

Project Evaluation and Assessment

PJM 6125

Assignment 3

Title: Evaluation Goals Matrix & Tools

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**EVALUATION GOALS MATRIX**

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| Goal | Measure type | Metric | Stakeholders | Evaluation tool |
| Within budget | Efficiency | USD 3 billion | FIFA, Q.F.A, Qatar’s Head of State, Qatar’s population Construction contractors, Project management consultants, Design & Engineering consultants | Earned Value Management, Budget reports |
| Within schedule | Efficiency | 4 years (before the end of April 2021) | Construction Contractors, Project management Consultants, Qatar’s population, Project management team, Q.F.A., Qatar’s Head of State, FIFA | Earned Value Management, Gantt chart |
| Within scope | Efficiency | 3 renovated stadiums, 9 newly built stadiums | Design & Engineering Consultants, FIFA, Q.F.A., Construction Contractors, Project management Consultants, Project management team | Project charter/ Scope document, Root cause analysis |
| High Quality standards | Efficiency | Followed all the ISO quality standards.  40% improvement in modular seating arrangements, and 20% increase in the sensitivity/response-time of the climate-control devices | Olympic Sport council, FIFA, Q.F.A., Construction Contractors, Project team members | Quantitative-Benchmarking |
| Environmental certification | Efficiency | Fulfilled all the criteria to meet the environmental regulations and policies. | Environmental council, Qatar population, FIFA, Q.F.A., Construction Contractors, Project management Consultants | Site-visit/ Manual inspection |
| Technical specifications | Effectiveness | The constructed stadiums are symmetric, 105 metres x 68 metres with grass pitches. | Design & Engineering Consultants, Q.F.A., FIFA, Construction Contractors | Requirements traceability matrix/ Site survey by expert (football referee) |
| Stadium capacity | Effectiveness | The stadium must be able to accommodate the FIFA’s minimum seating requirement of 21,182 people. | FIFA, Q.F.A., Design & Engineering Consultants, Construction Contractors, Project management Consultants | Observation/  Seat count |
| Proximity of hotels and training sites | Effectiveness | The time taken to travel from the hotel/training site to the stadium must not exceed 30 minutes via bus. | Q.F.A., Qatar’s head of state. FIFA, Design & Engineering Consultants, Construction Contractors, Project management team. | National Teams/staff-members’ feedback |
| Lighting requirements | Effectiveness | Each stadium must meet the lighting requirement of 2000 lux. | FIFA, Construction Contractors, Q.F.A., Qatar’s Head of State, Football audience | Expert review |
| Accessibility of stadium | Impact | 90% of the stadium is occupied by the audience. | Design & Engineering Consultants, Olympic sport Council, FIFA, Q.F.A., Qatar’s population, Media, Football audience | Customer feedback |
| TV ratings | Impact | Increase in satellite TV ratings by 6% | FIFA, Q.F.A., Qatar’s Head of State, Football audience, Media, Competitors | Qualitative & Quantitative Benchmarking |
| Youth-connect | Impact | 65% of the audience consists of youth | Media, Design & Engineering Consultants, Project Management team, Football professional/experts. | Social media response (Twitter ‘#’ tags) |
| Football awareness | Impact | 8% increase in participation of football events/training programmes, especially among women | Media, Qatar’s Head of State, Q.F.A., FIFA, Olympic sport Council, Construction Contractors. | Observation/ Attendance |
| Worldwide support/  assistance | Impact | Sixteen schools in Pakistan and Nepal shall inherit the project profits as a major assistance to promote football. | Media, FIFA, Q.F.A., Qatar’s Head of State, Football audience. | MBWA |

**DESCRIPTION:**

The project goals can be evaluated using various tools- qualitative as well as quantitative. Depending on the project environment and the performance metric, we may choose quantitative tools such as EVM, Variance Analysis, Benchmarking or in some cases, MBWA, Root Cause Analysis, Fault Tree Analysis may be implemented.

**EVM or Earned Value Management** is a great tool to evaluate project performance parameters quantitatively, especially for cost and schedule. It calculates the variation associated with cost and schedule by comparing the actual results with the baseline at regular intervals. The baseline consists of a planned value- the value that the product is planned to achieve. It calculates all parameters by comparing this planned value (also abbreviated as PV), actual cost (AC) with the earned value (EV). Mathematically, variance associated with schedule (SV) can be expressed as the difference between the earned value and planned value. Therefore, this result is in the units of currency. A negative variation of 2000$ (earned value is 2000$ lesser than the planned value) indicates that the project is 2000$ worth man-hours behind schedule. The cost variance (CV) is expressed as the difference between the earned value and the actual cost. A negative variance means that more cost is incurred, while subsequently adding lesser value to the product.

In both cases, 0 indicates no variance while positive values indicate that the project is performing better than expected (under-budget or ahead-of-schedule). The project management team shall be responsible for performing EVM bi-weekly, to ensure that the project has a sufficient buffer, to cope in future; since this construction project is time-bound. The team shall undertake this responsibility under the supervision of the Project Consultant. The Project Consultant shall analyze these performance characteristics and develop a monthly **budget report** (in case there is no significant variation) or weekly budget reports (while performing critical activities and/or in case of significant variations) depending on the project’s current state. These reports shall include the **Gantt chart** view so that the stakeholders can easily visualize the timeline of the project against the baseline and consequently, take essential project-related decisions.

**The Project Charter and Scope Document** consist of very important information, related to the roles/responsibilities of team members and the success criteria of the project. The scope document can be used to determine whether the project has accomplished a particular objective or not, qualitatively by the Project leader with the stakeholder’s consent. In case, it does not meet the requirements, **root cause analysis** can be implemented to identify the reason for poor performance. Consequently, these reasons can be communicated to the responsible/authorized team members who shall either implement stated corrective measures in the risk register or develop alternative solutions. This would assist the team to accomplish the stated objectives.

**Quantitative benchmarking** may be implemented to evaluate the stadium’s overall quality. In this context, quality is comfort. Comfort shall be governed by two factors- modular seating arrangements and climate control devices. Benchmarking can be implemented to ensure that the stadium offers an extremely high comfort level that satisfies the requirements of “best practices” established by the competitors. Softness of the seats and sensitivity of the devices are compared with the best standards in the market.

The benchmarking shall be performed by the Quality Assurance team, on partial/full completion of different facilities within the stadium. The reports generated based on these parameters shall be submitted to the Project Consultant, who then decides whether any changes are required and if so, he/she sends it to the Quality Control department (in case of partial completion). Stakeholders are informed about this quality aspect (positive or negative).

Combination of qualitative benchmarking and quantitative benchmarking may be performed to evaluate the satellite TV ratings. **Quantitative benchmarking** shall be conducted by the sports channel head who would provide the stakeholders with a numerical value (TRP) that represents the number of people watching the game LIVE. This is an important element as one of the success criteria is an increase in popularity. Secondly, **qualitative benchmarking** can be implemented to compare the TV rating value of FIFA World Cup with other, similar tournaments. This is done by the media, to evaluate the other objective- gaining a significant market share.

The environmental certification shall be obtained only after the representative from the Environmental council **visits the site** and approves it. The approval process begins by providing the representative with a detailed report on the different materials, tools and equipment used throughout the project. The environment council studies this report, analyses minute details and conducts several tests, some of the performance parameters are **inspected manually**. If the stadium’s parameters meet the requirements, regulations of the environment; the project is certified.

**Requirements traceability matrix** is another important tool to justify whether the technical specifications of the actual stadiums meet the desired requirements stated in the planning phase. These requirements shall be tested by a professional football referee **(expert review)**. He shall **visit the site** and use his knowledge, expertise and experience to evaluate the compliance with the standards. A green signal from the referee indicates that the project has been qualified to host the world cup games.

FIFA has explicitly stated a minimum seating capacity of 21,182 people (as audience) inside the stadium. This goal can be evaluated by **observation** and **counting the number of seats**. Seats may be counted by the product obtained after multiplying the number of rows to the number of seats in each row. This estimation gives a rough idea on the capacity of the stadium. If the seating capacity is not fulfilled by this method, seats are numbered and/or color-coded to increase the accuracy of the count.

Another way is comparing the design plan and the actual layout for the estimation. Fulfilling the minimum seating arrangement ensures that the project recovers most of its expense with the sales of stadium seats (tickets). This is directly linked to another goal of youth participation. As the number of seats increase, the number of youth in the audience increases too. The youth-connect can be evaluated by creating **fan pages** on social media websites like Facebook. In addition, Twitter may be used as a platform to begin a new trend by fans with a **“#” tag**. Examples of such “#” tags include “#first\_game#Doha#FIFA#WorldCup#2022”. This increases the popularity of the game in the virtual medium (another critical success factor).

**Observation** also plays a major role in determining other metrics such as the voluntary participation of individuals playing football/attending training programmes. These observations may be quantitative when they are compared to previously recorded values. The evaluation is done by a count, representing the number of registered individuals for a game, recorded by the system server. These reports are directed to FIFA, who must be continuously updated on this goal’s performance.

A friendly match shall be played between two teams as a rehearsal, before the actual tournament commences. This game is very important as at the end of this game, staff members, the two participating teams, as well as the audience members shall share their **feedback** on the accessibility of the stadium via bus, train or other modes. The upper management shall conduct interviews with different people from the teams, staff and audience. If they find the journey too long to reach the training site/stadium, changes shall be made to reduce the time of commute. This would result in pleasing their concerns, indirectly increasing the success capability (customer satisfaction) of this project.

This match shall also gain considerable insight into the lighting capability. While playing the game, **different experts** such as the cameraman, players, referee and staff shall express their concerns (if any) and share constructive criticism to enhance the effectiveness of the lighting. The suggestions could include increased brightness, different angles, number of bulbs etc. Qualitative tool is particularly useful in this scenario as the feedback is of paramount importance and relevance to achieve a bigger LIVE audience as well as the audience tuning in via television.

**MBWA** (or Management By Walking Around) is an example of a low-tech, highly qualitative approach towards performance evaluation. However, it may uncover facts that would otherwise remain oblivious to the management. Random checks are done across any department at any given point in time, without prior notice. It shall be conducted alternatively once a week by the Project Consultant and the Contractor. Results are easily understood using this approach. Therefore, the development of schools in Nepal and Pakistan can be adequately evaluated and monitored for continuous improvement with the help of this tool. It promotes football internationally, another goal of this project.