Clothes ‘R’ Us

Case Report

OPIM – 5668 – Project Risk and Cost Management

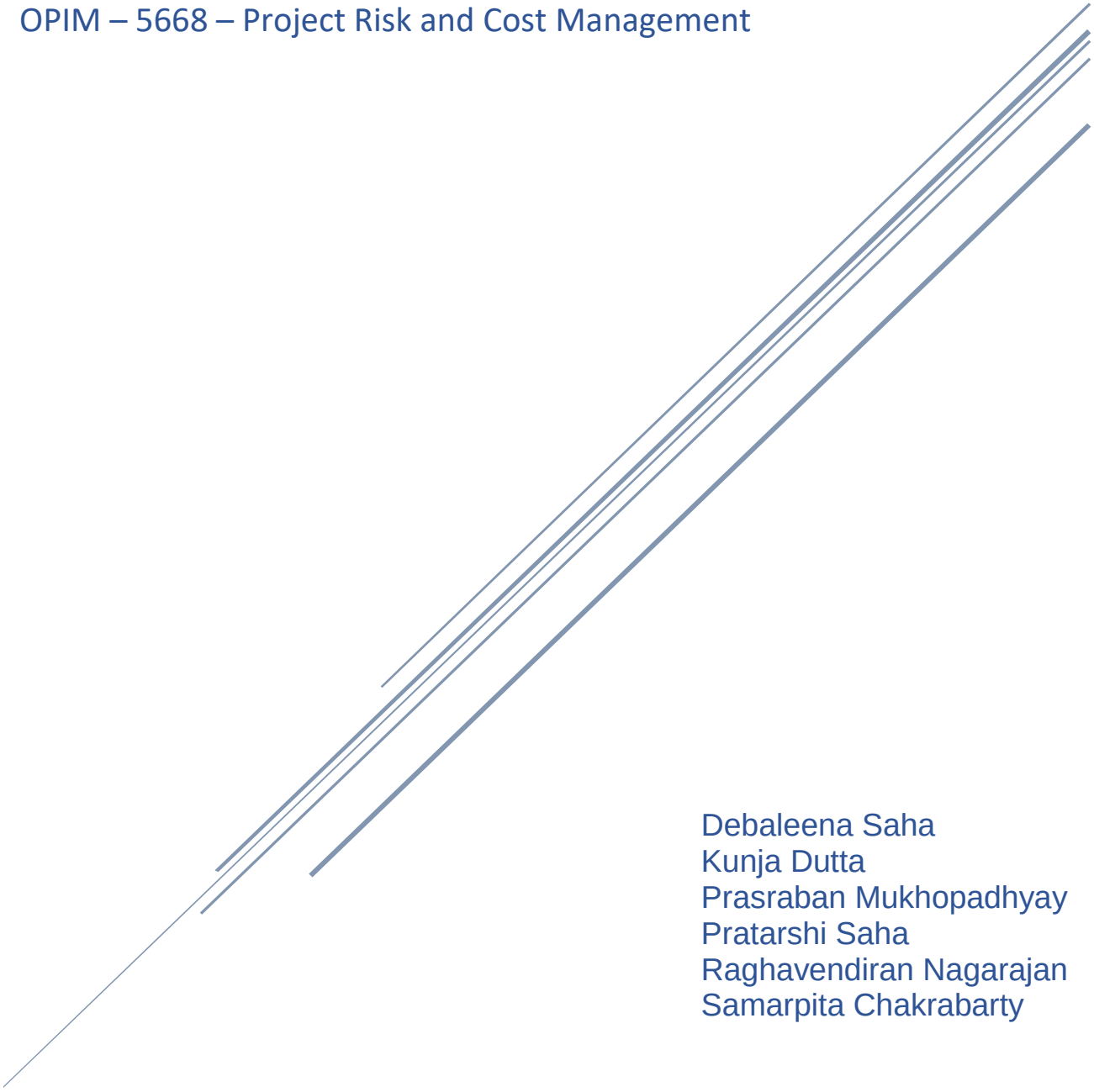

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Table of Contents

Executive Summary

This report provides an evaluation and analysis of the Point of Sales (POS) Initiative by Clothes 'R' Us to enhance their customer service at the point of sales thus regaining their competitive advantage against their direct competitors. The initiative primarily focused at improving the store manager's time allocation from back-office work to more specific store management and to provide a seamless coordination between the store IT systems and the central Clothes 'R' Us headquarters. The initiative was to also incorporate additional features of better cash and inventory management with improved network connectivity at the store level. A $15 million per year return-on-investment was expected after the completion and deployment of the project.

The execution of the project faced a delay in its scheduled completion due to various unplanned situations and irregular project tracking. This report provides a detailed analysis of the impacts of these issues on the project budget and schedule. The impacts have been evaluated and analyzed using best-practice industry tools and metrics. The earned value analysis provides the monthly impact of the issues and risks on the budget and the delays in schedule they incurred.

Our analysis finds the unavailability of slack in the project schedule and inefficient risk management during the project planning phase and throughout the project lifecycle, to be the primary causes leadings to the project failure. It also reveals that although the project showed indications of possible failure, the management had failed to identify them and respond accordingly given the high number of tightly coupled deliverables and the strict schedule.

In lieu of our findings, we primarily propose the following recommendations to mitigate the encountered issues and plan for the identified risks:

· Agile method should be adopted for a project this critical, especially when it is seen to be behind schedule and the progress hindered due to numerous dependencies.

· Slack should be introduced to make-up for any lost time whenever a phase of a project is behind schedule.

· Close monitoring and control of the budget is very crucial to avoid sunk costs.

· Employees should be involved in rotational knowledge transfer and receive training on special skills similar to the product manager, so that any resignation and termination can be handled smoothly.

Business Case

Project Objectives:

1) Free up the store manager to work the store instead of the store office
2) Automate cash management processes to include credit/debit at store level.
3) Provide real time on-network connectivity for store management and performance monitoring.
4) Allow cross-store inventory checking and reduce authorization times at POS.

Project Scope:

POS	A newly integrated POS and credit application to be developed to interface with the store servers in order to run the store management application and the POS master in each store.
Credit	Credit authorizations were to be routed through the store server directly to the HQ via a private network connecting each store to HQ and each other.
Store Management	Sales cash and credit management had to be updated in the store management application in real time from the POS stations over the store LAN.
CRM	Corporate implementation of a customer relations management (CRM) system. This would accept rolled-up sales transaction data and later real-time access from any store's POS to customers' buying history and preferences.
Inventory	Inventory interfaces to corporate inventory legacy systems to allow real-time update of inventory and cross-store inventory checking.
Network Services	Implementation of always-on private network and VoIP at every store which could reduce fax, paper mail and voice phone costs at every store.

Planned Project Timeline:

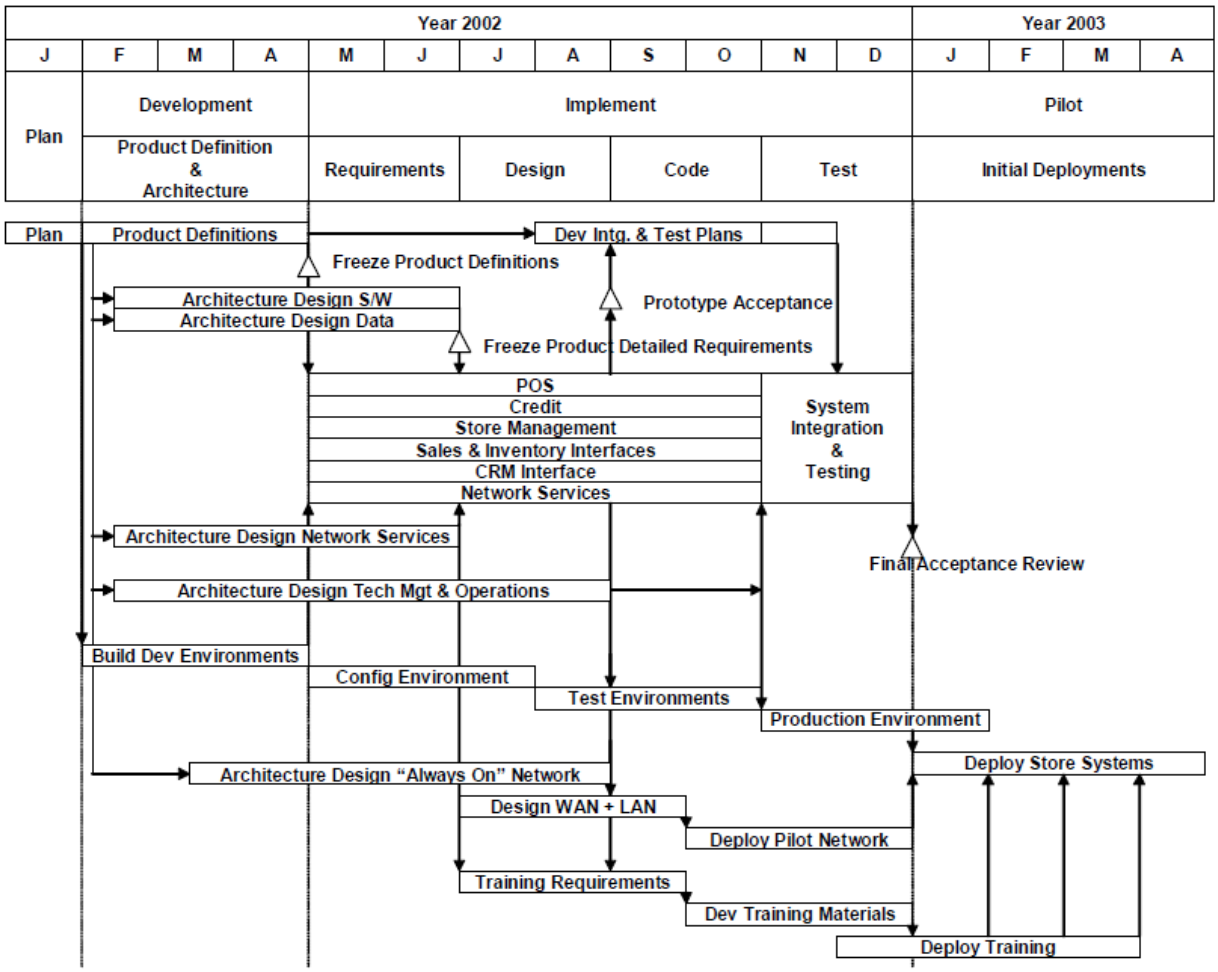
<table>
<tr><th colspan="12">YEAR 2002</th><th colspan="4">YEAR 2003</th></tr>
<tr><th>JAN</th><th>FEB</th><th>MAR</th><th>APR</th><th>MAY</th><th>JUN</th><th>JUL</th><th>AUG</th><th>SEP</th><th>OCT</th><th>NOV</th><th>DEC</th><th>JAN</th><th>FEB</th><th>MAR</th><th>APR</th></tr>
<tr><td rowspan="2">Plan</td><td colspan="3">Development</td><td colspan="8">Implement</td><td colspan="4">Close</td></tr>
<tr><td colspan="3">Product Definition and Architecture</td><td colspan="2">Requirements</td><td colspan="2">Design</td><td colspan="2">Code</td><td colspan="2">Test</td><td colspan="4">Initial Deployments</td></tr>
</table>

Challenges Faced

As per the case document, Clothes ‘R’ Us faced the following challenges

1. The POS project manager, Linda Hanse, concluded that her project was late by four weeks because the operations steering committee would not easily sign off on the POS GUI.
2. The program manager, Marcus Nord, reported an overall four-week delay across the program because another software vendor had hired the entire product management team.
3. Rich Burke, the infrastructure manager, reported that the setup of the testing environments was most likely going to be late by four weeks due to incompatibility of the application with the preinstalled operating system.
4. Ben Richards, the deployment project manager, reported that because of the recent bankruptcy of WorldCom, BellNorth’s set up of the private network was going to be delayed by a month.

Phases of the Project



Financial Challenges

POS GUI Cost Impact

- The four weeks' delay of POS GUI sign off had incurred an extra cost in the month of July. It was planned to be signed off by end of June which could not happen. Thus, it had costed an extra $192,917 to the company in July.

- This extra cost had impacted CPI to drop from 100% to 85.71%. Although it was tried to compensate this extra cost with other things in the later months, but could not be succeeded completely. Due to this, the project was over budget till the end of completion.

- There is another noticeable schedule variance and cost variance of $396,280 in the month of June for Big ABC Consulting Rollup which caused a decrease in SPI and CPI from 100% to 94.37% and a drop in critical ratio to 0.89.

- In July, there was another cost variance of $1,765,280 which caused a further drop in critical ratio to 0.81.

The later months were unaffected from any other changes, but these two impacts could not be overcome till the end of the project.

Product Management Impact

The other four weeks' delay occurred due to the product management team. The entire team had been hired by another vendor.

- The POS GUI sign-off delay had already caused an impact of $192,917 to the company. Now, due to the changes in product management team, the project was affected severely and the impacts can be seen on all the statistics.

- There was a SV of $23,750, SPI had decreased from 100% to 98.24%, CV of $216,667, CPI dropped to 85.96% and finally caused a drop in critical ratio to 0.84.

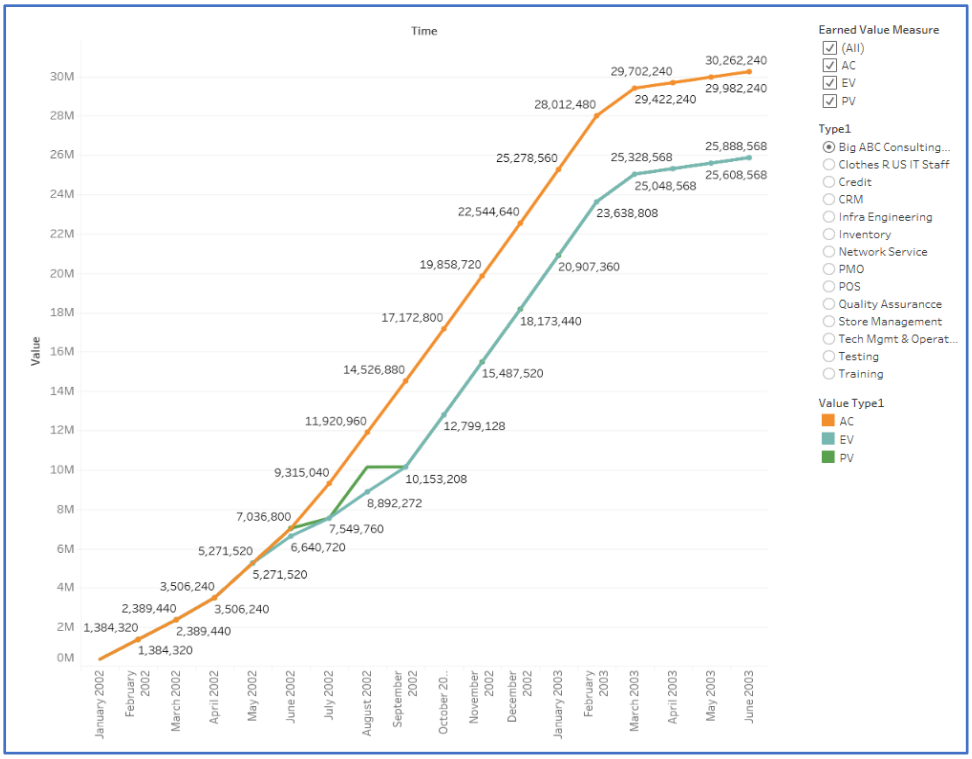
- These could not be compensated ever causing the project to be over budget till the end. This delay also affected the Big ABC Consulting Company Rollup team.

- There was already a drop-in SV and CV in the month of June and July and product management team change had caused an additional drop in SV, CV, SPI and CPI.

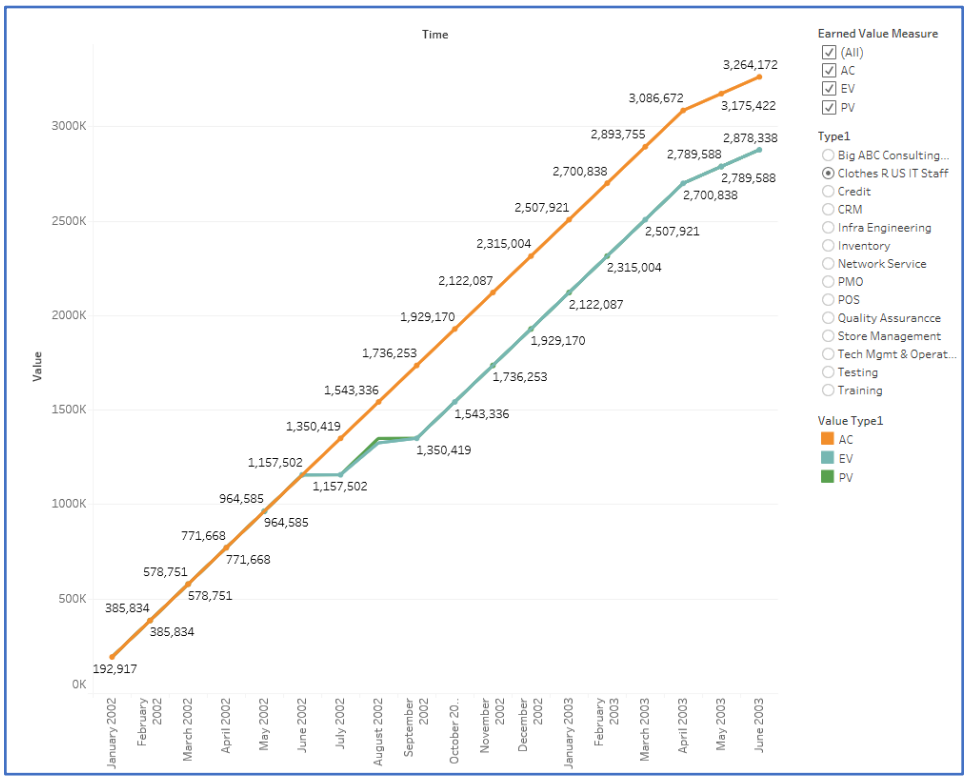
- The CPI dropped to 69.89% in September which was the lowest of all and could not recover from there.

- The total planned budget for Big ABC was $25,891,040 and the total actual burn was $30,262,240 – a variance of $4,371,200 which was huge and could not be overcome till the end.

Earned Value Analysis



Big ABC Consulting – Earned Value Analysis



Clothes 'R' Us IT Staff

Issue Analysis

Issues	Description	Impact
Product Managers left mid-way	4 out of 6 product managers submitted resignation and all of them left by August.	Pushed the project to 4 weeks behind schedule.
Delay in sign-off for POS GUI Design	The operations steering committee were indecisive about the design of the POS GUI and took time in freezing the requirements.	This delayed the entire project work to start and a lot of extra money had to be spent in the process.
Incompatible operating system	Version mismatch between the current operating system and the hardware shipped by the vendor.	Completion of the infrastructure project got delayed by 4 weeks.
Outsourced all IT works to consulting firms	The internal IT team was not trained enough and they had to rely heavily on outsourcing the technical work to consulting firms.	Lack of technical insight during the requirement analysis and design phase. Increased dependency on external sources.
Flexible requirement	The requirement was compromised initially and hardware compatible with newer version of operating system was accepted.	This led to incompatibility and loss of time and money.
Absence of slack period	The Executive Management Committee had planned for a highly-expedited development and mandated first deployment within 12 months, with no provision for slack.	The program had numerous dependencies and any lag resulted in the delay of all the other phases which incurred a huge loss of time and money.
Inefficient monitoring and controlling of the project	Proper monitoring and control was not introduced in any of the phases, to keep the project on track and attempt to recover the lost time or money.	Whenever there was a delay in any of the phases, all the other phases suffered and huge money and time was lost.
Absence of back up skills	No provisions for back up with similar skill set as the product managers were available to cover up the work when the managers left.	Resulted in another major loss in time and in turn, money.
Sunk Cost	Despite realizing that the project has deviated drastically from the schedule and that they were losing out on the market, still they went on investing money in the project.	The cost was in no way recovered or any alternate action plan implemented to prevent further such losses.

Risk Analysis

The following were the Risk identified if viewed after creating the project plan. The aim is to identify all the activities/events that could deviate the project execution from the planned baseline.

1. Project Team Members resigning – A lot of planning, training and money is invested over project team members for the successful completion of any project. The team for any major project should be chosen where all critical resources are available for work when required as planned. To mitigate this risk, there should be resources present kept on standby and up to date with project happenings for a quick handover.

2. New Store Location – Until that point where CRU products can easily compete with other market retailers such as Walmart, the new store locations should be strategically decided which would be far off from such brands yet market demand is present. This will help CRU have their dominance over the customers and profits. This is a temporary risk, yet significant enough for CRU at the current stage.

3. New Store Setup Cost – It would seem wise to close least performing stores and open new ones where demand exists. What needs to be considered the Return on Investment tenor and the existing money with the firm. An uncalculated judgement passed to install new stores versus the money available and overheads to pay will push the firm into higher debts.

4. Private Network Failure – Since the current mode of transaction involves a great use of private networks, CRU should make sure that the speed and the quantity of the network bandwidth available is enough to withstand any failures. A fault in this will cause CRU to lose sales and damage brand name to extents to lose current and potential customers.

5. Store Manager Workload – Currently the store managers have been burdened with numerous procedural duties that hinders them from paying close attention to the store activities. For new installation projects, such as the POS systems and other activities would require the store manager to view the work proceedings of the stores better. Steps should be taken to either automate certain systems else help in redistribution of the workload.

6. IT Resource Unavailability – A major set of activities in this project involved the use and deployment of IT dependencies and software resources. A failure in any activity due to this will cause delays and cost money significantly. To mitigate this one should keep enough slack time for delays in these activities and related resources at standby to help overcome these issues. Through software testing should also be done prior to project execution to ensure IT failures do not happen.

7. Over-dependency in Outsourcing – It is good to outsource activities to help speed up work or for quality work delivery. At the same time, too much of outsourcing can cause delays in project execution too if one or more such activities are affected by the outsourced company work execution/environment. To mitigate this, all activities which can be executed well within the firm's resources should be done within. Outsource what is required and the project manager should constantly follow up with work execution process to keep control over happenings. A proper balance

needs to be struck upon on how much to outsource and what to outsource.

8. Slack in Schedule – Delays can be caused due to numerous reasons, be it small or major. In over to overcome this, one should add in appropriate slack periods, especially in the critical path. A hard stop time and a project schedule with little slack is a risk. Time consuming activities and critical resource usage activities should be carefully assigned time periods considering a delay buffer during the project scheduling itself.

9. Complex Activity Dependency – During project planning and scheduling one should make sure that the interdependencies between activities be kept as least as possible. If the execution of one activity requires many predecessors to be completed, delays can easily creep in. Also, if the completion of one activity results in initiation of numerous other activities then again delay factors increases.

10. Timely Availability of Resources – Great care and attention should be taken to make sure all the required resources be present during project activity executions. Resource availabilities should be marked in calendar and should be followed up in advance to ensure delays are not caused due to lack of them. This is an important risk especially for complex large projects and those with insignificant slack periods.

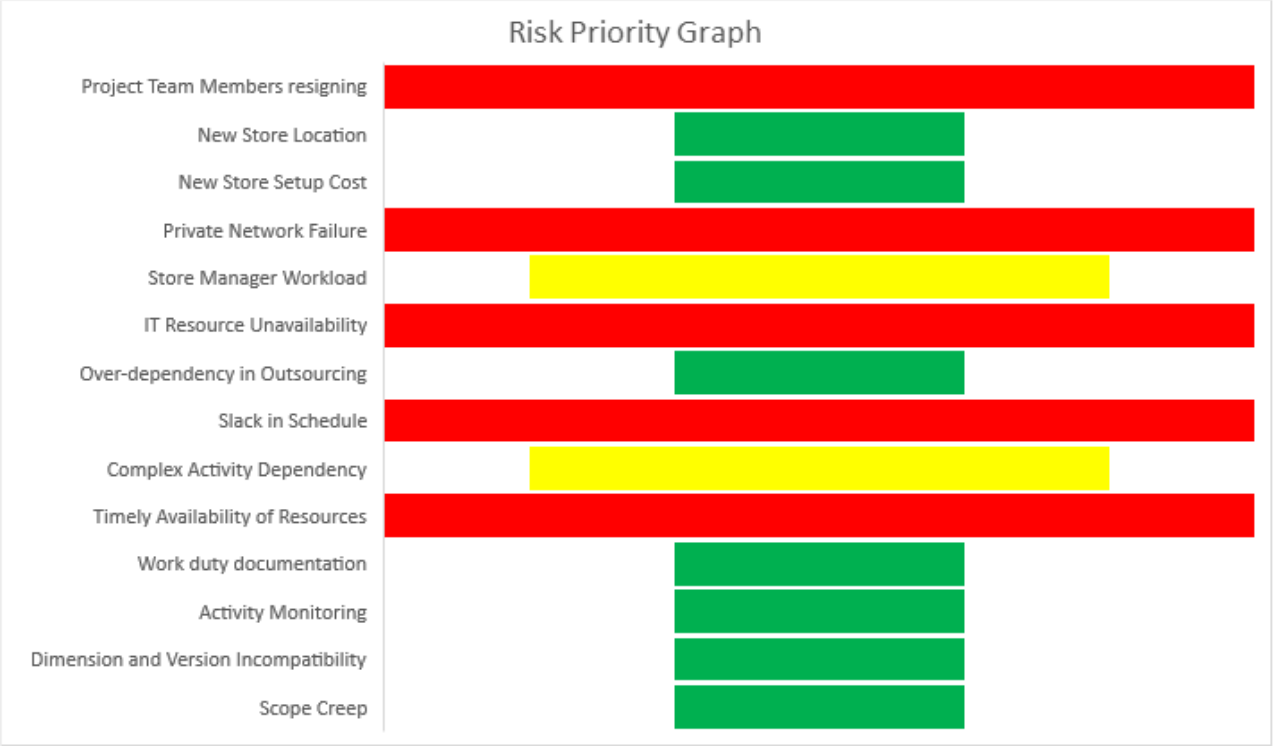
11. Work duty documentation – All the project team members' roles and duties should be clearly documents and distributed before the execution of the project. There should be no ambiguity or lack of responsibility quotient within the members, including the project manager. This will help in proper work delegation and accountability.

12. Activity Monitoring – The project manager should ensure that required attention is paid towards all project activities. Overlooking towards and activity can cost the business both money and time. To help mitigate this, the project managers can use tools and software such as MS Project which helps in monitoring every resource and activity.

13. Dimension and Version Incompatibility – Since a lot of activities are outsourced, one should remember that different firms use different measuring standards and software versions to execute activities. Special attention should be paid to ensure a proper scale conversion or version match is made as per the business requirements to help complete the project activities successfully.

14. Scope Creep – This is one major issue faced by corporate projects. The initial business requirements should be well discussed and detailed to avoid changes in the project scope in the middle. There should be a formal procedure existing to execute scope changes in the later stages of the project during execution. A movement to change should detail all the time, scope and budget changes that will be impacted and a change should proceed after consent and required schedule and resource changes.

Risk Priority Graph



In the above graph, the priorities of the risks identified, have been set as the following:

High Priority Risk

Medium Priority Risk

Low Priority Risk

Recommendations

Based on the above analysis, the following recommendations can be proposed, which if followed in time, could have saved the company the budget and schedule slippage, which occurred during the project lifecycle.
These recommendations have been classified under scope, time, cost, risk and quality constraints.

Scope

Problem Statement: Clothes 'R' Us development centre used the earlier version of the operating system. The new version of the operating system which was accepted initially led to incompatibility issues.

Recommendation: Project deliverables included software requirements, system interface requirements, functional and conceptual designs, user interface designs. These requirements should not be compromised as the project is planned based on these requirements. It will disturb the triple constraint if compromised.

Problem Statement: Every week each project manager would need to report to the PMO (Project Management Office) the status of his or her respective project. This dependency on the project manager and absence of daily update did not keep the entire team updated entirely.

Recommendation: Agile method should be adopted for a project this critical or at least when it is seen that the project is lagging behind schedule and facing continuous obstacles. Also, the project manager need not be the only one responsible to report, rotational scrum masters can do the same. That way the team as a whole will have better insights about the on goings of the project.

Problem Statement: Scope of the project was not monitored in every phase.

Recommendation: Verification and control of scope is vital along with the change request management. Documentation related to every completed phase of the project should be maintained. All project groups should be monitored that it has achieved its objectives perfectly. Any adjustment in scope, time or budget should be changed in the scope documentation and the key stakeholders should be informed.

Time

Problem Statement: Project has been delayed by weeks at various stages.

Recommendation: Slack should have been there. That buffer time in the project is useful when the project runs late for some unseen reason. It helps with the extra money and time needed to some extent. A project with so many stages should have at least a week's slack at every stage.

Problem Statement: Many of the challenges were addressed at the nth hour which forced reactive management. This led to delays in most cases.

Recommendation: For successful project management, pro active management should be adopted as much as possible. Proactive management helps in forecasting risks better and gives us some time to react when a new challenge comes up. It helps us address an issue better with the benefit of additional time in hand which can be utilized to solve the issue or come up with a useful alternate solution.

Problem Statement: Excess deviation from the project baseline.

Recommendation: Project schedule baseline should be kept in mind. Unforeseen circumstances can be addressed better by monitoring the project better and preventing the schedule issues from becoming major setbacks.

Cost

Problem Statement: The overall project was delayed by weeks. Each week's delay had constituted an additional cost of $92,000 which turned into $288,000 of lost savings.

Recommendation: Close monitoring and control of the budget is very crucial for any project. Stakeholders should be kept up to date on the progress. Regular documentation of the cost should be maintained. Unpleasant surprises during the course of the project can be avoided by regularly assessing the progress related to scope, benchmark goals, timeline, and budget.

Problem Statement: Communications regarding excess budget was not addressed in the best way.

Recommendation: Throughout the project timeline, many factors affect the cost of the project. Communication around the control of cost should be clear and accurate so that the intensity of the situation is better perceived. Any change in the budget should be timely noted.

Risk

Problem Statement: Product managers quit unexpectedly. No resource was there to take up the responsibility completely.

Recommendation: Employees should be involved in rotational knowledge transfer and also receive trainings on special skills similar to the product manager. In that case, we can avoid a mythical man-

month and instead another employee can temporarily take up the responsibilities of the product manager rather than facing a big pause.

Problem Statement: Various risks that were encountered led to delay in the project.

Recommendation: Active monitoring and controlling of the risk is of utmost importance. This will help the project to progress smoothly through each phase. Risk should be tracked, documented risks can be responded to as expected, and risk response must be evaluated at all times.

Quality

Problem Statement: Lack of documentation was a hurdle for any new person to take up the responsibility of the product managers.

Recommendation: Continuous documentation of every action and lesson learnt should be noted for the success of any project. Not only will it help the current project but also will act as a great reference for the future projects. To keep the timeline and phases within plan and for proper forecasting, collecting and reporting performance data on a regular basis and audit review on monthly basis is important.

Problem Statement: Enough testing could not be performed.

Recommendation: Rigorous testing before deployment should be conducted. The accuracy and responsiveness of the project can be maintained by regular quantifying and reporting of the quality control issues. Process adjustments can be made based on these findings. Testing timelines should not be compromised.

Problem Statement: The newer version of the operating system led to incompatibility issues.

Recommendation: Administering procurement is important. All paperwork that documents any change in contract should be kept track of. This is useful to deliver the project within budget as close as possible.

Cost-Benefit Analysis

- $247,200 could have been saved for the POS GUI impact had everyone been up to date.
- $385,834 could have been saved in the month of September when the product managers of Clothes ‘R’ Us Company had left.
- $4,371,200 could have been saved by Big ABC Consulting Company in total.

Business Improvement Recommendations

1. **Apropos Training by HR Team** – It was seen that the project managers left the company. Advanced innovation training can help motivate and train the employees to perform exceptionally for company business.

2. **Customer Service Team (CST)** – Since people use social networking sites to express fashion, the CST should extensively tap fashion trends via such blogs and medias to stay ahead in market competition. This would give the company the extra edge to stay ahead in the market.

3. **Restricting fashion within US Border** – CRU executives observed that they were being competed with Walmart which offered clothes at lower rates. People do prefer change in fashion with time. If CRU limit its fashion within the borders, then I could be easily competed with other retailers which have outlets in different countries. CRU executive should plan to open retails across different countries and distribute fashion.

4. **New Retail Location** – Since retailers such as Walmart was offering competition to CRU, it could prove to be a financially disastrous move to open new stores near such brands. The marketing team should identify locations where demand is high and competition retailers are not close by.

5. **Off the Shelf Cost** – Due to use of existing billing system, the purchase payment time was high. This was one major factor which would demotivate customers to purchase due to long queues. POS systems will increase the payment speeds between 6 to 9 times the existing speed. All purchase forecasts made from the existing data will not hold true once the POS systems will be installed. The executive team should perform response surveys and analysis from similar stores which use POS to keep supply in the stores for sales.

6. **Price Volatility** – Market prices for commodities change quickly. Due to existing billing method, the sales rate is slower. Due to this, there could be a situation when the cost price of certain clothes which were purchased by CRU before become higher than the selling price, due to availability of same clothes with other retailers at lower costs. This will create significant loss. Installation of POS should help mitigate this risk to great levels.

7. **Self-life and Inventory Life Cycle** – Fashion changes seasonally from the summer to the winter. There is a great possibility that a good proportion of the clothes of one season remain in the self, due to slower billing systems as mentioned above. This would require space and money to keep the left-over stocks for the next season. The new POS billing system would help reduce this risk. Also, newer forecasts which will be taken after installation of POS systems should help CRU purchase clothes as per requirement.

8. **Online Shopping market** – Business is moving towards e-commerce at present times. This mode of shopping is highly preferred by customers. Competition brands if they ventured into online shopping portals would provide great business loss for CRU. CRU should venture towards online shopping portals to stay profitable in the clothing market.

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Appendix

Completed Earned Value Analysis for the case	ClothesRUs_Exhibits_EVA.xls
CRU Issue Management Log	Team 1 - CRU - Issue Management Log.xls
Risk Management Log	Team 1 - CRU - Risk Management Log.xl

Expected Monetary Value Analysis

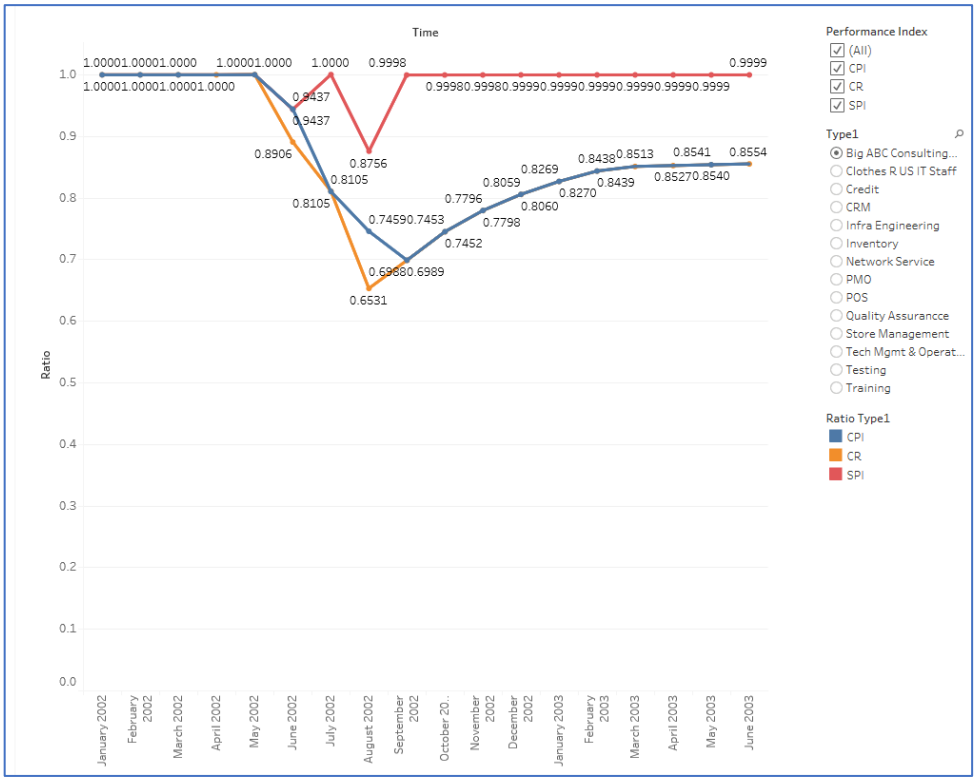
Risk ID	Problem	Priority	Prob	Cost	EMV
R1	Project Team Members resigning	High	0.15	$5,000	$750
R2	New Store Location	Low	0.3	$3,500	$1,050
R3	New Store Setup Cost	Low	0.25	$4,000	$1,000
R4	Private Network Failure	High	0.45	$10,000	$4,500
R5	Store Manager Workload	Medium	0.75	$2,000	$1,500
R6	IT Resource Unavailability	High	0.35	$5,000	$1,750
R7	Over-dependency in Outsourcing	Low	0.25	$1,500	$375
R8	Slack in Schedule	High	0.8	$40,000	$32,000
R9	Complex Activity Dependency	Medium	0.25	$7,000	$1,750
R10	Timely Availability of Resources	High	0.45	$10,000	$4,500
R11	Work duty documentation	Low	0.05	$2,000	$100
R12	Activity Monitoring	Low	0.25	$3,000	$750
R13	Dimension and Version Incompatibility	Low	0.05	$10,000	$500
R14	Scope Creep	Low	0.15	$50,000	$7,500
					$58,025

Assuming the probabilities of occurrence and cost impact of the different risks identified, the expected monetary value analysis is performed as given

The rest of the graphs, showing the Monthly Costs, Variances, Departmental Performances etc. are available at the following web link:

https://public.tableau.com/profile/pratarshi.saha#!/

Big ABC Consulting – Performance Index



Clothes R Us IT Staff – Performance Index