Parallel Session 2B – Services & Commercial activities

Transforming Isfahan’s railway station to an “Eminent Service Center” in a 20-year horizon

Mahdi Ostadi Jafari
POLROOD Con. Eng.
Project Manager
Table of Contents

01 Introduction

02 Methodology

03 Results

04 Conclusions
Introduction (Isfahan’s remarkable potentials and capacities)

- Site’s location
- Railway station area (728 hectare)
- Public transport system’s promotion
- Increase in freight demand
- Increase in passenger demand
- Access to Isfahan - Shiraz road (Shahid Dastjerdi Highway)
- Commuter trains’ development plan (Fooladshahr- Isfahan and Baharestan - Isfahan)
- low geological hazards
- Vicinity to Sepahan-shahr residential area
- Sepahan-shahr’s young population composition
- Nearby urban development projects
- Tourist destination and major industrial center
City of Isfahan

Legend
- Residential area
- Isfahan Railway Station
- Roads
- Rail
- Proposed commuter rail network
  - Line A
  - Line B
  - Line C
  - Line D
  - Urban line 1
  - Urban line 2
  - Urban line 3
  - Urban line 4
- North-South link
- Tehran-Isfahan high-speed rail
Contiguous Area

Legend
- Station Building
- Residential area
- Rail track
- Contiguous area
- Main uses
- Railway station
- Urban Area
Study Objectives

1. Increase the efficiency and affordability of station and create an urban identity for Isfahan

2. Create an active and vibrant urban environment

3. Preserve and promote the aesthetics and indigenous identity of the city of Isfahan
Methodology

1. Initial study, including overall feasibility study and determining the scale of the study (City/region, corridor, station area)

2. Determining the vision, strategies, policies, and goals

3. Scenario building and prioritizing, selecting best case scenario and developing the plan

4. Complementary studies and determining the details of the project

5. Approval procedure, stakeholders’ identification, and project implementation
Isfahan Railway Station

- Freight Demand (2041): 36 million ton
- Passenger Demand (2041):
  - long distance (passenger per year): 2.1 million
  - commuter (passenger per year): 24.2 million
- Num. of freight lines: 12
- Num. of passenger lines: 7
- Three passenger platforms with a length of 470 m
Best Case Scenario

- Sepahan-shahr metro station
- Services/Entertainment
- Residential development & local services
- Social services
- Rail development area
- Transportation Technology Park & Exhibition Center
- Renewable energy farm
- Logistic Park
- TOD zone
- Customs administration
- Station Area: 728 hectare

Services/Entertainment

Residential development & local services

Social services

Transportation Technology Park & Exhibition Center

Renewable energy farm

Logistic Park

TOD zone

Station Area: 728 hectare
Integration of Different Modes of Transport

Legend
- Metro
- Commuter rail station
- Bus stop
- BRT Station
- Taxi
- Bicycle
- Pedestrian-only street
Determining the Details of Land Use Planning

Phase 1
Phase 2
Phase 3

Rail facilities
solar power plant 10 MW

Legend
- Mixed use
- Public services
- Official - Law enforcement
- Urban facilities
- Recreational areas
- Tourism and entertainment
- Transportation and inventory
- Education and culture
- Residential and local services
- Medical
- Social and public services
- Sports
- Transportation exhibition center
- Renewable energy farm
- Rail facilities
- Logistic Park
- Green spaces along roads
- Transportation technology park
- Residential
- Helipad
- Pedestrian bridge
- Metro station
- Entrance/exit (to/from site plan)
### Economic Evaluation and Feasibility Study

<table>
<thead>
<tr>
<th>Investment cost</th>
<th>82,795,341</th>
</tr>
</thead>
<tbody>
<tr>
<td>railway share</td>
<td>30%</td>
</tr>
<tr>
<td>(25,102,759 million Rials)</td>
<td></td>
</tr>
<tr>
<td>Investor share</td>
<td>70%</td>
</tr>
<tr>
<td>(57,692,582 million Rials)</td>
<td></td>
</tr>
<tr>
<td>Assignment period</td>
<td>20 years</td>
</tr>
<tr>
<td>Rent-free period (paid to Railway)</td>
<td>5 years</td>
</tr>
<tr>
<td>Percentage of rent to railway from user income</td>
<td>0%</td>
</tr>
<tr>
<td>Average rent during operation period (paid to RAI)</td>
<td>2,751,281 million Rials</td>
</tr>
<tr>
<td>Internal rate of return (IRR)</td>
<td>23.97%</td>
</tr>
<tr>
<td>IRR for Investor</td>
<td>26.18%</td>
</tr>
<tr>
<td>IRR for RAI</td>
<td>93.93%</td>
</tr>
<tr>
<td>NPV (15%)</td>
<td>11,325,750 million Rials</td>
</tr>
<tr>
<td>NPV (investor share)</td>
<td>1,026,186 million Rials</td>
</tr>
<tr>
<td>NPV (RAI share)</td>
<td>12,289,596 million Rials</td>
</tr>
</tbody>
</table>
Conclusion

Integrated Transportation Systems

Designing station area plan of 728 hectare (based on TOD approach)

Designing streets for pedestrian and cyclists
Thank you for your kind attention