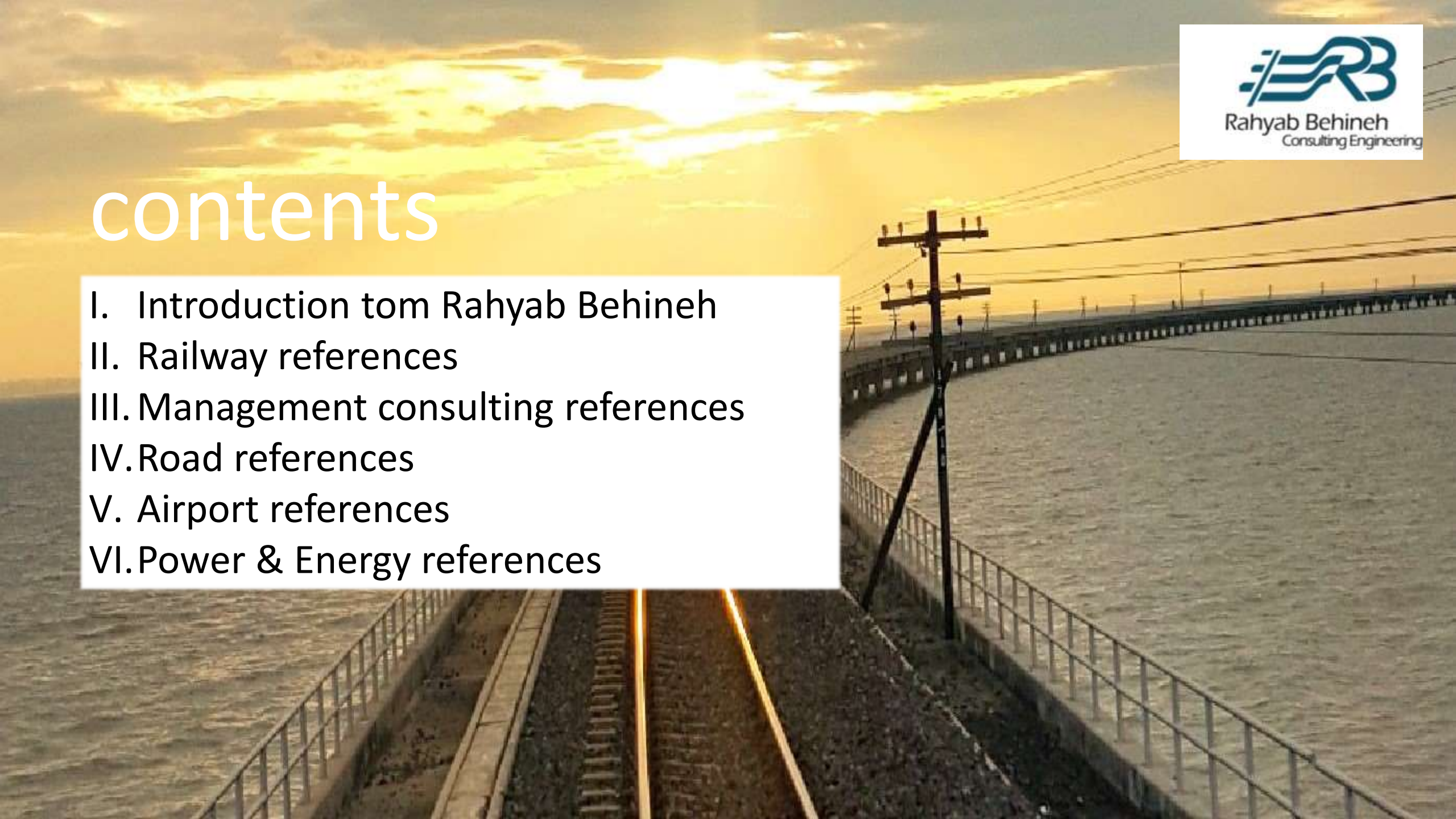
Rahyab Behineh
Consulting Engineering

Rahyab Behineh consulting engineering

introduction and overview of our experiences



Rahyab Behineh
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contents

Rahyab Behineh
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I. Introduction to Rahyab Behineh Co.

Introduction to Rahyab Behineh Co.

- established by civil experts and university professors

1994

- Licensed in railway engineering
- 1st international project
- 9th domestic project

1998

- Contracted 2 major design and supervision projects in port
- 18th domestic project

2001

- Certified as a grade 1 Iranian railway
- 30th domestic project

2004

In this year the management team and the boards were changed and the team was renewed

- Licensed in road construction
- 2nd international project
- 50th domestic project

2011

- Started mass world-class collaboration
- 3rd and 4th international projects (major European consultants)
- Licensed in management consulting

2015

- The 100th project
- Licensed in airport construction
- Established our first international office

2018

Rahyab Behineh
Consulting Engineering

Reliability, Brilliance, Compassion

Values

Honesty and Reliability

Our team believes that trust is the most valuable virtue

Glee

We are a team of experienced, happy and motivated engineers

Excellence

Our aim is to provide real and exact value using innovative solutions.

Vision

Recognition

We see ourselves as one of the leading international consulting companies and we are in the saddle.

Rahyab Behineh
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To give our clients more than what they expect, we offer our brilliant team of engineers with winning personalities

Decent analysts with a heart of gold

Firm and loyal consultants who go the extra mile

Our teamwork makes the dream, work

Creative minds giving innovative solutions

Personalities you can rely on

Our company is a part of transportation industry with a diverse portfolio of 3 major services

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Investment strategy, investment performance management, capital market assumptions, Research and information on markets and managers, Portfolio structure, board consulting services, efficient implementation of investment strategy, Investment
Policy Development & Review, risk analysis and etc.

Economic and technical feasibility studies, super structure design and studies, value engineering, signaling and communication and electrification studies, urban railway studies, internal/secondary railway lines design and study and etc.

Business process reengineering, business process management, strategic planning, change management assistance, holding training courses and seminars, business planning, human resource strategic planning, performance analysis system, system analysis, project and plan management and etc.

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We have worked with many wonderful companies and institutions

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I. Railway references

We are an independent private engineering consulting company – we mostly provide services for railway projects

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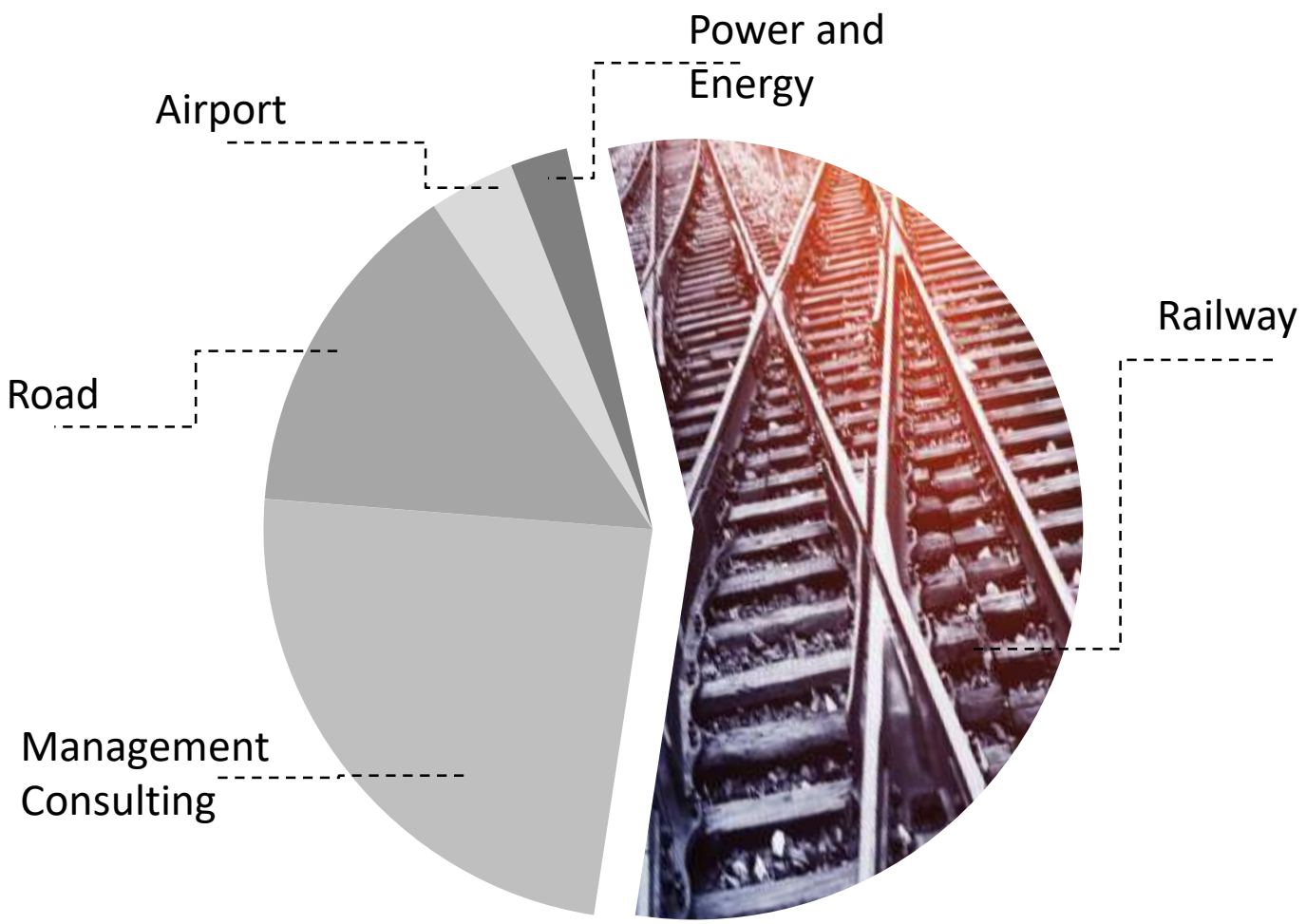

More than 50% outstanding services in the field of **railway**

This chart was made according to 110 domestic 4 international projects

We provide services in all railway segments

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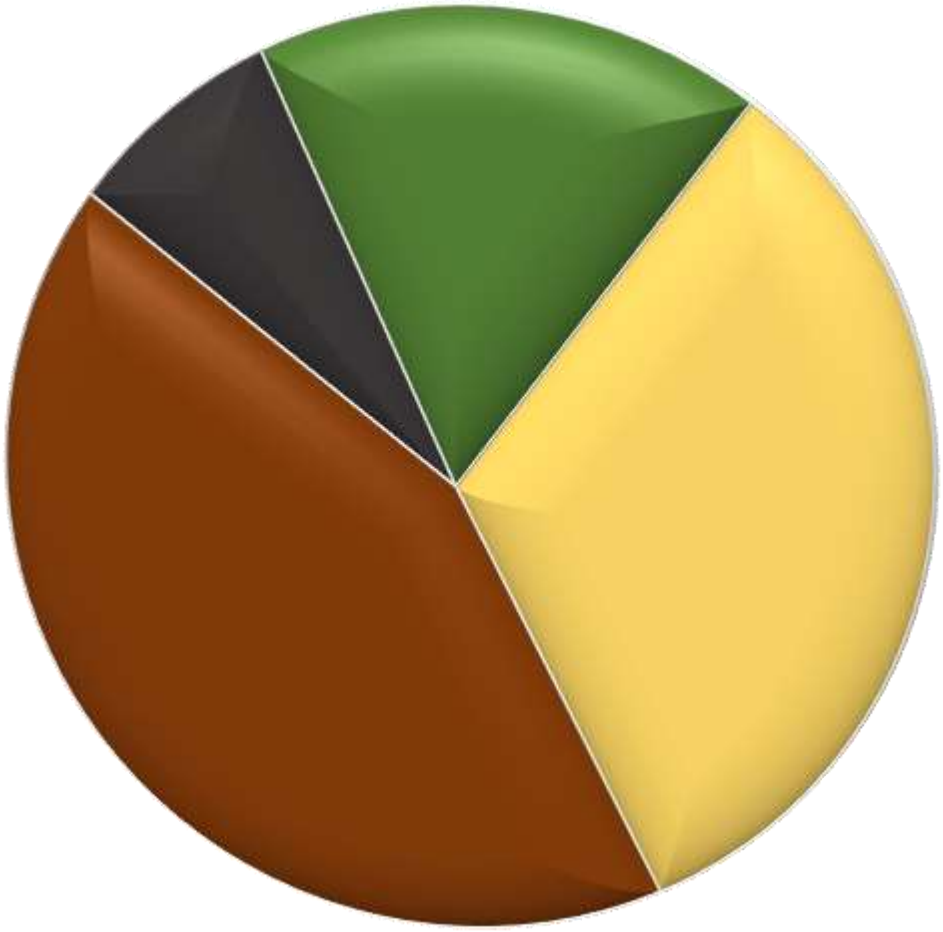
Feasibility studies

Detailed designs

Supervision services

Management consulting



This chart was provided due to 65 projects

Tendering the Construction Phase of Amir Abad Port (Superstructure and Infrastructure Project)

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Consulting Engineering

In detailed design's phase, RAHYAB BEHINEH did the project of tendering the design of railway routes inside the Amir Abad port and its connection with the main railway network. RAHYAB BEHINEH prepared the tender documentation, qualifying the contractor, supervision on purchasing the equipment.

Some of the provided services are as follows:

- Providing the legal documents for the bidding and cooperative supervision with the client for running the bidding
- Supervision on qualifying and choosing the contractor
- Doing the project control (permissible and impermissible delays by contractors)

Date: 2004/2010
Location: Tehran
Client: Amir Abad Port

Provision of consulting services to restructure the Rail Fleet's Maintenance System

Rahyab Behineh
Consulting Engineering

- Project control services
- Rail Engineering Organization Design
  - Identify the existing regulatory organizations and departments in the Rail Transportation field
  - Review existing Engineering Organizations in the country
  - Analyze and design the Organization
- Regulation of Pricing the services for maintenance wagons
  - Create a Service Price List for Rail Fleet's maintenance
- Validation of Restructured System through International Management Consultants

Date: 2016/2017
Location: Tehran
Client: I.R.I. Railway Co.

Provision of Conceptual analyzes and feasibility study of constructing the second railway line in Bandar Abbas port in order to acquire the permission for construction

Rahyab Behineh
Consulting Engineering

Carefully checking each step, our goal was achieved with doing two main tasks

Section one

Pre-feasibility and feasibility studies

1. Demand and traffic studies
2. Route design studies
3. Super/sub-structure studies
4. Station yard design
5. Fleet and rolling stock studies
6. Track components and station yard facility based on the standards and meeting the requirements of the project, while keeping the costs to the minimum

Section two

Obtaining the construction permission from the government

Date: 2015/2015

Location: Tehran

Client: Nik Gostar Co.

Design and administrative/site provide necessary supervision for railway track maintenance and repair

Rahyab Behineh
Consulting Engineering

The project of maintenance and repair is as important as design and construction. in order to present our quality, we advanced to each step with cautious engineering solutions

Date: 2016/2017
Location: Tehran
Client: Ports & Maritime Organization

Design Optimization

- Reviewing the initial design and optimizing it
- Railway track detailed design and building maps preparations
- Site visiting and controlling the earthwork (route profile control)
- Providing the tender documents to be published, in order to choose the qualified contractors
- Supervision on contracting and providing legal documents

Supervision

- Supervision on maintenance and repair of all track components by all responsible companies
- Supervision of rehabilitation including the super/sub-structure carried out by operator, investor and all subsidiary companies

Provision of engineering studies in order to connect Hamedan-Sanandaj Intercity Railway to the national railway network

Rahyab Behineh
Consulting Engineering

in this project RAHYAB BEHINEH studied the engineering solutions of appending the Hamedan – Sanandaj, -two main cities in the west of Iran- to the railway network

the key aspects of the project INVOLVE:Research and Design

- Project identification
- Study the demands of freight and passenger traffic during the operation phase
- Routes and corridor design
- Carry on Environmental studies
- Carry on Passive Defense studies
- Carry on Financial and economic studies

Date: 2015/2016
Location: Hamedan - Kermanshah - Kurdistan
Client: I.R.I. Co

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Date: 2015/2016
Location: Hamedan - Kermanshah - Kurdistan
Client: I.R.I. Co

جمهوری اسلامی ایران
وزارت راه و شهرسازی

Master plan design of Islamshahr train station

Rahyab Behineh
Consulting Engineering

Islamshahr train station has the biggest yard and is located on the main southern corridor near Tehran station. The station is currently undergoing major development and modernization to provide TOD regional and commuter services, passing the high speed lines. In this regard RAHYAB BEHINEH Co., prepared the master plan for the optimizationof functions and facilities.

The main scope of our services:

- Project identification (scope, methodology, targets)
  - Passive defense studies
- Environmental studies
- The climate and geology conditions
- Geotechnics studies
  - Tunnel, bridges, and culverts
- Economic and social studies
- Railway studies (track, operation condition, rolling stocks, transportation, demands analysis)
- Mechanical and electrical facilities studies
- Master plan design
- The cost and benefit analyzes for introduced packages

Making a final report (drawings, maps)

Date: 2017/Ongoing
Location: Tehran
Client: I.R.I. Railway Co.

راه آهن جمهوری اسلامی ایران

Provision of Consulting services For tendering the Electrification of Tehran-Mashhad intercity Railway

Rahyab Behineh
Consulting Engineering

- Identification phase report (ITC)
- Project description and Term of references (TOR)
- Preparation of proposal (RFP)
- Preparing the documents of RFQ
- Codification of the documents for consultant selection and rating
- Cooperation on collecting and controlling the consultant’s documents
- rating and evaluating consultants for the client and selecting the right consultant
- Assisting the chosen consultant to make a contract with the client for the Tehran – Mashhad project

Date: 2006/2007
Location: Tehran - Mashhad
Client: I.R.I. Railway Co.

راه آهن جمهوری اسلامی ایران

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Date: 2006/2007
Location: Tehran - Mashhad
Client: I.R.I. Railway Co.

راه آهن جمهوری اسلامی ایران

regulation of the instructions for operation, maintenance and repair of railway tracks in the yard of Imam Khomeini Port

Rahyab Behineh
Consulting Engineering

- Reviewing the current maintenance condition and operation
- Conduct Comparative studies using national standards and criteria
- updating and regulating specific instructions for maintenance and repair of the railway tracks in port area
- regulating the operation instructions of railway tracks in port area
- making a technical and financial justification report for particular defects of railway tracks
- Conclusion and Documentation

Date: 2002
Location: Tehran – Imam Komeini Port
Client: Ports & Maritime Organization

Provision of Pre-feasibility and feasibility studies for Oroomieh-Salmas Intercity Railway construction, Tamarchin and Khalkhal antenna

Rahyab Behineh
Consulting Engineering

- Gathering statistical information
- Reviewing and précising the influence area
- Check the priority rule of the project in the railway network high priority list
- Studying the demand and traffic
- Designing the corridors
- Providing Time schedule
- Cost predictions
- Predicting the design’s profits
- Analyzing the profitability
- Sensitivity analysis of determinant parameters on the project profitability
- Carry on economic evaluations
- Analyzing the effective elements on the economic evaluation
- Conclude Results and offer Recommendations

Date: 2013
Location: Tehran
Client: Ministry of Roads & Urban Development.

جمهوری اسلامی ایران
وزارت راه و شهرسازی

Provision of Consulting services for organizing Qom's rail transportation

Rahyab Behineh
Consulting Engineering

Since the city of Qom is becoming more developed day by day in terms of urban development and population, a high quality transportation network is necessary. For this, city rail transportation plays an important role.

The existing railway network in the area is the main route for transporting cargo and passengers from north to south, but due to the poor quality of repair and maintenance for more than a decade as well as some technical issues costs are not effective and some unwanted difficulties have been made.

The provided services by RAHYAB BEHINNEH emphasize the following items:

- Checking for railway bottle necks in the project's area and railway network's effects on urban development and architecture
- Suggesting the best route and mechanism for the rail freight and passenger transportation
- Measuring the profitability, efficiency, advantages and disadvantages of railroad options
- Develop strategies for operation phase and consider environmental aspects for preferred options
- Preparing The technical and financial detailed documents for preferred options

Date: 2005/2007
Location: Tehran
Client: I.R.I. Railway Co.

راه آهن جمهوری اسلامی ایران

Provision of Engineering services for superstructures, signaling and communications of the main railroad of Shiraz-Bushehr-Asalooyeh (approximately 700 Kilometers)

RAHYAB BEHINEH performed The detailed design phase of the project with an approximate length of 700 kilometers. Considering the potential resources in the area such as oil, gas, and nuclear facilities, Shiraz-Bushehr railway operation can play a significant role in the development of the area.

RAHYAB BEHINEH services were mainly focused on:

- Design criteria and measurements
- Designing the station yard (30 various types of stations)
- Simulating train movement for both freight and passenger vehicles to pass the track
- Preliminary and detailed design studies for signaling along the track
- Studying the required traction forces and suggesting the suitable locomotives
- Preliminary and detailed design studies for power traction along the track and station
- Determining the requirement of station buildings, facilities, and yard construction

Date: 2008/2017

Location: Tehran – Fars – Bushehr

Client: Construction and Development of Transportation Infrastructures Company

Provision of Engineering services for detailed design phase of 620-Kilometere rail track between Chabahar-Fahraj cities

Rahyab Behineh
Consulting Engineering

The route that is being studied is more than 600 kilometers long, and starts from Chabahar harbor and through its way it passes cities of Chabahar, Nik Shahr, Iranshahr, and Fahraj. A total length of 262 kilometers of the road is located in plains, 144 kilometers of hills, and the rest is in mountains. The infrastructure project of this road is divided into 7 parts, also three organizational stations of Chabahar, Iranshahr, and Fahraj are being placed in this road. Considering the the mountains of this area some tunnels are designed with a total length of 5 kilometers, and an overeall 1.1 kilometers of bridges will be constructed as well.

- Presenting the superstructure design parameters
- Designing the route's stations including 2 organizational stations, 4 semi-organizational, and 24 passing stations
- Doing simulation studies on how long it takes for both freight and passenger vehicles to complete the route
- First and second level studies on transportation signaling
- Studies on traction forces and suggesting the suitable vehicles
- First and second grades studies on electrical power traction of main line and stations
- Reviewing and determining the requirements for buildings, facilities, and landscaping

Date: 2006/2007
Location: Tehran – Sistan and Baloochestan
Client:Construction and Development of Transportation Infrastructures Company

Provision of Advanced phase 1 studies for Line 4, Mashhad Urban railway infrastructure and superstructure

Rahyab Behineh
Consulting Engineering

- Carry on Infrastructure studies
- Describing the location of repair station and the terminal equipment according to rail vehicles specifications of the line
- Designing the terminal and the repair station
- Predict the parking capacity
- Review of the instructions of fixed equipment and the fleet
- Presenting the superstructure system report
- Sound and vibration studies
- Presenting the report of the first part of the superstructure system
- Provision of instruction for the maintenance and repair method of superstructure
- Providing the tender documents

Date: 2014/Ongoing
Location: Tehran

Client: Mashhad Urban Railway Co

Feasibility studies for building a station in Qom's northern terminal and organizing the high speed railway network

Rahyab Behineh
Consulting Engineering

- Study the feasibility of moving the Mohammadie Station to the northern multimodal terminal
- Study the feasibility of moving the high speed railway of Tehran-Qom, to the northern terminal
- Study the connection of Qazvin-Qom corridor in the northern terminal

Date: 2015

Location: Tehran – Qom

Client: Qom City Hall

Revision of feasibility phase of Esfahan-Daran-Azna-Dorood railway network studies in addition to Provision of financial studies of the project

Rahyab Behineh
Consulting Engineering

- Predict the passenger and cargo traffic of the railway network for the years of construction
- Carrying out Studies of Infrastructure, technical equipment, superstructure, and stations
- Provision of Rail fleet studies and development phase studies
- Sum up of Feasibility studies
- Presentation of possibilities for financing the project

Date: 2010/2011
Location: Esfahan

Client: Ministry of Roads & Urban Development

جمهوری اسلامی ایران
وزارت راه و شهرسازی

Provision of Feasibility studies for Jahrom-Sarvestan cities Railway network connection

Rahyab Behineh
Consulting Engineering

- Provision of beneficial statistics
- Revise and pinpoint the influence areas
- Study of the network traffic
- Determination of the route's tunnels and corridors
- Estimation of project's costs
- Foresee of project's profitability
- Analyze of determinant financial elements on making the project profitable

Date: 2017

Location: Tehran

Client: Ministry of Roads & Urban Development

جمهوری اسلامی ایران
وزارت راه و شهرسازی

Provision of Technical, financial, and environmental feasibility studies for connecting the Tehran's railway network to Imam Khomeini International Airport

Rahyab Behineh
Consulting Engineering

- Review of technical and financial records
- Demand studies
- Preliminary and feasibility studies
- Construction and operation financial studies
- Technical and environmental supplementary studies
- Managing the time schedule
- Review of liquidity flow
- Review of impact of inflation and interest of financial resources
- Forecast of incomes
- calculation of residual value
- Technical and economical sensitivity studies

Date: 2002

Location: Tehran

Client: Imam Khomeini Airport

Provision of Feasibility studies for of Esfarayen Rail station relocation

Rahyab Behineh
Consulting Engineering

- Collect and analyze available statistics
- Perform Demand studies
- Perform Corridor studies
- Perform Environmental evaluation studies
- Perform Economic studies
- Presentation of reviews of evaluating the operation phase

Date: 2009/2010

Location: Tehran

Client: Ministry of Roads & Urban Development

جمهوری اسلامی ایران
وزارت راه و شهرسازی

Provision of Feasibility and planning studies of infrastructure and superstructu for corridors: 2, 3, and 4 of Mashhad urban railway network in addition to Detailed design's phase studies of the Mashhad urban railway network : line 2

Rahyab Behineh
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This project generally includes providing E.P.C documents for two separate projects:

First, Feasibility and planning studies of infrastructure and superstructure for corridors: 2, 3, and 4 of Mashhad urban railway network

Second, Detailed design's phase studies of the Mashhad urban railway network : line 2

Also, it's good to mention that Rahyab Behineh Company has been responsible for the engineering and consulting services of implementation of the Mashhad's urban railway network cooperating with the national railway network at the F2 station.

These studies are consisted of two parts:

Section one: Feasibility and planning phase

- regulating infrastructure and superstructure parameters considering the types of the fleet
- determining the type of materials used for superstructure of the lines
- reviewing the regulations of the fleet
- Providing information about parking capacity
- Reviewing the method used for moving the facilities under the tunnel
- Presenting plans and profiles

Section two: detailed design phase

- Designing the route and presenting the longitudinal and latitudinal profiles
- Describing the design of the stations and the terminal based on fleet type and facilities
- Reviewing the required type of machines and facilities for the duration of operation phase and construction phase
- Reviewing the maintenance and repair methods
- Estimating the project's costs based on infrastructure and superstructure operations

Date: 2009/2010

Location: Tehran

Client: Ministry of Roads & Urban Development

Provision of Advanced studies for preliminary phase of the project: Line 3 Mashhad Urban Railway Network (18 Kilometers long)

Rahyab Behineh
Consulting Engineering

The general overview of this project includes advanced studies for the preliminary phase of Mashhad's urban railway network: line 3 with the length of 18 kilometers.

- Design of the track and presenting the profiles and plans
- Determination of the design and location of the terminal
- Review of the parking capacity
- Reviewing and studying the parameters
- Evaluation of the project's effect on the nearby facilities
- Review of all required machinery and equipment
- Describe the design of superstructure lines and route's switches
- Study of the maintenance and repair methods
- Estimation of project implementation costs

Date: 2007/2009

Location: Tehran – Mashhad

Client: Mashhad Urban Railway Co.

Provision of Studies for Tehran high speed railway line 2 preliminary phase (Tehran-Pardis & Tehran-Shahriar)

Rahyab Behineh
Consulting Engineering

- Gather available information and statistics
- Review and pinpoint of the influence area
- Review of the importance of the project in the initiative
- Study of the traffic and demands
- Determination of corridors and tunnels' location
- Determining time schedules
- Estimation of the initiative's profits
- Estimation of the initiative's costs
- Determine the profitability of the initiative
- Analyzing the effects of determinant elements on profitability of the initiative

Date: 2008/2012

Location: Tehran

Client: I.R.I Railway Co.

راه آهن جمهوری اسلامی ایران

Provision of Engineering services for the Initial phase of the project: Transporting iron ore to Khoozestan through Railway Network

Rahyab Behineh
Consulting Engineering

Date: 2005/2008
Location: Tehran

Client: Construction and Development of Transportation Infrastructures Company

Following the growth in industry and economy, an optimum way of transportation is necessary, also because of the average annual growth in steel industries, this project attracts a unique attention.

To reach this Goal, RAHYAB BEHINEH was selected to provide studies and researches for the project

- To Examine the Rail Network related issues in the area of the project and their solutions
- Figuring out the best solution leading to the selection of the best rail route
- Evaluating the profitability, perks, and dangers from economic point of view
- Geographical studies and field researches
- Predicting the traffic and demands
- General studies in order to optimize the design of the route
- Comparison of Electrical vs Diesel rail Network and selection of the best option

Provision of Initial Studies for Renovation of Ahvaz-Khoramshahr cities Rail Connection network

Rahyab Behineh
Consulting Engineering

- Gather and careful review of previous study records
- Prediction of the traffic and the demand for the freight and passenger trains
- Investigation of the infrastructure, technical constructions, superstructure, and station options
- Study of the required fleet, and maintenance services requirements
- Study of the financing possibilities

Date: 2004

Location: Tehran – Khoozestan

Client: Construction and Development of Transportation Infrastructures Company

Provision of Study and design of rail track and stations for the Amir Abad's port and connecting this railway to closest national railway network

Rahyab Behineh
Consulting Engineering

Basic studies for the first stage and second stage of Amir Abad port's infrastructure and superstructure design. Also to make the connection between Amir Abad port and closest Railway network (11.9 km).
Also in this project RAHYAB BEHINEH designed the trading stations between this port and the railway track of Rostam Kala city.

Date: 2003/2004
Location: Tehran – Amir Abad Port

Client: Amir Abad Port

First Stage:
1st section
- Field research
- Presenting the general opinion of our experts about the project
- Predicting the future income of cargo transportation
- Providing the plan

2nd Section:
- Overall analyzes of the project
- Determining the locations and types of stations on the plan
- Reviewing the Design's standards
- Determining the number of bridges and creating contents

Second Stage
1st Section:
- Field research and marking the precise location
- Estimating the costs

2nd section:
- Technical analyzes and creating the final plans
- Time schedules
- Infrastructure and superstructure plans

Provision of Studies for Feasibility phase of project: Imam Khomeini Port-Khoramshahr city Railway network Connection (120 Km)

Rahyab Behineh
Consulting Engineering

Imam Khomeini port, as well as being considered one of the biggest ports of Iran, is Iraq's best access route to high seas.

After design of the the Khoramshahr-Basre project, which led to the connection of Iran-Iraq Railway Network, Company of Construction and Development of Transportation Infrastructures in Iran handed this project to RAHYAB BEHINEH company.

Some advantages of this project are as follows:

- The route is beneficial for Iraq's transportation system so it's a perfect opportunity to increase rail transit income.
- Creates Career opportunities
- This plan improves the financial and political measures

Our actions toward this goal:

- Carry on Geographical studies
- Field research and acquiring suggestions from different organizations
- Estimating the traffic and demands for both: cargo and passengers
- Provide The project's overall studies
- Provide Infrastructure, superstructure, technical construction, and station studies
- Investigation of the rail fleet options and providing the right equipment for maintenance
- Reviewing financial aspects of the project
- Analyzing and setting the project's standards

Date: 2004/2009

Location: Tehran - Khoozestan

Client: Construction and Development of Transportation Infrastructures Company

Provision of Studies on Connecting the Tehran-Hamedan-Sanandaj cities railway to the Arak-Malayer-Kermanshah cities railway through Hame Kasi-Tuysarkan-Nahavand route and connecting Asad Abad, Tuysarkan, Knagavar, and Nahavand cities to the national railway network

Rahyab Behineh
Consulting Engineering

- Gathering Available statistics and data on the project
- Review and pinpoint the influence area
- Review the importance of this project in national initiatives
- Review the traffic and the demands
- Determination of the location of tunnels and corridors
- Determining initiatives time schedules
- Estimation of the costs
- Estimation of the profit
- Measuring the project's residual value
- Analyzing the profitability
- Analyzing the determinative elements on the project's profitability

Date: 2017
Location: Tehran

Client: Ministry of Roads & Urban Development

جمهوری اسلامی ایران
وزارت راه و شهرسازی

Provision of Studies on how to increase the capacity of Iran's northern railroad

Rahyab Behineh
Consulting Engineering

First stage: technical and financial studies

- Investigate the current capacity of the network
- Study the Goals and requirements of the project
- Provide Technical studies
- Provide Financial studies

Second stage: economic and Financing studies

- Provide Economic studies
- Provide Financing studies

Date: 1999
Location: Tehran

Client: Ministry of Roads & Urban Development

جمهوری اسلامی ایران
وزارت راه و شهرسازی

Development of local and suburban railway transportation

Rahyab Behineh
Consulting Engineering

- Studying the demand and gathering field data for routes that currently don't have a railway network (following the mentioned rules below)
  - Being connected to the railway network at least from one side
  - The approximate length shouldn't be more than 100 Km
  - Being classified as busy railroads
- Design the structure of the local and suburban rail transportation pricing system
- Estimation of the capacity of required rail fleet
- Evaluation of the direct and indirect costs of implementation
- Determining the stakeholders' partnership system

Comparison of the project outputs with other countries' standards

Date: 2002/2005
Location: Tehran

Client: Raja Railway Transport Co.

Provision of Initial feasibility Studies for construction of Shiraz – Ahvaz cities rail connection

Rahyab Behineh
Consulting Engineering

1. Collection of information and statistics and analyzing them
2. Carry on Demand studies

- Analyzing the statistics
- Reviewing the development feasibility in the area of effect
- Reviewing the demand and the traffic for both passengers and cargo applications
- Investigate various marketing methods and their effect on the demand
- Studying the railroad corridors
- Determining the connection's schedule
- Estimating the project's costs and profits
- Carry Project's financial and economic analyzes

Date: 2013/2014

Location: Shiraz – Ahvaz

Client: Ministry of Roads & Urban Development

جمهوری اسلامی ایران
وزارت راه و شهرسازی

Organizing the Qaemshahr railway transportation network

- Investigating the detected hazards of the train passing through town and feasibility studies for constructing a ring railroad
- Investigation on feasibility of constructing new stations
- Investigation of constructing a second railroad
- predicting the demand for more capacity of passenger and cargo transportation
- presenting a summary report in an article format with the name of Railway and Client's Cooperation

Date: 2009/2011
Location: Qaemshahr/Iran

Client: I.R.I Railway Co.

The standard Dobleh – Dogomeh Cities railway Connection

Rahyab Behineh
Consulting Engineering

- Investigation of necessities, targets, limits, and the long/short term results of constructing the Dobleh – Dogomeh railway connection
- Reviewing the determinant parameters for implementation of the Dobleh – Dogomeh railway
- Providing a schematic map
- Carry on Technical analyzes
- General review of the required amount, and methods of providing materials and equipment
- Estimating the approximate annual costs of constructing the project

Date: 1996/2001

Location: Dobleh – Dogomeh

Client: Qeshm International Consulting

Study and provision of the design for connecting the Bushehr port to the national railway network

Rahyab Behineh
Consulting Engineering

- Forecasting the rail traffic
- Forecast the Amount and capacity of the predicted cargo
- Determining the feasibility of transporting cargo with the railway network
- studies on Current conditions
- Carry on the feasibility study phase
- Determining the locations of connecting rail track
- Determination of the superstructure of the railroads
- Establishing parameters
- fleet studies including
  - determining the amount and types of rail vehicles
  - determining the required number of locomotives
  - determining the required type of freight trains
- Concluding the results and decision making
- Presenting different options
- Estimating the costs of each option
- Infrastructure and superstructure studies
- Station studies

Technical reviews

- Reviewing the profits of cargo transportation
- Analyzing the financial reviews of different options
- Describing the method and software used in the project

Other evaluations

- Fuel consumption rate
- Demand Studies
- The cost of the required fleet
- The costs of construction and maintenance

Date: 2009/2016

Location: Bushehr

Client: Ports & Munritime Organization

National railway network technical – economic railway sleeper studies

- Technical and economic studies in field of sleepers
- Reviewing the types, functions, advantages, and issues of the sleepers as well as provision of the technical, economic, and environmental studies
- Reviewing the effective local features and special properties of the sugarcane development project on the railway sleepers
- Reviewing the effective transportation system features on the sleepers
- Reviewing the parameters for selecting the right type of sleepers
- Reviewing and selecting the right type, quality, and shape for the railway sleepers
- Reviewing the required number of sleepers and their life cycle cost (LCC)
- Providing a road map on the correct management of sleeper supply

Date: 1997/1998

Location: Tehran

Client: Sugarcane and Byproducts Development

Technical and economic feasibility study for Mianeh – Ardebil cities railway connection

Rahyab Behineh
Consulting Engineering

- Technical and economic studies in field of sleepers
- Reviewing the types, functions, advantages, and issues of the sleepers as well as provision of the technical, economic, and environmental studies
- Reviewing the effective local features and special properties of the sugarcane development project on the railway sleepers
- Reviewing the effective transportation system features on the sleepers
- Reviewing the parameters for selecting the right type of sleepers
- Reviewing and selecting the right type, quality, and shape for the railway sleepers
- Reviewing the required number of sleepers and their life cycle cost (LCC)
- Providing a road map on the correct management of sleeper supply

Date: 2003/2006

Location: Tehran

Client: Ministry of Roads & Urban Development

جمهوری اسلامی ایران
وزارت راه و شهرسازی

Provision of Study Services for the Bafq – Mashhad cities rail transit tranportation Network

Rahyab Behineh
Consulting Engineering

This project is basically divided into two parts, part One of the project is about studying the transit and investments and the second part is about investment and partnership of the project

Part one:

- Studying the transit transportation opportunities of the country and its neighbors
- Study of Conditions for import and export to middle Asia
- Transit Transportation's Countries of origin and destinations
- Studying the potential railway network and some of their properties like capacity, quality, and function
- The current condition of Iran and middle Asia in field of transit
- Final gathering of information and making a report

Part two:

- Studying the funding options of the project
- Extracting determinant Parameters
- Measuring the economic feasibility
- Items and conditions that can affect the investment
- Identifying the investment stakeholders
- Rating the stakeholders
- Investigation of the technical and financial areas of the project
- Partnership management
- Supervision on technical, financial, and schedules
- Summarizing the gathered information and making a report

Date: 1998/1998

Location: Bafq – Mashhad

Client: Mostazafan Foundation

Provision of Technical and engineering services for technical and economic feasibility study for the construction and operation phase of the project: Freight and passenger Railway of Esfahan – Azna cities(length: 322 km, Maximum passenger train speed: 160 km/h

Rahyab Behineh
Consulting Engineering

Review the records on
- Land costs
- Operation costs
- The costs of providing and arming the fleet
- Maintenance costs
- The costs of the operation phase
- Environmental costs
- Identifying and reviewing the project's area of effect
- Reviewing the probable optional facilities

Demand and Tariff Prediction
- Collecting, analyzing, and controlling the statistics
- Measuring the demand for freight and passenger transportation
- Measuring the chances of increasing the transportation rates
- Reviewing the marketing methods

Estimating the costs
Calculate Project duration
Liquidity flow
Study Effects of monetary inflation and interest rates on costs
Estimating the incomes
Project's residual value
Carry on Financial analyzes
Analyzing the sensitivity
Carry on Economic analyzes
Make and Present conclusions

Date: 2002/2003
Location: Esfahan – Azna

Client: Ministry of Roads & Urban Development

جمهوری اسلامی ایران
وزارت راه و شهرسازی

Studying the superstructure, electrical signalling, and communications of the Esfarayen – Bojnord cities railroad

- Superstructure studies
  - Presenting the KMZ file
  - Presenting a summary of the preliminary phase
  - Determining the type of railroad
  - Designing the superstructure tools
  - Suggesting the tests of ballast rocks
  - doing researches in order to select the suitable mines
  - technical reviews
  - presenting plans in UTM coordination format
- Fleet studies and maintenance needs
  - Presenting the details of freight trains
  - Presenting a summary report about technical aspects of the project
  - Determining the numbers and general information of passenger trains
  - Estimating the required machinery
  - Locating the places of facilities
- Operation phase studies
  - Determining the right alignment of freight trains and passenger trains
  - Presenting the stimulation calculations
  - Providing the longitudinal profile maps
- Station studies
  - Mentioning the location of switches
  - Presenting the table of switches details
  - Mentioning the line numbers in the station's railroad
- Superstructure implementation studies
  - Presenting a report about the implementation method
  - Presenting the list of required machinery
- Sign and communication studies
  - Providing a communication commanding center
  - Inter Locking
  - Control panels
  - Electrical sign lights
  - Safety equipment
  - Control equipment

Rahyab Behineh
Consulting Engineering

Date: 2018/Ongoing
Location: Esfarayen – Bojnord

Client:
Construction and Development of Transportation Infrastructures Company

Concession of Railroads maintenance and repair

The scope of the project:

- Reviewing the current condition and technical justification
- Identifying the best, most functional option
- Qualifying the investors
- Technical, economic, and investing justification report

Feasibility phase

Identifying the current conditions, reviewing the issues and possibilities

Demand and tariff studies

- Studying the current methods of maintenance and repair in other countries
- Management UIC parameters
- Planning and measuring the maintenance and repair of the railroads
- Summary report of the turnover
- Framework and conditions
- Determining the quality grade for each option
- analyze Technical parameters

management studies

- Financial plans and time schedules of maintenance and repair
- Organizing and managing the assignment
- Cost evaluation tables
- Functionality
- Conditions and methods of selecting the contractors
- Design the system of Identifying and rating the contractors

Stage five: Final studies

Regulating the final report, and presenting correctional ways

Rahyab Behineh
Consulting Engineering

Date: 2001/2001
Location: Tehran

Client: Ministry of Roads & Urban Development

جمهوری اسلامی ایران
وزارت راه و شهرسازی

Studying and reviewing the construction of the Rudehen – Amol cities railway and connecting it to the Qaem Shahr railway

Rahyab Behineh
Consulting Engineering

- Gathering statistics and information
- Topography maps
- Geology maps and documents
- Environmental maps
- Reviewing the infiltration location and making it more precise
- Studying the demands for passengers and cargo
- Presenting the time schedules
- Estimating the costs
- Estimating the incomes
- Estimating side incomes
- Analyzing the profitability of the design
- Analyzing the effective elements on the project's profitability

Date: 2015/2017
Location: Rudehen – Amol - Qaem Shahr

Client: NKCo.

Providing the cargo rail transit plan from Bandar Abbas – Sarakhs cities

Rahyab Behineh
Consulting Engineering

First stage:

General design: project studies

- Presenting the feasibility studies
- Organizations
- Technical aspects
- Equipment
- Operations
- Cost
- Profits
- Tariff
- Technical sensitivity analyzes
- Economic
- Policies
- Presenting the optimized methods for the operation phase
- Determining time schedules

Second stage:

- Organization design and etc.
- Regulating the instructions and standards

Third stage:

Provision of Supervision on construction phase and operation phase

Date: 1997

Location: Tehran

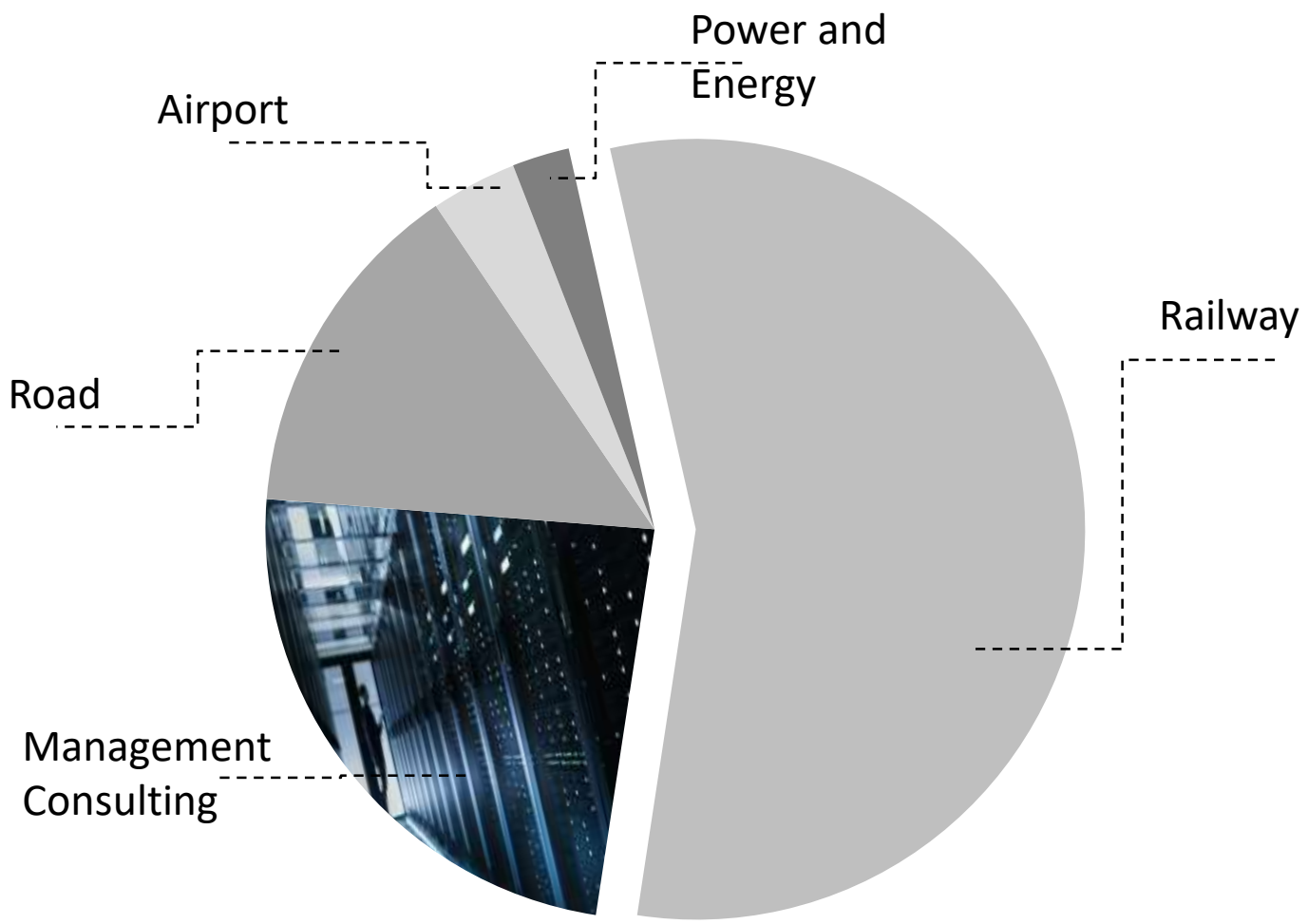
Client: Shetab Co.

Rahyab Behineh
Consulting Engineering

II. Management Consulting references

Our consultants provide amazing management consulting services

Rahyab Behineh
Consulting Engineering



This chart was made according to 110 domestic 4 international projects

Providing Regulation and instructions for a number of Tehran Municipality rules

Rahyab Behineh
Consulting Engineering

- Collecting data from the contract content
- Reviewing the actions and experiences of other organizations
- Reviewing the actions and experiences of other countries
- Field researches and analyzing the feasibility of the current situation
- Setting up professional meetings and asking for suggestions from Experts, consultants, and municipality personnel
- Setting up workshops
- Finalizing the edits based on suggestions
- Guarantying the quality

Date: 2016
Location: Tehran

Client: Tehran Municipality

Designing the comprehensive system of interactions among the stakeholders of Wagon Maintenance in I.R.I

Rahyab Behineh
Consulting Engineering

Identification Phase:
Identifying stakeholders and the current condition (their role and importance)
Data gathering, and listing the work history related to the project
Reviewing standards, provisions and analyzing the current situation
Establishing the effective measuring index
Making a report of stakeholders actions and their process
Making a report of the existing conditions of stakeholders and partners cooperation
Analyzing phase:
Maintenance and repair activities checklists for F/P trains
Strengths and weaknesses of the current M&R system
Reviewing the similar M&R systems in the world
Establishing the fixed points for designing the new systems for Rolling Stock's M&R
setting Strategies and methodology of the new M&R systems
Concluding and reporting results
Design phase:
The roles of stakeholders and their activities in the new system of interactions
Stakeholders interactions and their partnership pattern in the new system of interactions
Presenting the comprehensive system of interactions
Providing instructions and provisions for stakeholders
Comparison of the new model with the existing one and highlighting the issues and failures
Providing the framework and requirements to develop software for the new system
Developing the privatization model for Rolling Stocks M&R
Reviewing the current system of repair and maintenance for cargo and passenger Railway vehicles
Analyzing the points of Strengths, weaknesses, opportunities, and threats (SWOT)
Setting Qualification conditions for manufacturers of spare parts, general contractors and supervisors
Qualifying the registered companies
Presenting the new system of interactions to the qualified companies
Hold Training courses for stakeholders to learn about new system
Managing the Implementation of the systems, following the ISO 2008-9001 for all stakeholders

Date: 2014/2016
Location: Tehran
Client: I.R.I
Railway Co.

Developing the safety index for I.R.I Railway Network

Rahyab Behineh
Consulting Engineering

In this project, RAHYAB BEHINEH studied the safety issues in the railway maintenance and operation related to each operational region considering the different conditions.
In this investigation we have studied the fundamental of safety parameters reviewing the current safety condition, performing data collection, data analyzes, and developing new statistical indicators to measure the existing safety level. Also, RAHYAB BEHINEH suggested appropriate tools and equipment to record and calculate newly developed indices to enhance railway safety in each operational region.
The main tasks involved are as the following:

- Reviewing the current situation
- Studying the effective parameters for safety evaluations
- Statistical studies on available data and setting the right statistical indicators
- Providing the right equipment for collecting, measuring and analyzing the data
- Evaluating Iran’s Railway areas and presenting safety records
- Presenting reports and support services

Date: 2015/ongoing
Location: Tehran
Client: I.R.I Railway Co

Providing instructions for Financing the Construction of National road and transportation infrastructure Development Projects through banks, Financial institutions and other financial resources in Iran

Rahyab Behineh
Consulting Engineering

Date: 2016
Location: Tehran
Client: Ministry of Roads & Urban development

- Process Mapping of Construction of Development project from idea to final delivery to National Authorities
- pinpointing the processes, the road and transport administration should be involved in through reporting or direct supervision or other methods.
- Regulating the processes and requirements of ensuring the accountability of the general contractors in each phase of Engineering, Construction and operation of the project up to the point of delivery to the Authorities
- Delivery of Forms, checklists and instructions for each phase of the projects

جمهوری اسلامی ایران
وزارت راه و شهرسازی

Provision of Engineering and consultant services for preparing tender documents, controlling agreement and contract documents, and planning of Project management for the bureau of signaling and communication – I.R.I Railway Co.

Rahyab Behineh
Consulting Engineering

Date: 2014/2016
Location: Tehran
Client: I.R.I Railway Co.

The main Engineering and consultant services include:

- Provide Annual Financial plans, budgeting, and planning the time schedules
- Ensure effective Time management of the projects
- Ensure Cost management of the projects
- Provide Process management of procurement inquiries

Providing instruction and guidelines for temporarily and permanently commissioning of Tehran's newly built or renovated road and technical buildings delivered from contractors to Tehran Municipality

Rahyab Behineh
Consulting Engineering

Date: 2014/2017
Location: Tehran

Client: Tehran Municipality

- Investigate the process of temporarily and permanently deliverance of municipally based projects
- Gather and analyze technical issues of delivered bridges and other facilities
- Providing major parameters for testing the safety and quality of the road and buildings in specific categories
- Analyzing the data gathered and eventually presenting the relevant checklists and instructions

Rail Cargo Pricing System Design

Rahyab Behineh
Consulting Engineering

- Evaluation of Iran's railway current pricing system as well as the same for foreign countries
- Evaluating Iran's railway network systematical boundaries
- Analyze the pricing mechanisms of cargo for other modes of transportation
- Classify major and minor parameters into separate categories
- Design of the optimum pricing system for Rail Cargo in Iran Freight Transportation

Date: 2013/2015
Location: Tehran

Client: RTC Guild

Design a Comprehensive system for operation of Siemens/Mapna locomotives

Rahyab Behineh
Consulting Engineering

Designing the system on how to operate 150 Siemens locomotives manufactured by Mapna Co. including conductor training packages, running drivers' eligibility tests, hire drivers, design and implement driver's time schedules.

Providing methods to effectively decrease the training time of the drivers

Running financial and economical Studies of the project

Running feasibility studies and Calculation of Profitability of the designed system

Date: 2017

Location: Tehran

Client: Mapna Group

MAPNA GROUP

Providing the Feasibility Study for buying 2000 freight trai

Rahyab Behineh
Consulting Engineering

- follow up in order to approve the plan by the Islamic Republic of Iran Railways (IIRR)
- Providing the design's cash flow
- Providing the Feasibility study for the project (approved by banks)

Date: 2011/2012
Location: Tehran
Client:Tosse,e tarabar Iranian investment group

T.T.I

Coding, preparing, inserting, controlling, and correcting the data input and output for the I.R.I railway company spare parts

Rahyab Behineh
Consulting Engineering

- Coding three fields of information (Descriptions of parts, location of deployment, the providers name)
- Separating and organizing the data input and output of the railway company properties based on company's 17 data layers
- Preparing, inserting, listing, controlling, and correcting the reports
- Determining the rate and type of depreciation of properties based on Ministry of Economic Affairs and Finance charts
- Determining the depreciation rate and putting it in the related field

Date: 1997/1998
Location: Tehran

Client: I.R.I Railway Co.

Design and regulate the quality Control system for SAPCO

Rahyab Behineh
Consulting Engineering

- Regulating the quality control system
  - Carry on Basic studies
  - Organize Quality descriptions
  - Reviewing the production conditions
  - Investigate the quality control system
  - Gather and analyze data

Date: 1997/1998
Location: Tehran

Client: Sapco

Provision of studies on technical and operational Regulation of the locomotive maintenance system

Rahyab Behineh
Consulting Engineering

Feasibility phase: project overview

- Research method and selecting the right tools
- Describing the scope of the project as well as limits and priorities
- Providing and presenting an overview of the project

Preliminary phase: project identification

- Introductory meeting with stakeholders

Identifying the current technical situation

- Obtaining the opinion of managers, experts, policy makers, and the government
- Identifying, collecting, and analyzing the provided data
- The necessities and needs for the maintenance and repair of locomotives
- Reviewing the current conditions of maintenance and repair
- Reviewing and identifying the conditions of repair workshops
- Providing and presenting an identification report

Identifying the existing contract conditions

The system's condition

Identifying the current regulations for privatization

SWOT analyze of the current situation

Design phase

- Selecting the final design
  - Determining and confirming the strategies of maintenance and repair
  - Scenario making
  - Comparing the scenarios and selecting the best one
  - Making the detailed design of the selected Scenario
- Technical suggestions
- Contract suggestions
- Systematic suggestions
- Privatization suggestions
-

Date: 2018/Ongoing
Location: Tehran

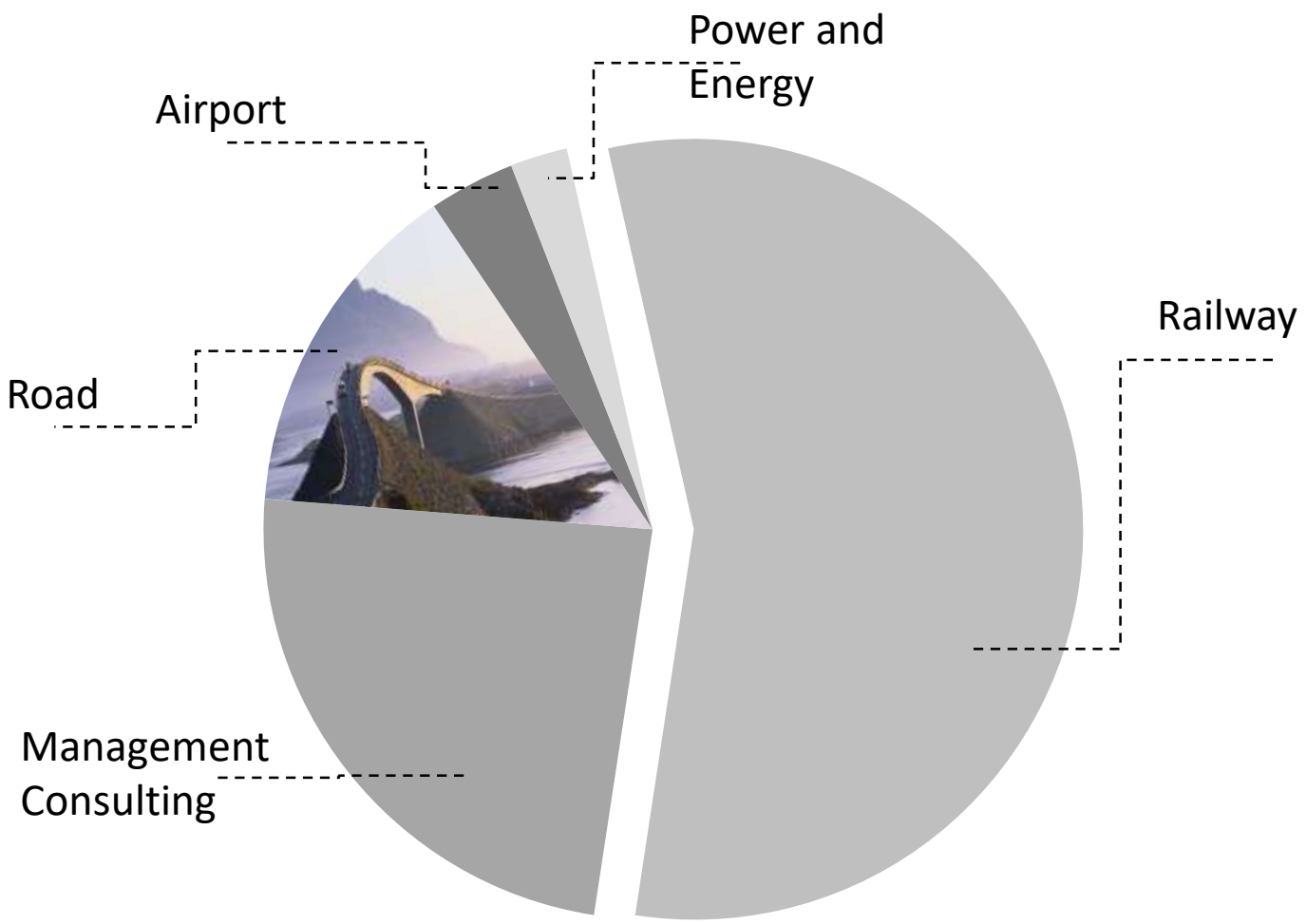
Client: I.R.I Railway Co.

Rahyab Behineh
Consulting Engineering

III. Road references

Road engineering is one of the fields we’re really good at

Rahyab Behineh
Consulting Engineering



This chart was made according to 110 domestic 4 international projects

Financial Consulting for Sirjan - Bandar Abbas Intercity Freeway Project

Rahyab Behineh
Consulting Engineering

The core of the project is value engineering and to appraise the benefits of the project. Our plan for coming up with the best solution is divided into three parts:

Studies on the Field

- Field investigation; reviewing other national and local projects
- Studies in order to realize local capabilities and possibilities to enhance the profits of the project
- Presenting the optimal solution considering the area's potentials
- Feasibility study for constructing optional facilities

Establishing the framework (Value engineering)

- Collecting the existing information
- Analyzing the data and statistics
- Value engineering
- Presenting solutions
- Analyzing the value of the solutions of the project and presenting the results
- Value engineering report

Business plan

- Collecting data and presenting them. Also presenting time schedules, describing the project, inflations and total fix costs
- Analyzing data and presenting the results consisted of evaluation, money circulation, final confirmed price and etc.
- Incorporating the client's comments and presenting the business plan

Date: 2017/2017

Location: Tehran – Qaem Shahr

Client: Kerman Jahad-e-Nasr Co.

Provision of field measurement services to determine the total length of existing highways in the country and converting those data into data layers based on GIS format

Rahyab Behineh
Consulting Engineering

- Designing the standard sheet form for gathering unified data
- Field measuring and data acquisition
- Data controlling and supplementary measuring
- Data layer generating, Running the GIS system
- Finalizing the GIS maps based on required standards by the Ministry of roads and urban development, UTM coordination being able to be utilized by third party companies

Date: 2014/2014

Location: Iran national road network

Client: Iran Ministry of Roads & Urban Development

دانشگاه علم و صنعت ایران

Reviewing the available studies and Optimizing the existing studies the detailed design phase of Qaem Shahr-Sari Intercity Freeway

Rahyab Behineh
Consulting Engineering

The primary detailed design of 45-km long Qaem Shahr-Sari Freeway consisting of 6 lanes in two directions which is including 10 bridges, 2 tunnels, 3 main junctions, and 16 underpasses, was reviewed and optimized by RAHYAB BEHINEH. This company was looking for a new variant to reduce the length of the tunnels. also because of the existing problems such as the absence of cut and fill resources near the project, some solutions were introduced such as application of stabilized materials, various types of superstructure and etc. in order to optimize construction cost.

Section One: Project Identification

- Scope of work, project outcomes, and priorities
- Research methodology and choosing the right method and tools
- Collecting and checking the available documents
- Data analyzes and concluding the basis of the project

Section Two: Reviewing the Geometric design of the route

- Examining the route's corridor, plan, longitudinal profile and cross sections of the project's grade lines

Section Three: Reviewing the Special Structure

- Multi span Tajan river bridge
- Bridge design modifications based on the latest standards
- Deducting a total length of 2000 meters from Mahdasht tunnel in order to reduce the cost by changing the route's corridor
- Supplementary design for pavements

Section Four: Procurement methods and materials for the project

- Studying the geotechnical aspects
- Required materials and resources
- Field researches and locating the resources in the proximity to the project

Date: 2016/2017

Location:

Ghaemshahr

Client: Construction and Development of Transportation Infrastructures Company

Provision of Consulting services to the client for Finance and Construction of the Qaem Shahr-Sari cities Freeway project

Rahyab Behineh
Consulting Engineering

Qaem Shahr – Sari freeway is located in the northern part of Iran. the aim of this project is to increase the potential tourism and business capacity of this part of Iran. The main goals are:
Construction of a part of the Mazandaran-Golestan freeway
Facilitating the traffic of Qaem Shahr – Mazandaran(east) road
Reducing the fuel consumption
Redirecting part of the city traffic to side roads
To reduce trip duration
To decrease accidents

Date: 2018/Ongoing

Location: Tehran – Qaem Shahr

Client:

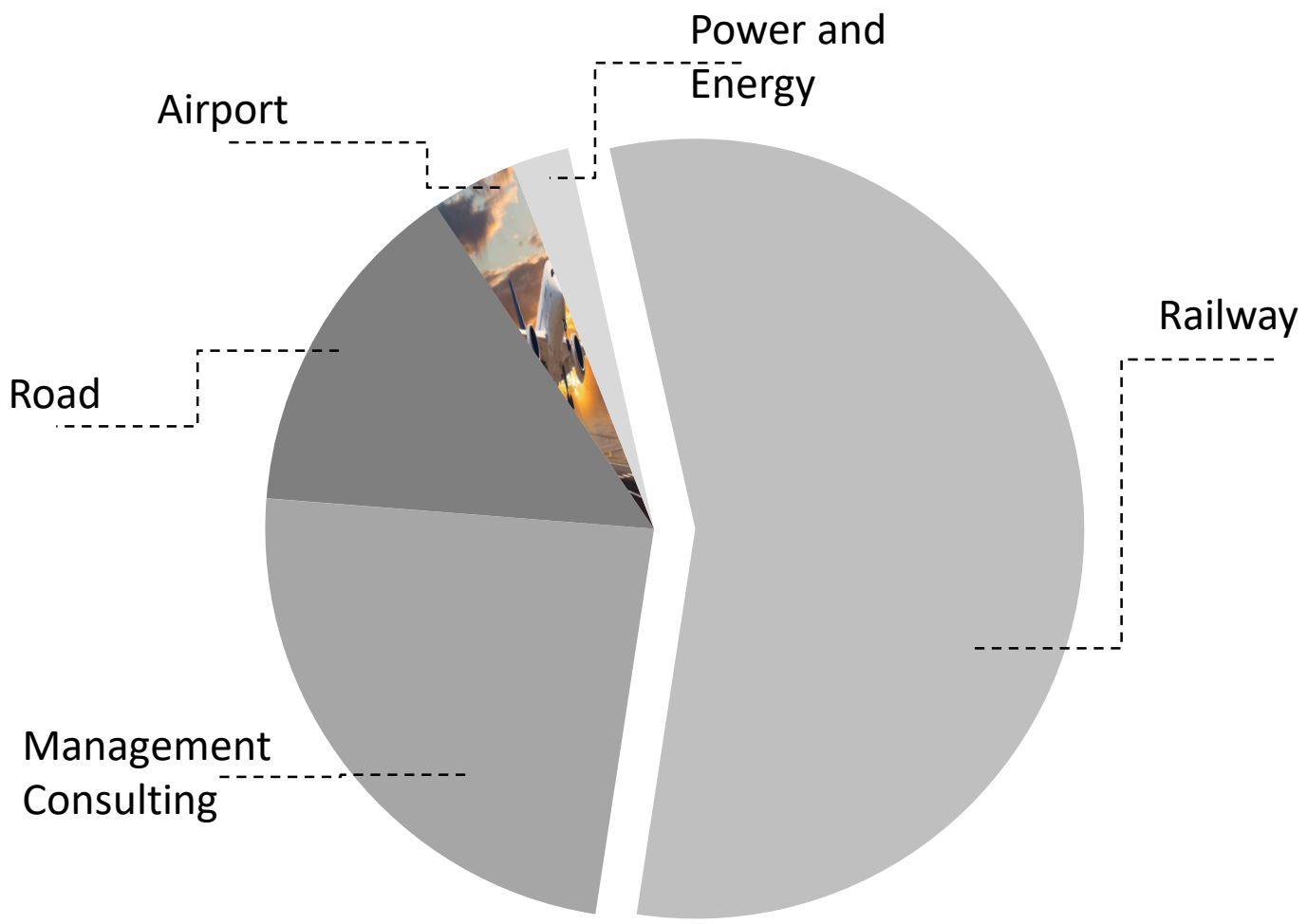
Construction and Development of Transportation Infrastructures Company

Rahyab Behineh
Consulting Engineering

IV. Airport references

We have recently started providing services and we are on fire

Rahyab Behineh
Consulting Engineering



This chart was made according to 110 domestic 4 international projects

Provision of studies for Initial and detailed design phase of the project: Construction and optimization of the road and protective walls around the

Rahyab Behineh
Consulting Engineering

Date: 2017/Ongoing

Location: Tehran

Client: Imam Khomeini Airport

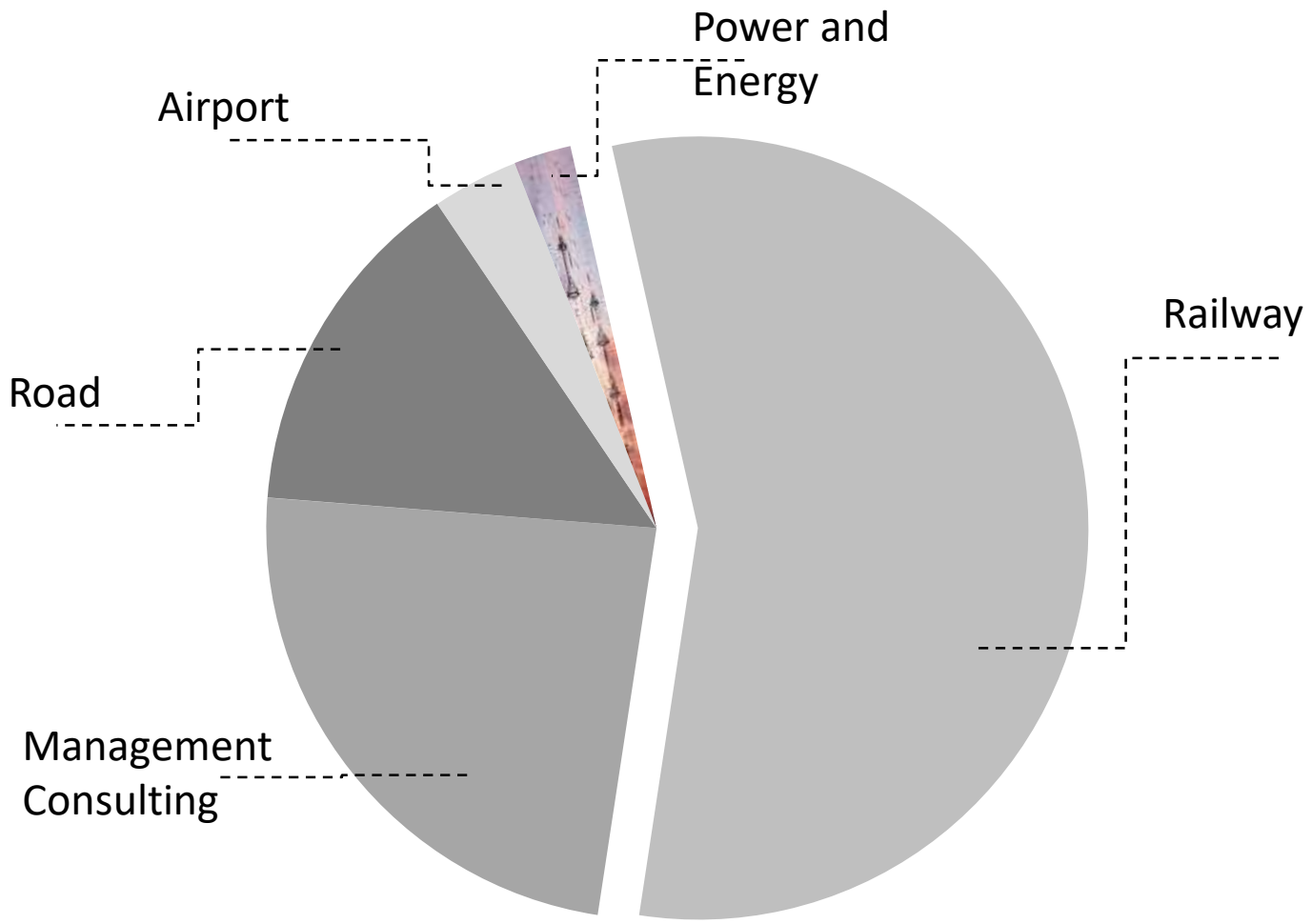
Study and Presentation of current situation of Road and walls around the airports
Running the necessary tests to clarify the current situation
provision of the topographic plan of the location
Provision of the current longitudinal profile from the wall location
Providing the longitudinal and latitudinal profiles from the access routes
Measuring the details dimensions of the project and drawing the lines of access routes
Presenting the longitudinal and latitudinal profiles of the access routes (each airport separately)
Presenting the canal details
Presentation of Final detailed instructions for optimization per Airport

Rahyab Behineh
Consulting Engineering

IV. Power & Energy references

Power & energy is a fast-growing field in the engineering world

Rahyab Behineh
Consulting Engineering



This chart was made according to 110 domestic 4 international projects

Presenting services for Ofogh Persiangolf Energy Development Co. (Mashhad Power Plant owner) in order to achieve an optimal bidding strategy for participating in power market and energy exchange:

Rahyab Behineh
Consulting Engineering

Date: 2017/ongoing

Location: Tehran-Mashhad

Client: Ofogh Persiangolf Energy Development Co.

1. Reviewing the technical operation constraints and effective parameters of the electricity network on efficiency of power plant :

- Identifying the technical limitations of transmission system regarding sample power plant
- Economic dispatch in order to maximizing the profit function for units of power plant with considering technical unit constraints

1. Presenting daily power market services:

- Reviewing and determining acceptable prices in the power market by selecting optimum bidding strategy
- Analyzing power market results, and presenting a monthly management report including revenue, profit and production volume , …
- Verifying the bills issued by the Iran Grid management Company(IGMC)

1. Presenting at the Iran Energy Exchange (IRENEX)

- Reviewing the opportunities of earning revenue

1. Verifying the bills issued by the Iran Energy Exchange (IRENEX)

- Collecting and reviewing the daily bills issued by the power market
- Seting up protests to IGMC after check bills

1. Essential training for power plant operational personals

Not even the sky is a limit

Rahyab Behineh

Consulting Engineering