes are detailed out in the following paragraphs.

1. Governance Mechanism

In order to ensure risk mitigation, a robust governance mechanism is very essential. The governance mechanism would ensure that all high risk action items are attended to and escalated to the right stakeholders in a timely manner. To define a governance mechanism it is essential to define the risk management responsibilities for all levels. Key responsibilities of management include

- Are responsible for effective management of risk.
- Select from risk reduction options recommended by staff.
- Accept or reject risk based upon the risk appetite of the organization.
- Train and motivate personnel to use risk management techniques.
- Elevate decisions to a higher level when it is appropriate.

A recommended format of governance mechanism is given in Figure 3 for reference.

Depending on the value and criticality of the transaction, the escalation pyramid represented in figure 4 is proposed for approvals on transactions. This pyramid is however indicative. Different lines of business may have customized matrix to match their transaction type and value.

Activity	Process/ Area	Mode	Attendees/ Addressee	Frequency	Owner	Purpose	Outcome	Documentary evidence
High Value transactions > USD 1 million irespective of age and breaks with age greater than 15 days	Reconciliation Processes	Email & Call if required.	TL, Manager	SOD	Supervisors	Brief to be prepared by Supervisors about transactions greater than USD 1 Million. A Separete line items for breaks which don't any informations or no idea how to resolve.	TL to action these breaks	TL's Update to Manager by an email/ call. Escalation of client process owner, if required.
High Value transactions > USD 2 million irrespective of age and breaks with age greater than 30 days	Reconciliation Processes	Email & Call if required.	Manager & COH	SOD	TL	Brief to be prepared by Supervisors/TL about transactions greater than USD 2 Million. A Separete line items for breaks which don't any informations or no idea how to resolve.	Manager to intervene and see it to closure.	Manager's update to COH if required. Escalation to client process owner, if required.
High Value transactions > USD 5 million irespective of age and breaks with age greater than 60 days	Reconciliation Processes	Email & Call if required	COH	SOD	Manager	Brief to be prepared by Supervisors about transactions greater than USD 2 Million. A Separete line items for breaks which don't any informations or no idea how to resolve.	Manager to intervene and see it to closure and take help of COH, if required.	Manager's update to COH if required. Escalation to client process owner, if required.
Posistions unmatched reconciliations	Reconciliations process	Email & Call if required	TL, Manager	Daily	Supervisors	To highlight the risk in the process	Impact assessment	Supervisors update to TL & Manager
Financial unmatched reconciliations	Reconciliations process	Email & Call if required	Manager	Daily	TL	To highlight the risk in the process	Impact assessment	TLs update to Manager
Number of Errors greater than 1% and Defects raised by Process Owners	Data management processes	Email & Call if required	TL, Manager	Daily	Supervisors	To highlight the risk in the process	Impact assessment	Supervisors update to TL & Manager
Potential failure to meet the agreed TAT	Data management processes	Email & Call if required	TL, Manager	Daily	Supervisors	To highlight the risk in the process	Impact assessment	Supervisors update to TL & Manager
Calculation of RIN Score	All the processes	Email	ALL TLs'	Weekly	Qlty	To identify critical processes	Focus area for next 4 weeks	Action item to reduce the RIN score within next 4 weeks
Review of critical processes	All the processes	Account Managem ent Meeting	Managers	Monthly	COH	Manage the risk, if unable to mitigate.		Action item to Manage the risk
Self assessment on Operations' checklist	All the processes	Email to Managers	Managers	Monthly	Supervisors	Self declaration that everyone is following checklist	Checklist followed	Checklist
Review of Risk control framework	All the processes	Review meetings	Managers	Quarterly	Qlty	Ensure compliance to the requirement	CARs	Action plan for CAR closure

Figure 3: Governance Model

The transactions which have the indicated transaction value need to be approved as per the pyramid given in Figure 4.

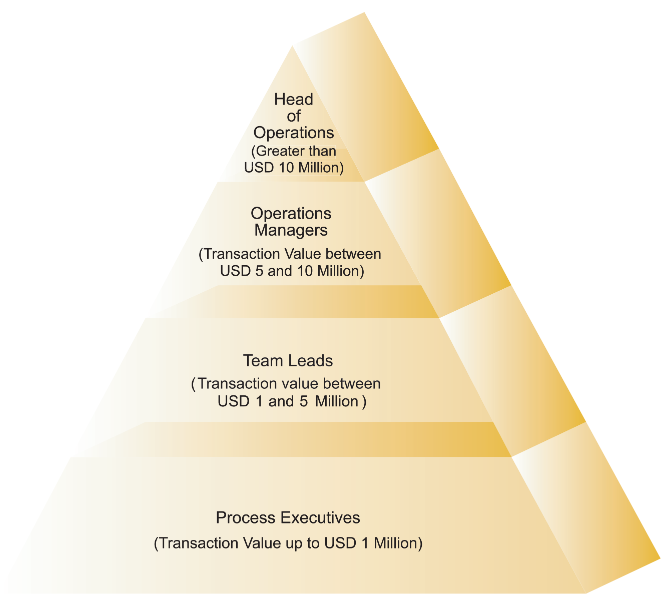

Figure 4: Escalation Pyramid

2. Operations' Checklist

Operations' checklist is a tool which details the daily, weekly, monthly and quarterly tasks of the various roles in operations. The check list details the activity, frequency, purpose and the expected outcome from each activity. It is expected to conduct a self assessment of being compliant with the checklist and the same is shared with the Management as discipline. The format of the checklist is detailed Figure 5.

Task	Frequency	Responsibility	Purpose	Output Expected
Team huddle	Daily	Team Leads along with Team Members	To cascade management instructions, client updates to the team. To resovle any pending issues with the team	Team Huddle Log
Priortized allocation of work as per guidelines	Daily	Team Leads and SMEs / Supervisors	To ensure allocation of work to team members as per capability at the same time ensuring client requirements and SLAs are met	Work Allocation Schedule
Adherance escalation protocol for escalating issues to operations manager as per guidelines	Daily	Team Leads and SMEs / Supervisors in absence of Team Leads	To ensure timely escalation of issues while the issue is still controllable. Proactively manage the risk, if any involved in the process.	Escalation Emails
Monitoring SLA performance	Daily	Team Leads and Supervisors	To ensure SLAs are met and team members are rising on the learning curve. To ensure proactive measure to avoid potential SLA misses.	SLA Reports
Review of daily MIS Reports updated by Team	Daily	Team Leads and supervisors in absence of team leads	To ensure all Management information is accurate, up to date and usable.	Error free Daily Reports
Ensure SOP compliance	Daily	Team Leads and supervisors in absence of team leads	To ensure the agreed Standard Operating procedures are complied with as per the contractual obligation towards the client	Noise free RTB
Adherence to Risk Control Framework	Daily	Team Leads, Supervisors and Operations Managers	To ensure compliance to the guidelines laid down in the risk control framework so as ensure avoidence of any operational failures	Artefacts to be generated as per the risk control framework
Quality audit	Daily / Weekly	Team Leads or Supervisors in absence of team leads along with SME and quality resource for the process	To ensure quality of deliverables are met as per client commitment and organizational guidelines	Quality audit report
Roster planning for next week	Weekly	Team Leads or Supervisors	To ensure trained and accredited staff are avaialble as per business requirments and to manage expected volumes.	Weekly Roster
Check accuracy of weekly report	Weekly	Team Leads and supervisors in absence of team leads	To ensure all Management information is accurate and up to date	Error free Weekly Reports
Weekly calls	Weekly	Team Leads or Supervisors in absence of team leads along with operations manager as per requirements	To ensure client instructions are gathered and information, issues and updates are provided to cleints	Weekly Call minutes
Team meeting	Weekly	Team Leads and operations managers along with team members	To cascade management instructions, client instructions and any kind of updates to the team members and to secure feedback, issues and any other information from the team members	Team Meeting minutes
Resource planning	Fortnightly	Team Leads along with Operations Managers	To ensure sufficient measures are taken for anticipated attrition, absentieism and spikes in volumes. This also includes creating utilization / optimization plan in case of (anticipated) fall in volumes. This is to make sure that sufficient resources are available to conduct client business and meet SLA committements.	Resource Planning Report
Performance review of team members	Monthly	Team Leads and operations managers in absence of team leads	To ensure timely performace review and feedback sessions for team members. This helps in keeping team members realise their short comings and improve. Done monthly to ensure there are no surprises at the end of review cycle	Individual performace review log for each team member
SOP Review procedure	Quarterly	Team Leads or Supervisors in absence of team leads	To ensure SOP documents are reviewed and updated as per the SOP maintainence guidelines. This helps in better scope management of the process	Reviewed and Signed Off SOP documents

Figure 5: Operations Checklist

3. Risk Identification Matrix

The risk identification matrix is based on following three variables

a. Factors
b. Weight
c. Scale Value

A Risk Identification Number (RIN) is calculated based on this. Higher the RIN value higher would be the potential risk for the particular process and action plan needs to be formulated to mitigate the risk.

Factors

The factors refer are those variables that can cause operational failures. Based on a brainstorming session with the operations team these factors can be decided. Some of these factors are inherent to the industry and some of them are specific to operations. These factors can be broadly classified into fixed and variable based on time required to alter its status co. Fixed factors are generally inherent to the industry or the line of business and can be influenced only in the long term. Variable factors stem directly out of operations and can be influenced and controlled in the short term. Period within 1-2 weeks is referred as short term and any period longer than this implies Long Term. The factors affecting the operations and can cause operational risk can be ascertained by creating a fish-bone (cause and effect) diagram. These factors have been diagrammatically illustrated in the fishbone diagram given in Figure 6.

The definition of operational risk incorporates the risks stemming from people, processes, systems and external events. People risk refers to the risk of management failure, organizational structure or other human resource failures. These risks may be exacerbated by poor training, inadequate controls, poor staffing resources, or other factors. The risk from processes stem from breakdowns in established processes, failure to follow processes, or inadequate process mapping within business lines. System risk covers instances of both disruption and outright system failures in both internal and outsourced operations. Finally, external events can include market movements, external fraud and currency fluctuations etc. These factors are detailed in Figure 7.

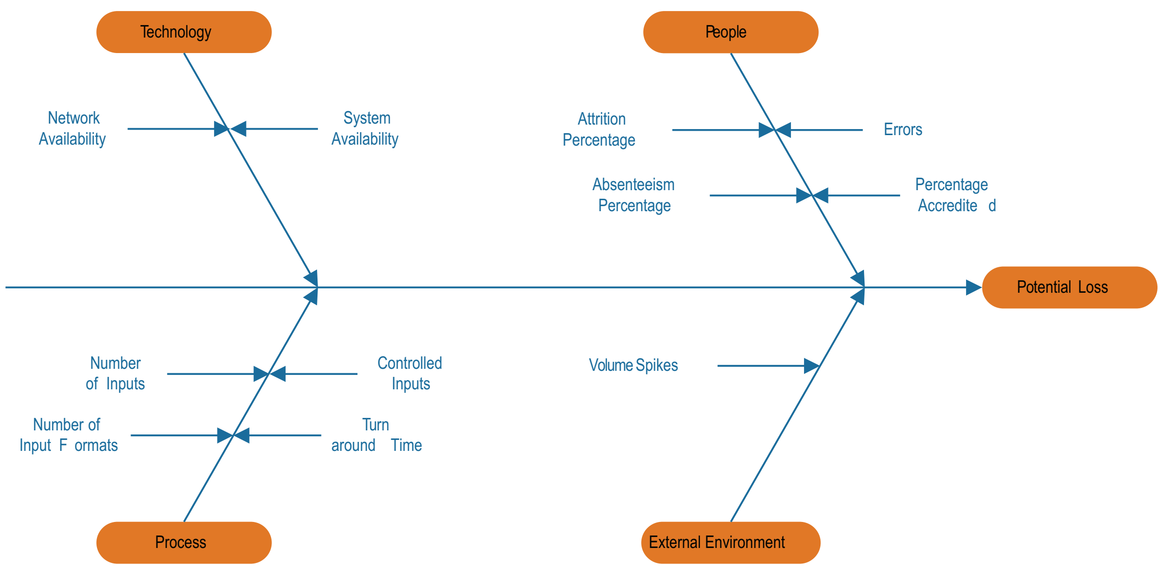

Figure 6: Causes of Operational failures

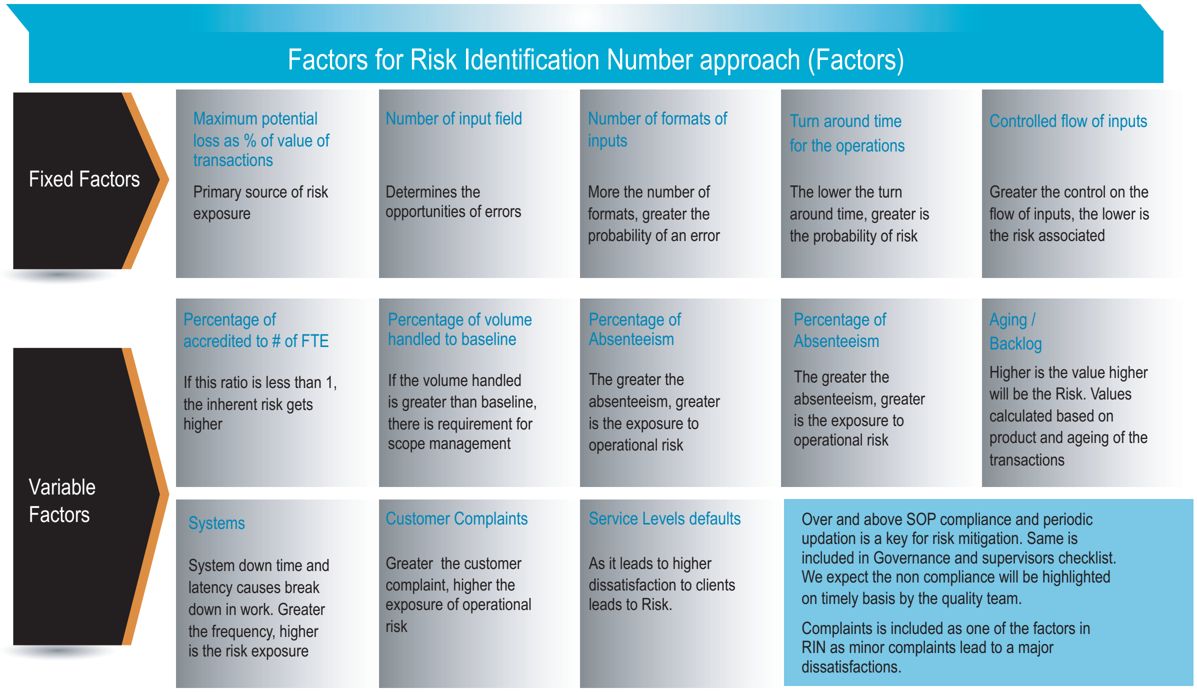

Figure 7: Factors for Risk Identification Number (RIN

The Weights

The risk identification matrix requires weights to be assigned to each of the factors identified in the fishbone, as per their influence on the output of the process. This is purely based on the principle that higher risk potential higher would be the weight. The summation of the weights, inclusive of both fixed and variable, must total to 100%. The ratio of the weights assigned to fixed and variable factors may vary as per the type of operations, industry of the operations, degree of variation in the observation, amount of influence on the operation etc,

Numeric Quotients

The numeric quotients range from one to five, according to the possible scenarios that the factors (fixed and variable) occur. In these numeric quotients, one is the most desirable scenario and five is the most un-desirable scenario. The output generated from the risk identification matrix is the risk identification number. The risk identification number (RIN Index) is the summation of weighted score, computed on a 5 point scale for the operations and its sub parts.

Threshold

To decide which process need to be in focus / needs attention of management, a threshold is arrived at. Any process which RIN value is higher than the threshold needs to be monitored as a critical process. Action plan should be formulated to change the risk category of the process. Based on suitable statistical method threshold should be decided.

Conclusion

The risk control framework, discussed in this paper, provides a logical and systematic means of identifying and controlling risk. Through this document, an attempt has been made to identify potential losses, the causes of these potential losses and then formulating a robust framework to detect and eliminate the probability of occurrence of these losses. The existing control measures have been validated for existence and sufficiency. The success of this framework is contingent on rigour in which it is adopted on a day to day basis.

About the Author

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Hrishi has been in Infosys BPO since last 4 years. He is part of the quality team for banking and capital market vertical, working for an engagement serving a global investment bank. Hrishi heads quality function for the engagement and has rich experience in managing quality in offshore capital markets environment. He has led numerous projects involving quality assurance, risk management and control. As part of current assignment, Hrishi also heads the process excellence delivery for the engagement. Process excellence being a key deliverable and value add for the client, Hrishi was till recently based in London where he worked closely with the client's process excellence team, while consulting on developing the process excellence function for the client. In terms of education, Hrishi is a Chartered Accountant and is trained on Six Sigma Master Black Belt from Indian Statistical Institute, Bangalore

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