FYDP | Five Year Development Plan

Imam Khomeini International Airport

IKAC

Imam Khomeini Airport City co.

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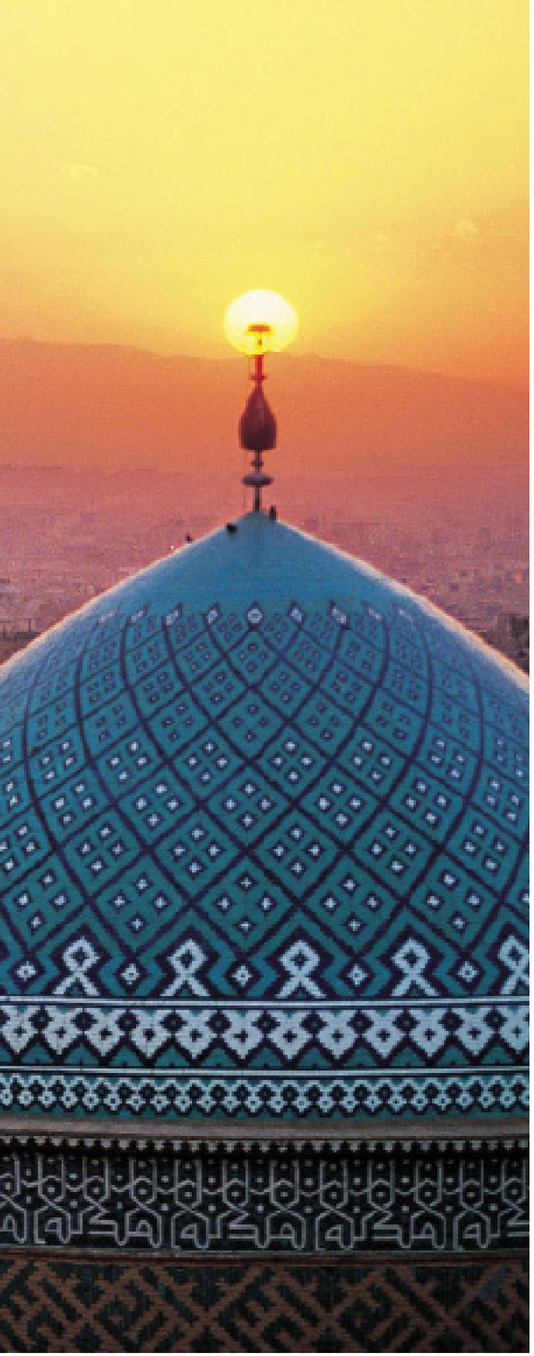



SQ956
SQ910
FY3542
SQ972
NZ3448
MI102
SQ5102
SQ178
VA5478

1 Introduction

For the purpose of guiding the future development and commercialization of Imam Khomeini International Airport (IKIA) and the Airport City, Imam Khomeini Airport City Company (IKAC Co) has initiated the Imam Khomeini Airport City Master Consultancy Services Project. As part of the master consultancy services a master plan for IKAC has been prepared for the next 30 years.

In order to have a comprehensive and common understanding of the first development phase of the master plan, it was decided by IKAC to prepare a Five Year Development Plan (FYDP) for the time frame 2018-2022 which will respond to urgent capacity needs and also to the necessity to construct the infrastructure of the airport city in order to achieve predetermined economic growth.

Existing and planned facilities at IKIA during the FYDP comprise the following terminals:

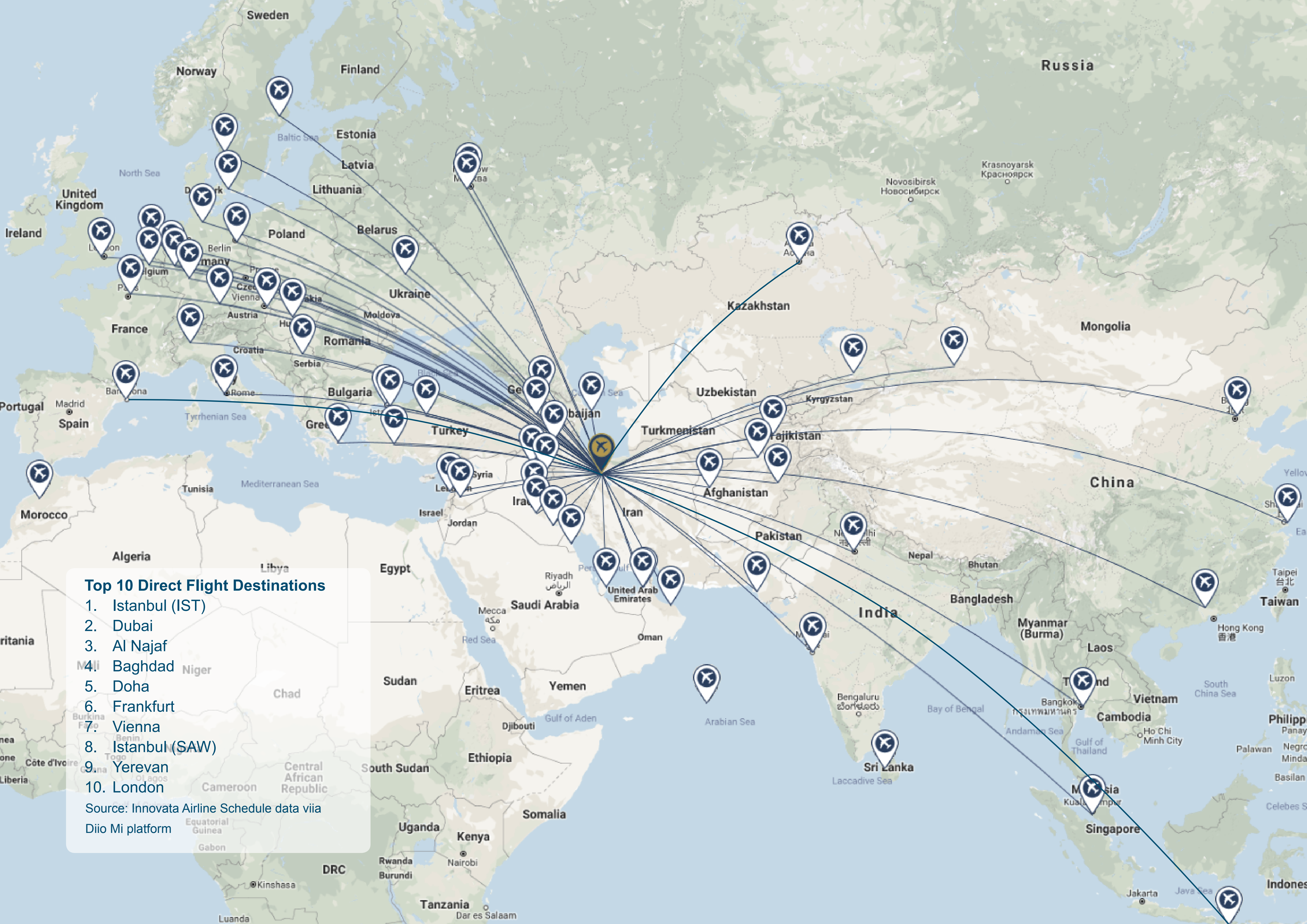
1. The existing Terminal 1 (T1);
2. Salam International Terminal (ST);
3. New Iranshahr Terminal 2 (T2)

The developments required and included in the FYDP are primarily focused on the Iranshahr T2 passenger terminal building and T1 expansion. Additionally, new infrastructure will be developed for establishing the airport city allowing investors to start developing MRO, cargo and logistics facilities.

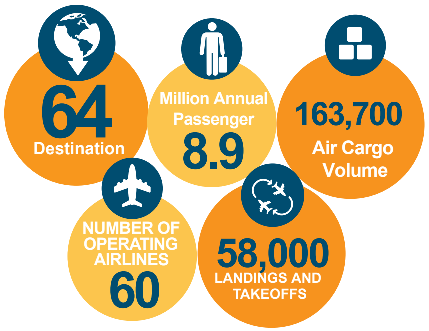
This report should be considered a guideline for the development and to support the IKAC management in realizing the future for air transportation in Iran.

Imam Khomeini International Airport | IKIA

Imam Khomeini Airport City | IKAC


Top 10 Direct Flight Destinations
1. Istanbul (IST)
2. Dubai
3. Al Najaf
4. Baghdad
5. Doha
6. Frankfurt
7. Vienna
8. Istanbul (SAW)
9. Yerevan
10. London
Source: Innovata Airline Schedule data viia Diio Mi platform
Sweden
Norway
Finland
Russia
Estonia
Latvia
Lithuania
Baltic Sea
North Sea
United Kingdom
Ireland
Poland
Belarus
Berlin
Ukraine
Moldova
Romania
Austria
Vienna
Croatia
Serbia
Bulgaria
France
Portugal
Madrid
Spain
Rome
Tyrrhenian Sea
Turkey
Syria
Israel
Jordan
Iran
Turkmenistan
Uzbekistan
Kazakhstan
Kyrgyzstan
Afghanistan
Pakistan
Mongolia
China
Nepal
Bhutan
Bangladesh
India
Myanmar (Burma)
Laos
Vietnam
Cambodia
Taiwan
Hong Kong
Singapore
Sri Lanka
Krasnoyarsk
Novosibirsk
Morocco
Algeria
Tunisia
Mediterranean Sea
Libya
Egypt
Saudi Arabia
Riyadh
Mecca
United Arab Emirates
Oman
Red Sea
Sudan
Eritrea
Yemen
Djibouti
Gulf of Aden
Arabian Sea
Ethiopia
South Sudan
Somalia
Uganda
Kenya
Nairobi
Tanzania
Dar es Salaam
Rwanda
Burundi
DRC
Kinshasa
Luanda
Chad
Niger
Central African Republic
Cameroon
Bay of Bengal
Andaman Sea
South China Sea
Gulf of Thailand
Bangalore
Laccadive Sea
Jakarta
Java Sea
Luzon
Palawan
Ho Chi Minh City
Bangkok

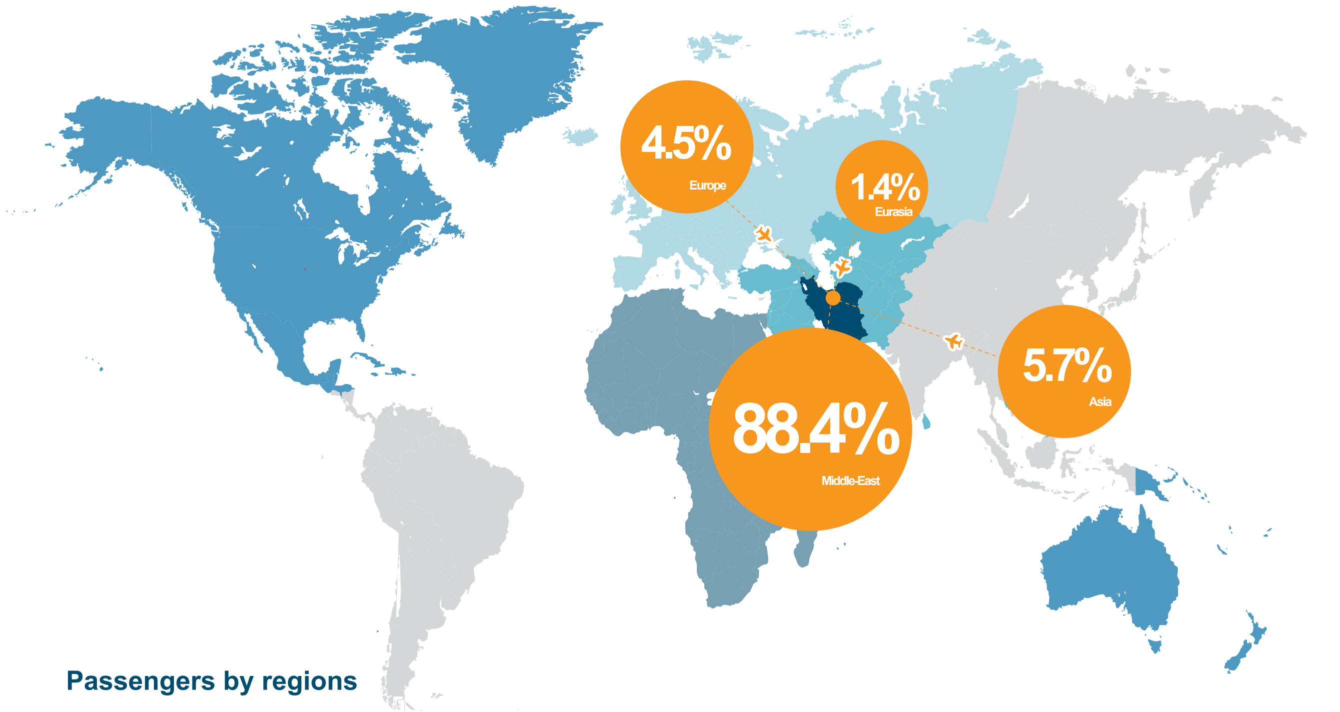
1.1 IKAC TODAY



Imam Khomeini International Airport (IKIA) is one of the busiest airports in Iran. A total of 8.9 million passengers passed through this airport in 2017.

Over the last 2 years many new routes were opened contributing to a total of 64 destinations in total. The passenger traffic grew with more than 14% last year.

The majority of passengers traveling to and from IKIA are coming from the Middle East. Other passengers are mainly coming from Asia and Europe.



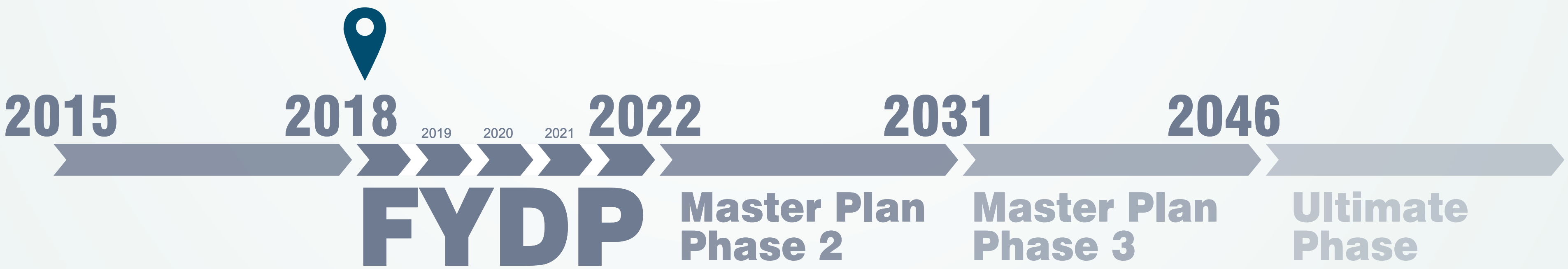
Passengers by regions

Fast Traffic Growth

Service Level Performance

Increasing Environmental / Social Impact

Financing Gap



1.2 Challenges

Currently IKAC is facing four major challenges which limit current development, which need to be addressed in the Five Year Development Plan.

The **Fast Traffic Growth** requires the airport with more terminal facilities to handle the increasing passenger and cargo demand. The existing Terminal 1 at IKIA is handling more annual passengers than the inital design capacity, which has a negative impact on passenger experience and maintaining the desired **Service Level Performance**.

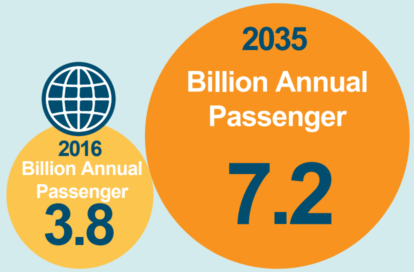
To invest in new infrastructure and improve the level of service, more funding resources are required to fill in the **Financing Gap**, which now can not be fully covered by IKAC revenue.

As aviation activities brings IKAC opportunities but also negative impacts to the communitiy (e.g.noise pollution or congested infrastructure). More effort shall be made already during aiport design or planning phase, as well as in daily operations to mitigate the **Increasing Environmental / Social Impact.**

I. Fast Traffic Growth
II. Service Level Performance
III. Increasing Environmental / Social Impact
IV. Financing Gap

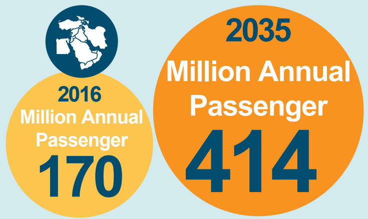
These are explained further in the next pages.

Worldwide Growth



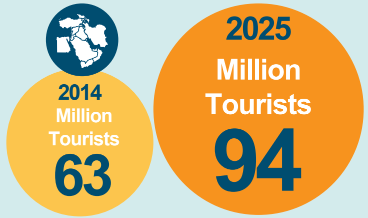
The International Air Transport Association (IATA) expects 7.2 billion passengers to travel in 2035, a near doubling of the 3.8 billion air travellers in 2016. The prediction is based on a 3.7% annual Compound Average Growth Rate (CAGR)

Regional Growth



The Middle East will grow strongly (4.8%) and will see an extra 244 million passengers a year on routes to, from and within the region by 2035. Over 419,000 domestic and international flights were conducted via Iranian airports in the ten months from March 21, 2017 to January 20, 2018 indicating a growth of eight percent year-on-year.

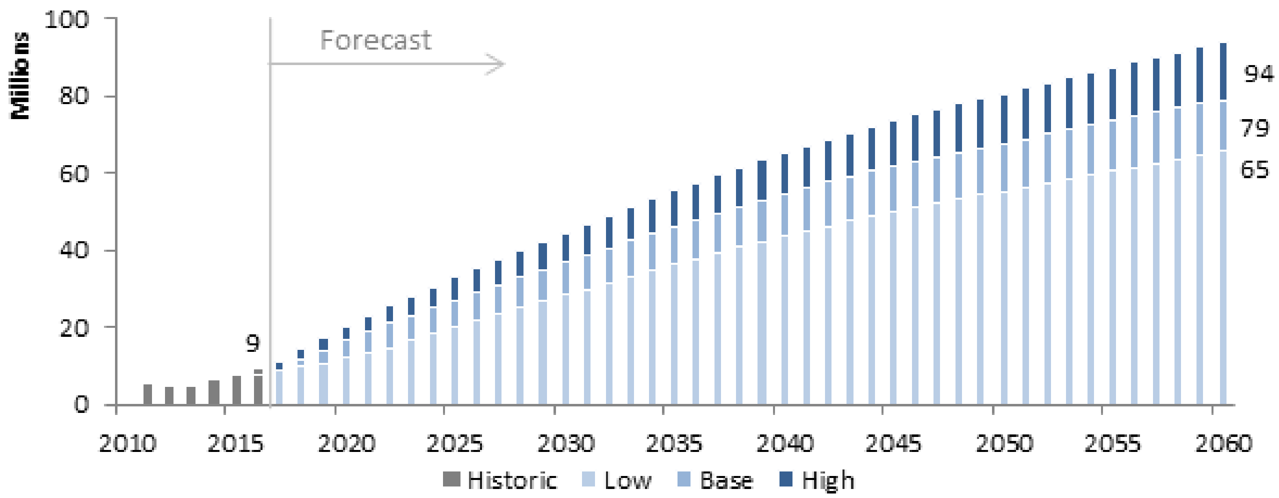
Iran Tourism Overview



Sources :
McKinsey Global Institute

Iran boosts a largely untapped tourism market, and the number of inbound visitors has steadily increased since 2000.
-Almost 63 million overnight tourists in 2014, of whom 4 million foreigners (75% of them coming from neighboring countries)
-94 million visitors expected by 2025, of whom 28million internationals

I. Traffic Growth- Passenger

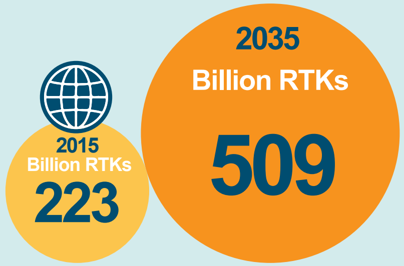


IKIA passenger growth is particularly strong in the first ten years of the forecast period. A growing domestic economy, fuelled by international trade and expansion, combined with ambitious fleet plans and a constrained Mehrabad Airport*, are expected to be the major drivers of traffic growth at IKIA.

In 2016, approx. 9 million passengers were handled in IKIA, and in the coming five years this number will grow to approx. 27 million according to the high scenario forecast.

Until IKIA opened in 2005, Mehrabad Airport was the only airport serving Tehran, handling both domestic and international traffic. When IKIA opened in 2005, international traffic was reallocated to IKIA.

Worldwide Growth



World air cargo is the sum of freight and mail. World air freight traffic is strongly related to GDP and average yield. The baseline forecast for total world air cargo predicts that traffic will more than double between 2015 and 2035. Worldwide traffic will grow from 223.4 billion RTK*s in 2015 to more than 509 billion RTK*s.

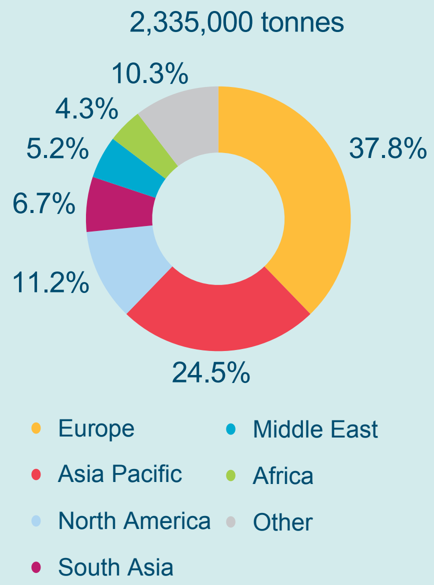
Regional Growth

Air cargo traffic expands strongly on economic growth. Air cargo moving into, within, and out of the Middle East is estimated to have accounted for 5.2 percent of the world's tonnage and 4.4 percent of the world's RTK in 2015.

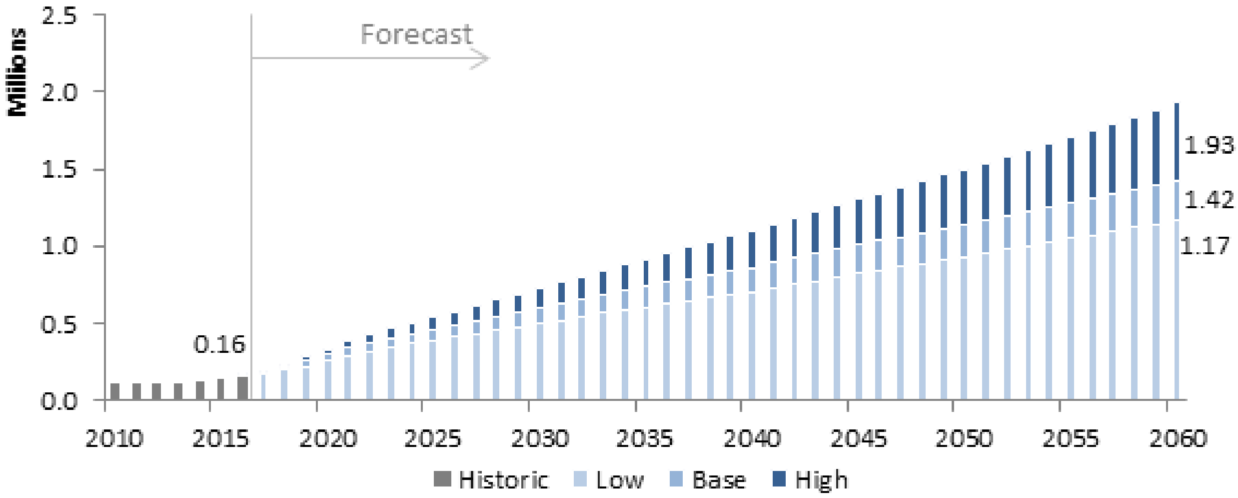
*RTK stands for revenue tonne kilometres, which refers to the revenue load in tonnes multiplied by the distance flown.

2015 Europe is the largest Middle East air trade partner

Overall air cargo between the Middle East and Europe is forecast to grow at an average annual rate of 3.9 percent between 2015 and 2035.



I. Traffic Growth - Cargo



Cargo at IKIA will see growth when domestic routes are gradually build up at IKIA. Air cargo imports and exports will be carried as a combination of belly freight on board commercial passenger aircraft and on dedicated all-cargo full freighters.

In 2016, IKIA handled 163,700 tons of cargo volume, and in the coming five years, this number will be more than doubled according to the high scenario forecast.


Salam
Terminal 4.5 MAP
T1
9 MAP
6 MAP
Available Capacity
N

II. Service Level Performance

The second challenge of IKAC is how to improve the service level for passengers.

Currently, Terminal 1 restricts further airport growth, as it is currently (2017) handling approx. 9 million annual passengers, which is well above the design capacity (about 6 million annual). As a result, it has a negative impact on passenger experience and maintaining the desired level of service. Waiting areas are crowded, queues long and waiting times for passengers increase.

As T1 will remain the primary gateway to Iran and will represent the image of IKIA until opening of Iranshahr T2, IKAC has identified the optimization of the passenger experience inT1 as an urgent and important target in the overall IKIA development together with the completion of the Salam Terminal. Future traffic growth will put more pressure on infrastructure which need to be expanded to be ready for the growing number of passengers.

Processing areas that have reached capacity are operating under capacity as shown on the right.

Congested Infrastructure

III. Increasing Environmental & Social Impact

The third challenge of IKAC is how to create an environmentally sustainable and socially responsible airport.

Social Impact

The aviation industry is a rapidly growing sector of the economy. According to IATA, in 2016 alone, about 3.7 billion passengers were transported by the world's airlines. With this growth have come numerous social benefits that are paired with ever increasing threats to societal health and wellbeing, damaging the environment we live in and the air we breathe.

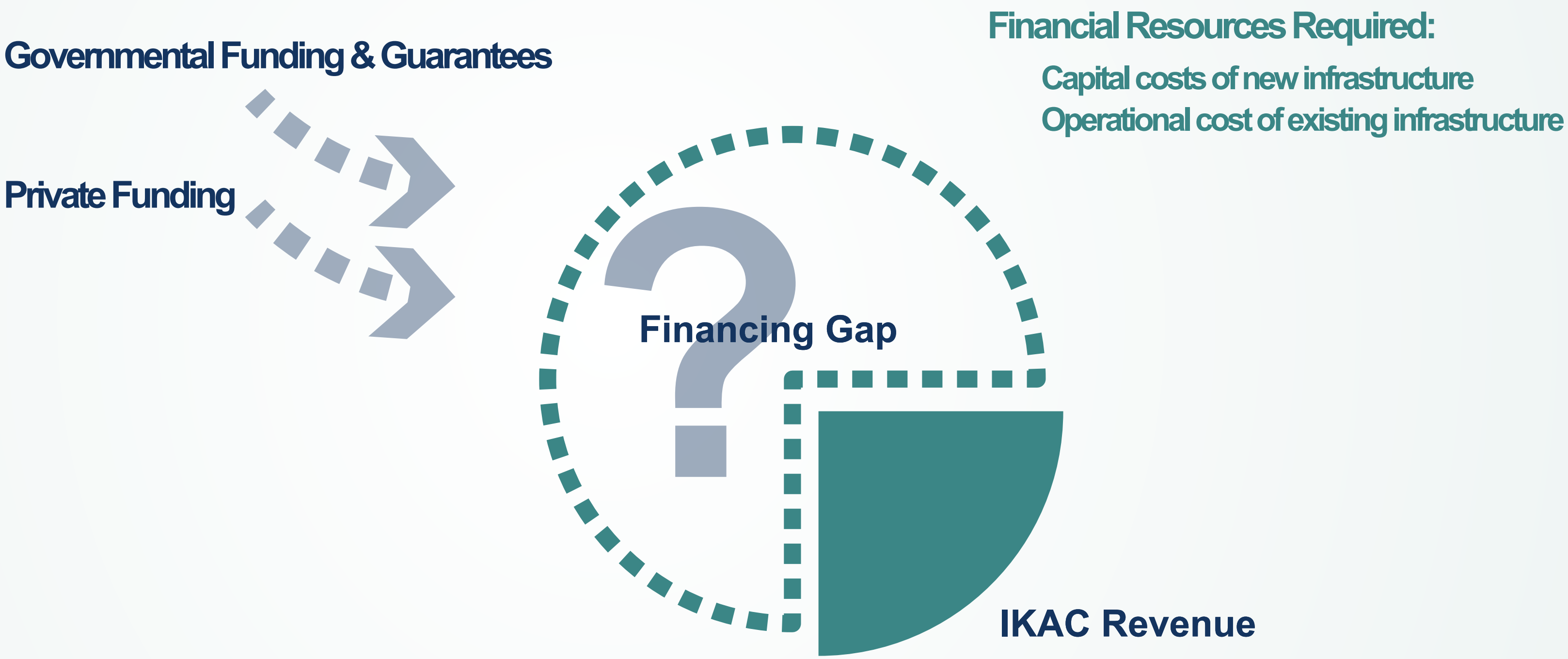
Despite these social benefits, air travel generates social costs that have an overwhelming effect on the community, and thus those who live and work nearby. For example, social impacts as noise pollution and congested infrastructure where airport locates.

FYDP will address sustainability as one of its key priorities. Actions are described in the Chapter 4.

Environmental Impact

Aviation is a fast growing sector with increasing environmental concerns linked to aircraft emissions at airports and noise nuisance. This is not different in Tehran and combined with an alarming shortage of water, there is the urgency to mitigate the environmental impact of the airport operations.

The photo below is *the Eyes of Earth*, 2015. View from the bridge over Lake Urmia, a giant, salty, inland body of water which has dried to 10% of its former size due to damming and environmental changes. © Solmaz Daryani


Governmental Funding & Guarantees
Private Funding
Financing Gap
IKAC Revenue
Financial Resources Required:
Capital costs of new infrastructure
Operational cost of existing infrastructure

IV. Financing Gap

The fourth challenge of IKAC is how to balance the Financing Gap.

Airports are facing increasing pressure from different angles: stiff competition from airports fighting for market share and footloose airlines, airlines demanding lower airport charges, reduced access to financing to fund capital-intensive airport expansion programs, and an uncertain economic outlook dampening passenger demand and non-aeronautical revenues.

To succeed in these challenging market conditions, airports have changed their business model and have diversified their revenue sources, while trying to keep operational costs in check.

Due to the fast growth of traffic demand, IKAC has the urgency to increase terminal capacity. and in order to do so, more funding resources are required to invest in capital costs of new infrastructure and finance the operational cost of existing infrastructure. Currently the Financing Gap, the shortfall of desired amount of funding budget excluding of IKAC revenue, requires a feasible business model to bring in different funding source other than IKAC revenue to close off the gap and ensure the sufficient funding through the entire five year development plan period.

FYDP Strategic Planning Approach

Strategic Planning Approach

Strategic planning is a review and planning process that is undertaken to make thoughtful decisions about IKAC's future in order to ensure its success. Strategy is a framework of plans or methods that help and organisation to achievement of the main objective. It is a course of actions that is designed to reach smaller goals thus leading to the main aim of the company.

Strategic planning process requires a well-structured plan for how to optimally allocate time, human capital and financial resources. By following a strategic planning process, IKAC can improve outcomes for their business and avoid taking on unexpected risks due to lack of foresight and futuristic approach.

2 Mission

2.1 What is Mission

Mission:

Concise statement of the organization's purpose and core values.

The Mission Statement concentrates on the present; it defines IKAC, critical processes and it informs about the desired level of performance.

It lists the broad goals for which IKAC is formed. Its prime function is internal; to define the key measure or measures of the organization's success and its prime audience is the leadership, team and stakeholders.

The mission of IKAC is explained in section 2.2.

2.2 IKAC's Mission

Mission

Our Mission – our core purpose and reason for existence – is:

To provide **a safe, secure and efficient** airport,

offering **excellent services** to our customers
and enhancing **economic benefits** for the region.

3 Vision

3.1 What is Vision

Vision:

An aspirational description of the ideal "end state" that the organization aims to achieve in the future.

The Vision Statement focuses on the future; it is a source of inspiration and motivation. Often it describes not just the future of the organization but the future of the industry or society in which the organization hopes to effect change.

It lists where IKAC sees itself some years from now. It inspires the organization to give its best. It shapes IKAC's understanding of why it is established.

The vision of IKAC is explained in section 3.2.

3.2 IKAC's Vision

Vision

Our Vision – our collective ambition for the next 5 years – is:

to make IKAC **The Gateway for Iran**

Our Vision embraces transforming IKAC to an **air transportation center** and **economic engine** for the Tehran region and the country facilitating aviation and related services supported by an **airport city** that functions as **a multi-modal transport, logistics and manufacturing** platform.

Challenges

Initiatives

Goals

4 IKAC’s Strategic Objectives

- Expand Airport Capacity
- Improve Service Level
- Sustainability
- Be (more) Financially Independent

- Establish Airport City Organization
- Logistics Hub in Iran
- Putting IKIA on the World Map

- Be (more) Financially Independent
- Job Creation

Strategic Objectives

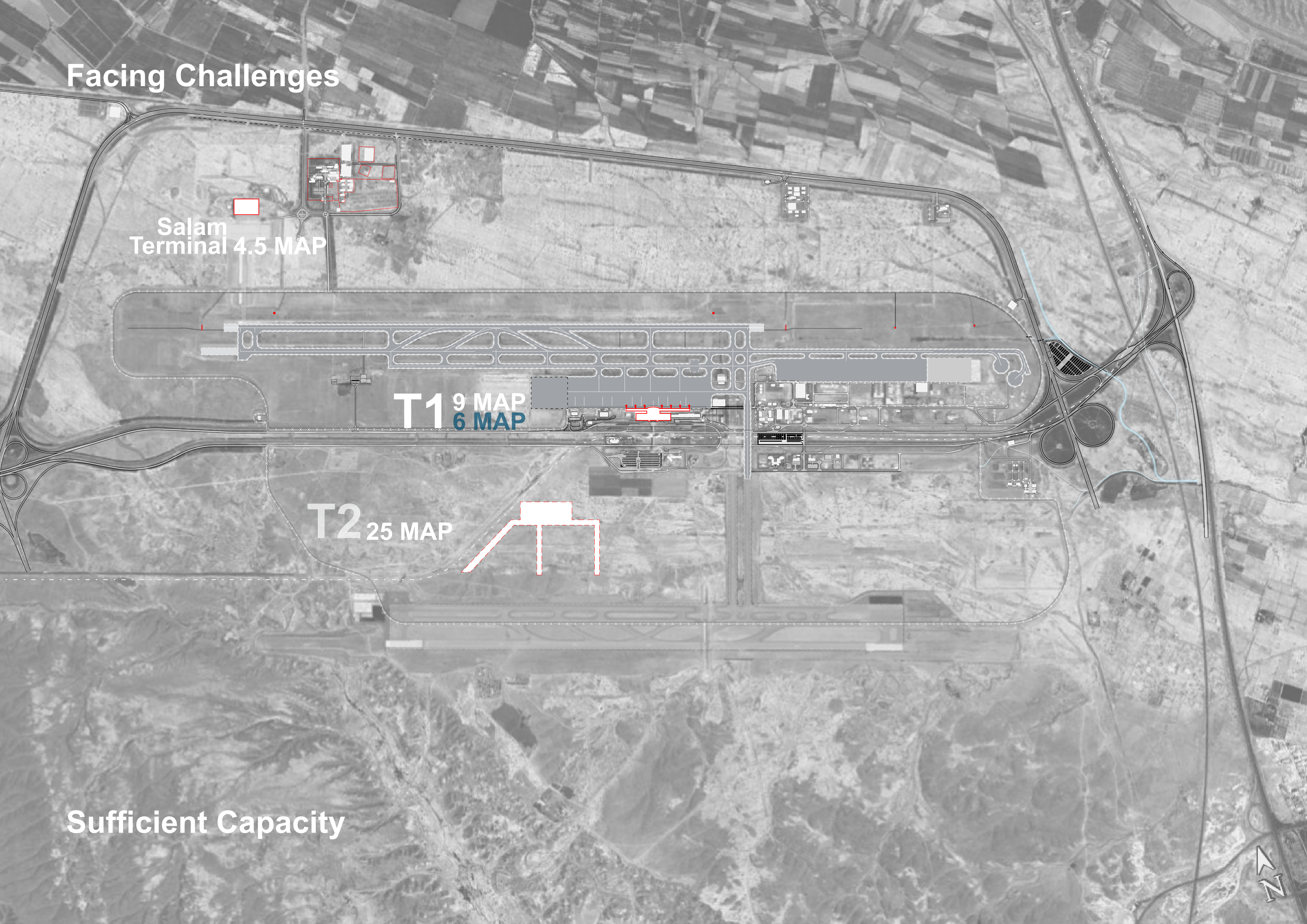
Strategic objectives are statements that indicate the goals IKAC is trying to achieve in the period of FYDP.

IKAC’s Stragtegic Objectives comes from three parts.

Part One: Facing Challenges
Thestrategic objectives try to solve the urgency of the four major challenges IKAC is facing now. (described in chapter 1)

Part Two: Taking Initiatives
The stragetic objectives in this part align with national policy and require IKAC to take the initiatives.

Part Three: Achieving Goals
This part of stragetic objectives includes the results from previous objectives and will contribute further in a virtuous cycle for FYDP’s success and beyond.


Facing Challenges
Salam
Terminal 4.5 MAP
T1
9 MAP
6 MAP
T2
25 MAP
Sufficient Capacity
N

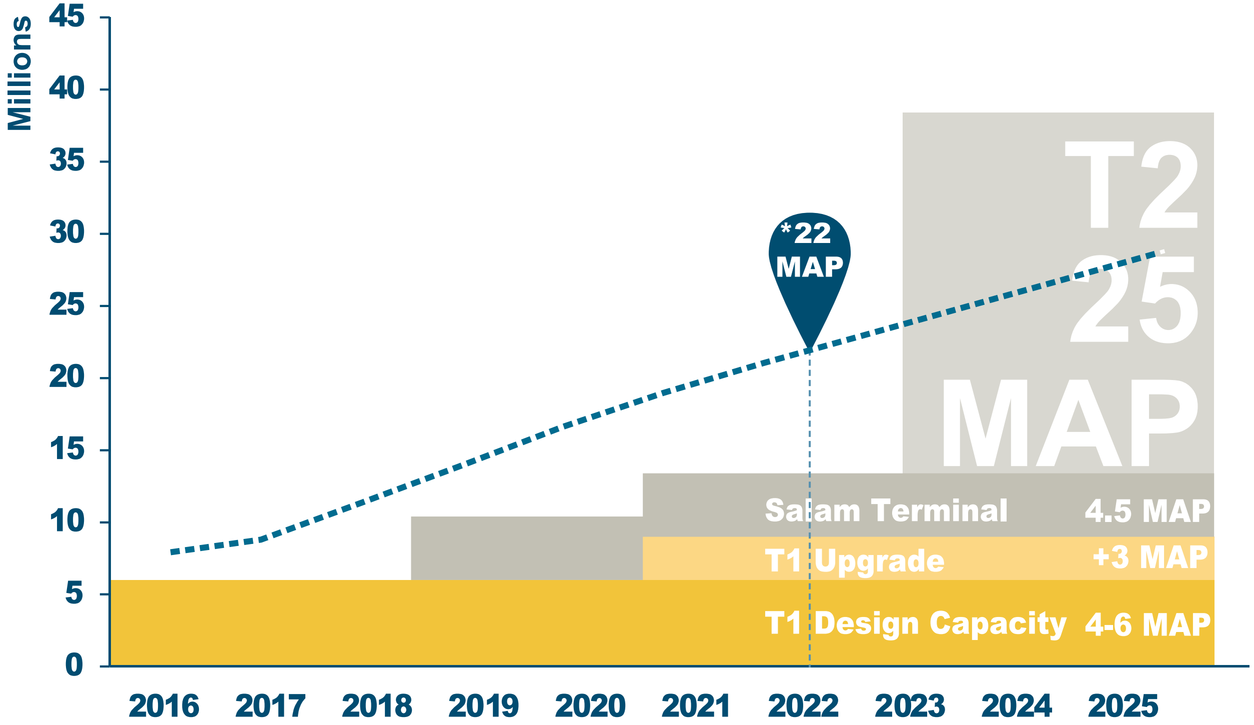
Expand Airport Capacity

In order to cope with the forecasted increasing passenger traffic demand IKAC will built additional passenger terminal capacity over the next 5 years. It is currently already building a new terminal, the Salam Terminal, which will add 4.5 MAP to IKIA's handling capacity.

In parallel with completion of the Salam Terminal, IKAC has embarked on the main expansion program for the next 5 years; the development of the new Iranshahr T2 terminal with a capacity of 25 MAP.

Whilst designing and constructing the Iranshahr T2 terminal, IKAC will also refurbish and expand the capacity of Terminal 1. By adding processing facilities to the existing building, its capacity will increase to 9 MAP.

If all these projects are completed, IKAC will have sufficient passenger handling capacity until its next major expansion phase.



* 2022 annual passenger demand according to high scenario traffic forecast

Facing Challenges

After solving the urgent capacity shortage, the next challenges will be to improve service level. Although capacity and Level of service are two related terms. Capacity analysis tries to give a clear understanding of how much traffic a given facility can accommodate. Level of service tries to answer how good is the present traffic situation on a given facility. Thus it gives a qualitative measure of traffic, where as capacity analysis gives a quantitative measure of a facility.

Following globally best practice such as ACI-ASQ or Skytrax would give airport operator more insight to identify the areas where investments can improve levels of passenger experience the most. Further information regarding ASQ and Skytrax can be found on the next page.

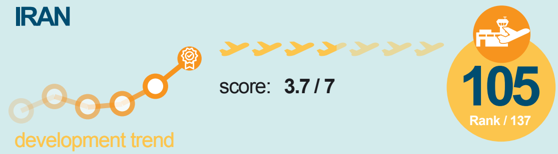
Currently, IKIA has not yet paticipated in either ASQ or Skytrax evaluation. Quality of Air Transport Infrastructure rating organized by World Economic Forum annually gives indication per how the quality of air transport infrastructure scores worldwidely per country. The latest rating is shown on the right, accompanied with the rating for Turkey showing the performance of one of the main peers.

WORLD ECONOMIC FORUM
COMMITTED TO IMPROVING THE STATE OF THE WORLD

Quality of Air Transport Infrastructure

World Economic Forum 2017-2018

In your country, how is the quality (extensiveness and condition) of airports [1 = extremely poor—among the worst in the world; 7 = extremly good—among the best in the world]



Improve Service Level

It's one of IKAC's intentions to start participating in one of the major passenger service level rankings during the next 5 years.

Airport Service Quality (ASQ)

ACI's Airport Service Quality (ASQ) is the world-renowned and globally established global benchmarking programme measuring passengers' satisfaction whilst they are travelling through an airport.

Istanbul Atatürk Airport (IST)

Based on passenger surveys held throughout the year, Istanbul Atatürk Airport is selected as the airport which improved its service quality the most in Europe. It is also one of the Client Testimonials ASQ Award winners in 2015.

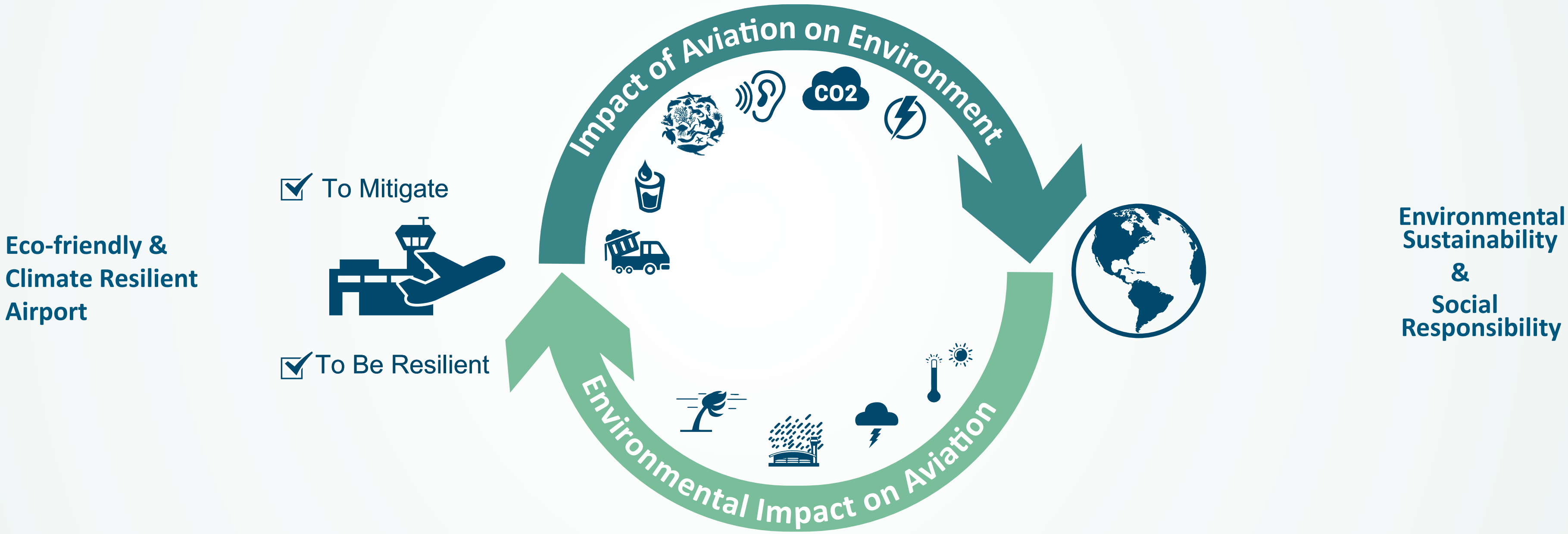
SKYTRAX (-World Airport Rating)

The World Airport Awards began in 1999, when Skytrax launched its first global, Airport customer satisfaction survey. The global airport rating system that classifies airports by the quality of airport product facilities and staff service standards.

Turkey

Istanbul Atatürk Airport is Certified with the 3-Star Airport Rating for the departure, arrival and transfer experience, evaluating the airport facilities, terminal comfort and cleanliness, shopping, food & beverages, staff service, and security / immigration.

Facing Challenges

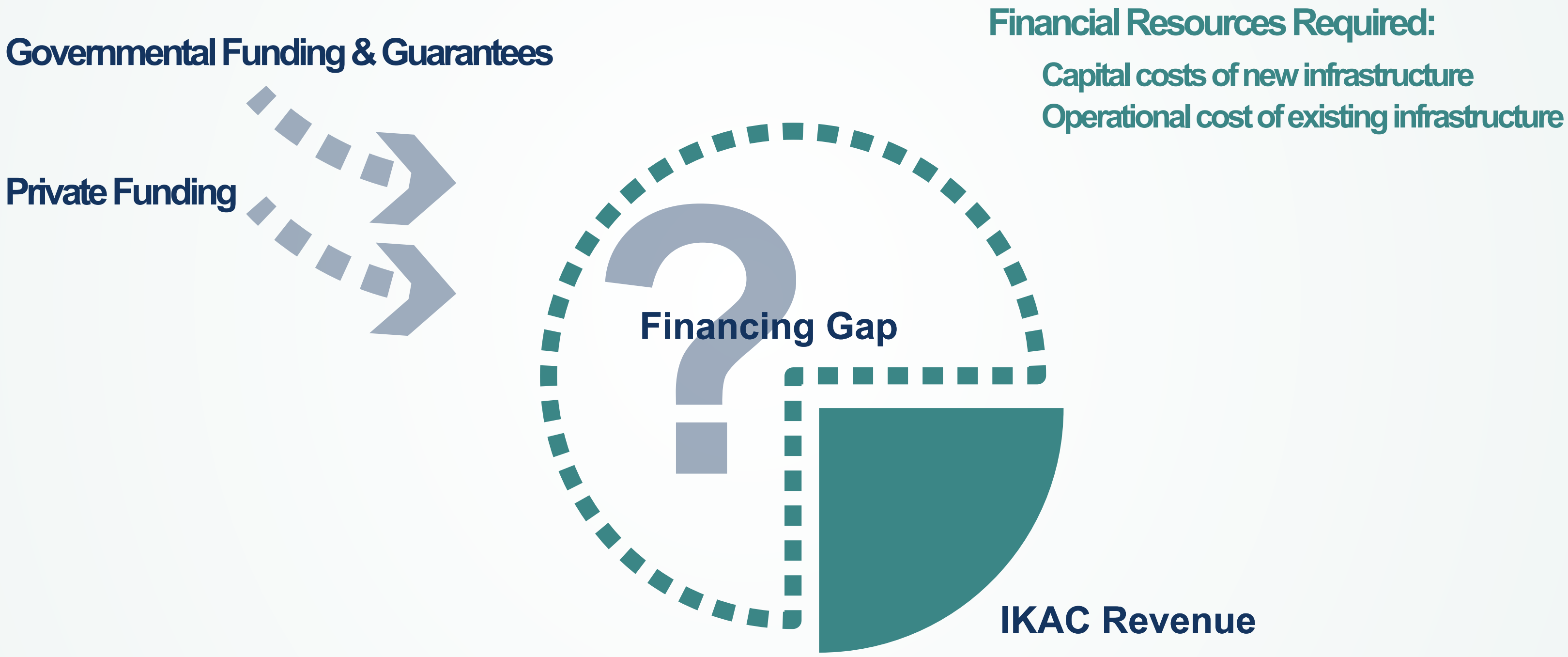


Sustainability

To cope with the impact of climate change, governments, communities and the industry also need to working together in partnership to advance technology, improve operations and generate more efficiencies in infrastructure.

One individual portfolio has been created to address more attention for achieving sustainability goal for IKAC.

Facing Challenges



Be (more) Financially Independent

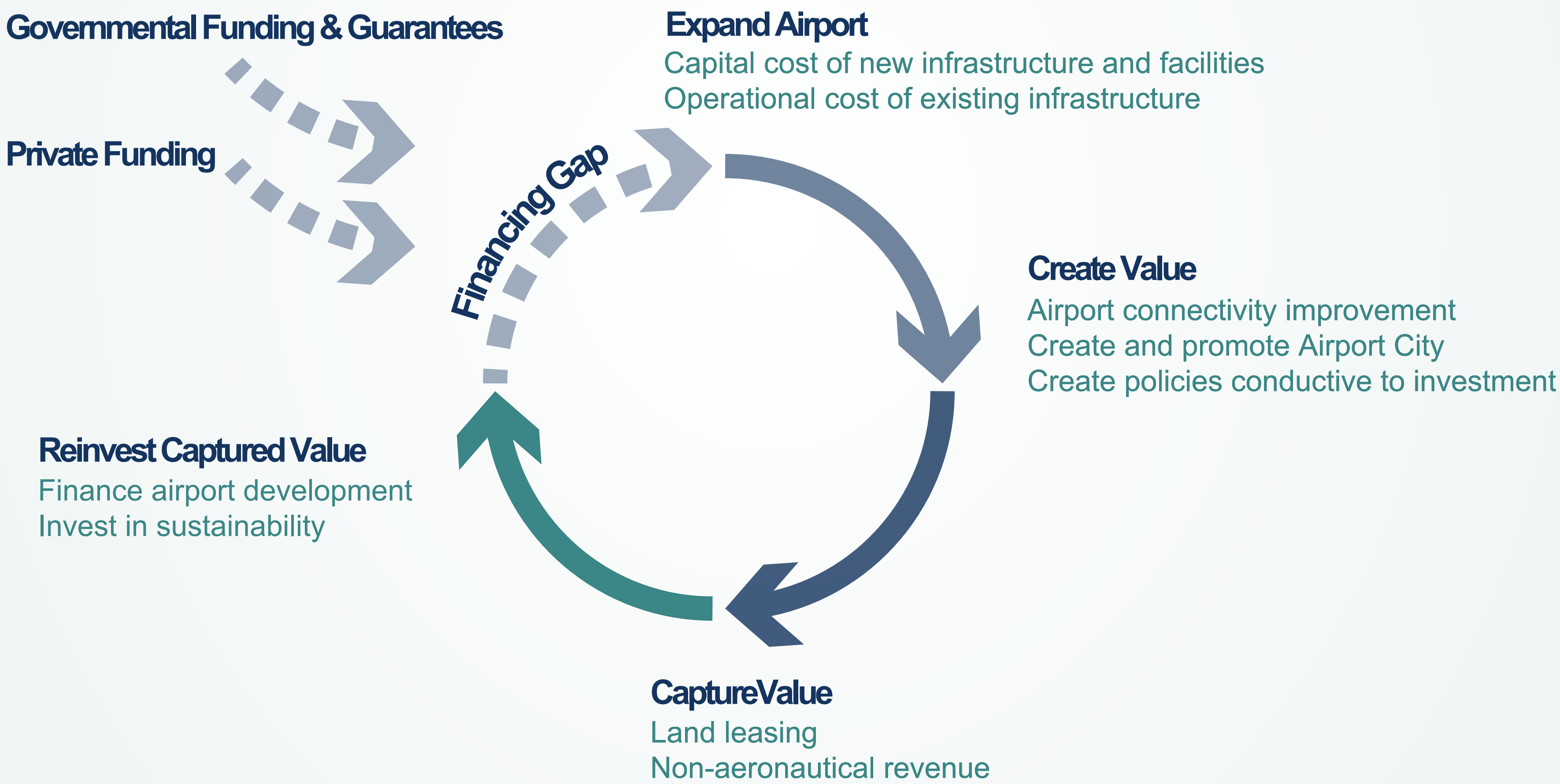
The vision of IKAC is linked to a business model with the objective to make IKAC less dependent on government funding. This model is based on developing both IKAC's airport and airport city.

Many airports today receive greater percentages of their revenues from non-aeronautical sources than from aeronautical sources (e.g., landing fees, passenger service charges). These non-acronautical revenues, including car parking, retail and food & beverage facilities in the terminal buildings, and real estate development, have become critical to airports meeting their facility modernization and infrastructure expansion needs, as well as being cost-competitive in attracting and retaining airlines.

Airports from Amsterdam to Zurich and from Beijing to Seoul have embraced this planning model to develop their terminals and landside areas as a pivotal means to financing airport operations and contributing to their own competitiveness.

As part of the strategy to increase non-aeronautical revenues airports are developing airport cities to tap the potential of increased business activities around an airport. The airport and airport city will have a 'symbiotic' relationship, where as a successful airport increases the valuations of the airport city development and the core program of the airport city results in increased demand for air service at the airport.

Facing Challenges



Expand Airport

IKAC is expecting a steady increase in passenger and cargo traffic growth over the next few decades. In order to accommodate the growth, IKAC is facing a multi-billion capital expenditure program ensuring sufficient airside, landside and terminal capacity. Together with the increasing number of passengers and cargo, operational costs are also expected to rise proportonially.
In order to be able to finance such massive expenditure, IKAC can rely on basically three sources; governmental, private and its own funds through aeronautical and non-aeronautical revenues. Since governmental resources will be limited available for IKAC's expansion plans, as part of the FYDP and master plan strategy, developing non-aeronautical revenue is a key objective. Although the government will not support IKAC directly by providing funds, it can contribute to this strategy by providing guarantees for private and foreign financing.
Non-aeronautical revenues will become a vital component of IKAC's bottom line. This source of revenue tends to generate higher net profit margins, whilst providing IKAC with more diversification of income streams which then serve as funding source for the airport's expansion and as an additional cushion during economic downturns where passenger numbers may drop or passenger spend may decrease in one area or other.

Create Value

This phase corresponds to the planning and design phase of airport and airport city projects. By establishing an airport city IKAC is using the potential of increasing non-aeronautical revenues through land lease incremental. A comprehensive planning strategy has contributed to using the potential while ensuring that social equity and environmental conservation goals are met.

To boost the airport city development, policies can be introduced that attract potential investors; this has been for example done at IKAC by assigning Free Zone and Special Economic Zone status to the airport city.

An expanded airport will result in an increase in air travel and a better connectivity to the rest of the world. This in return will give the airport city more potential as location for new investments.

Capture Value

This phase corresponds to the land leasing and implementation during which IKAC must ensure the smooth development and operation of the airport and airport city. IKAC can then proceed with capturing premiums from the lease of land to developers, investors or other third parties.
Due to the growing number of passengers the non-aeronautical revenues of IKAC, for example for retail in the terminal building and car parking, will increase.

Reinvest Captured Value

In this phase the land lease captured by IKAC together with the other revenues are used to fund the construction of new expansion projects, reach IKAC's sustainability goals , and provide an excellent passenger service level.
Still the reinvested value might not be sufficient to fund all future expansion and improvement programs and therefore governmental or private funding might still be required. However, over time the model should result in a financially healthy, strong and stable IKAC.

Taking Initiatives

6th Five Year Development Plan

Article No. 2: *The below items are among the most fundamental items of the plan. The government, while allocating budgets, is obliged to consider the below related programs (projects), and also the approvals issued by the Resistive Economy Organization (necessarily in the below fields):*
c. *The special items in Economy such as Mining and Mineral Industry, Agriculture, Tourism, Transit and Rail Transportation, Modern Technologies, Development and Utilization of Science, Technology and Energy.*

Article No. 51: *Through observing the general policies of the 44th principle of the constitution on privatizing the economy and expanding the infrastructure required for foreign business services and also increasing the transit while tackling the transportation issues, the below items shall be considered:*

A: *Through observing the 44th principle of the constitution and the law of implementing the general policies of the 44th principle approved in 2008 and its following addendums, The Ports and Maritime Organization and Iran Airports and Air Navigation Company are allowed to take actions into establishing companies for investment and operation in the main ports and airports (except for navigational aids and take-off and landing of the airplanes) with partnership of valid international companies (domestic or foreign). The share of The Ports and Maritime Organization and Iran Airports and Air Navigation Company would be at least 51%.*

5th Five Year Development Plan

Article 166
To boost the status of the country in international air transportation network and to increase income resulting from transit and goods and passengers transportation and ***productive employment****, to promote the level of Imam Khomeini. International Airport to the* ***first hub of cargo transportation*** *in the region and the second hub of passenger transportation with insisting on the* ***airport independence in managerial, financial and organizational aspects*** *and to provide stable flow of financial resources for beneficiaries, the government shall take the below – mentioned actions:*

To develop an ***airport city*** *in the area adjacent to Imam Khomeini International Airport and a free Trade Zone and Economic Special Zone in a part the lands belonging to the airport to provide insurance, banking and other services for airport town, such as tourism, medicine, welfare and…..*

Logistics Hub in Iran

Putting IKIA on the World Map

National Policy

Iran's national Five Year Development Plans are an important guideline for IKAC's development. In both the 5th and the 6th Iranian Five Year Development Plans attention has been given to the development of the aviation sector, its airports and Imam Khomeini Airport City in particular. When developing the master plan and this IKAC FYDP document, the national policy have been considered an integrated in the development approach for IKAC.

Taking Initiatives

IKAC Department	Now		To be hired				
	IKAC Staff	External Consultants	2018	2019	2020	2021	2022
AIRPORT CITY							
Current Staff Management Team	1						
Current Staff Logistics/ SEZ	4						
Current Staff Free Zone	0						
Current Staff Investment	8	8					
Current Staff Business Development		1					
Infrastructure& Execution							
Current Staff Infrastructure	15	5					
Current Staff PMO	1	1					
Infrastructure				2		2	
PMO				3	2		
Iranshahr Program Management				5	5	5	
T1 Program Management				3			

Establish Airport City Organization

Introduction

IKAC is going to deliver a major expansion program in the next 5 years in order to accommodate the growing demand. Apart from overcoming technical and financial challenges in order to deliver the program, IKAC will also need to establish an airport city organization and will require additional staff to implement the FYDP.

Airport City

In order to establish the airport city at IKAC, new departments will need to be created in order to promote, manage and operate the related new developments. The new IKAC departments will take care of managing and operating the airport city development, business development to attract new investors for IKAC including promoting IKAC around the world. Furthermore, with the ambition to be client/ investor centric a new customer center will need be required to support a one-stop-shopping approach.
In the FYDP, 8 organizational projects have been identified in order to achieve the vision and strategic objectives of IKAC. These projects will result in a fully operational airport city organization able to manage IKAC's airport city efficiently and successfully.
Budgets and timelines have been defined for these projects. The budgets includes amounts for hiring external consultants to support IKAC in implementing the projects and establishing the airport city organization. The budgets do not include IKAC staff costs; these are considered to covered under other IKAC budget resources.

Taking Initiatives

Staffing Plan

In order to make sure sufficient staff will be available to implement the FYDP, this section is placing a special focus on staffing requirements. It will be important to have the right people, in the right place, at the right time, all while making IKAC an employer of choice for those entering the workforce.

The staffing requirements mentioned in this section are limited to staff for implementing and developing IKAC's airport city and staff required for the the FYDP delivery. These are considered new developments and therefore require a separate staffing plan. Other staff for ongoing operations or IKAC general management and support functions are not considered in the FYDP.

The five year staffing plan presents the staff required for IKAC's airport city and project delivery departments. Although its primary purpose is to help inform the IKAC budget planning process, the five year staffing plan can be a useful planning tool for the mentioned departments as well. It can be used to link staffing needs to expected activities and assist the department management in seeing how staffing needs would be affected by changes in plans.

IKAC Department	To be hired				
	2018	**2019**	**2020**	**2021**	**2022**
AIRPORT CITY					
IKAC Airport City Management Team		2			
IKAC Airport City Support (HR, Finance)		5			
IKAC Airport City Business Development	2	3			
IKAC Customer Center		2	5	5	
IKAC Airport City Asset Management Services			10	5	10
IKAC Knowledge & Development Center		2		1	
IKAC Route Development	1			1	
IKAC Airport City Marketing & PR	1				

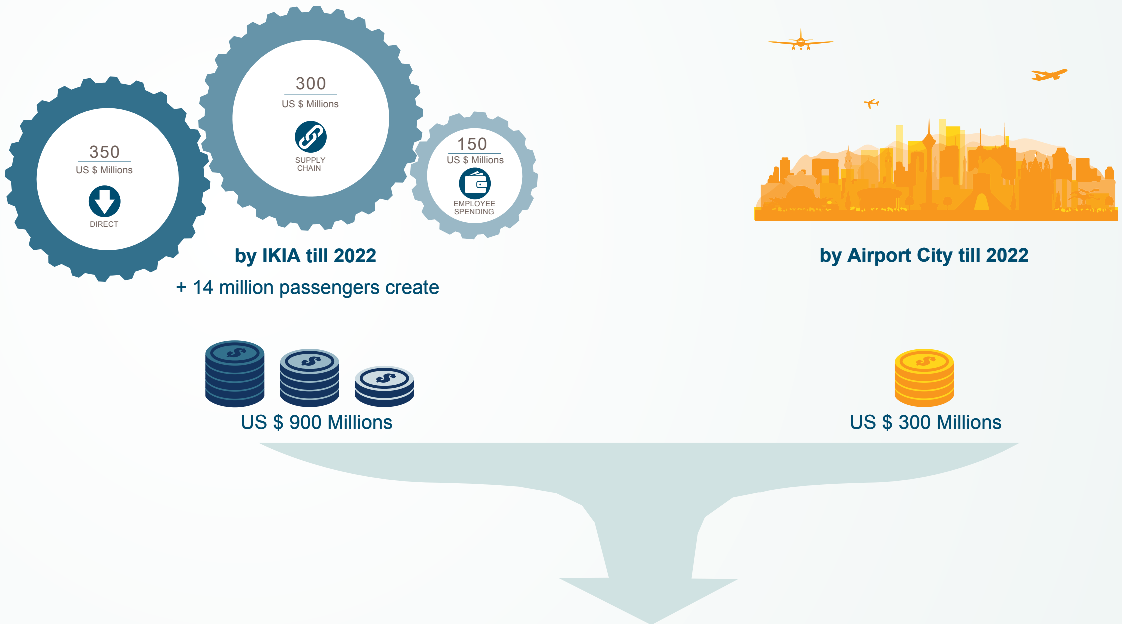
All numbers presented are FTE equivalents.

The table contains IKAC's estimated staffing requirements. The five year staffing plan details IKAC's human resources requirements and how those requirements will be fulfilled. The plan includes the following sections:
•Staffing Estimates – identifies estimated staffing requirements
•Department Needs – describes when staffing should be acquired

Establish Airport City Organization

Develop & Establish IKAC Airport City Management Team incl. support functions (legal, HR, contracts)	USD 3,450,000 IRR 144,986,250,000
Develop & Establish Airport City Customer Center (for one-stop shopping service)	USD 3,450,000 IRR 144,986,250,000
Develop & Establish Airport City Asset Management (maintenance, utilities, waste management, security, etc)	USD 1,725,000 IRR 72,493,125,000
Develop & Establish IKAC Airport City Business Development Team	USD 575,000 IRR 24,164,375,000
Establish Knowledge & Development Center	USD 402,500 IRR 16,915,062,500
Establish Route Development Center	USD 1,725,000 IRR 72,493,125,000
Develop Airport City Marketing & PR Strategy	USD 2,300,000 IRR 96,657,500,000
Develop & Implement CIQS (Customs, Immigration, Quarantine and Security) Procedures for Airport City	USD 11,500,000 IRR 483,287,500,000

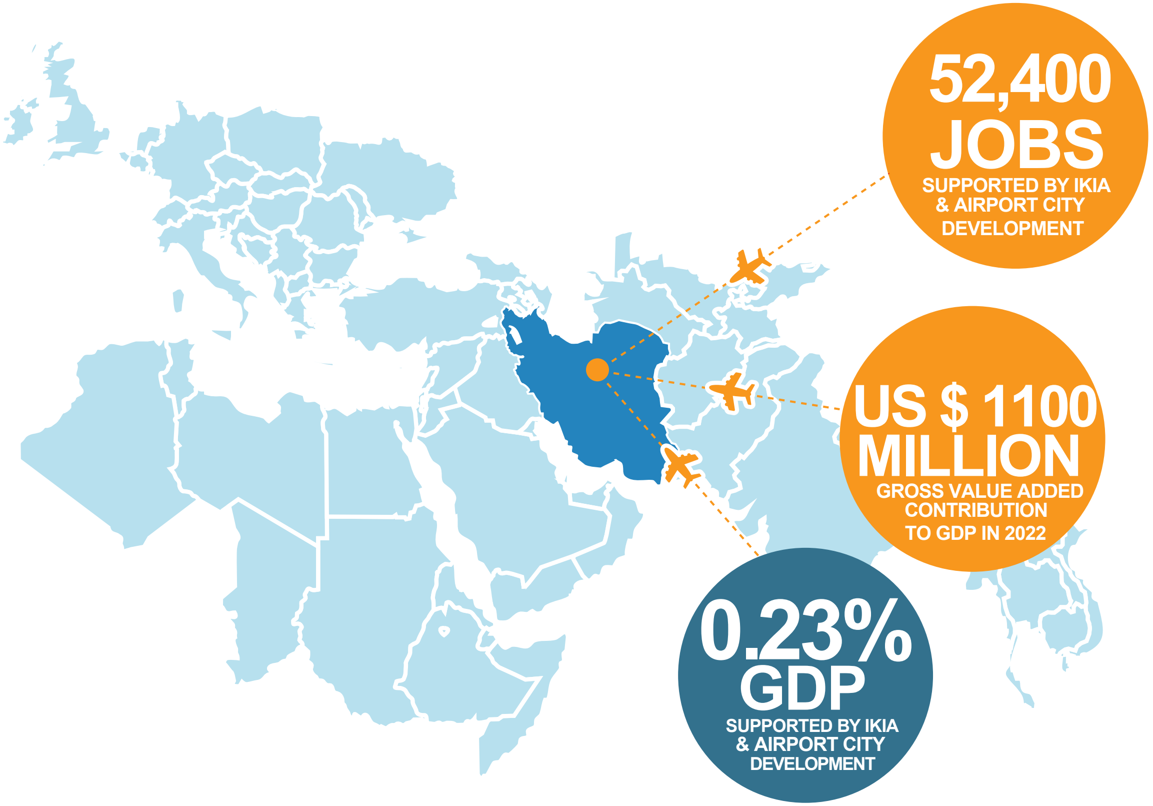
Achieving Goals



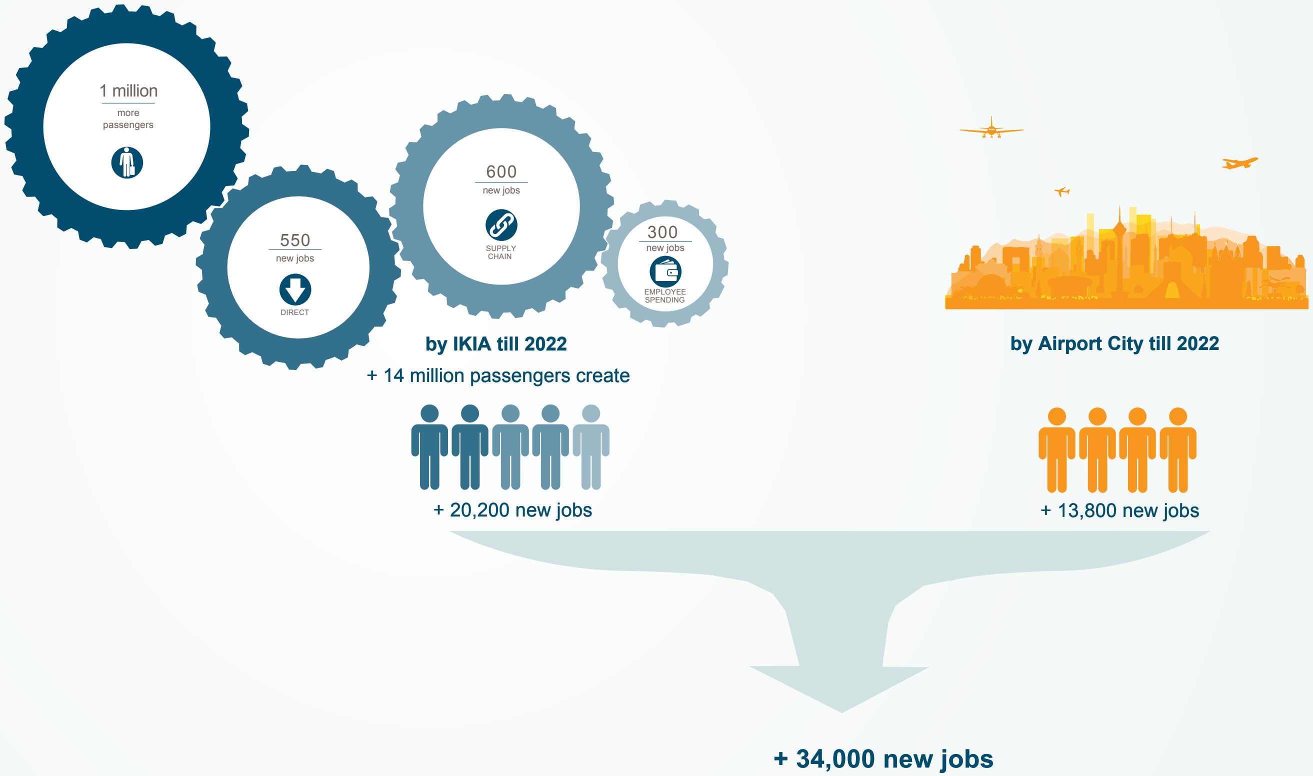
US $ 1100 Millions GDP Contribution

A Key Economic Engine for Iran

As traffic at the airport grows, this employment will increase. Based on the master plan air traffic forecasts, by 2022, IKIA and Airport City together will support an estimated 52,400 jobs and contribute aprox. US $ 1100 million in GDP.



Achieving Goals



Economic Impact

Air transport is a major economic generator in the world's economies. The air transport industry contributes directly to employment and economic growth in the region through the ongoing operations and activities of the airport and airport city.

Airports essentially have four potential types of impact on the economy in their region. The economic impact of IKAC's development and associated aviation activity comprises the following:

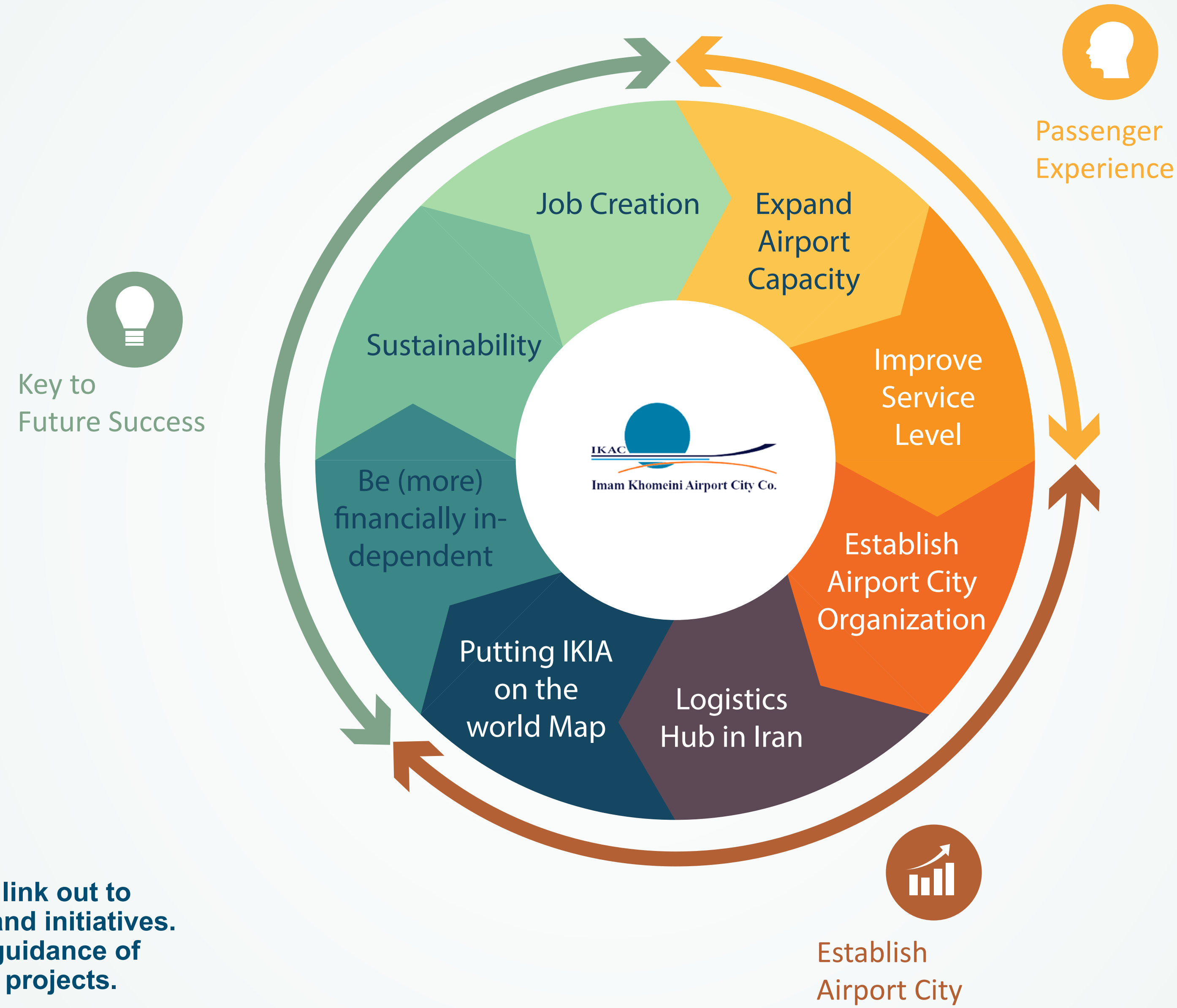
- Direct Economic Impact. The employment, income and GDP associated with the operation and management of activities at the airports including firms on-site at the airport and airport-related businesses located elsewhere near the airport. This includes activities by IKAC Co., the airlines, air traffic control, ground handlers, airport security, immigration and customs, aircraft maintenance, and other activities at the airport.

- Indirect Economic Impact. The employment, income and GDP generated by down-stream industries that supply and support the activities at the airport. For example, these could include: wholesalers providing food for inflight catering, oil refining activities for jet fuel, companies providing accounting and legal services to airlines, travel agents booking flights, etc.

- Induced Economic Impact. This captures the economic activity generated by the employees of firms directly or indirectly connected to the airport spending their income in the national economy. For example, an airline employee might spend his/her income on groceries, restaurants, child care, dental services, home renovations and other items which, in turn, generate employment in a wide range of sectors of the general economy.

- Catalytic Impacts. Also known as wider economic benefits, catalytic impacts capture the way in which the airport facilitates the business of other sectors of the economy. As such, air transportation facilitates employment and economic development in the national economy through a number of mechanisms including trade, investment, tourism, and productivity.

The contribution of IKIA and the airport city development to the national economy has been quantified as part of the master plan. Since defining the impact of catalytic impacts is a challenge, only the impact for the first three categories has been defined. The estimated economic impact of IKAC after delivery of the FYDP projects is presented on the following pages.



The objectives link out to the measures and initiatives. And futher as guidance of structuring the projects.

5 Portfolio, Program & Project

Portfolio: Passenger Experience

Portfolio: Establish Airport City

Portfolio: Key to Future Success

The main goal of this chapter is to identify the scope of the development expansion program within FYDP period and to put it in a manageable structure.

- Portfolio Management Structure
- Master Capital Budget
- Master Schedule
- Financial Model Update

IKAC Portfolio,Programs & Projects Approach

Portfolio Management

Portfolio

Program

Project

To structure the scope identified for the FYDP, the scope of the first phase implementation will be broken down in three main level groups based on Project Portfolio Management best practice :

- Portfolios; a portfolio is a collection of projects and programs that are managed as a group to achieve strategic objectives.
- Programs; a program is a group of related or similar projects managed in a coordinated way to get the benefits and control not available from managing them individually.
- Projects; the objective of a project is to create a unique product or develop a system to provide you any service.

Master Schedule

This section provides information on time schedule for the FYDP. This information can be viewed in Appendix. The integrated schedule represents all the project scope agreed as included in the FYDP. All schedule data provided is as at May 2018.

The schedules have been divided into the Portfolio-Programme categories of:

1. Passenger Experience
    - Iranshahr Terminal 2
    - Salam Terminal
    - Terminal 1 Refurbishment
    - Runway 1
    - Runway 2

2. Establish Airport City
    - Dry Port
    - Logistic & Investment Park
    - Infrastructure '240/ 90 ha'
    - Rail Manufacturing Park
    - Organization

3. Key to Future Success
    - Sustainability

The FYDP can be divided into 3 categories for scheduling purposes:

- Ongoing projects which spills over into the FYDP timeframe;
- New projects that are defined and in definition or design phase;
- A compilation of other projects proposed in the FYDP which has not been fully defined, ranked and resource and cost levelled.

For the latter category, it is difficult to produce an accurate schedule at this time. However, a schedule based on the current information is included which will need to be verified when these projects are going to be defined. For the other the latest schedule information is included. It is envisaged that, once every year the time schedule information will be updated. This will allow the interdependencies between projects to be more accurately and easily seen and ensure visibility of the assumptions and impacts on airport operations on which the whole FYDP plan are built.

Master Capital Budget

Capex

A principal objective for the FYDP is to set out the budgets for the proposed capital expenditures. This section is used to present project specific budgets for the FYDP.

It is envisaged that the budgets are monitored on a monthly basis and can only be adjusted via an agreed change control process.

The FYDP is, at its most basic level, a publication of the current state of budgets for possible investments at IKAC.

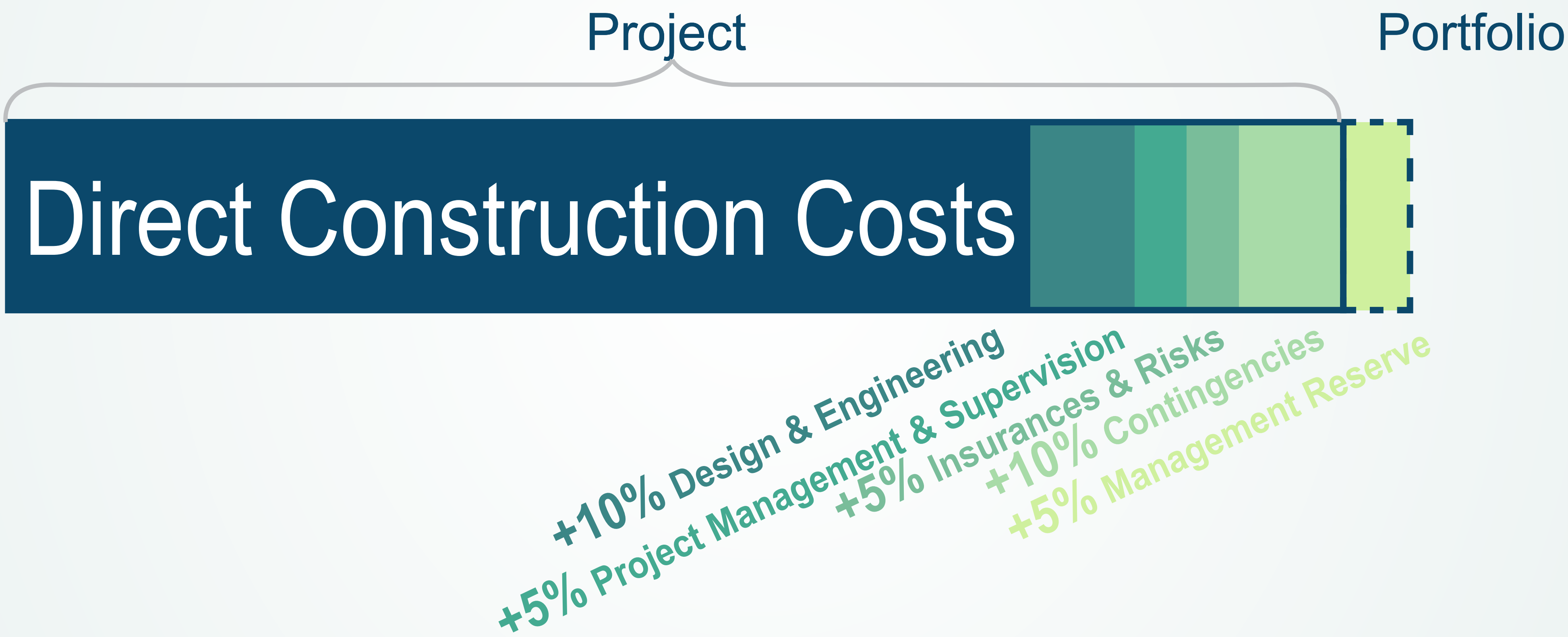
The FYDP is produced in ‘constant’ prices meaning that the price base is fixed regardless of the year in which investment occurs (inflation).

Price Base

The FYDP CAPEX budget is published in ‘constant’ 2018 prices for Iran. The FYDP price base represents real prices to December 2018 and does not include any allowance for inflation for the remaining FYDP time frame.

Inflation

The FYDP has been prepared to reflect ‘constant’ prices in the year of publication. However, it is envisaged that on a monthly or quarterly basis IKAC’s PMO presents to the IKAC management information on budgets including an allowance for inflation. Given the current economic conditions it is advisable for IKAC to monitor inflation assumpations and issues on at least a quartely basis in order to understand how they impact the delivery of the FYDP at IKAC. The individual project budgets shown in the FYDP remain in the current ‘constant’ cost base.

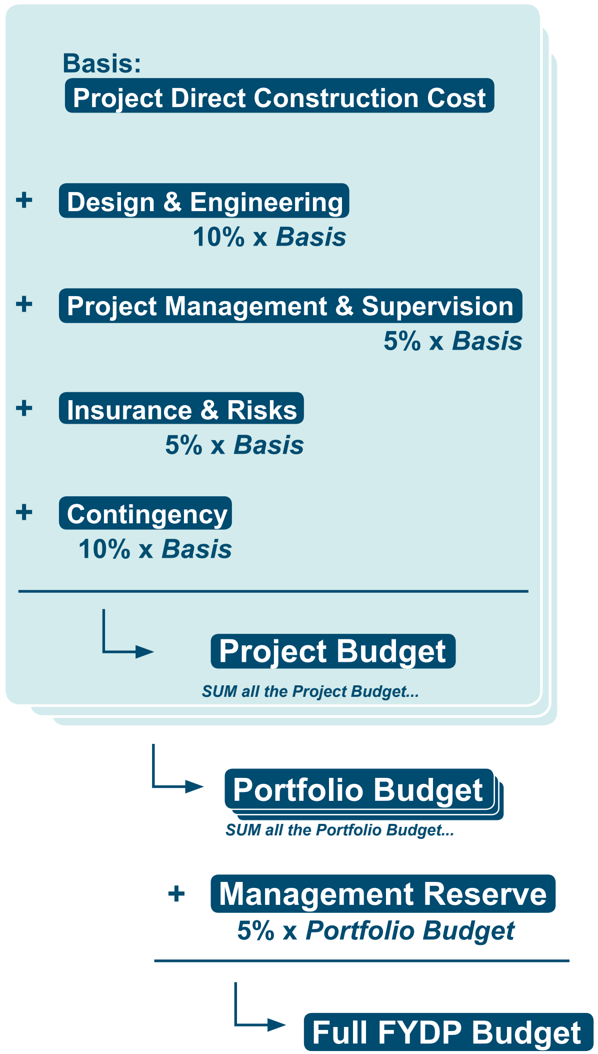

Project
Portfolio
Direct Construction Costs
+10% Design & Engineering
+5% Project Management & Supervision
+5% Insurances & Risks
+10% Contingencies
+5% Management Reserve

FYDP Budget Build-up

The estimated amounts (construction cost) are increased with an overhead percentage that should cover the following (additional expenditure) items:

- Design & Engineering
- Project Management & Supervision
- Insurance & Risks
- Contingency

Finally, as all other projected amounts in the financial analysis, the future capital expenditures are escalated for inflation (in order to cover for future price increases) based on the timing of the capital projects.



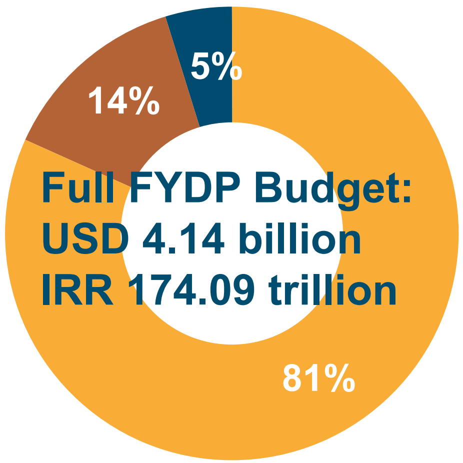
Portfolio Passenger Experience Budget: USD 3.37 billion IRR 142.03 trillion

Portfolio Establish Airport City Budget: 564.47 million IRR 23.70 trillion

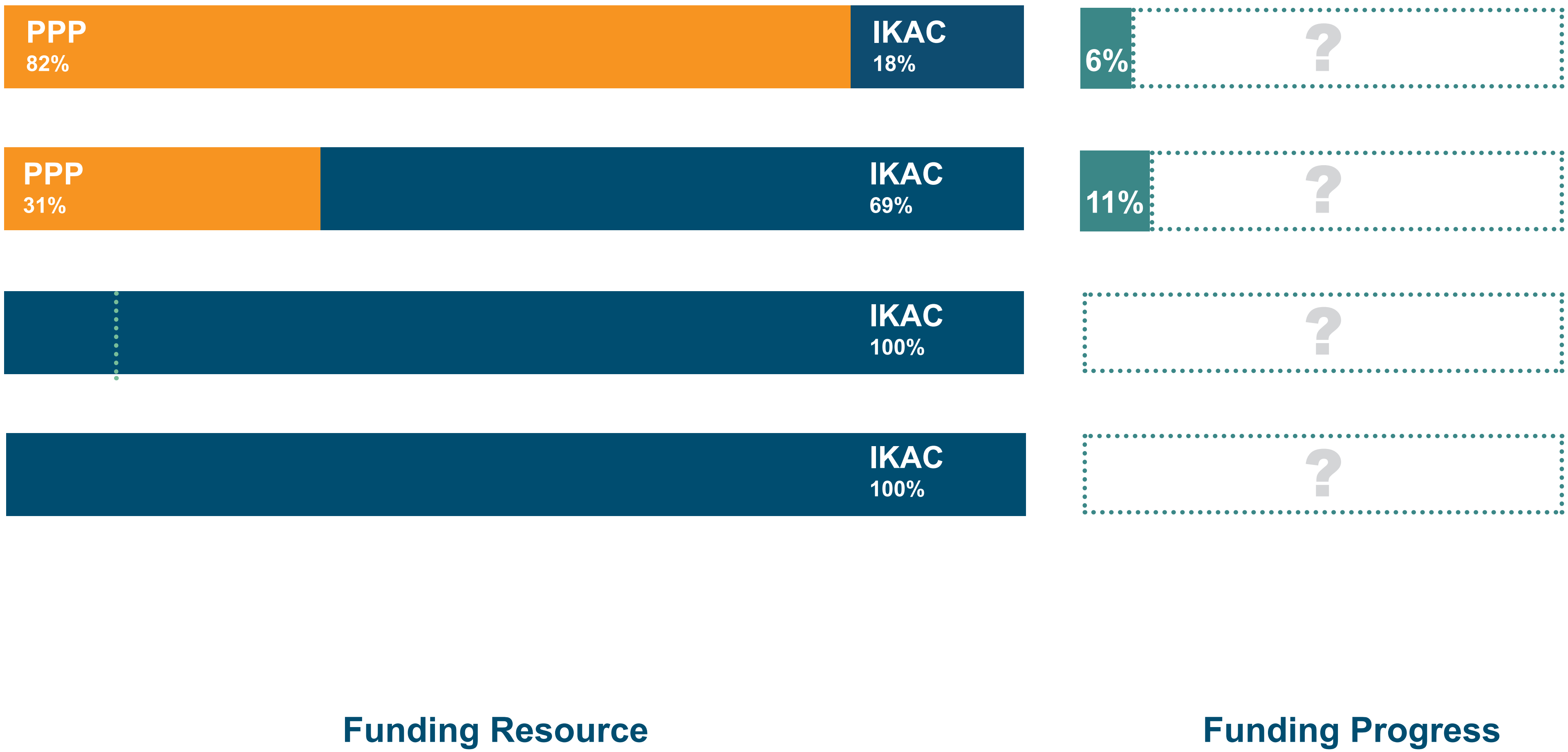
Portfolio Sustainability Budget: USD 1.67 million IRR 70.18 billion

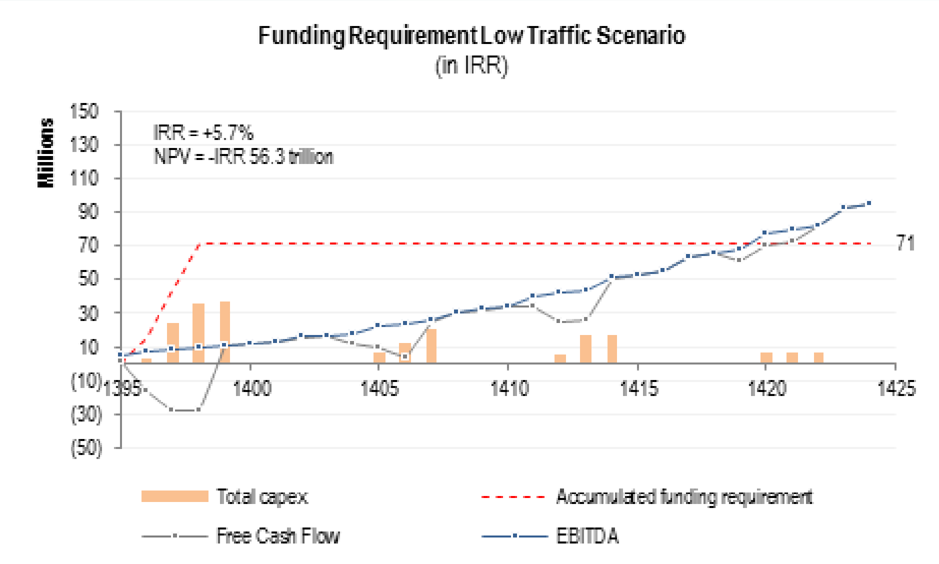
+ Management Reserve: USD 197.27 million IRR 8.29 trillion

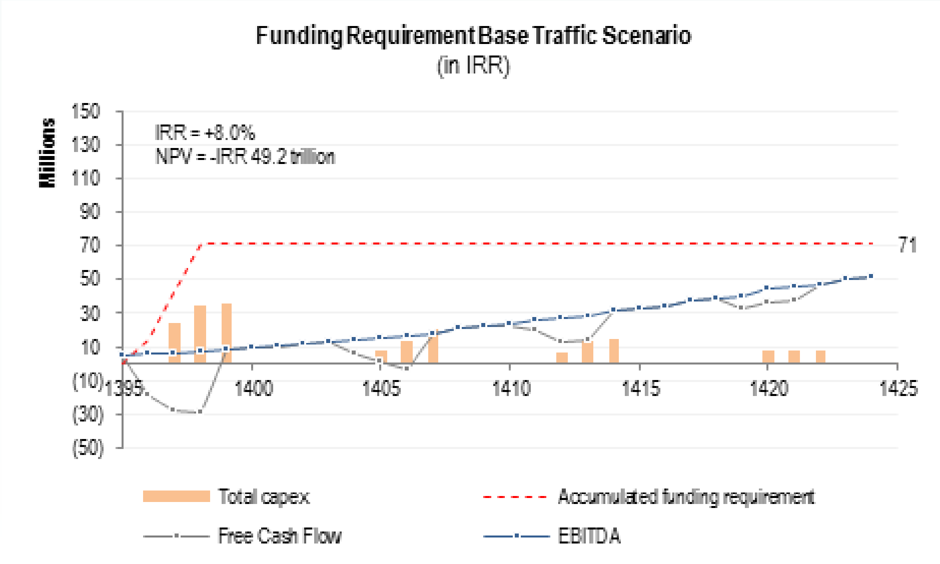
5% x Portfolio Budget

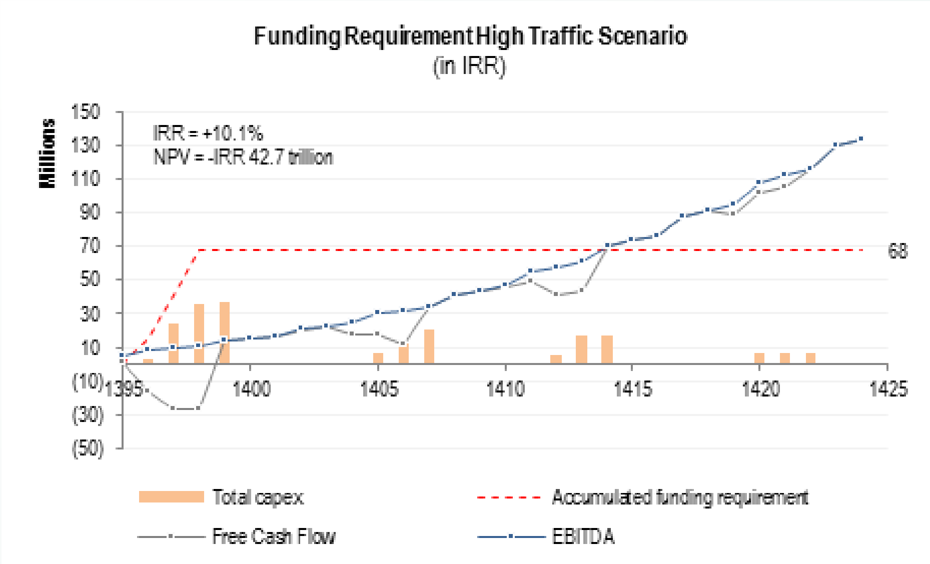


Budget Summary




Funding Requirement Low Traffic Scenario
(in IRR)
Millions
IRR = +5.7%
NPV = -IRR 56.3 trillion
71
Total capex
Accumulated funding requirement
Free Cash Flow
EBITDA


Funding Requirement Base Traffic Scenario
(in IRR)
Millions
IRR = +8.0%
NPV = -IRR 49.2 trillion
71
Total capex
Accumulated funding requirement
Free Cash Flow
EBITDA


Funding Requirement High Traffic Scenario
(in IRR)
Millions
IRR = +10.1%
NPV = -IRR 42.7 trillion
68
Total capex
Accumulated funding requirement
Free Cash Flow
EBITDA

Financial Model Update

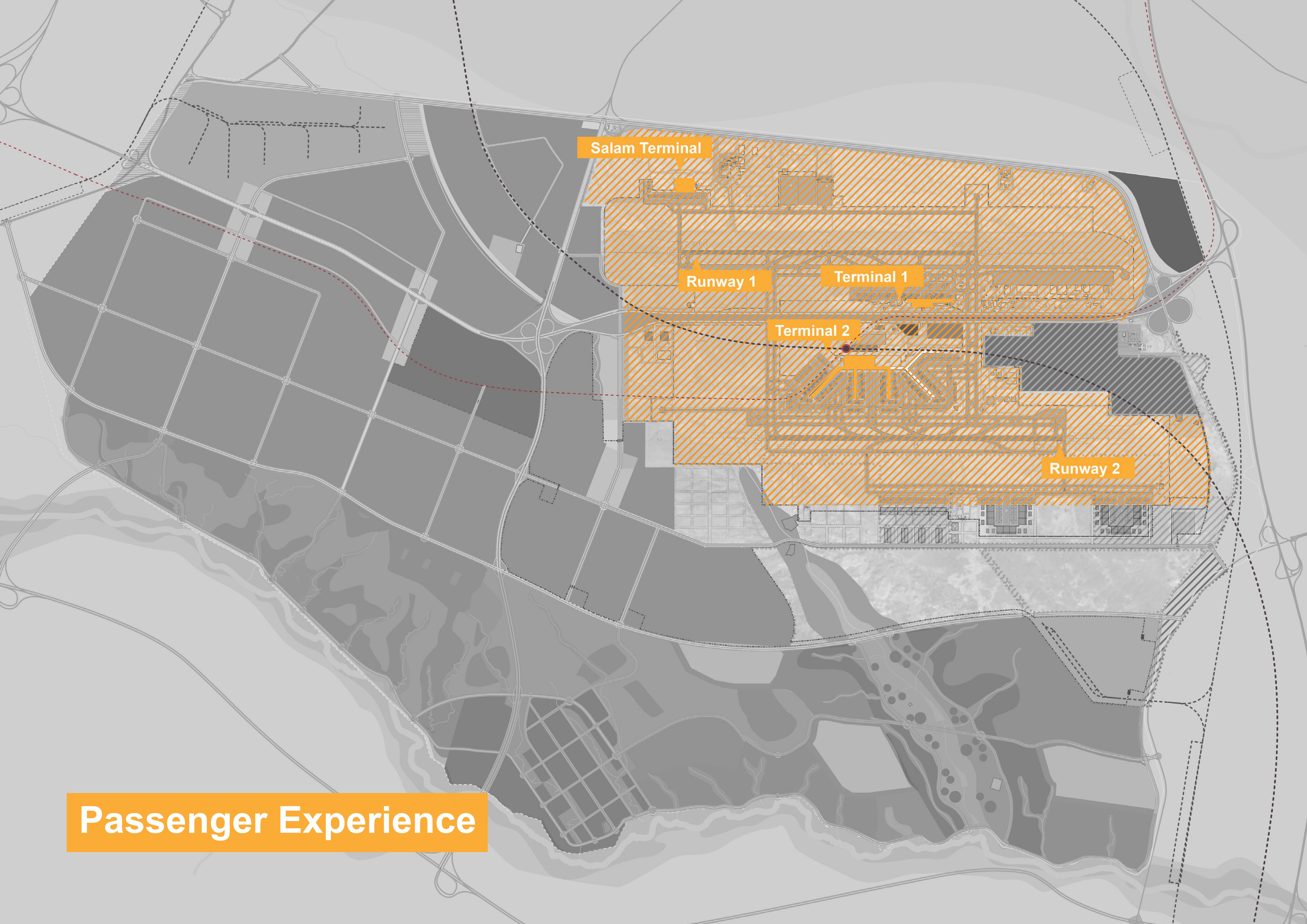
In order to define the financial impact of the FYDP and the funding requirement, the financial model has been updated based on the latest information.

The original financial model has been prepared as part of the master plan under Task 11.

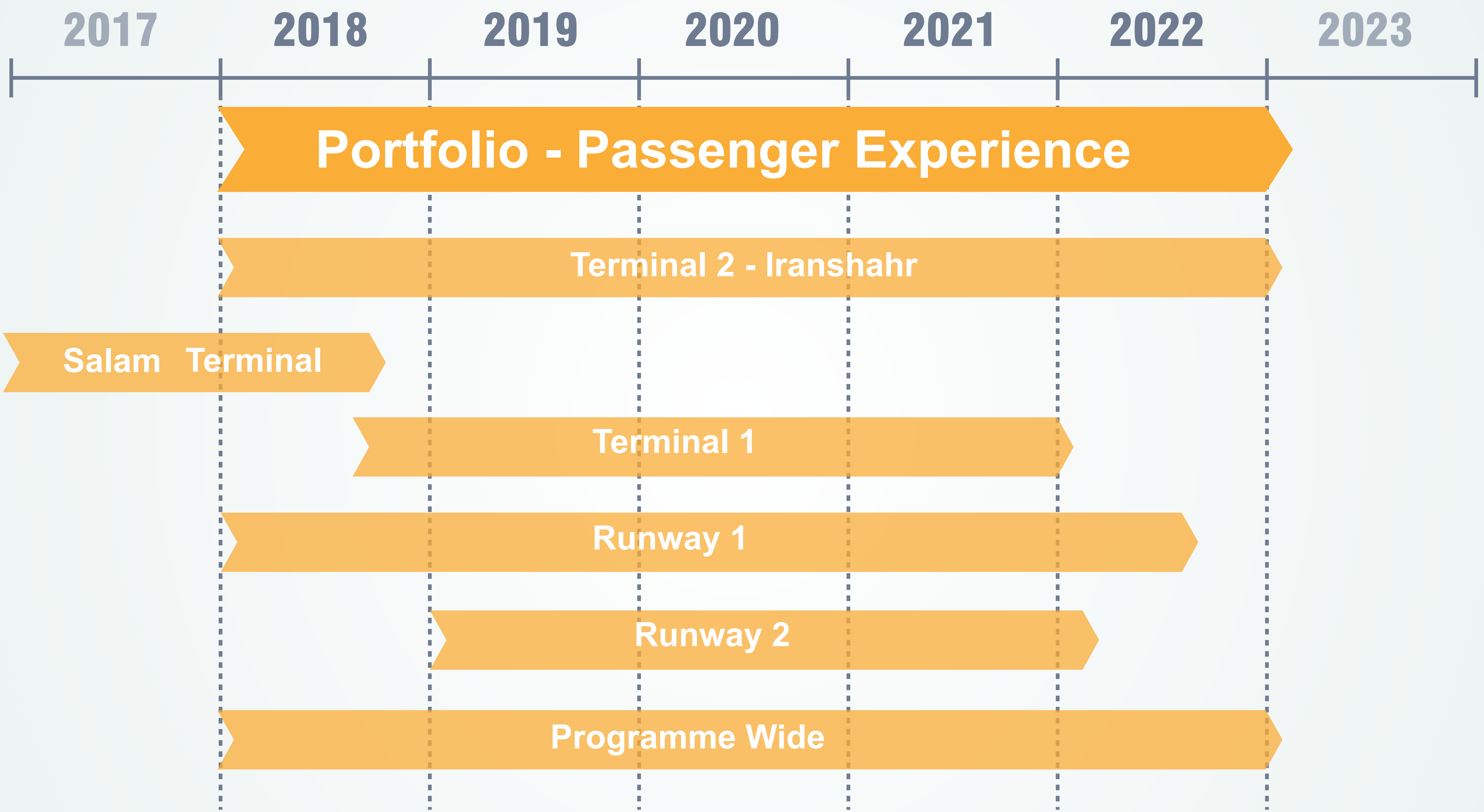
Combining the projections of EBITDA with the anticipated capital expenditures provides insight into the profitability of the project (before financing) as well as the funding requirements. Funding requirements exist when the cash flow from operations is not sufficient to finance the envisaged capital expenditures.

Figures in the opposite page show the funding requirements for the different traffic scenario, as well as the outcome of project profitability in terms of Internal Rate of Return (IRR) and Net Present Value (NPV). The graphs indicate that in all three traffic scenarios, based on the operating cash flows alone, there is a significant shortfall and external financing is required. In other words, the EBITDA is not sufficient to finance the investment and that additional funding is required. Although the project is profitable in terms of a positive IRR, the IRR and NPV suggest that the full project might not be attractive from a traditional investor point of view, requiring higher returns.

Appendix



Passenger Experience


2017
2018
2019
2020
2021
2022
2023
Portfolio - Passenger Experience
Terminal 2 - Iranshahr
Salam Terminal
Terminal 1
Runway 1
Runway 2
Programme Wide

Passenger Experience

Terminal 2

USD 2.52 billion
IRR 105.79 trillion

Passenger Terminal 2 Building - Phase 1

- T2 Apron
- T2 Apron Utilities - PBB, PCA, GPU
- T2 Apron Utilities - Fuel Hydrant System
- T2 Access Road & Kerbs incl. Structures
- Secondary Roads Around T2
- Ground Transportation Center (GTC) at T2
- Short-Term Car Parking T2 - Multi-storey
- Central Utility Plant

USD 2,464,066,942
IRR 103,552,413,224,942

New Air Traffic Control Tower

USD 45,526,000
IRR 1,913,230,150,000

Consolidation Center

USD 8,000,200
IRR 336,208,405,000

Aircraft Waste Disposal & Water Supply Station

USD 1,950,000
IRR 81,948,750,000

Salam Terminal

USD 182.01 million
IRR 7.65 trillion

Salam Terminal Building

- Salam Taxiway & Apron
- Salam Terminal Access Roads, Car Parking, Utilities
- Support Buildings

USD 179,411,779
IRR 7,539,780,000,000

Salam Terminal Fuel Supply

USD 2,600,000
IRR 109,265,000,000

Terminal 1

USD 276.77 million
IRR 11.63 trillion

Terminal 1 Refurbishment	USD 76,440,000 IRR 3,212,391,000,000
Temporary Terminal	USD 76,440,000 IRR 3,212,391,000,000
Parking 3 Multi-storey Car Parking	USD 113,182,293 IRR 4,756,485,848,276
Mosque	USD 2,600,000 IRR 109,265,000,000
Entrance to Spine Road near Hotel (P3 Parking)	USD 780,000 IRR 32,779,500,000
Flight Guard Security Building	USD 8,109,459 IRR 340,800,000,000

Portfolio Budget: USD 3.37 billion IRR 142.03 trillion

Runway 1

USD 49.53 million
IRR 2.08 trillion

De-icing Positions at Western Threshold	USD 4,589,722 IRR 192,883,046,038
Northern Parallel Taxiway of RWY 1	USD 35,176,700 IRR 1,478,300,817,500
Isolated Aircraft Parking Position	USD 852,377 IRR 35,821,137,121
RFF (Rescue Fire Fighting) Training Grounds	USD 2,629,900 IRR 110,521,547,500
Apron Extension West	USD 6,281,975 IRR 264,000,000,000

Runway 2

USD 219.66 million
IRR 9.23 trillion

RWY 2 / Taxiways Civil Works
- RFF (Rescue Fire Fighting) Station
- Airside Roads
- Airside Fence
- Airfield Ground Lighting Equipment
- Navigational Aids for RWY 2
- Cargo Tunnel under RWY 2
- Cross Taxiways Civil Works

USD 119,161,296
IRR 5,007,753,450,000

Southern Parallel Taxiway
- Runway Exits

USD 38,482,600
IRR 1,617,231,265,000

Isolated Aircraft Parking Position

USD 852,377
IRR 35,821,137,121

Airside Road Bridge

USD 3,900,000
IRR 163,897,500,000

Tunnels under Cross Taxiways (2x)
- RFF (Rescue Fire Fighting) Station

USD 15,600,000
IRR 655,590,000,000

Southern Cargo Apron & Associated Infrastructure

USD 8,248,630
IRR 346,648,675,750

Southern MRO Apron & Associated Infrastructure

USD 20,981,584
IRR 881,751,067,600

Engine Run-Up Bay

USD 1,092,000
IRR 45,891,300,000

Security Facilities (airside-landside gates)

USD 4,212,000
IRR 177,009,300,000

Airport Maintenance Facility

USD 5,181,800
IRR 217,765,145,000

New Flight Procedures

USD 1,950,000
IRR 81,948,750,000

Programme Wide

USD 132.38 million
IRR 5,56 trillion

IT Master Plan

USD 15,600,000
IRR 655,590,000,000

Parking Management System (all parkings)

USD 13,500,500
IRR 567,358,512,500

High Speed Rail - IKAC Provisions

USD 6,500,000
IRR 273,162,500,000

Aviation Security Master Plan

USD 550,000
IRR 23,113,750,000

Telecommunication Network Infrastructure

USD 111,089,082
IRR 4,668,518,651,735

Passenger Experience

Terminal 2

USD 2.52 billion
IRR 105.79 trillion

Funding Source: PPP 98%

Funding Progress: ?

Salam Terminal

USD 182.01 million
IRR 7.65 trillion

Funding Source: PPP 100%

Funding Progress: 99%

Terminal 1

USD 276.77 million
IRR 11.63 trillion

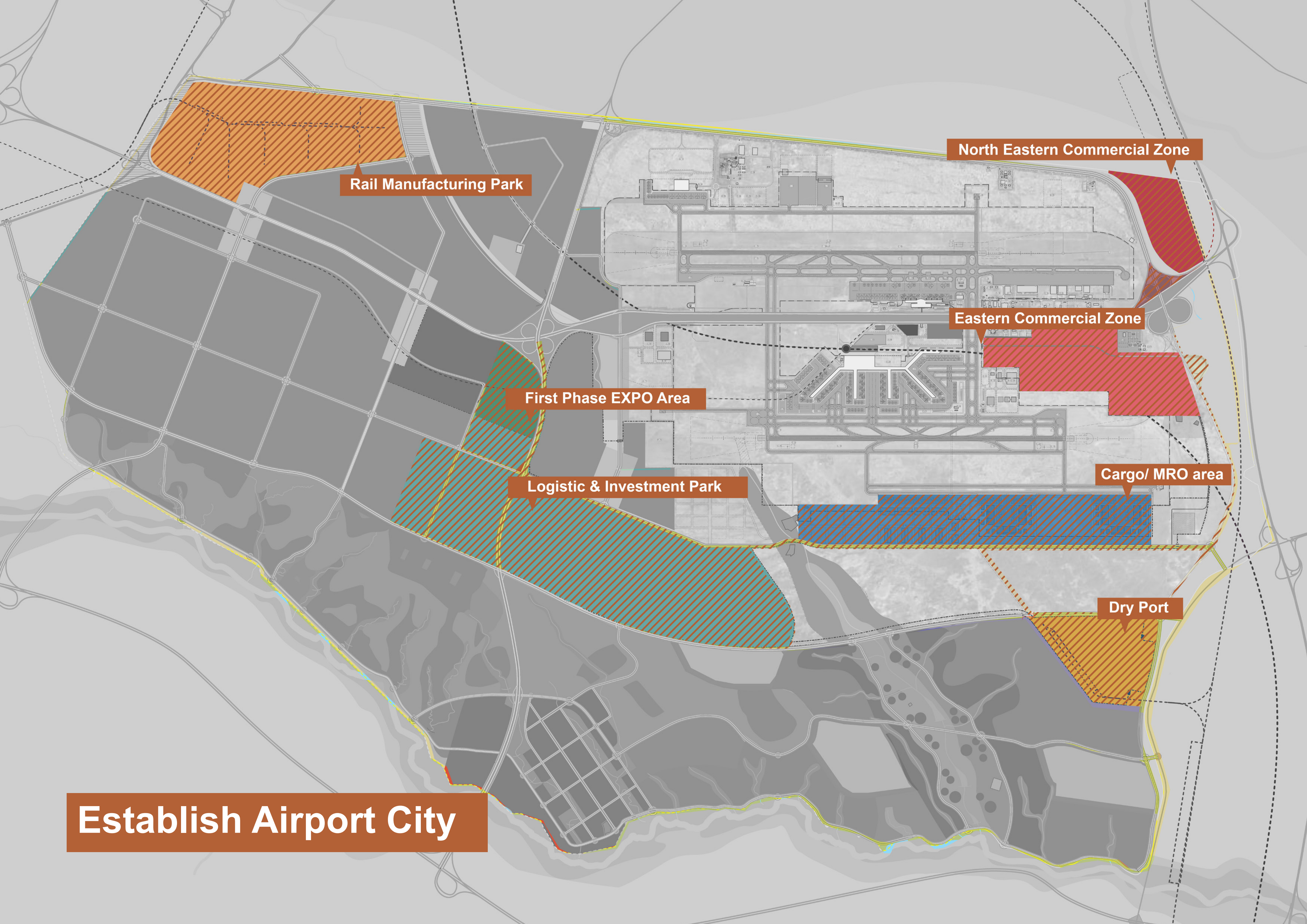
Funding Source: PPP 41% | IKAC 59%

Funding Progress: ? | 3% | ?

Portfolio Budget: USD 3.37 billion IRR 142.03 trillion

Runway 1	Runway 2	Programme Wide
USD 49.53 million IRR 2.08 trillion	USD 219.66 million IRR 9.23 trillion	USD 132.38 million IRR 5,56 trillion
PPP 13% / IKAC 87%	IKAC 100%	IKAC 100%
13% / ?	?	?

Establish Airport City



2017
2018
2019
2020
2021
2022
2023
Portfolio - Establish Airport City
Dry Port
Eastern Commercial Zone
North Eastern Commercial Zone
Logistics & Investment Park
Rail Manufacturing Park
Programme Wide

Establish Airport City

Dry Port

USD 18.44 million
IRR 0.77 trillion

Dry Port	
Dry Port Area Fence Access Road to Dry Port Area Entrance Gate for the Dry Port Site Grading	USD 18,447,000 IRR 775,235,175,000

Logistic & Investment Park

USD 70.80 million
IRR 2.97 trillion

Logistic & Investment Park	
Customs Bonded Fence Cargo Support Roads MRO Support Roads Landside Roads Road Bridge Landscaping Truck Parking Entrance Gates	USD 70,803,200 IRR 2,975,504,480,000

Infrastructure '240/ 90 ha'

USD 143.96 million
IRR 6.04 trillion

Eastern Commercial Zone (240 HA)

Expansion of the Eastern Clover - Leaf Junction	USD 7,036,770 IRR 295,720,259,250
240 HA ECZ Customs Bonded Fence Entrance Gates Landside Infrastructure	USD 64,390,244 IRR 2,706,000,000,000
New IKAC HQ Building	USD 41,600,000 IRR 1,748,240,000,000

North-eastern Commercial Zone (90 HA)

Long-Term Car Parking T2 incl. Cell Phone Parking /Car Rental Parking	USD 17,784,000 IRR 747,372,600,000
Landside Infrastructure Utilities	USD 13,149,968 IRR 552,627,400,000

Portfolio Budget: USD 564.47 million IRR 23.70 trillion

Rail Manufacturing Park

USD 30.55 million
IRR 1.28 trillion

Rail Manufacturing Park Landside Infrastructure Customs Bonded Fence Utilities Entrance Gates	USD 30,550,000 IRR 1,283,863,750,000

Organization

USD 25.13 million
IRR 1.05 trillion

Please refer to chapter 4 Strategic Objectives - Establish Airport City Organization for details.

Programme Wide

USD 275.18 million
IRR 11,56 trillion

Utility Distribution Network	USD 24,104,600 IRR 1,012,995,815,000
Electrical Power Supply	USD 56,386,200 IRR 2,369,630,055,000
Water Treatment Plant	USD 9,240,400 IRR 388,327,810,000
Fuel Supply and Distribution Network	USD 78,441,919 IRR 3,296,521,662,785
Natural Gas Supply	USD 17,677,400 IRR 742,892,735,000
Energy & Management Strategy	USD 575,000 IRR 24,164,375,000
Smart City Strategy	USD 345,000 IRR 14,498,625,000
Telecommunication Network Infrastructure	USD 74,746,163 IRR 3,141,207,512,385
Waste Water Treatment Plants	USD 12,857,000 IRR 540,315,425,000
Solid Waste Recycling Plant	USD 804,700 IRR 33,817,517,500

Establish Airport City

	Dry Port	Logistic & Investment Park	Infrastructure '240/ 90 ha'
	USD 18.44 million IRR 0.77 trillion	USD 70.80 million IRR 2.97 trillion	USD 143.96 million IRR 6.04 trillion
Funding Source:	**IKAC** **100%**	**IKAC** **100%**	**IKAC** **100%**
Funding Progress:	?	?	**63%** ?

Portfolio Budget: 564.47 million IRR 23.70 trillion

Rail Manufacturing Park

USD 30.55 million
IRR 1.28 trillion

IKAC
100%

?

Organization

USD 25.13 million
IRR 1.05 trillion

IKAC
100%

?

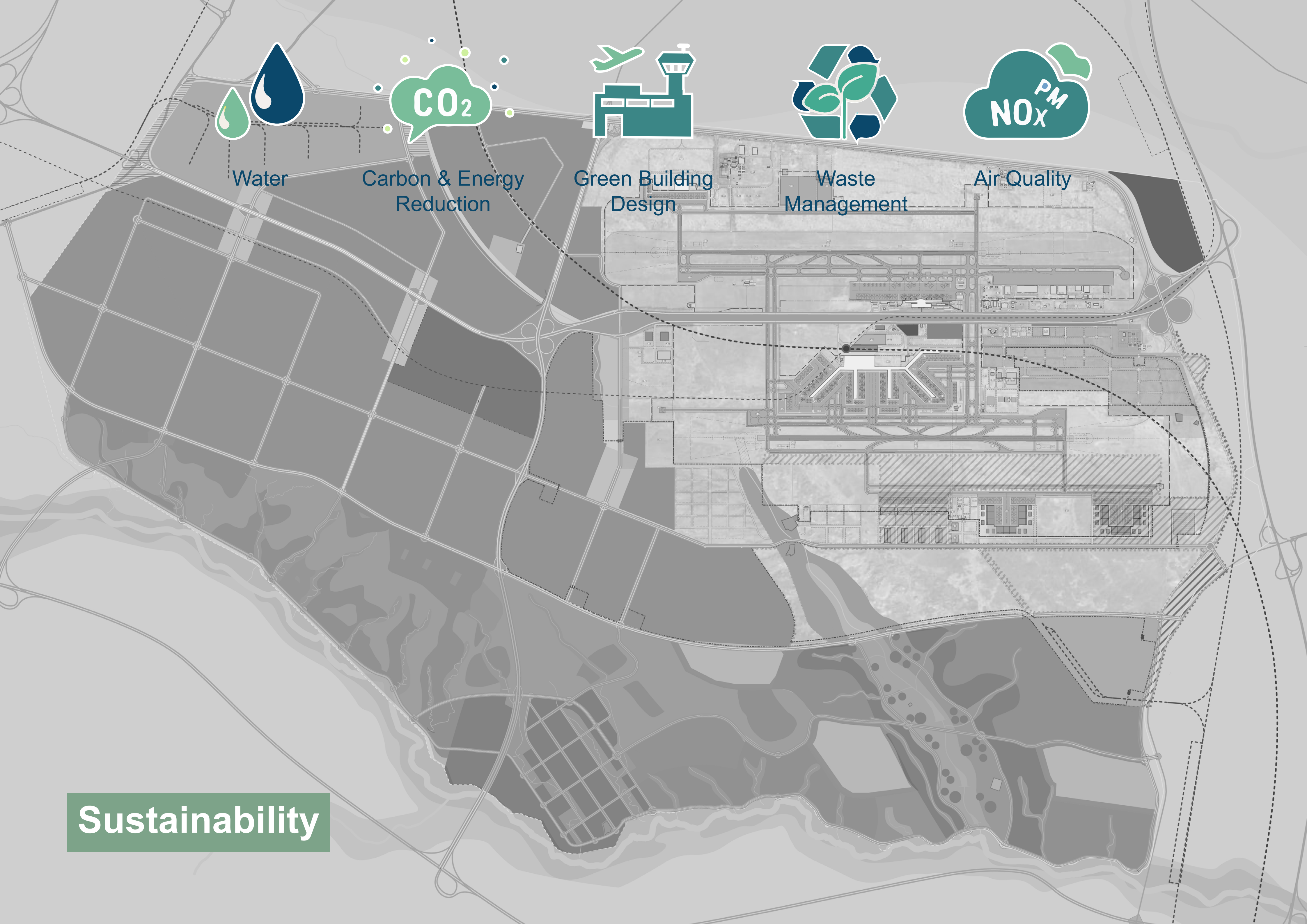
Programme Wide

USD 275.18 million
IRR 11,56 trillion

PPP
64%

IKAC
36%

?



CO_2
NOx
PM
Water
Carbon & Energy Reduction
Green Building Design
Waste Management
Air Quality
Sustainability


2017
2018
2019
2020
2021
2022
2023
Portfolio - Sustainability
Sustainability Strategy
Waste Managerment Strategy
Air Pollution Monitoring Station

Sustainability

Portfolio Budget: USD 1.67 million IRR 70.18 billion

Sustainability

USD 1.67 million
IRR 70.18 billion

Sustainability Strategy	USD 460,000 IRR 19,331,500,000
Waste Management Strategy	USD 460,000 IRR 19,331,500,000
Air Pollution Measuring Station	USD 460,000 IRR 19,331,500,000

Funding Source:

IKAC
100%

Funding Progress:

?

Imam Khomeini Airport City Company
Master Consultancy Services -
Five Year Development Plan
Stage B - FYDP Report
Version 1.0
June 2018

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TANA GROUP

TADBIR OMRAN IRANIAN

TNA