FROM ASIA
TO EUROPE
AND BEYOND
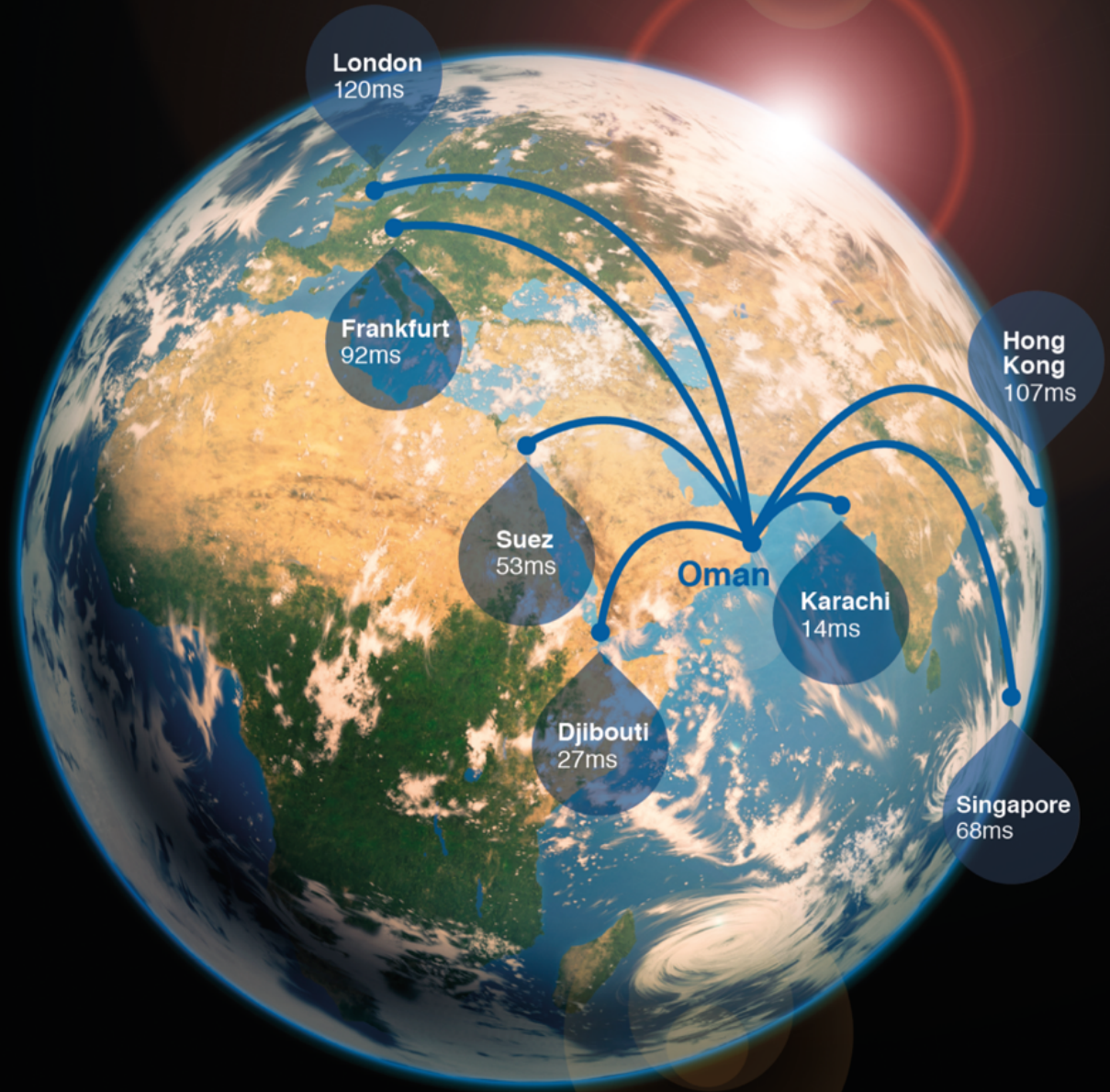
BUILDING A GLOBAL NETWORK

London
120ms

Frankfurt
92ms

Hong
Kong
107ms

Suez
53ms

Oman

Karachi
14ms

Djibouti
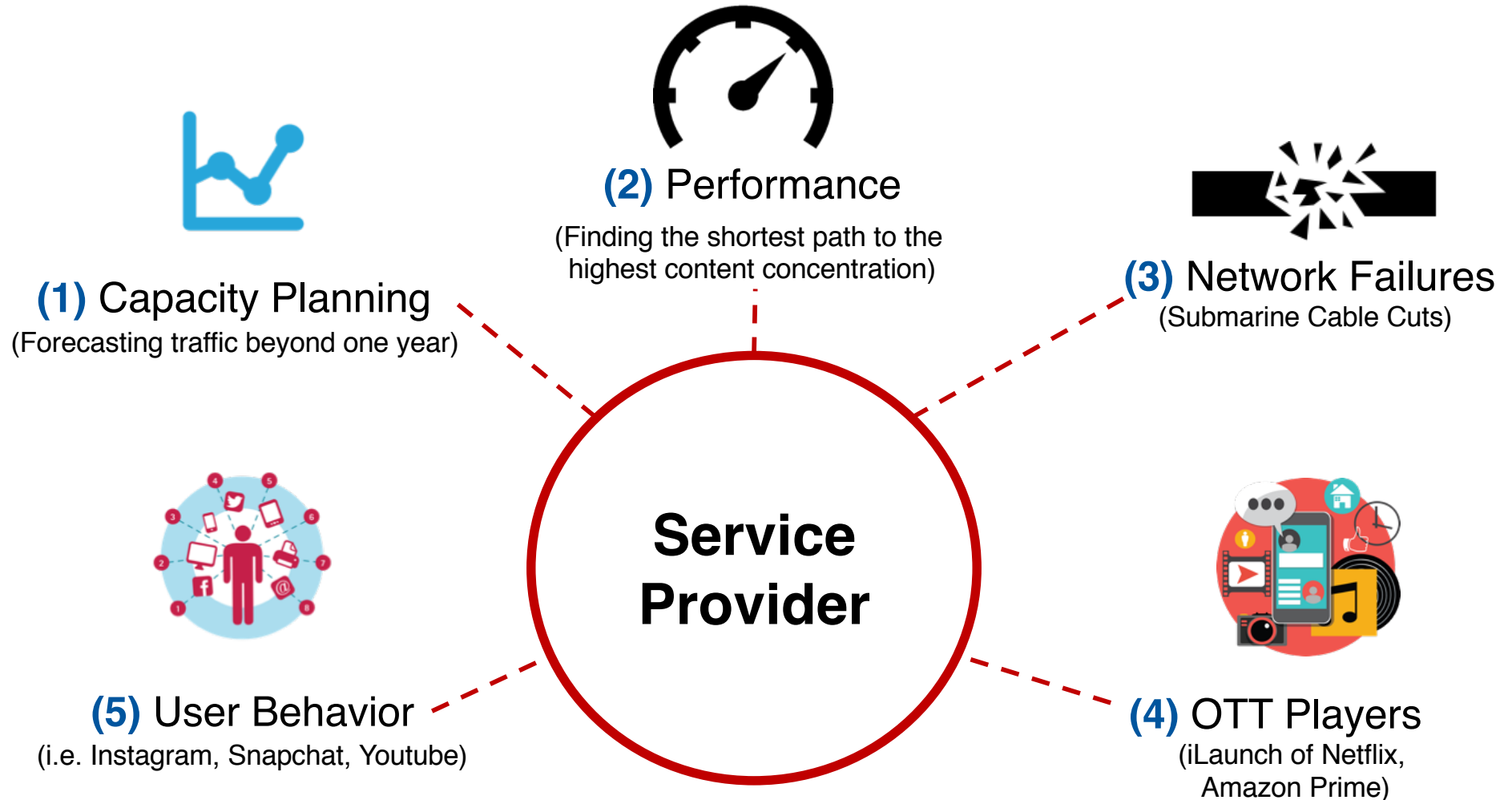27ms

Singapore
68ms

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Topics of Discussions…

DNSSEC

IPv6

Content

Peering

Internet Exchange (IX)

Connectivity

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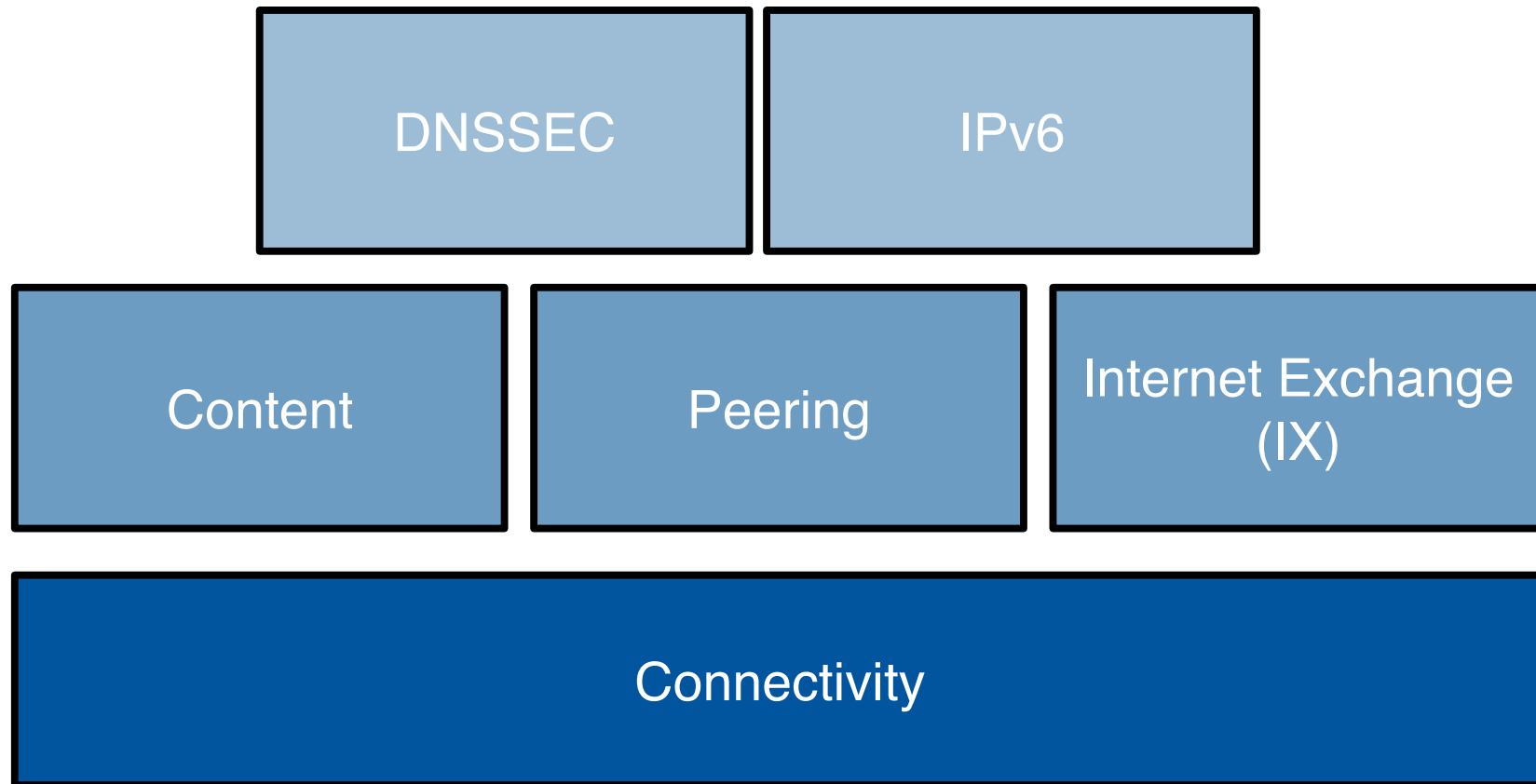
Service Provider Challenges

(2) Performance
(Finding the shortest path to the
highest content concentration)

(1) Capacity Planning
(Forecasting traffic beyond one year)

(3) Network Failures
(Submarine Cable Cuts)

Service Provider

(5) User Behavior
(i.e. Instagram, Snapchat, Youtube)

(4) OTT Players
(iLaunch of Netflix,
Amazon Prime)

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Traffic Growth - Omantel

Yearly Traffic Growth

2012	2013	2014	2015	2016
87%	164%	84%	75.5%	80.4%

Contributors to Growth
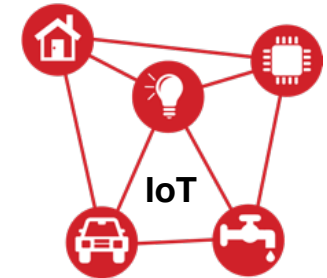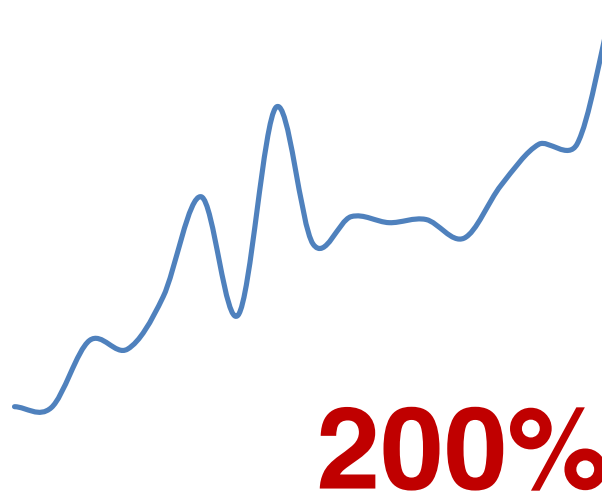
2018 - 2020

25%
Social Media
(From Total Usage)

43%
Streaming
(From Total Usage)

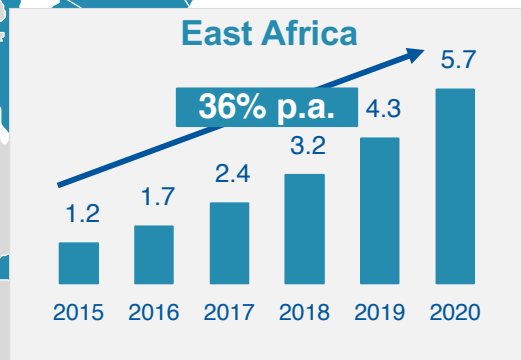**Netflix/Shahid Growth**
(Last 12 Months)

200%

5G 4K ULTRA HD

IoT

Cloud

Virtual Reality

INT`L BANDWIDTH GROWTH FORECAST FOR THE REGION

Middle East

37% p.a.

2015	2016	2017	2018	2019	2020
4	6	8	11	14	19

South Asia

33% p.a.

2015	2016	2017	2018	2019	2020
22	29	39	52	69	91

East Africa

36% p.a.

2015	2016	2017	2018	2019	2020
1.2	1.7	2.4	3.2	4.3	5.7
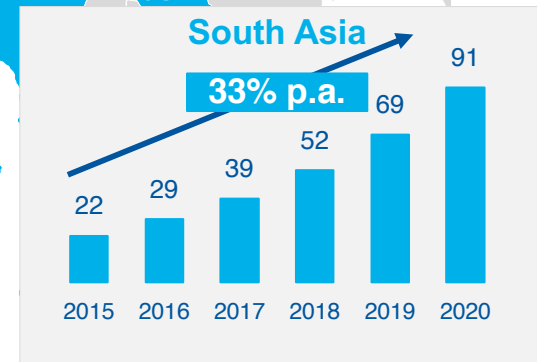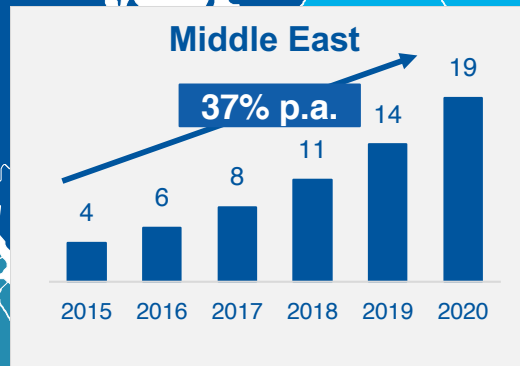
Tbps per annum
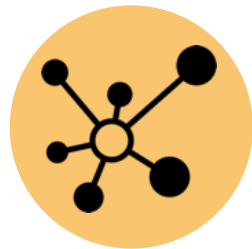Source: Telegeography, Arthur D. Little analysis

THE OPPORTUNITY

The Opportunity

- Eight years ago we took aim on becoming a regional hub for international carriers and content providers by connecting the East with the West.

- The strategy focused on improving the following in our region:

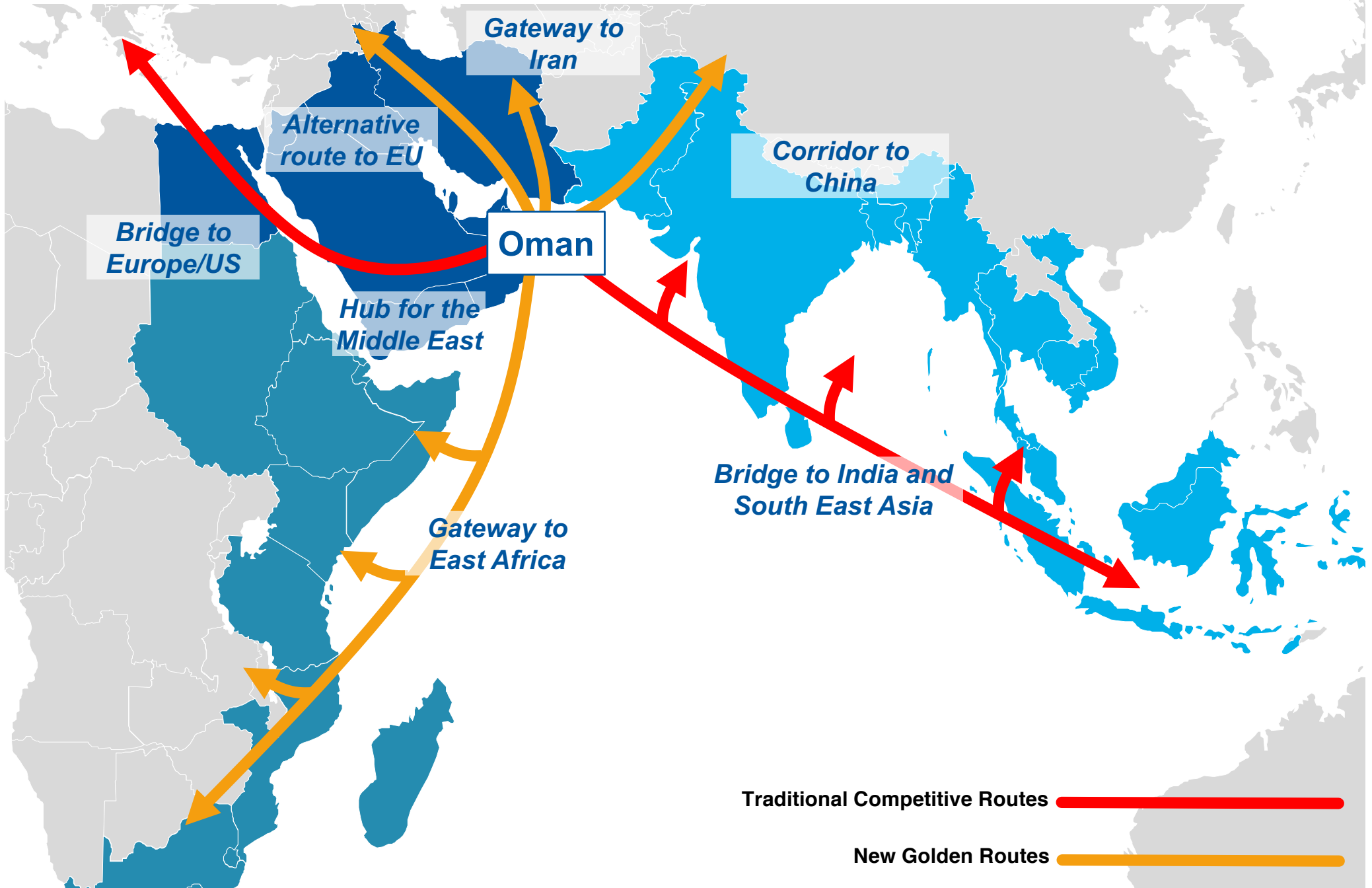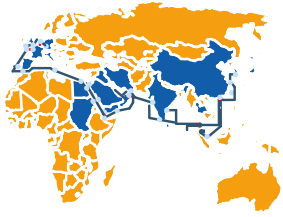Capacity   Diversity   Latency   Content

- We used our strategic geographic position as a foundation for our strategy.

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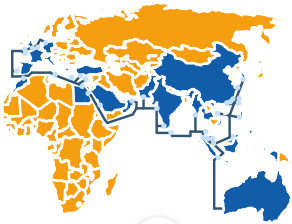# OUR GEOGRAPHICAL POSITION IS MUCH MORE THAN THE ENTRANCE TO THE GULF…

OMANTEL INT`L SUBMARINE CABLES

FALCON

EPEG

G2A

TWA 1

MENA

POI
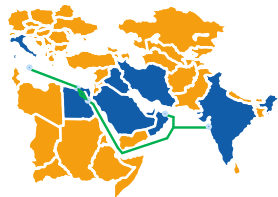
IMEWE	APG
SMW4	ASE
TGN	PC1
SMW5	JP-US

access/ownership

SRG-1

SMW3

EIG

GBI

OMRAN

BBG

AAE1

2010   **2011**   **2012**   **2013**   **2016**   **2017**

Investment ownership

Landing Partner

13 Submarine Cables by End of 2017

Game Changing Approach

AAE-1 WILL BE ONE OF THE WORLD'S LARGEST CABLES PASSING THROUGH 20 COUNTRIES WITH OMAN IN THE MIDDLE
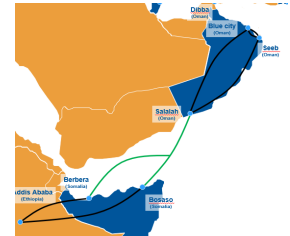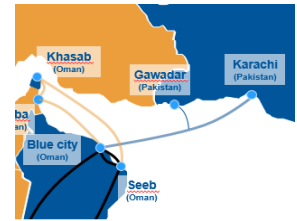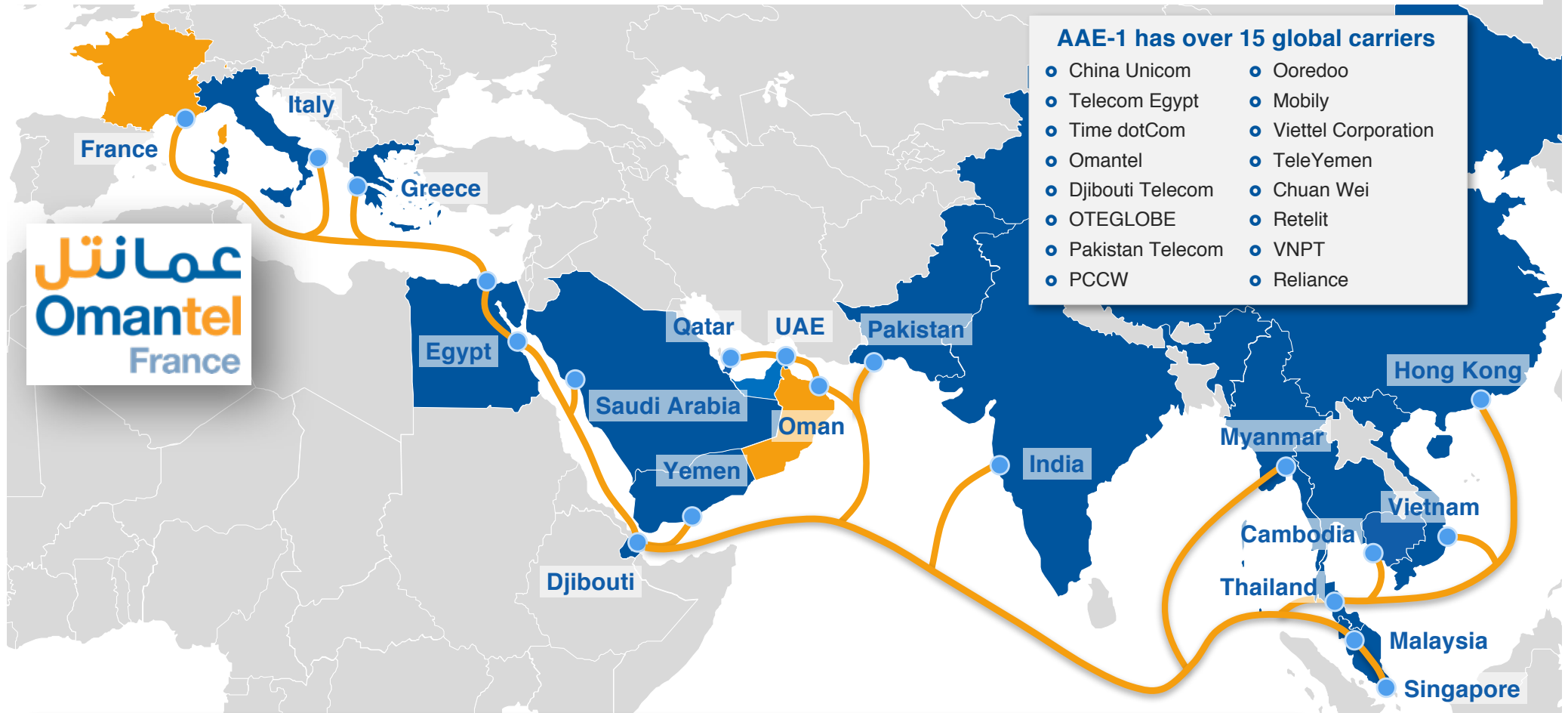

AAE-1 has over 15 global carriers

- China Unicom
- Telecom Egypt
- Time dotCom
- Omantel
- Djibouti Telecom
- OTEGLOBE
- Pakistan Telecom
- PCCW
- Ooredoo
- Mobily
- Viettel Corporation
- TeleYemen
- Chuan Wei
- Retelit
- VNPT
- Reliance

- AAE-1 (Africa-Asia-Europe) will be a brand new state-of-the-art cable spanning approximately 25,000kms
- It is currently under construction, due to be completed in November 2017
- It is one of the first unique cable systems to connect Hong Kong to Singapore (via Thailand), Africa and Europe via Oman reaching close to 50% of the world population
- It will provide an alternative and low latency short route between Hong Kong/Singapore and Europe
- Omantel is the landing party in Oman and as well as in France (first GCC operator to land a submarine cable in EU)

UNCHALLENGED LATENCY OF ONLY 160MS
RTD BETWEEN FRANKFURT AND SINGAPORE

The combination of BBG – the highway between Oman and Singapore – together with the EPEG cable – terrestrial direct route to Frankfurt – will provide something truly unique

- EPEG is a brand new high capacity fiber optic cable system which links Europe with Middle East as a transit route alternative to the Red Sea, Suez Canal and the Mediterranean Sea regions and plays an important role for traffic re-routing in case of earthquakes and disasters.

- BBG will enhance the robustness and reliability of connectivity between Oman and Singapore with the main trunk directly between Singapore and Oman

- Omantel will be able to offer a redundant and unique latency of 160ms between Frankfurt and Singapore: **two of the world's main capacity hubs accessible directly from within Omantel's carrier neutral data centre.**
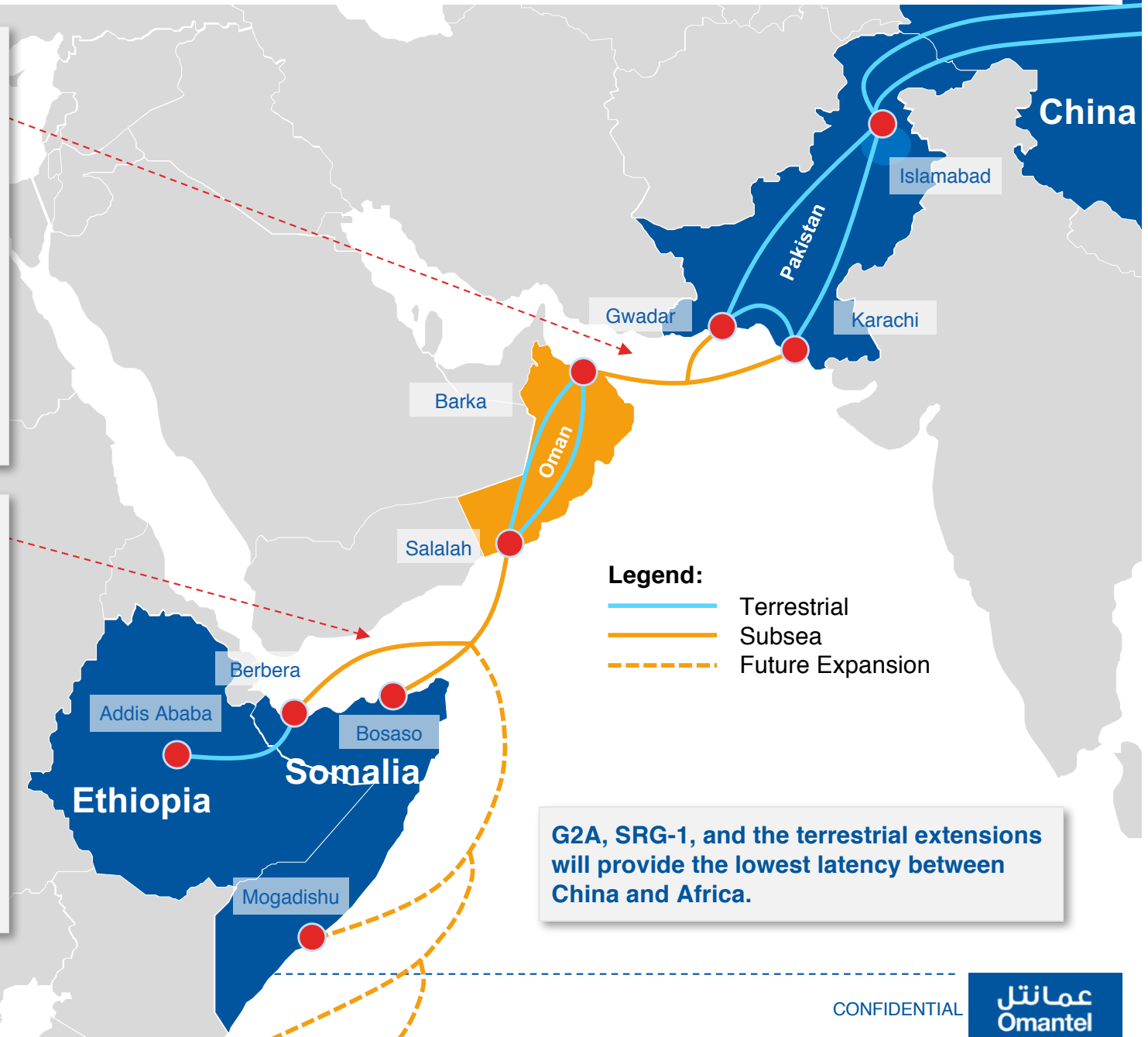
Frankfurt

EPEG

92ms

Oman

68ms

BBG

Singapore
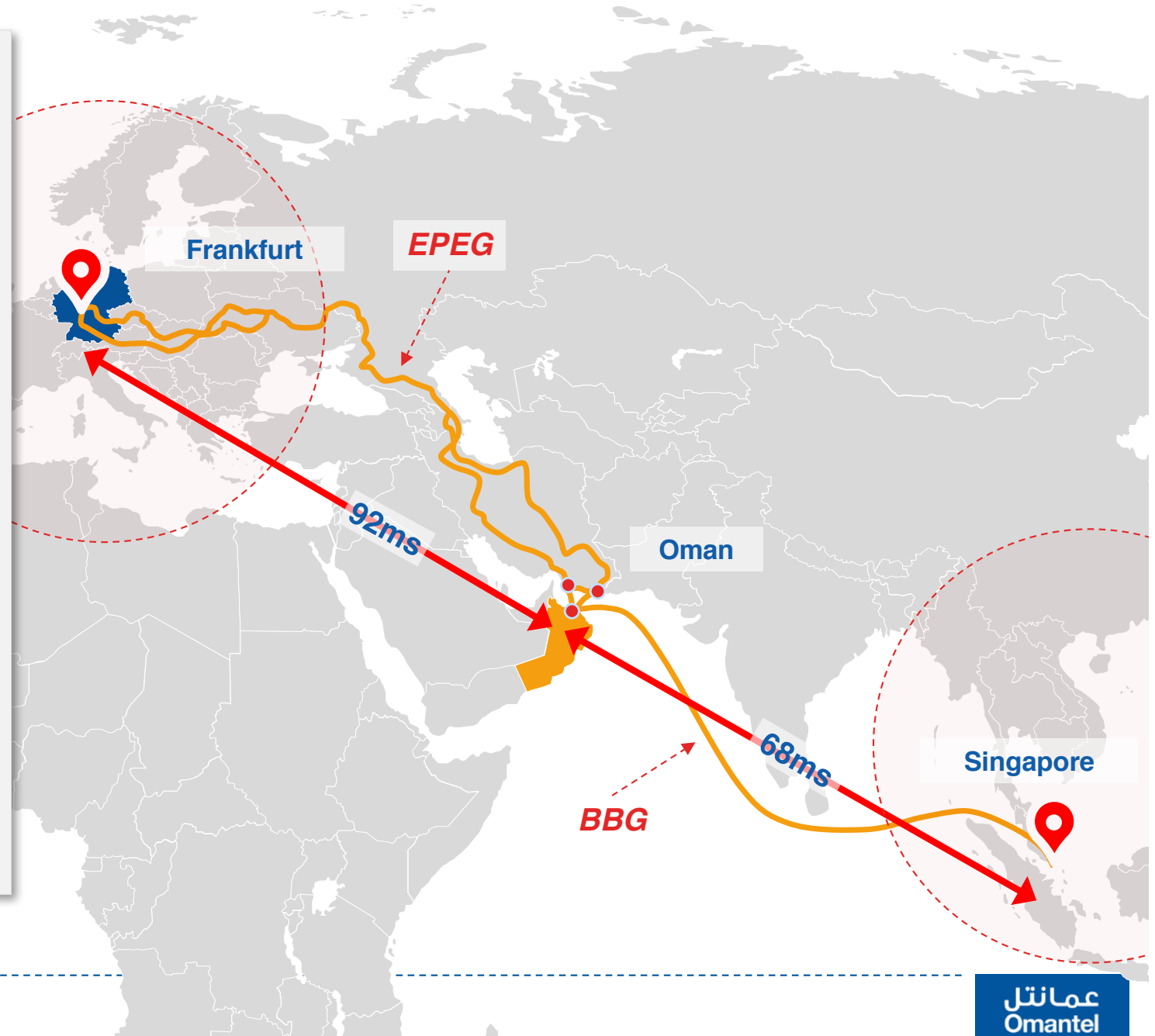
Omantel
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OMANTEL WILL BE THE FIRST OPERATOR CONNECTING AFRICA AND CHINA BY NOT CROSSING INDIAN OCEAN OR SINGAPORE STRAIT

Silk Route Gateway 1 (SRG-1)

- SRG-1 will provide additional capacity to an underserved Pakistan, complementing the existing cables, with landings in Gawadar and Karachi.

- Furthermore, Omantel will extend SRG-1 on terrestrial redundant routes to Islamabad and then to China connecting Omantel's carrier neutral data centers with 1.4bn voice users and 254mn broadband users as of 2015.

Gulf to Africa (G2A)

- G2A will be Omantel's first own cable to Africa providing connectivity for Somalia through landings in Puntland State and Somaliland.

- Phase 1, in the East Africa expansion of Omantel's own network, G2A will be extended on terrestrial cable to Ethiopia.

- In Phase 2, G2A will be extended to Mogadishu (Somalia), Kenya, and Tanzania.

China

Islamabad

Pakistan

Gwadar

Karachi

Barka

Oman

Salalah

Berbera

Addis Ababa

Bosaso

Somalia

Ethiopia

Mogadishu

Legend:

— Terrestrial
— Subsea
- - - Future Expansion

G2A, SRG-1, and the terrestrial extensions will provide the lowest latency between China and Africa.

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Global Nodes

Global Nodes

Objectives

- PoPs are deployed using our submarine assets.

- Sourcing Content.

- Direct Peering.

- Resilience.

- MPLS Inter-connection.

- Underlying Network for building services on top of it.

2014 → **2016** → **2017**

2014
- Amsterdam
- Frankfurt

2016
- London
- Marseille
- Dubai
- Los Angles
- Singapore

2017
- Paris
- Milan
- Ashburn (US)
- New York
- Hong Kong
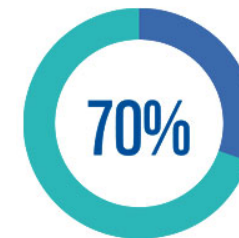
Outcome of Our Strategy

Submarine Cables

- Position Oman as a connectivity hub for OTT and Telecom Operators.

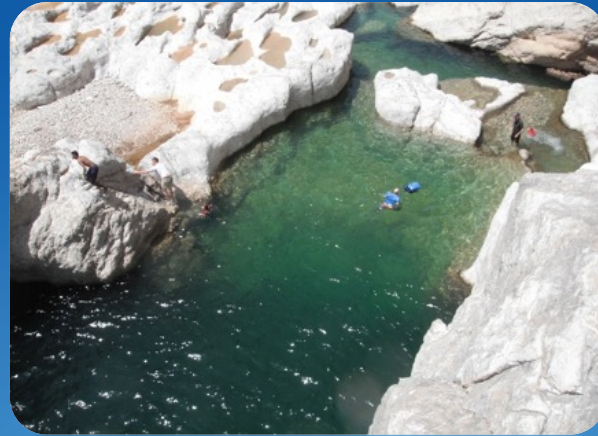- Serving the region by leveraging on the connectivity.

Global Nodes

- Regional and local parties benefit from the peers that are in place without having to establish their own PoPs in other regions.

Content

More than 70% of the Internet is sourced directly through:

- Local Content Nodes.
- Peering.
- Internet Exchange(s).

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Thank you and
Enjoy your time in
beautiful Oman

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Bridge between Europe and Asia
The Connectivity Hub

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