



شرکت
اوتباحتات
زیوساخت

**In the Name of God,
the Compassionate, the Merciful**

Ministry of ICT
Telecommunication
Infrastructure Company



TIC

Report Of Network

October 2014, Iran ,tehran

Contents

1 Overview of Telecommunication Infrastructure Company

2 Telecommunication Infrastructure networks

3 Status of Border Gateways

4 IP Network Plans

Overview of Telecommunication Infrastructure Company

Short History about TIC

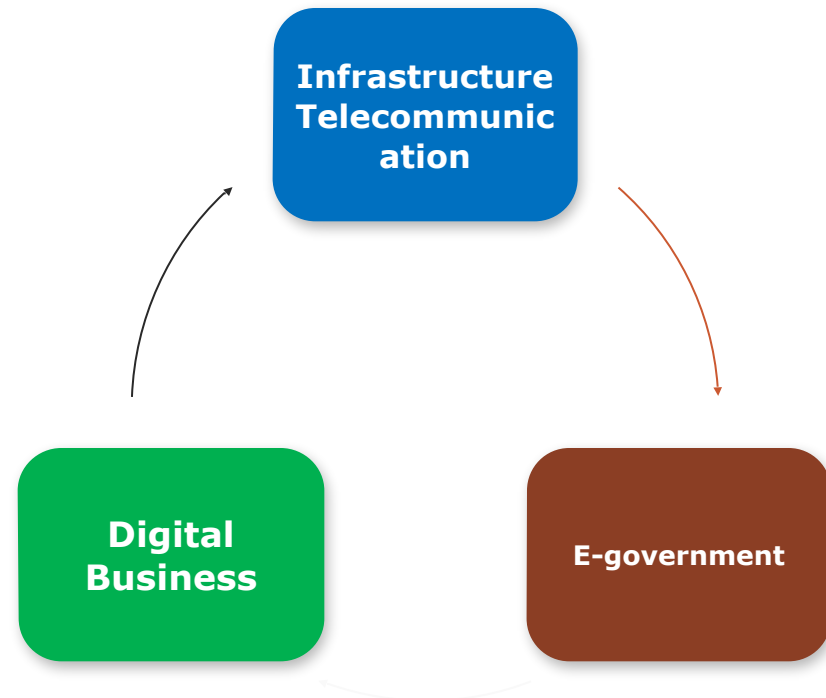
- The government cabinet approved the article of association (constitution) of Telecommunication Infrastructure Company (TIC) in 2004

TIC is under supervision of ICT ministry and its constitution was revised in 2008 after privatization of Telecom Company of Iran (TIC).

The Main Task of TIC: Growth Factor of the Nation

Growth Factor of the Nation

**Telecommunication
Infrastructure Company
Is Incumbent of Backbone
Telecommunication and
Communications Network**



TIC includes :

- ☐ long – distance and international telecom network of Iran
- ☐ Microwave network
- ☐ National fiber optic network
- ☐ Data network
- ☐ Earth station satellite network
- ☐ Switching centers between provinces
- ☐ International Switching centers
- ☐ Voice ,data and video traffic management

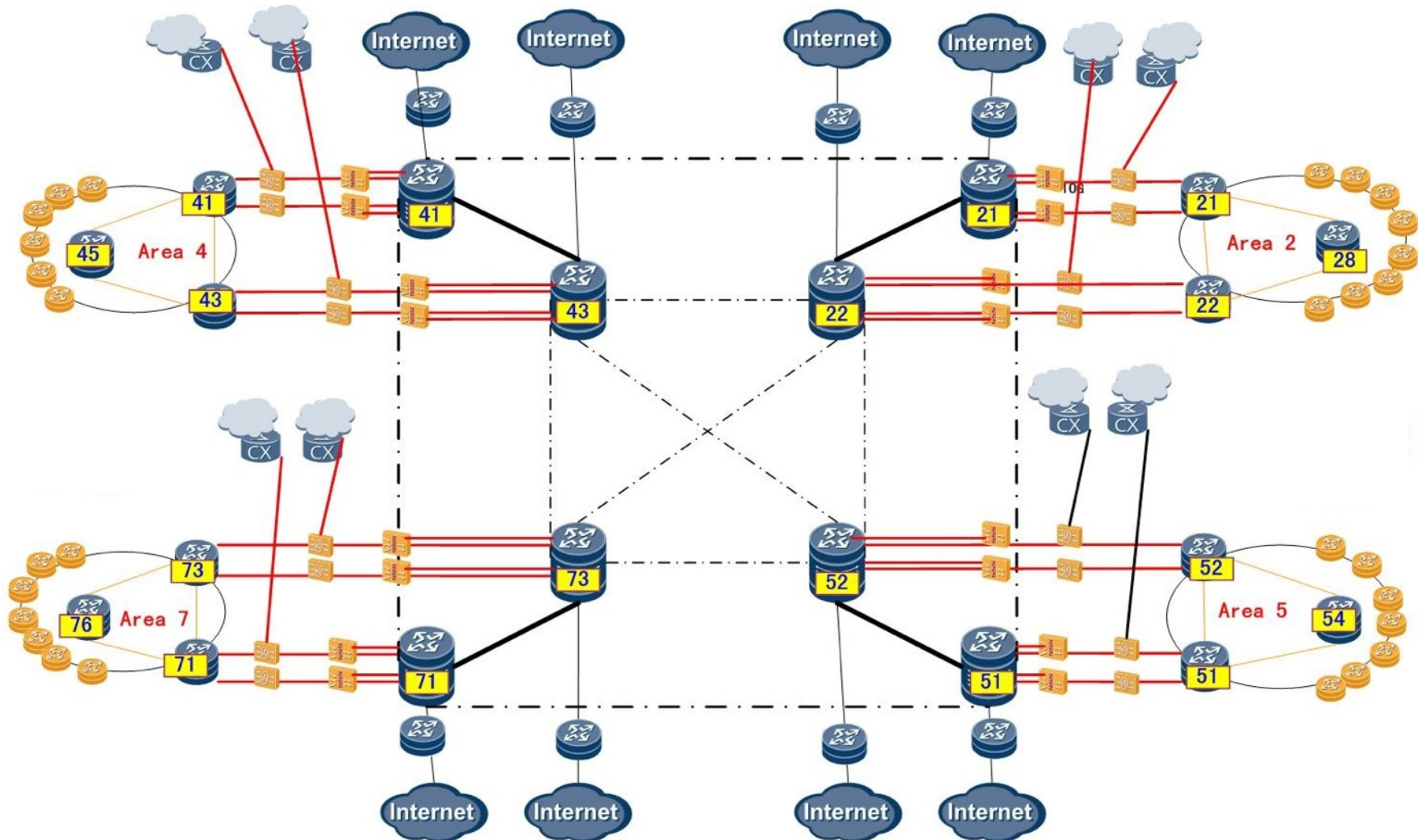


Telecommunication Infrastructure Networks

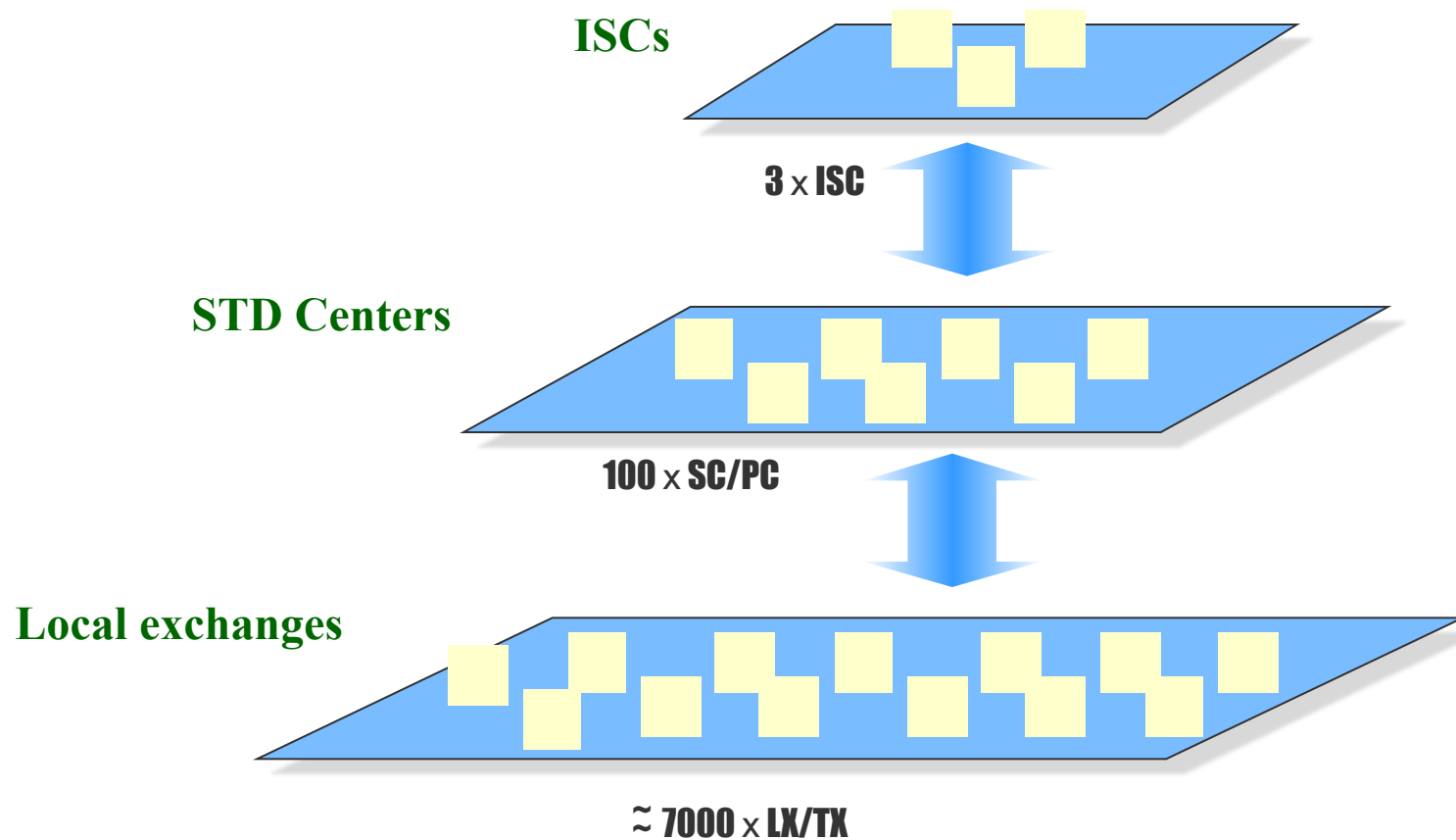
The Most Important Tasks of TIC

TIC network is one of the largest fiber optic networks, which exceeds **58 thousand** Kilometers with 580000E1 capacity, using NGSDH & WDM technologies & supported by intelligent protection ability for various capacity levels of STM*1, STM*4, STM*16 1/10GbE.

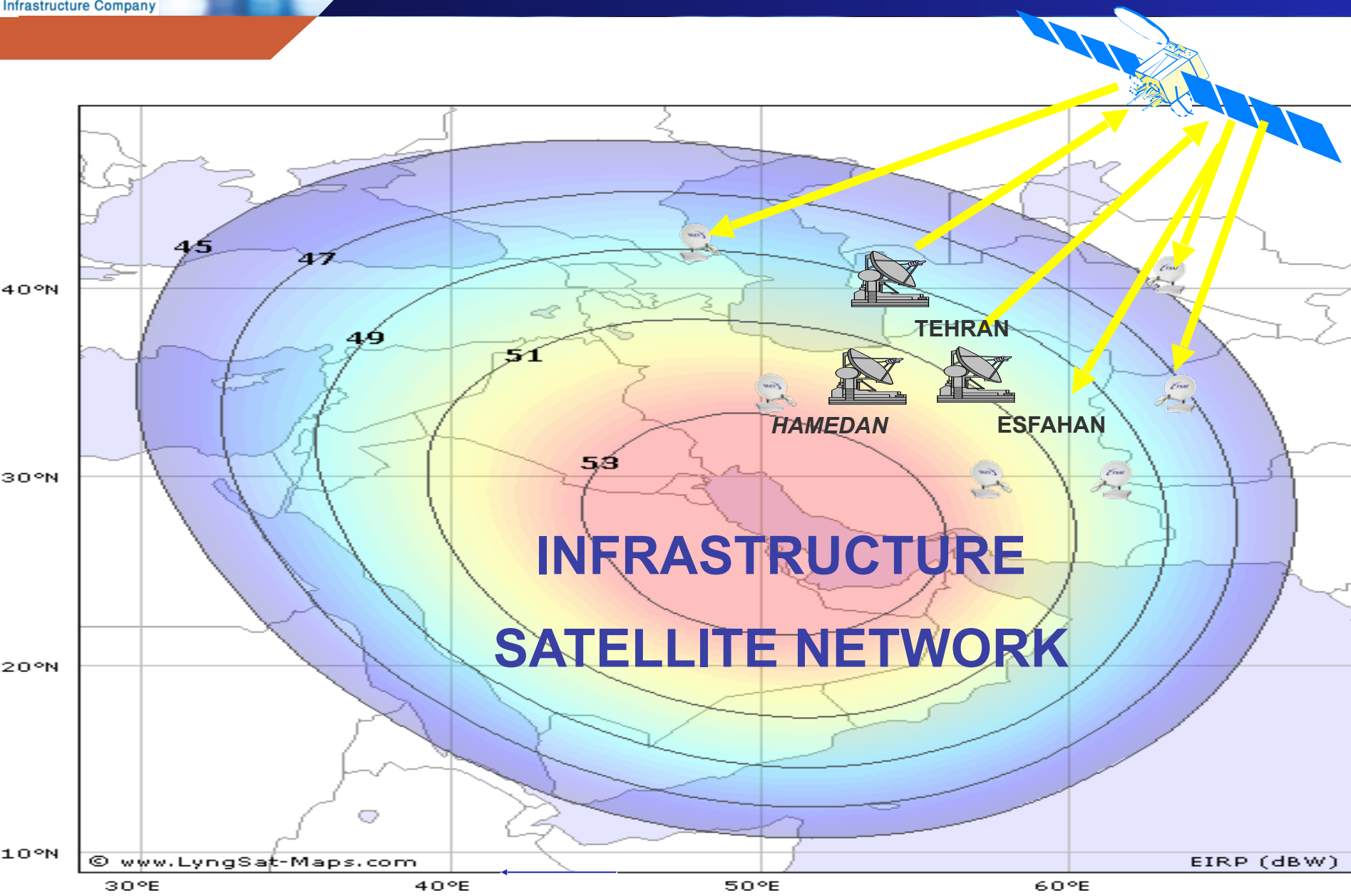
The Data Network



The Switch Network



Satellite Communication



DEVELOPMENT PLAN OF BANDWIDTH

At the end of Current Year

- International Internet 1Tbps
- Internal IP Network 4Tbps
- Transit 6.2Tbps



At the end of 5th development Plan(2015)

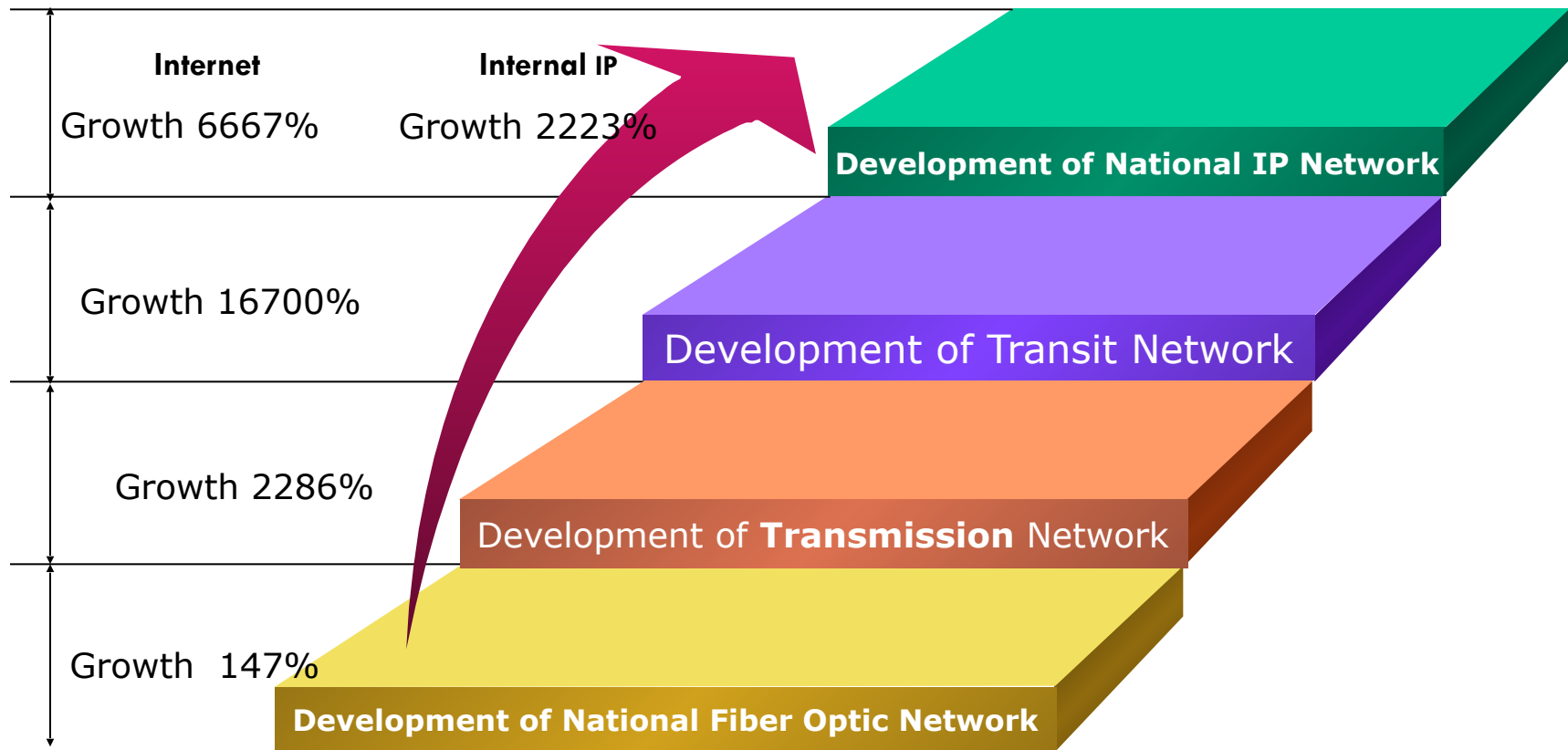
- International Internet 4Tbps
- Internal IP Network 20Tbps
- Transit 10Tbps



In 4 years

- International Internet 8Tbps
- Internal IP Network 40Tbps
- Transit 20Tbps

Executive Plan



Executive Plan



13000KM New fiber optic network

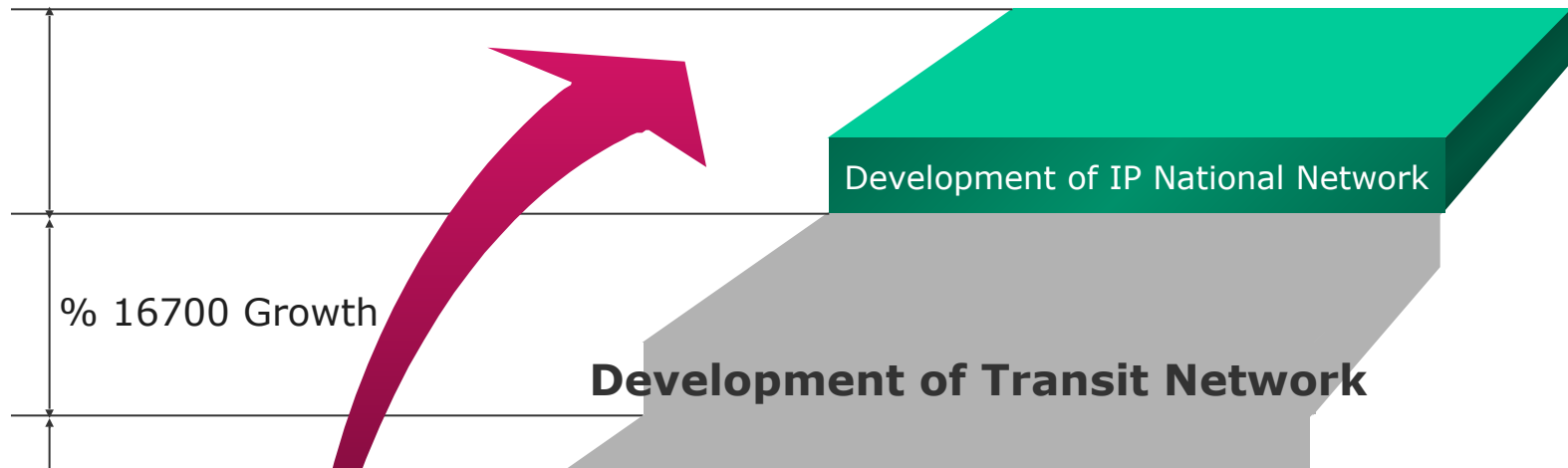
Executive Plan

Company name



Tadbir Projects 1 & 2

With the Goal of Covering Internal requirement & International Internet



- * Project implementation of OMID 1, 2, 3
- * Project implementation of OMID PAYESH
 - * Project implementation of OMID PALAYESH
- * Project implementation of OMID AMN

Status of Border Gateways

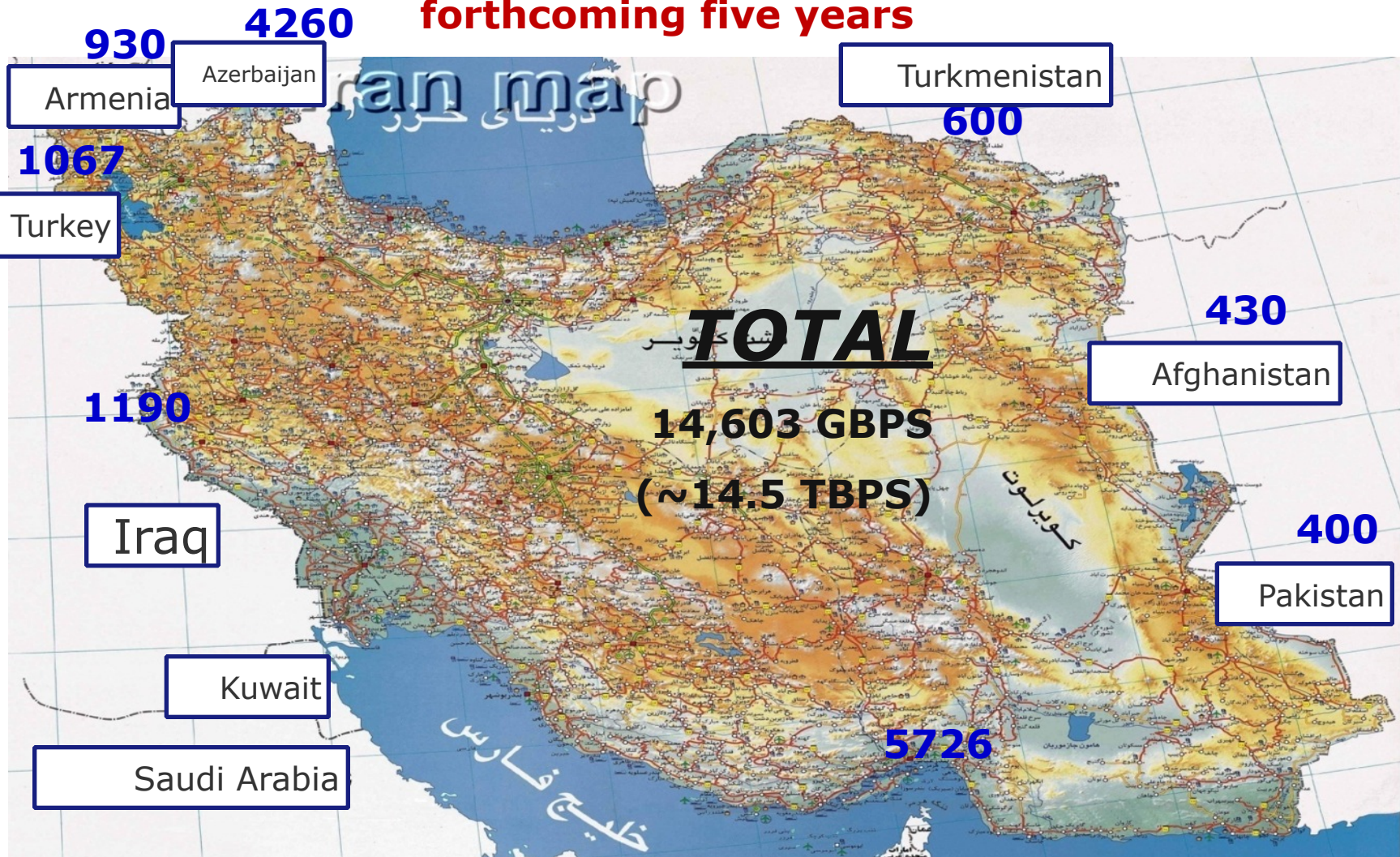
Future status of border gateways

The number of existing border gateways are as follows:

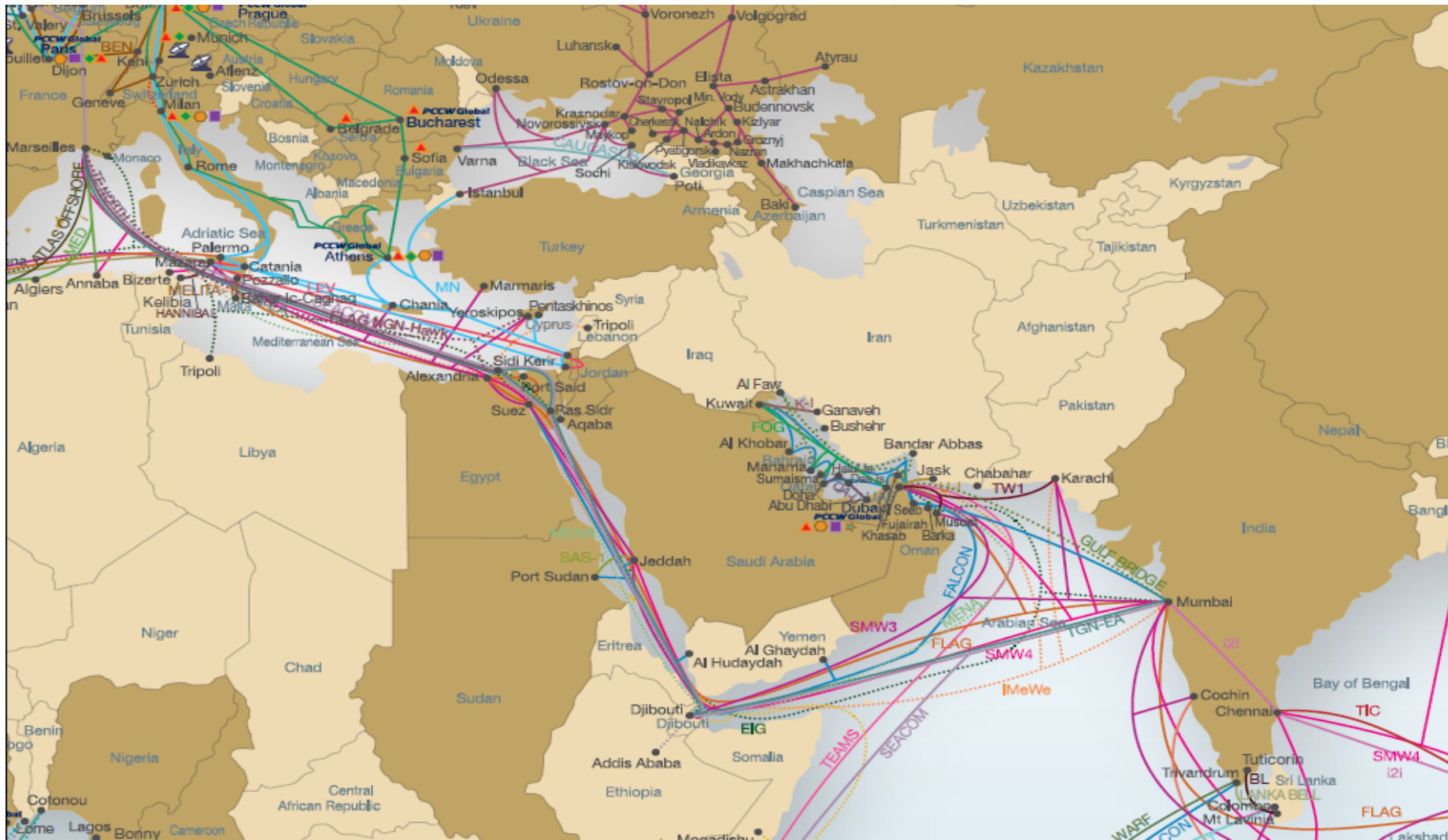
Number of border gateways	Border/Country
5	South/Sea
5	West/Iraq
2	West/Turkey
2	North/Armenia
2	North/Azerbaijan
2	North/Turkmenistan
2	East/Afghanistan
2	East/Pakistan
22	Total

Future status of border gateways

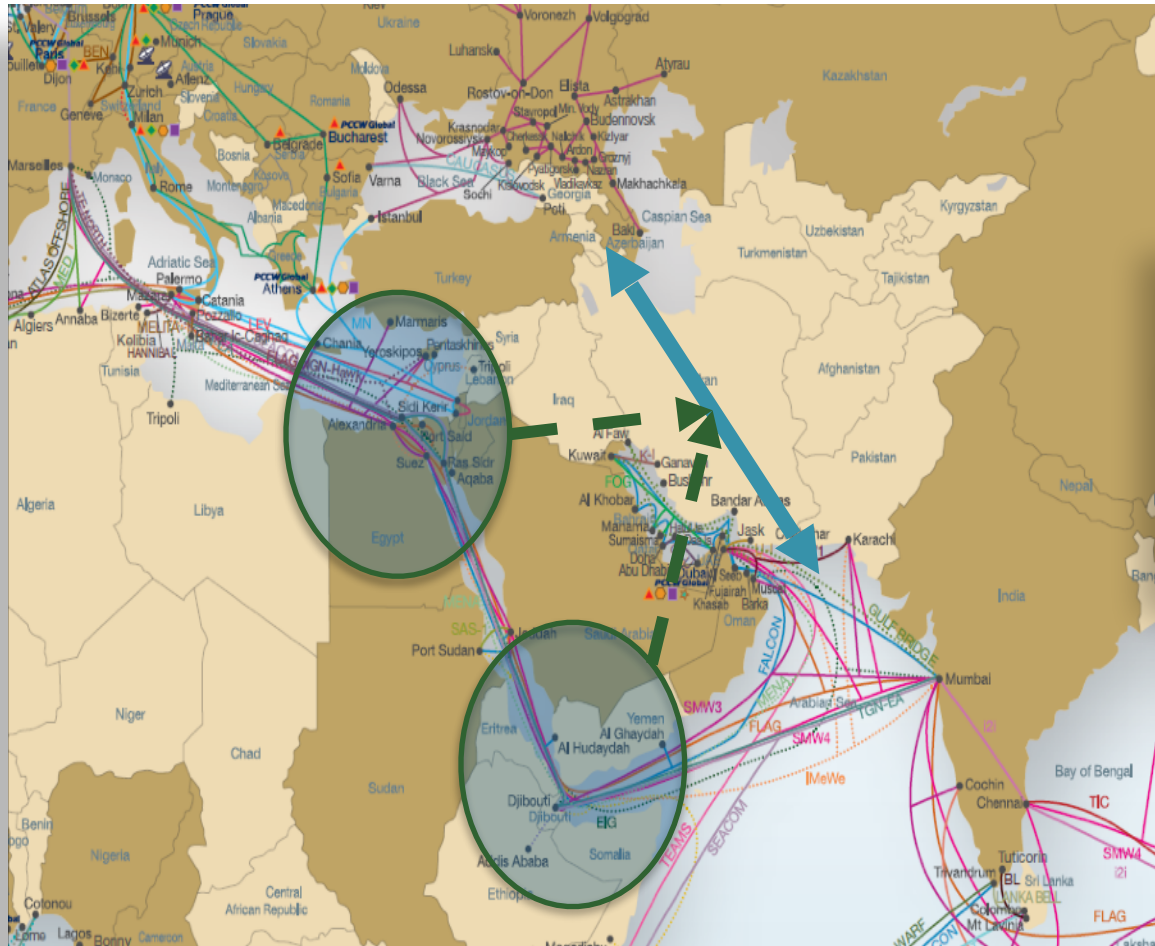
Total capacity of border gateways in the forthcoming five years



Iran Transit Opportunity



Development of Transit Network

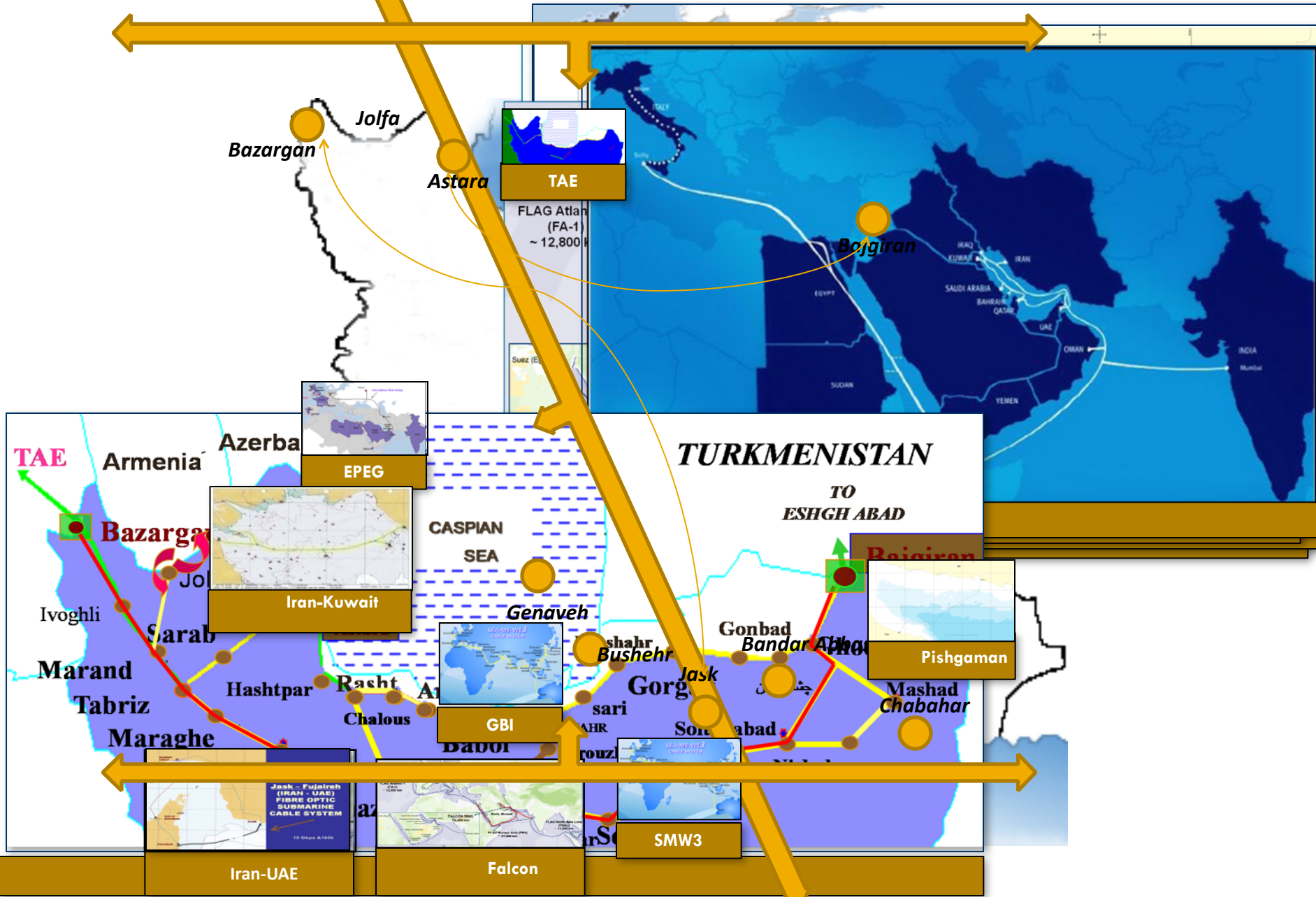


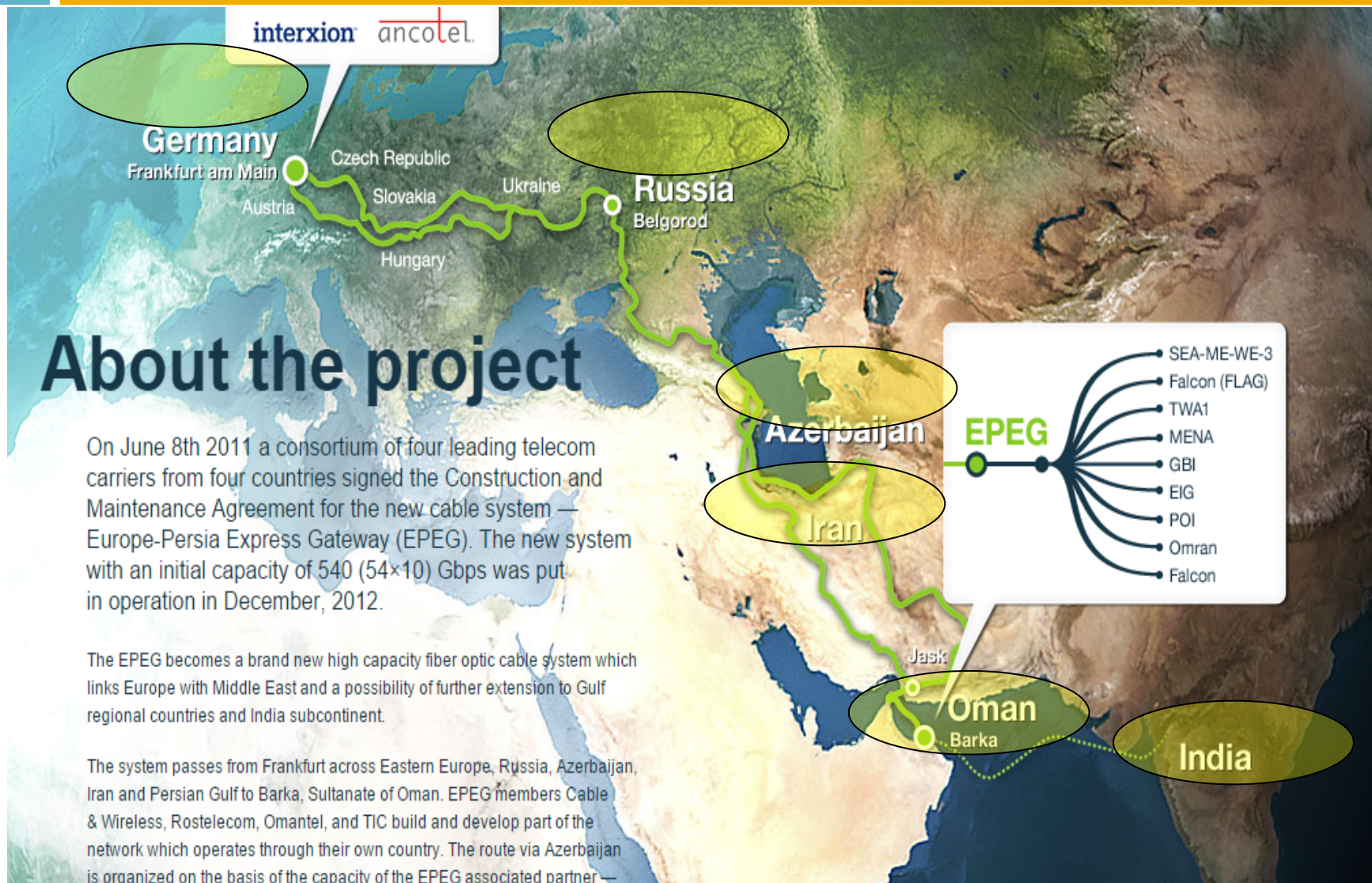
**International
Transit via of
Iran**

Development of Transit Network



**Providing
Telecommunication
to neighbouring
countries of Iran**





Development of Transit Network with EPEG Project



Europe Persia express gateway (EPEG) is one of the important projects aimed and transiting the traffic of East to the West as well as Transiting 10% of traffic volume via 4 companies including Omantel, Roustelecome, Vodafone and TIC; when completed, it would be act as a first substitute for Suez Channel. In addition, the project provides the regional countries and international operators with opportunities to access their information and communication needs via a shortcut, safe and trusted root.

Technical Features

EPEG will be based on DWDM technology. Highest density, and most reconfigurable DTN-X (Infinera) and Alcatel 1626 LM (Alcatel-Lucent) transmission platforms will be used on the system.

3.2 Tbps

Design Capacity

540 Gbps

Initial Capacity



Terrestrial Part

5%

Submarine Part

Short Route



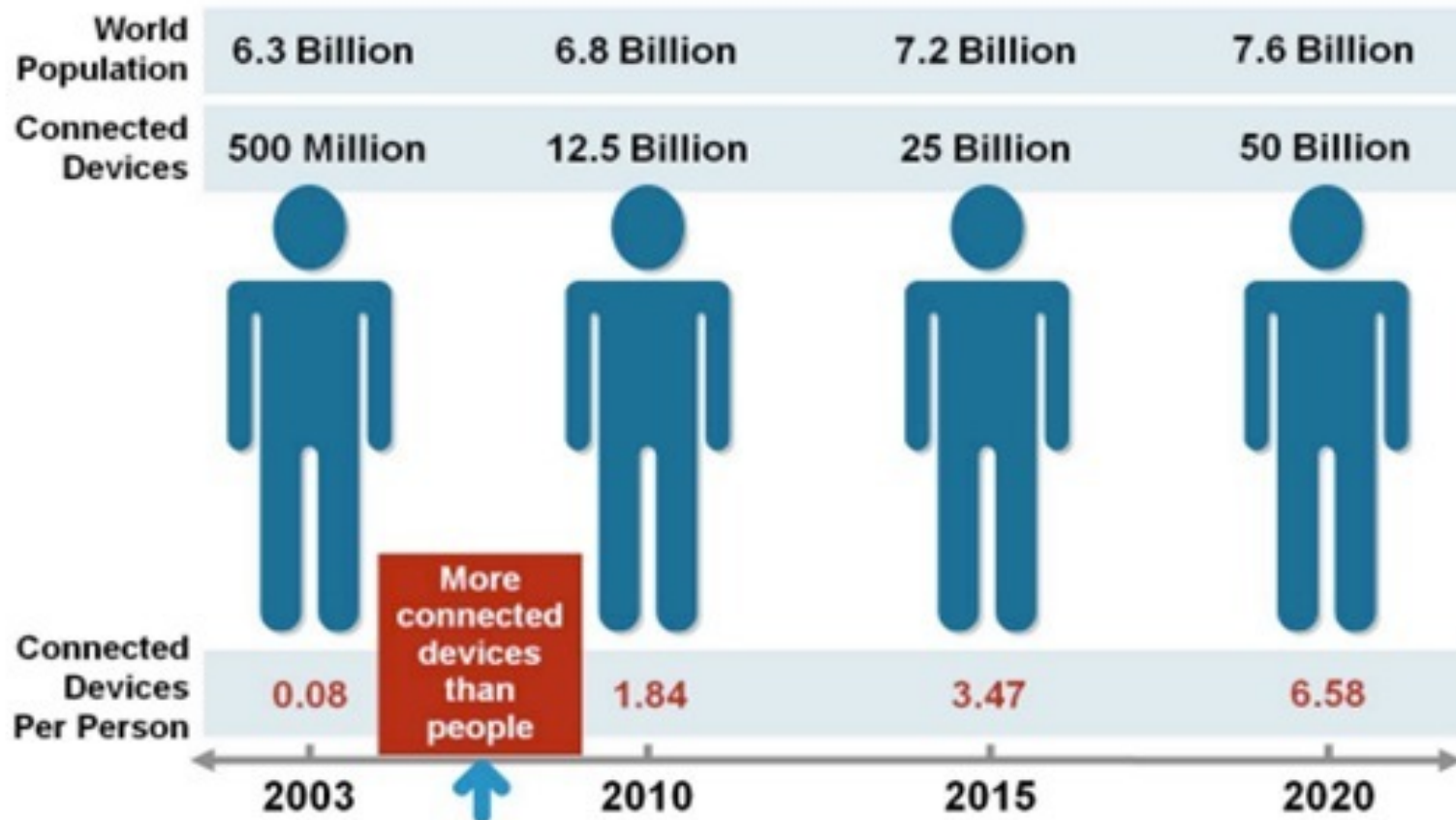
Long Route





**overview Of
IPV6 adoption in IRAN**

Urgency of IPv4 to IPv6 migration



Source: Cisco IBSG, April 2011



Major reason of migration to IPv6

30

- ❑ Limited addressing space
- ❑ Low service quality
- ❑ Low security
- ❑ Non-optimize routing
- ❑ Complicated configuration
- ❑ Low mobility

IP Network Addressing

As= 12880

As= 48159

TIC IP Network

IPv4

Total	TIC
2.176.0.0/12	2.188.0.0/1

OnlyTIC

178.251.208.0/21
185.11.88.0/22

IPv6

TIC
2001::4188::/32

TIC

2a03::57c0::/32

Tehran Telehouse

Future Plan



