# Problem Statement

[www.undisclosed.com](http://www.undisclosed.com) was in IT business in Mumbai, India since last 5 years. Initially when team size was small organization was focusing on getting business and delivering the solution to customer. Over the period of time when business has grown many folds then there were too many dynamics compare to initial days. Higher Resource attrition, bigger project, more change request, in the absence of defined processes project managers was executing the project as per their experience. Organization was expecting to deliver the solution at low cost for similar kind of solutions has been delivered and there was no hope for this. Project managers were bog down in day-to-day delivery issues with adhoc project planning and not in position to tell the true status, progress of the project and forecast the completion schedule, cost and efforts. Later data analysis revealed that projects were bleeding with cost variance from 200-300%, and schedule variance from 300-400%. Venture capitalist were worried that every years millions of rupees are being pumped into the business but no profit is coming out even after so many years. Due to Adhoc testing & release process customer were receiving low quality products. On top of this Management was committed for ISO9001:2000 quality initiative & next step logical progression for CMMI L4 assessment but do not know how to proceed among all the existing problems & uncertainties.

# Problem Analysis

* No business goals defined and communicated to project managers
* No organization quality policy and hence no defined & documented process
* Except rudimentary timesheet, no system was available for data collection and tracking the actual against the budget
* Excel sheet based defect tracking system was difficult to manage in stress time
* Excel sheet based test-case management was quite difficult to manage
* Managers does not reports till asked by the customer or management
* No system is available from which Project Managers can get the data and present the true status to customer or management. Reports presented by them was gut based not fact based
* No formal phase or project closure therefore no lessons learned documented and not used
* Organization was hesitating to conduct customer satisfaction survey, so organization does not know exactly where to improve
* At the end of phase or project reusable components are not being identified therefore no reusability
* Most of the requirements are floating in emails
* Team was communicating with customer directly without any approved detailed requirement document due to this reason it becomes difficult to identify the change request

# Solution Implemented by newly appointed PMO

## Solution for Improving Project Management

* Organizational business objective defined, documented with the help of senior management
* Organizational quality policy defined in line with business objective with the help of senior management
* Existing processes understood & documented with the help of project managers or functional head
* **New processes, standards, templates were identified & defined \*1\***
* Business goals mapped with processes & process goals were defined
* All the processes were tuned as per the defined process goals
* **Identify the tools which can help in process automation and data collection \*2\***
* Developed a skill database for each role
* Collected skills available in each project
* Conducted skill gap analysis & identified training required
* Deploy the identified tools
* **Trained project team on new processes, tools & any other gap identified as per the role \*3\***
* Helped project managers in creating project plan for each project. Rigor of the planning depends upon the size of project, strategic objective of the project, customer need & project phase.
* Benchmarked key metrics at organization level
* Baselined scope, time, cost for each project
* Collected project data on daily basis using the newly implemented systems
* **Defined & created dashboards, reports & pivots in tool so that information is available on demand \*4\***
* Conduct period project audit based on the PMO defined processes
* Variance analysis, Causal Analysis, Suggested Preventive Action for relevant stakeholders
* Define risk management plan for each project & closely watch key high probability issue and searching unidentified risks
* Periodically review the audit results, issues, progress, status with management, customer & other stakeholders & collect feedback
* Make sure that feedback is incorporated

## Solution for ISO9001:2000 Audit

* Mapped PMO defined processes to ISO9001:2000
* Develop QMS for the organization
* Share QMS and process map with external auditor
* Internally Audit projects against the ISO9001:2000 requirements
* Share the audit reports with senior management & commitment from project manager to close the non-compliance
* Invite external auditor for final audit

\*1\*-New processes, standards, templates were identified & defined

* 37 Processes were defined for Project Management, Program Management, Engineering, Support Functions and Process Management
* 24 Templates, 108 Forms, 25 Guidelines & Standards and 22 Checklists were created for 37 processes

\*2\*-Identify the tools which can help in process automation and data collection

* Tools for Project & Portfolio Management
  + Microsoft Office Sharepoint Server (MOSS) 2007
  + Project Server 2007
  + SQL 2005, SQL Reporting Services (SSRS), SQL Analytical Services (SSAS), SQL Integration Services (SSIS)
  + Excel sheet based prediction models
* Tools for defect & test case management
  + Mantis

\*3\*-Trained project team on new processes, tools & any other gap identified as per the role. Following trainings were conducted for the team

* Software sizing- FPA
* Earn Value Management
* Microsoft Project Office 2007
* Microsoft Project Server 2007
* Agile/Scrum
* AgileEVM
* Organizational newly re/defined processes
* ISO Process Consulting
* CMMI Process Consulting

\*4\*Defined & created dashboards and reports & pivot in tool so that information is available on demand. Following dash boards were defined for on demand access

**Dashboard-Portfolio Investment**

* In-Progress Project (Baseline Cost, EAC, Cost Variance, Baselined Duration, Forecasted Duration, Schedule Variance)
* Closed Project(Closure Condition, Earned Value, Customer Satisfaction Index, Cost Variance, Schedule variance)
* Portfolio Investment Reporting (Actual Cost, Cost Variance, Project Benefits, Realized Benefits)
* Portfolio Investment Reporting-Risk(Cost Variance, Escalation Indicator, Risk/Issues)

**Dashboard- PMO**

* Resource Availability & Allocation
* Resource Allocation & Utilization
* Billing hours & non-billing hours
* Efforts spread in Training, R&D, Component Development, Non-utilization
* Progress of each project against the planned schedule
* Progress of each project against the planned cost
* Resource consumed WBS component wise
* Risk exposure value for each project
* EAC of each project
* Actual cost incurred project-wise
* S curve for Project, Programs & Portfolios
* Overall Project Status Project wise
* Quality of each product developed & delivered to customer

**Quality Dashboard**

* Number of test cases per functionality
* Number of defects per test-case, per functionality
* Defect closure rate project wise, team member wise, functionality wise
* Defect aging
* Defect identification rate project wise, tester wise, functionality wise, severity wise

**IT-Support Dashboard**

* No of tickets registered category wise
* No of tickets open assignment wise, department wise, severity wise
* Ticket aging
* SLA Report

**Agile Project Metrics**

* Project wise Burn-down chart
* Project wise Velocity
* Project wise number of stories & estimates

**PMO Metrics, can be used to measure the performance of PMO**

* Number of engagements
* Number of mentoring relationships
* % of Projects in Green, Amber & Red
* Best Practices Contribution
* No of People trained/certified
* Number of project complying with standards/methodology
* Number of documents, web-pages, wikis available on the portal
* Return on the portfolio
* Benefit estimated v/s realized
* % of projects meeting/exceeding expectations
* Portfolio Tracker
* Program /Project Tracker