
***CHINESE RAILWAY PASSENGER
RESERVATION SYSTEM***
RISK MANAGEMENT PLAN

1.0.0

November 6, 2023

Team Cosmos

VERSION HISTORY

Version #	Implemented By	Revision Date	Approved By	Approval Date	Reason
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1 INTRODUCTION

The Chinese Railway Passenger Reservation System project for the Chinese Railroad Ministry (CRM) is about making train reservations easier and better. This project is very important, and we need to make sure it works well, so we have a plan for handling any problems that could come up. This report lists the main problems we might face, like the CRM wanting to do other big projects that could get in the way, or the team not having enough money to do everything. We've also thought about what we should do if these problems happen, to keep the project on track.

2 20 RISKS TABLE

The table has been sorted by the 'Risk Exposure' column in descending order. Risk exposure is calculated by multiplying the probability of a risk occurring by the potential loss if it does occur. This gives us a quantifiable measure of the risk's magnitude, which is used to prioritize risks. The higher the risk exposure, the more critical the risk is to the project, and the more attention it requires from the project management team. This ranking helps in focusing resources and efforts on the most significant risks to mitigate them effectively.

No.	Risk Description	Probability (%)	Loss	Risk Exposure	Risk Category
1.	The project manager is informed that the project plan and prototype had to be ready within 90 days. Additionally, The Chinese Railroad Ministry (CRM) needs a working prototype within a month. The Project Manager and the Development team should be consulted before setting the deadlines.	75	11	825	Schedule
2.	Lack of Object-Oriented Development Skills amongst developers can lead to risk of suboptimal system design and code quality,	75	9	675	Development Process
3.	The language barrier and varying English communication skills within the project team may hinder effective communication, potentially leading to misunderstandings and misalignment among team members, increasing the risk of project delays.	65	10	650	Staff

4.	The CRM state council's mission to expand the railroad system could hinder the project of the reservation system.	80	7	560	Mission and goals
5.	The State Council did not specifically allocate a budget to this reservation system. Most of the budget is allocated to railroad improvement. This might cause financial issues.	60	9	540	Budget/Cost
6.	The 90-day schedule may rush the project, risking quality compromise due to potential oversights and errors, exacerbated by overreliance on the CASE tool, neglecting vital design and customization.	50	10	500	Development Process
7.	Risk of Technological Incompatibility: The project's reliance on newly acquired CASE tool technology for development may pose a risk if the tool is not compatible with the existing infrastructure or development practices of the CRM, leading to integration challenges and potential project delays.	50	8	400	Project content
8.	The project's emphasis on developing a prototype within 90 days might result in insufficient post-delivery maintenance and support planning, leading to challenges in addressing system issues or transitioning the prototype to a production-ready system.	50	7	350	Maintenance
9.	Despite having experienced developers, a substantial portion of the local team lacks experience and requires on-the-job training, potentially posing risks to code quality and productivity in a fast-paced project	55	6	330	Staff
10.	The organization is only allowed to bring 4 people, which might not be sufficient for this large-scale project.	50	6	300	Organization Management

11.	The lack of in-house expertise in China could lead to challenges in setting up the development environment, securing necessary resources, and ensuring a cohesive team, potentially impacting the overall project progress.	40	7	280	Development Environment
12.	The project manager has mostly worked on software development and may not have the necessary experience to manage a complex hardware project. This may introduce risks related to project planning and quality assurance.	45	6	270	Project Management
13.	It is a huge risk to test the prototype live. People use the trains to get from one place to another for important reasons. Testing the prototype live may affect the users' plans to travel.	25	10	250	Performance
14.	Testing only a few scenarios may not mean the project is successful. A lot of testing should be done. The prototype will be tested on trains travelling from Shanghai or Guangzhou but none from Nanjing	40	5	200	Performance
15.	The Chinese Railroad Ministry (CRM) requires a project plan for evaluation, but a proper format is not provided. There is a risk that The Project Plan may not be complete or lack important information about the project. Without detailed information, the evaluation may miss checking important criteria that may cause problems in the future.	35	5	175	Project Content
16.	Cultural and language differences with the customers can be quite challenging.	60	2	120	Customer
17.	There's a heavy reliance on the international team, it may affect the maintenance process as it could lead to delays in addressing post-delivery issues.	30	4	120	Maintenance

18.	Relying upon the insider team for customer roles does not provide extensive customer-side experience - and might include some bias	35	3	105	Customer
19.	The CRM and the laws of China could hinder some of the key decision-making for project.	25	4	100	Organization Management
20.	The organization's mission to win international businesses using a marketing team could pose a risk to this software project.	30	3	90	Mission and goals

3 TOP 5 RISKS

No.	Risk Description	Responsible Person	Response Strategy	Action Plan	Resources Required
1	The project manager is informed that the project plan and prototype had to be ready within 90 days. Additionally, The Chinese Railroad Ministry (CRM) needs a working prototype within a month. The Project Manager and the Development team should be consulted before setting the deadlines.	Project Manager Director	Schedule compression and fast-tracking	Consult with the development team to reassess and renegotiate timelines, apply schedule compression techniques like crashing and fast-tracking where possible, and prioritize project tasks.	Additional skilled labour for critical tasks, overtime budget, and project management tools for efficient scheduling.
2	Lack of Object-Oriented Development Skills amongst developers can lead to risk of suboptimal system design and code quality,	Software Projects Manager	Skills development and knowledge transfer	Organize training sessions for current developers, hire consultants or temporary skilled developers for knowledge transfer, and pair programming to upskill the team.	Training materials, expert consultants, additional development staff, and time allocated for learning and development.

3	The language barrier and varying English communication skills within the project team may hinder effective communication, potentially leading to misunderstandings and misalignment among team members, increasing the risk of project delays.	Support Manager	Enhance communication and language support	Provide language training, employ translators, establish clear communication protocols, and use visual aids and collaborative tools to minimize misunderstandings.	Language training programs, professional translators, communication tools, and collaboration software.
4	The CRM state council's mission to expand the railroad system could hinder the project of the reservation system.	Project Sponsor/Strategic Planner	Stakeholder engagement and alignment	Engage with CRM stakeholders to understand priorities, align project objectives with CRM's mission, and ensure regular updates and communication to manage expectations.	Stakeholder management tools, regular meeting schedules, and dedicated time for stakeholder engagement activities.
5	The State Council did not specifically allocate a budget to this reservation system. Most of the budget is allocated to railroad improvement. This might cause financial issues.	Project Manager Director	Budget reallocation and cost optimization	Negotiate with the State Council for a dedicated budget, identify cost-saving measures within the project, and reallocate funds from less critical areas to ensure the reservation system is adequately funded.	Detailed cost-benefit analysis, budgeting tools, and negotiation with funding stakeholders.

4 IMPACT TABLE FOR TOP 3 RISKS

Risk No	Type of Impact	Low	Medium	High
1	Operational	The project could be delayed by a couple of weeks, if the deadline	Due to risk 1, the project could be delayed around a month if the deadline	Due to risk 1, the project could be delayed more than 2 if the deadline estimation matches less

		estimation already matches 90% the PM's expectations	estimation matches 50% of the expectations.	than 30% of the expectations.
2	Operational	The project could be delayed a week, if 25% of the developers struggled on OOP concepts	The project could be delayed by a month, if 50% of the developers struggled on OOP concepts	The project could be delayed by more than a month, if more than 50% of the developers struggled on OOP concepts
2	Financial	The project would require additional \$1000 for educational resources, if they know at least 70% of the concepts	The project would require additional \$1000-\$3000 for educational resources, if they know at least 50% of the concepts	The project would require more than \$3000 for educational resources, if they know less than 50% of the concepts
3	Operational	Miscommunication among people could delay the work by 2 weeks, if it happens 20% of the times	Miscommunication among people could delay the work by a month, if it happens 20%-50% of the times	Miscommunication among people could delay the work by more than a month, if it happens more than 50% of the times

5 SUMMARY

For the Chinese Railway Passenger Reservation System project to succeed, we must be ready for any problems. We've found the biggest issues that could slow us down, like not having enough time, our team needing more training, trouble with talking to each other, the CRM having different plans, and not having enough money. We've decided who in our team should handle these problems and what they should do about them. For example, the Project Manager will look at how we can do things faster, and the Support Manager will help the team communicate better. We will use extra help, training, and good planning to solve these issues. Our goal is to keep an eye on these problems and deal with them in the best way, so the Chinese Railway Passenger Reservation System project can finish successfully and make booking train tickets a lot easier.