# Project management for the construction of entertainment venue

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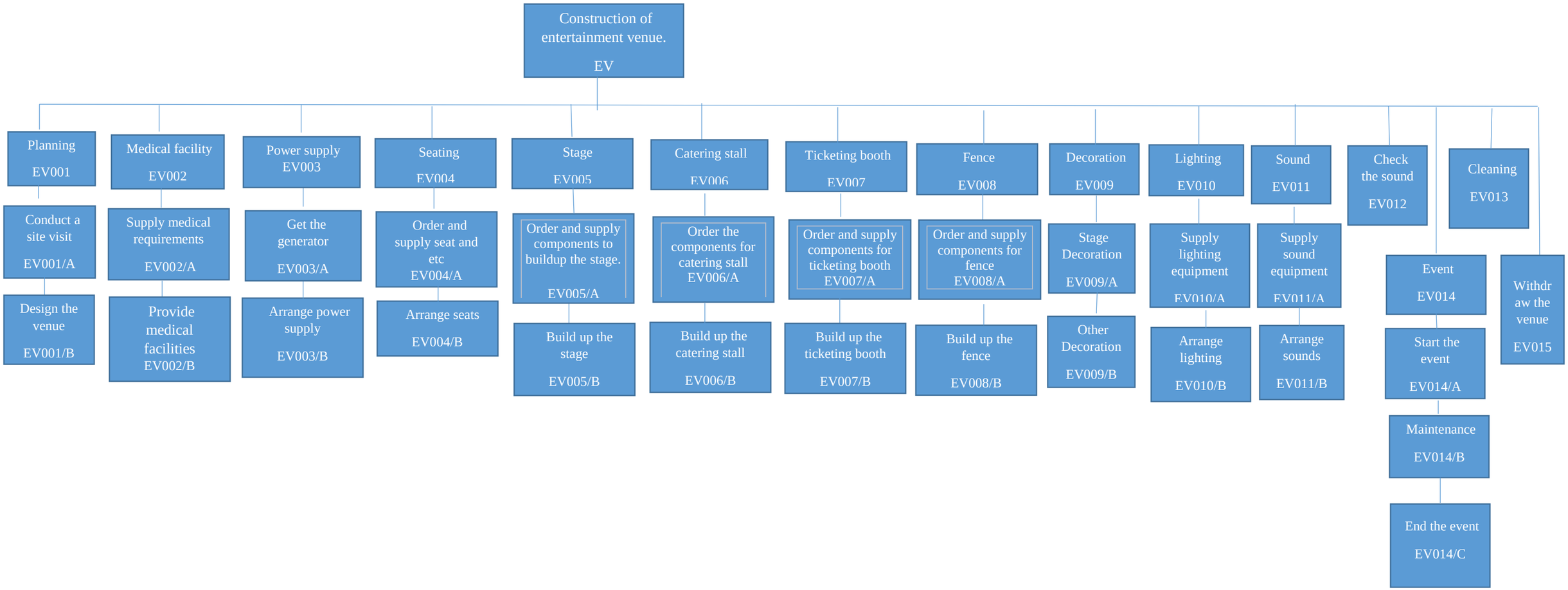
## Introduction

The objective of this report is to develop a project plan to construct an entertainment venue at Viharamahadevi Park. The venue will include a stage, seating for 100 people, a catering stall and a ticketing booth. The venue will be in place for 16 days from 12 – 28th July 2019. Project will start 3rd July onward. This project only consider about construction and maintenance of venue but not considering organize the event. This project plan includes Gantt chart, network diagram, cost estimate and risk analysis. Total project time of the project is 27 days and within the project period weekends are also considered as working days.

## Work breakdown structure (WBS).

Work Breakdown Structure (WBS) is the hierarchical decomposition of the entire project and it is used to split the overall project into different tasks. WBS help to project team to allocate resources, funds, time and responsibilities, and review the progress of each project tasks (Khohil and Chitkara, 2008). Furthermore, project team can take speed corrective actions if the WBS plan is delayed or changed.

Figure 01 – Work breakdown structure of the project.



**Project plan**

Detailed project plan has been conducted in below MS project document.

Entertainment venue.mpp

Gantt chart, work breakdown structure, resource usage, task usage, resource sheet any many other aspects of the project have been conducted in the project plan. Gantt chart is a type of bar chart which show the detail project schedule. Further, resources and cost can be allocated to different project tasks based on the Gantt chart via MS project. Gantt chart of the Entertainment venue project can be referred in above MS project document. Task based costs and resources are also entered in to Gantt chart.

Figure 02 – Screenshot of Gantt chart.

| ID | Task Mode | Task Name | Duration | Start | Finish | Finish Slack | Predecessors | Resource Names |
|---|---|---|---|---|---|---|---|---|
| 0 | | **Construction of entertainment venue** | **27 days** | **Wed 7/3/19** | **Mon 7/29/19** | **0 days** | | |
| 1 | | **Planning** | **2 days** | **Wed 7/3/19** | **Thu 7/4/19** | **0 days** | | |
| 2 | | Conduct a site visit to identify construction requirements | 1 day | Wed 7/3/19 | Wed 7/3/19 | 0 days | | Project manager,Designer |
| 3 | | Design the venue | 1 day | Thu 7/4/19 | Thu 7/4/19 | 0 days | 2 | Designer |
| 4 | | **Medical facility** | **27 days** | **Wed 7/3/19** | **Mon 7/29/19** | **0 days** | | |
| 5 | | Supply medical requirements | 1 day | Wed 7/3/19 | Wed 7/3/19 | 0 days | | Medicines and equipment[1],Medic |
| 6 | | Provide medical facilities | 26 days | Thu 7/4/19 | Mon 7/29/19 | 0 days | 5 | Medical team |
| 7 | | **Power supply** | **2 days** | **Wed 7/3/19** | **Thu 7/4/19** | **1 day** | | |
| 8 | | Get the generator | 1 day | Wed 7/3/19 | Wed 7/3/19 | 1 day | | Generator [1], procurement team r |
| 9 | | Arrange the power supply | 1 day | Thu 7/4/19 | Thu 7/4/19 | 1 day | 8 | Fuel [20],Electrician |
| 10 | | **Seating** | **3 days** | **Fri 7/5/19** | **Sun 7/7/19** | **21 days** | | |
| 11 | | Order and supply seats and other equipment | 2 days | Fri 7/5/19 | Sat 7/6/19 | 21 days | 3 | procurement team member 1 |
| 12 | | Arrange seats | 1 day | Sun 7/7/19 | Sun 7/7/19 | 21 days | 11 | seats[100],supporting team 1 |
| 13 | | **Stage** | **4 days** | **Fri 7/5/19** | **Mon 7/8/19** | **0 days** | **3** | |
| 14 | | Order and supply components to buildup the stage. | 1 day | Fri 7/5/19 | Fri 7/5/19 | 0 days | 3 | components of stage[1], Procureme |
| 15 | | Buildup the stage | 3 days | Sat 7/6/19 | Mon 7/8/19 | 0 days | 14,9 | Construction team |
| 16 | | **Catering stall** | **4 days** | **Fri 7/5/19** | **Mon 7/8/19** | **21 days** | | |
| 17 | | Order the components for catering stall | 1 day | Fri 7/5/19 | Fri 7/5/19 | 23 days | 3 | Procurement team member 3[50%] |
| 18 | | Buildup the catering stall | 1 day | Mon 7/8/19 | Mon 7/8/19 | 21 days | 17,12 | supporting team 1 |
| 19 | | **Ticketing booth** | **4 days** | **Fri 7/5/19** | **Mon 7/8/19** | **21 days** | | |
| 20 | | Order and supply components for ticketing booth | 1 day | Fri 7/5/19 | Fri 7/5/19 | 23 days | 3 | components of ticketing booth[1],P |
| 21 | | Buildup the ticketing booth | 1 day | Mon 7/8/19 | Mon 7/8/19 | 21 days | 20,12 | Supporting team 2 |
| 22 | | **Fence** | **3 days** | **Tue 7/9/19** | **Thu 7/11/19** | **18 days** | | |
| 23 | | Order and supply components for fence | 1 day | Tue 7/9/19 | Tue 7/9/19 | 18 days | 3FS+4 days | Procurement team member 2,Com |
| 24 | | Buildup the fence | 1 day | Thu 7/11/19 | Thu 7/11/19 | 18 days | 23FS+1 day | supporting team 1 |
| 25 | | **Decoration** | **3 days** | **Tue 7/9/19** | **Thu 7/11/19** | **18 days** | | |
| 26 | | Stage decoration | 2 days | Tue 7/9/19 | Wed 7/10/19 | 0 days | 15 | Stage decoration items[1],Designer |
| 27 | | Other decorations | 2 days | Wed 7/10/19 | Thu 7/11/19 | 18 days | | Other decoration items[1],Support |
| 28 | | **Lighting** | **4 days** | **Sun 7/7/19** | **Wed 7/10/19** | **0 days** | | |
| 29 | | Supply lighting equipment | 2 days | Sun 7/7/19 | Mon 7/8/19 | 0 days | 3FS+2 days | Procurement team member 3[50%] |
| 30 | | Arrange lighting | 2 days | Tue 7/9/19 | Wed 7/10/19 | 0 days | 29,15,26SS | Electrician[50%],technician 1 |
| 31 | | **Sounds** | **4 days** | **Sun 7/7/19** | **Wed 7/10/19** | **0 days** | | |
| 32 | | Supply sound equipment | 2 days | Sun 7/7/19 | Mon 7/8/19 | 0 days | | Speakers[4],Microphone[2],Procure |
| 33 | | Setup sound | 2 days | Tue 7/9/19 | Wed 7/10/19 | 0 days | 32,15 | technician 2,Electrician[50%] |
| 34 | | Check sound and light | 1 day | Thu 7/11/19 | Thu 7/11/19 | 0 days | 30,33 | technician 2,technician 1 |
| 35 | | Cleaning | 24 days | Sat 7/6/19 | Mon 7/29/19 | 0 days | | Cleaning team,Bins[5],cleaning equ |
| 36 | | **Event** | **17 days** | **Fri 7/12/19** | **Sun 7/28/19** | **0 days** | | |
| 37 | | Start the event | 0 days | Fri 7/12/19 | Fri 7/12/19 | 18 days | 18,21,24,27,34 | |
| 38 | | Maintenance | 17 days | Fri 7/12/19 | Sun 7/28/19 | 0 days | 37SS | technician 1,technician 2,Supportin |
| 39 | | End the event | 0 days | Sun 7/28/19 | Sun 7/28/19 | 0 days | 38FF | |
| 40 | | Withdraw the venue | 1 day | Mon 7/29/19 | Mon 7/29/19 | 0 days | 35FF,39 | Construction team ,supporting tean |

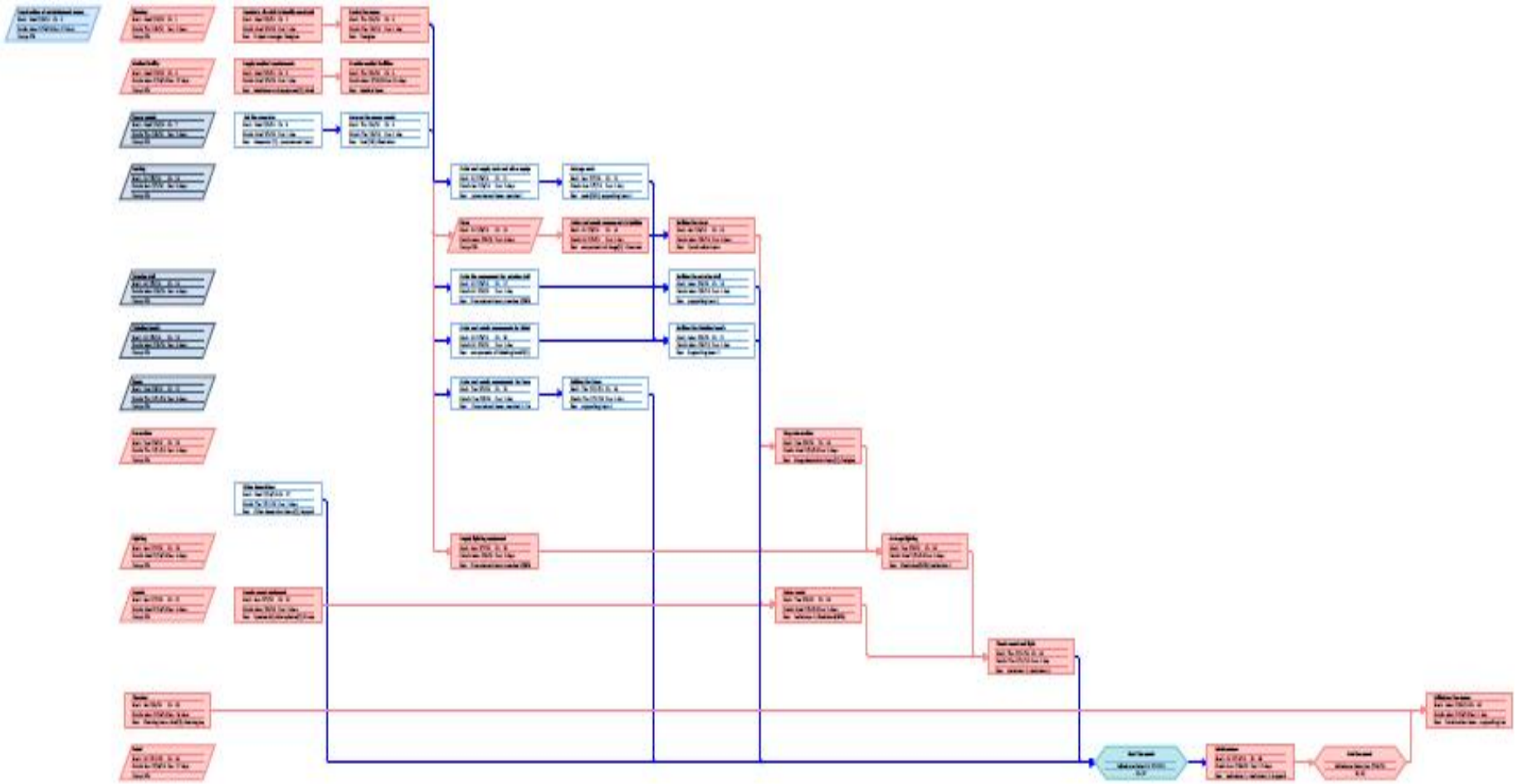
**Network diagram.**

Network diagram is the one of commonly used project planning technique that help to complete the project within shortest possible time (Sivaganathan, 2008). Total time that need to be allocated to complete this project is 792 man hours. However, as a team, project team need to complete the project within 27 days. Therefore, Network diagram is highly important for time management. Further, it clearly illustrate the critical task that project team need to complete within the time schedule.

Screenshot of this project network diagram is attached below and clear network diagram can be referred in MS project document. Critical path of the project is shown in red in network diagram. Please refer the network diagram in below link.

Network diagram.mpp

Figure 02 – Screenshot of network diagram.



**Budget and cost analysis**

The main objective of the cost planning process is to identify the importance cost factors and identify the potential for compromise the cost within different components of the project. For the cost analysis of this project, a bottom-up approach has been used. Bottom-up estimates of the each level in the WBS are added from each level of the project hierarchy (Maylor, 2006). Estimate cost of this project is Rs 777,650.00. Further, these calculated costs have been considered as baseline costs of the project.

Table 01 – Resource sheet

| Resource Name | Type | Material Label | Initials | Group | Max. Units | Std. Rate | Ovt. Rate | Cost/Use | Accrue At | Base Calendar |
|---|---|---|---|---|---|---|---|---|---|---|
| Designer | Work | | Designer | | 100% | Rs. 625.00/hr | Rs. 0.00/hr | Rs. 0.00 | Start | Standard |
| Project manager | Work | | PM | | 100% | Rs. 0.00/hr | Rs. 0.00/hr | Rs. 27,000.00 | End | Standard |
| procurement team member 1 | Work | | Procure 1 | | 100% | Rs. 250.00/hr | Rs. 0.00/hr | Rs. 0.00 | Prorated | Standard |
| **Procurement team member 2** | Work | | Procure 2 | | 100% | Rs. 250.00/hr | Rs. 0.00/hr | Rs. 0.00 | Prorated | Standard |
| Medical team | Work | | Medical | | 100% | Rs. 250.00/hr | Rs. 0.00/hr | Rs. 0.00 | Prorated | Standard |
| Cleaning team | Work | | CT | | 100% | Rs. 200.00/hr | Rs. 0.00/hr | Rs. 0.00 | Prorated | Standard |
| Medicines and equipment | Material | | Medicines | | | Rs. 0.00 | | Rs. 7,000.00 | Start | |
| Generator | Material | | Generator | | | Rs. 50,000.00 | | Rs. 10,000.00 | Start | |
| Fuel | Material | L | Fuel | | | Rs. 100.00 | | Rs. 1,000.00 | Start | |
| Electrician | Work | | Electrician | | 100% | Rs. 250.00/hr | Rs. 0.00/hr | Rs. 0.00 | Prorated | Standard |
| Procurement team member 3 | Work | | Procure 3 | | 100% | Rs. 250.00/hr | Rs. 0.00/hr | Rs. 0.00 | Prorated | Standard |
| seats | Material | | Seats | | | Rs. 300.00 | | Rs. 5,000.00 | Start | |
| supporting team 1 | Work | | Suporting team 1 | | 100% | Rs. 1,000.00/hr | Rs. 0.00/hr | Rs. 0.00 | Prorated | Standard |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| components of stage | Material | | Stage components | | | Rs. 0.00 | | Rs. 75,000.00 | Start | |
| Construction team | Work | | construction team | | 100% | Rs. 1,500.00/hr | Rs. 0.00/hr | Rs. 0.00 | Prorated | Standard |
| components of catering stall | Material | | Catering stall Components | | | Rs. 0.00 | | Rs. 25,000.00 | Start | |
| components of ticketing booth | Material | | Ticketing booth components | | | Rs. 0.00 | | Rs. 7,000.00 | Start | |
| Supporting team 2 | Work | | Supporting team 2 | | 100% | Rs. 1,000.00/hr | Rs. 0.00/hr | Rs. 0.00 | Prorated | Standard |
| Components for fence | Material | | Fence components | | | Rs. 0.00 | | Rs. 20,000.00 | Start | |
| Stage decoration items | Material | | stage deco | | | Rs. 0.00 | | Rs. 22,000.00 | Start | |
| Other decoration items | Material | | other deco | | | Rs. 0.00 | | Rs. 17,000.00 | Start | |
| stage lights | Material | | Stage lights | | | Rs. 7,000.00 | | Rs. 5,000.00 | Start | |
| other lights | Material | | other lights | | | Rs. 1,000.00 | | Rs. 0.00 | Start | |
| technician 1 | Work | | tech 1 | | 100% | Rs. 300.00/hr | Rs. 0.00/hr | Rs. 0.00 | Prorated | Standard |
| technician 2 | Work | | tech 2 | | 100% | Rs. 300.00/hr | Rs. 0.00/hr | Rs. 0.00 | Prorated | Standard |
| Speakers | Material | | speakers | | | Rs. 5,000.00 | | Rs. 0.00 | Start | |
| Microphone | Material | | Mic | | | Rs. 3,000.00 | | Rs. 0.00 | Start | |
| Bins | Material | | bins | | | Rs. 150.00 | | Rs. 0.00 | Start | |
| cleaning equipment | Material | | cleaning equipment | | | Rs. 100.00 | | Rs. 0.00 | Start | |

**Cost baseline.**

Follow the below link to refer cost baseline.


cost baseline.mpp

The cost baseline refer the amount of money which is predicted to cost for the project. This is useful to identify the actual performance deviation from the expected plan.

Table 02 – cost estimate

| Task Name | Total Cost |
|---|---|
| Conduct a site visit to identify construction requirements | Rs. 32,000.00 |
| Design the venue | Rs. 5,000.00 |
| **Planning** | **Rs. 37,000.00** |
| Supply medical requirements | Rs. 9,000.00 |
| Provide medical facilities | Rs. 52,000.00 |
| **Medical facility** | **Rs. 61,000.00** |
| Get the generator | Rs. 62,000.00 |
| Arrange the power supply | Rs. 5,000.00 |
| **Power supply** | **Rs. 67,000.00** |
| Order and supply seats and other equipment | Rs. 4,000.00 |
| Arrange seats | Rs. 43,000.00 |
| **Seating** | **Rs. 47,000.00** |
| Order and supply components to buildup the stage. | Rs. 77,000.00 |
| Buildup the stage | Rs. 36,000.00 |
| **Stage** | **Rs. 113,000.00** |
| Order the components for catering stall | Rs. 26,000.00 |
| Buildup the catering stall | Rs. 8,000.00 |
| **Catering stall** | **Rs. 34,000.00** |
| Order and supply components for ticketing booth | Rs. 8,000.00 |
| Buildup the ticketing booth | Rs. 8,000.00 |
| **Ticketing booth** | **Rs. 16,000.00** |
| Order and supply components for fence | Rs. 22,000.00 |
| Buildup the fence | Rs. 8,000.00 |
| **Fence** | **Rs. 30,000.00** |
| Stage decoration | Rs. 32,000.00 |
| Other decorations | Rs. 33,000.00 |
| **Decoration** | **Rs. 65,000.00** |
| Supply lighting equipment | Rs. 52,000.00 |
| Arrange lighting | Rs. 6,800.00 |
| **Lighting** | **Rs. 58,800.00** |
| Supply sound equipment | Rs. 28,000.00 |
| Setup sound | Rs. 6,800.00 |
| **Sounds** | **Rs. 34,800.00** |
| Check sound and light | Rs. 4,800.00 |
| Cleaning | Rs. 39,650.00 |
| Start the event | Rs. 0.00 |
| Maintenance | Rs. 149,600.00 |
| End the event | Rs. 0.00 |
| **Event** | **Rs. 149,600.00** |
| Withdraw the venue | Rs. 20,000.00 |
| **Construction of entertainment venue** | **Rs. 777,650.00** |

**Risk analysis**

Main risks of the project have been identified below and suitable risk mitigation actions are also suggested.

Table 03 – Risk assessment

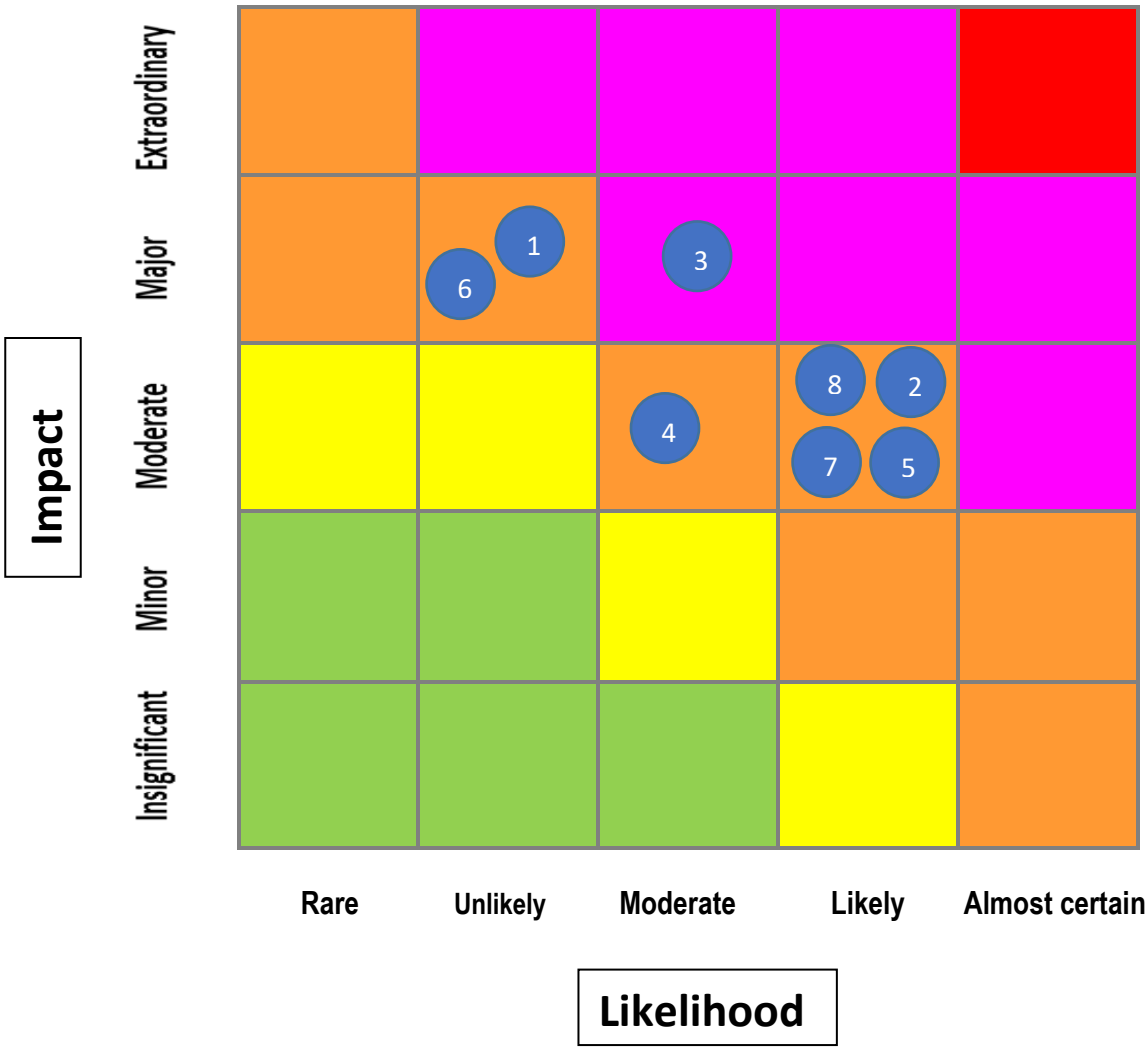
| Ref. no. | Risk | Impact | Likelihood | Risk mitigating action plans |
|---|---|---|---|---|
| 1 | Security threat | Major | Unlikely | Inform the police and provide security for the event. |
| 2 | Interrupt due to bad weather | Moderate | Likely | Check the weather updates,<br>Provide suitable covers,<br>Clear the draining system. |
| 3 | Accidents in the work place | Major | Likely | Provide pre training for employees.<br>Provide and use safety equipment.<br>Ensure medical team available in all the time.<br>Getting insurance |
| 4 | Absence of key employees | Moderate | Moderate | Hire employees from third party. |
| 5 | Delays in supply components | Moderate | Likely | Communicate with procurement team frequently.<br>Place order on time and coordinate with suppliers. |
| 6 | Constructions is not going according to design. | Major | Unlikely | Coordinate with designer frequently. |
| 7 | Interruption due to power cut. | Moderate | Likely | Use generator. |
| 8 | Unexpected increase of equipment cost | Moderate. | Likely | Keep additional budget. |

Risk register need to be updated by including all possible risks. Associated risk can be identified based on the previous experiences, different internal and external sources, key risk symptoms or performing time, cost, quality analysis (Baker and Cole, 2012). There need to be proper criteria to measure impact and likelihood. By having proper project plan, many associated risks can be mitigated.

Table 05 – risk ratings

| Risk Rating | What it Means |
|---|---|
| E<br>Extreme | ▪ Project sponsor's attention is required.<br>▪ Immediate actions need to be taken by higher management with a detailed research and management risk treatment plan. |
| H<br>High | ▪ Project sponsor's attention is required.<br>▪ Risk must be managed by project sponsor and project manager with a detailed risk treatment plan. |
| S<br>Significant | ▪ Project manager's attention is required.<br>▪ Project manager responsibility specified.<br>▪ Risks should be treated using one or more of the risk treatment options |
| M<br>Moderate | ▪ Risks need to be treated using one or more of the risk treatment options<br>▪ Risks need to be managed using specific monitoring or treatment processes. |
| L<br>Low | ▪ Risk is accepted with minimal treatment and can generally be managed using existing routine procedures.<br>▪ Low risks need to be monitored and constantly reviewed to ensure they remain acceptable. |

Figure 03 – Risk matrix for the project.



**References**

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