Shivam Singh

currently learning
Major Engineering Project Performance.

❖ Contact at-

Twitter-@Singh_Shivam_10

LinkedIn-shivam-singh-669503169

❖ Education-

2017 intermediate

2020 pursuing B.tech in civil engineering discipline

Skills-

- Microsoft Excel (Intermediate level)
- AutoCAD (Beginner)

Additional Skills-

- C Language (Beginner)
- HTML (Beginner)
- CSS (Beginner)

Overview Of The Project

- Delhi Metro is a rapid transit system serving the capital of India, New Delhi and National Capital Region(NCR).

- It is under construction project recently completing its phase 3 (total planned 4 phases) in 2019.

- It is by far second largest (after Kolkata metro) and busiest metro in India.

- The construction of the project was started in 1998.

- The project was divided into four phases.

- Phase 1 covered 65kms long network following 3 routes.

- Phase 2 covered 124 kms long network following 10 new routes.

- Phase 3 covered 167.27 kms long network following 2 new routes and extending existing routes.

- The network consist of twelve colour coded regular lines with a total length of 348 kms.

- The project is owned by DMRC (Delhi Metro Rail Corporation), a joint venture with equal equity of Government of India and Government of Delhi.

- The project is initially managed by Elattuvalapil Sreedharan (retd. IRSE officer) popularly known as 'Metro Man'. Currently the project is managed by Mangu Singh.[1]

- "Its been a good example for the politicians of what the professionals can do if they are given a free hand"(E.Shreedharan, 2008,expressindia.com)[8]

Cost And Time Performance

Forecast Data

- Phase 1

  The capital cost INR 10,571 crores [2]

  Time of completion- 2009

- Phase 2 [3]

  capital cost- INR 19,131 crore

  Time of completion- July 2012

- Phase 3

  capital cost-INR 35,262 crore

  time of completion- 2016

Actual Data

- Phase 1

  Expenditure- INR 10,349.59 crores [3]

  completion date - November2006 [3]

- Phase 2

  capital cost- INR 18,783 crores

  time of completion- 2011

- Phase 3

  capital cost- INR 41,079 crores

  Time of completion-2019

Benefits to different stakeholders

Forecast Benefits

- Passengers: Safe, reliable and punctual services and high standards in travel environment.

- Business partners, Contractors and Suppliers: Contract opportunity for new rail projects, continued partnering activities

- Public: Sustainable management of environment, optimization of natural resource use and restoration of key natural resources.

Actual Benefits

- Passengers: Only one train accident took place till date and that too in testing phase. Average arrival time of train is 3.30 minutes approx.[5]

- Business partners, Contractors and Suppliers: Many extension done in the same project and also some persons are taken in advisory committee for Lucknow metro.

- Public: Delhi metro has won awards for environmentally friendly practices from United Nations[6] and other famous organizations

- **Project Manager**: Reputation and Future Projects.

- **Lenders**: Judicious utilization of funds and completion of projects in time.

- **Staff**: Job security, career and professional development.

- **Project Manager**: Retd. Er. E. Shreedharan became popular as "Metro Man of India" and also became a member of suggestion committee in Lucknow metro.

- **Lenders**: The two phases of the project completed in time and in budget. However the third phase delayed by three years.

- **Staff**: More opportunities for jobs in government sector which assures the security of job in India.

Reasons for Similarity Between Forecast and Actual Performance

- One of the main reason behind the right estimation of project variables (or say in time and inbudget completion) is that it was managed by DMRC, a special purpose organization vested worth great autonomy and powers to execute this gigantic project.

- Secondly, Delhi has wide roads(over 23% of city area) where land possession for construction is not difficult. Most of the land required is under Government control and hence can be easily acquired.[7]

- Implementation of steps will also not involve demolition of large scale private properties.[7]

- Want of an efficient mass transport system as the number of motor vehicles in Delhi has increased form 5.4 lakhs in 1981 to 51 lakhs in 1998.[7]

Key Lessons

- "The Delhi metro is a stunning example of how a government project can be done properly."(E. Shreedharan,2008)[8]

- The successful completion of the project silenced the critics who had been sceptical about the ability of an Indian public sector to complete any project.

- An experienced leader is plays a major role in success of a project.

- Political interference severely affects a Project's development.

- There must be transparency of decisions with stakeholders.

- Every individual would be accountable for his/her role in the project. Each employee had to submit a DPR and will give reason in case of any deviation.

Delhi Metro Network

The total length of delhi metro id 348 kms(216 mi) in which Red, Blue and yellow line are in Indian guage and other lines are in standard guage.

References

1. https://web.archive.org/web/20100916160155/http://delhimetrorail.com/about_us.aspx

2. https://web.archive.org/web/20100916160326/http://delhimetrorail.com/projectsupdate/project_cost.aspx

3. https://www.google.com/url?sa=t&source=web&rct=j&url=http://mohua.gov.in/upload/uploadfiles/files/Delhi_MRTS.pdf&ved=2ahUKEwjrhPnDi-bpAhVi7XMBHa3mDkwQFjACegQIDBAH&usg=AOvVaw3i_dia8ke5vwuW9MC0u8iB

4. https://web.archieve.org/web/20170702223600/http://post.jagran.com/delhi-metro-rings-in-the-new-year-under-new-chief-1325423311

5. http://www.delhimetrorail.com/travelling-by-metro.aspx#:~:text=Reach%20The%20station&text=The%20Metro%20trains%20run%20from,3.30%20minutes%20during%20peak%20time.

6. https://timesofindia.indiatimes.com/city/delhi/Delhi-Metro-gets-UN-certificate-for-preventing-carbon-emissions/articleshow/4169221.cms?referral=PM

7. https://web.archive.org/web/20100916160251/http://delhimetrorail.com/needformetro/metro-need.aspx

8. https://web.archive.org/web/20081225005743/http://www.expressindia.com/news/fullstory.php?newsid=84775