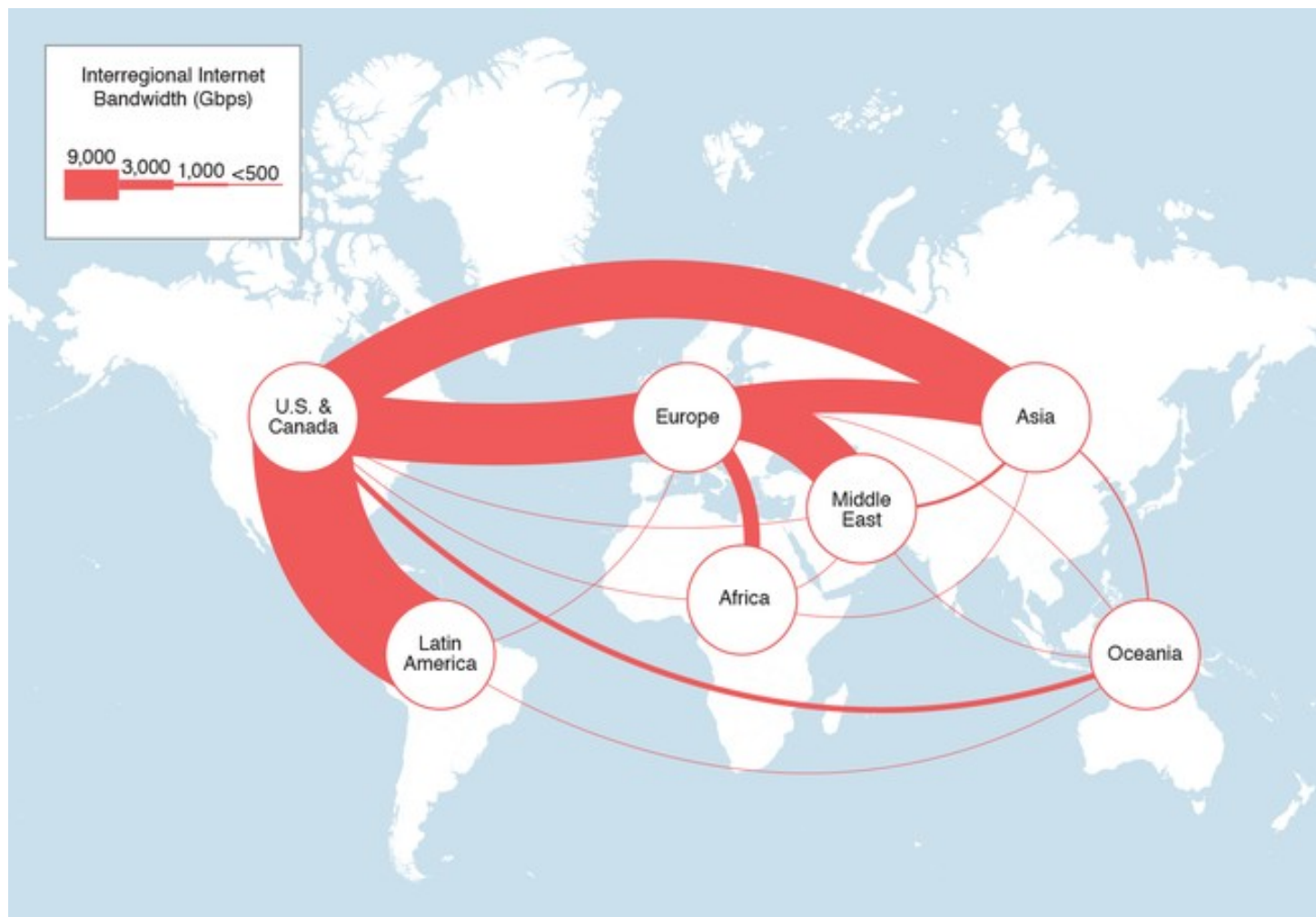


# International Internet Bandwidth and Pricing Trends in Africa

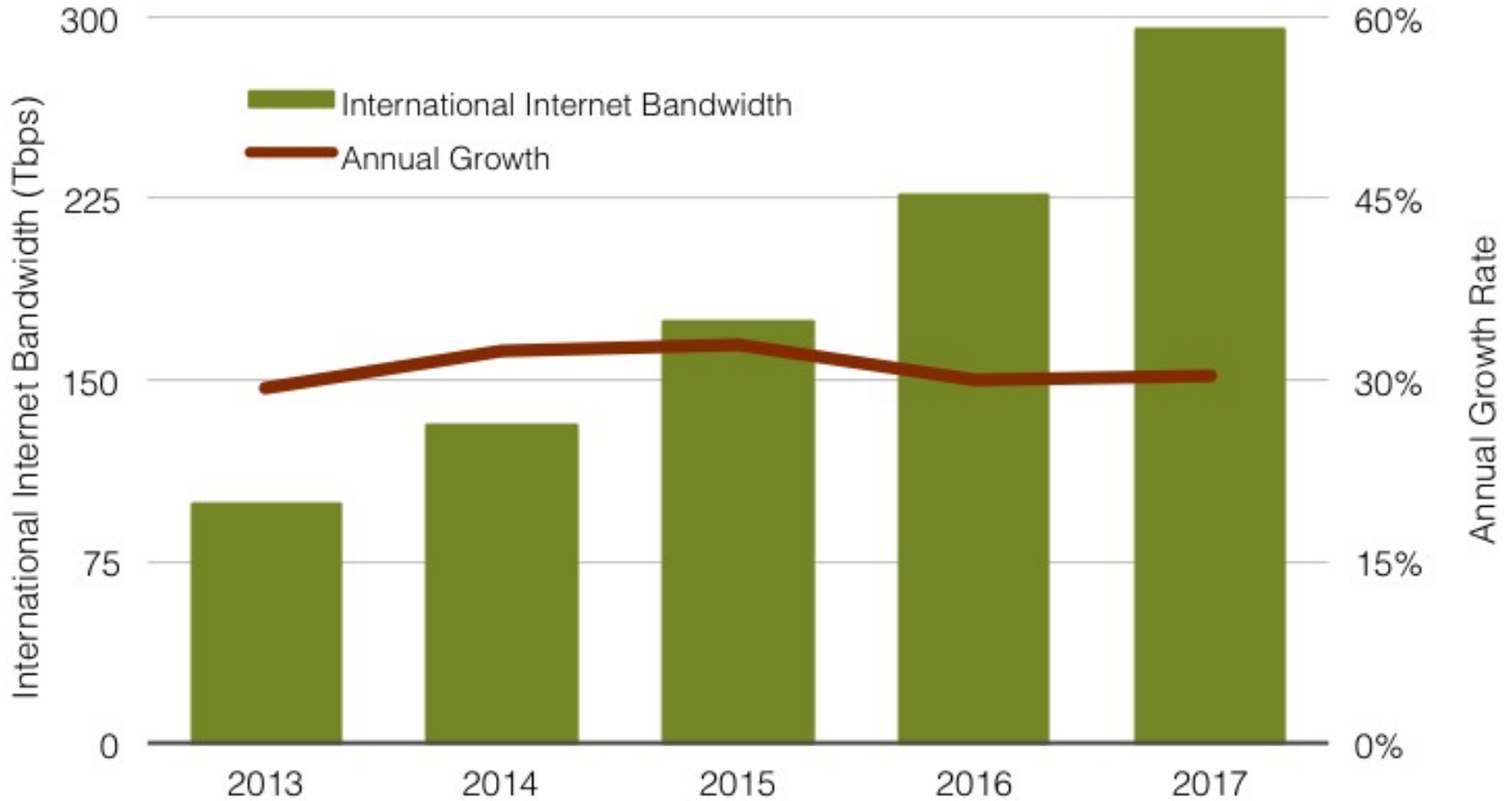
Patrick Christian  
August 22, 2017

# The Global Picture

Inter-Regional Internet Bandwidth, 2017

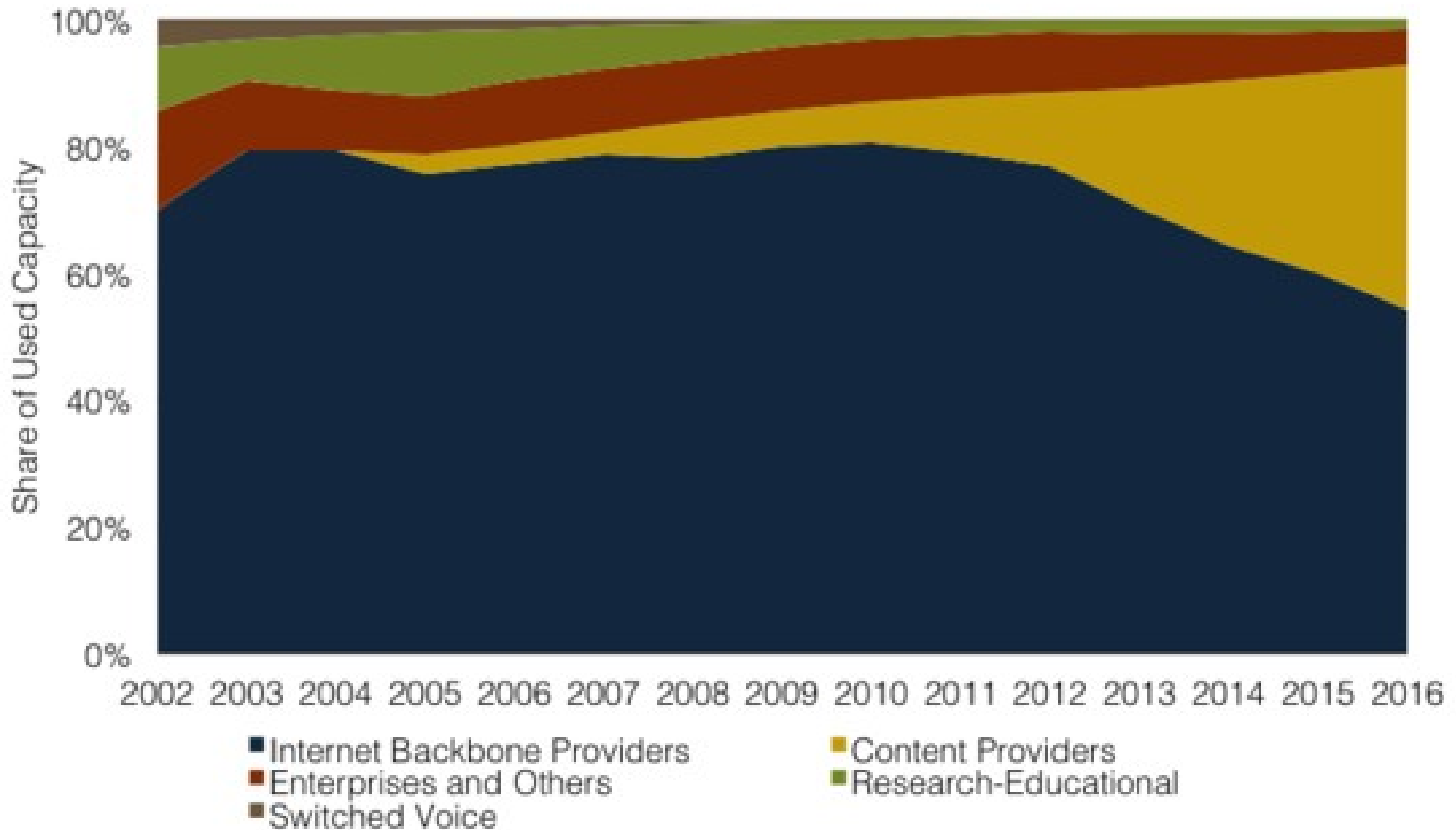


# Global Growth Stable



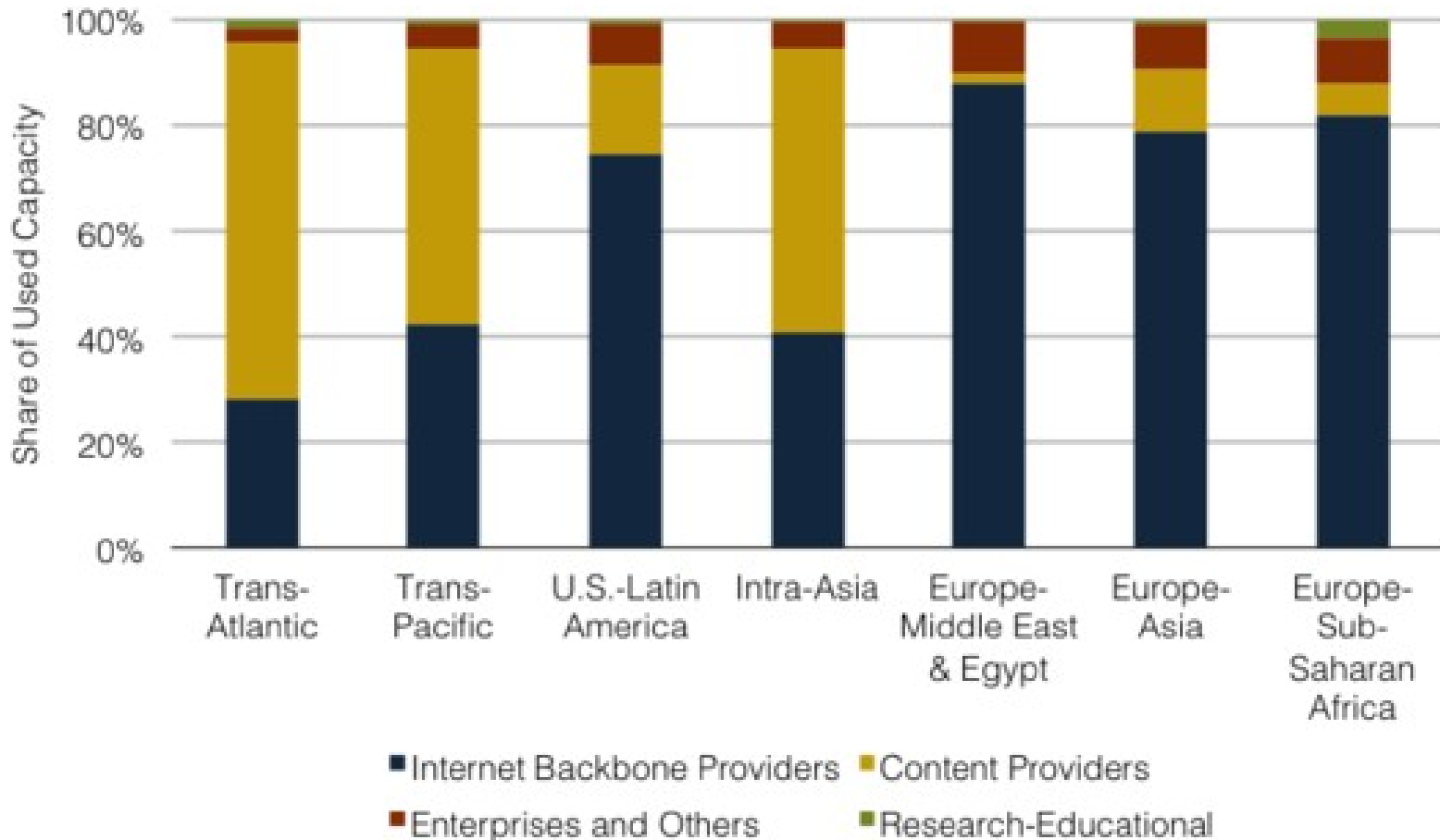
# Content Provider Capacity Growing

Used International Capacity by Source 2002-2016



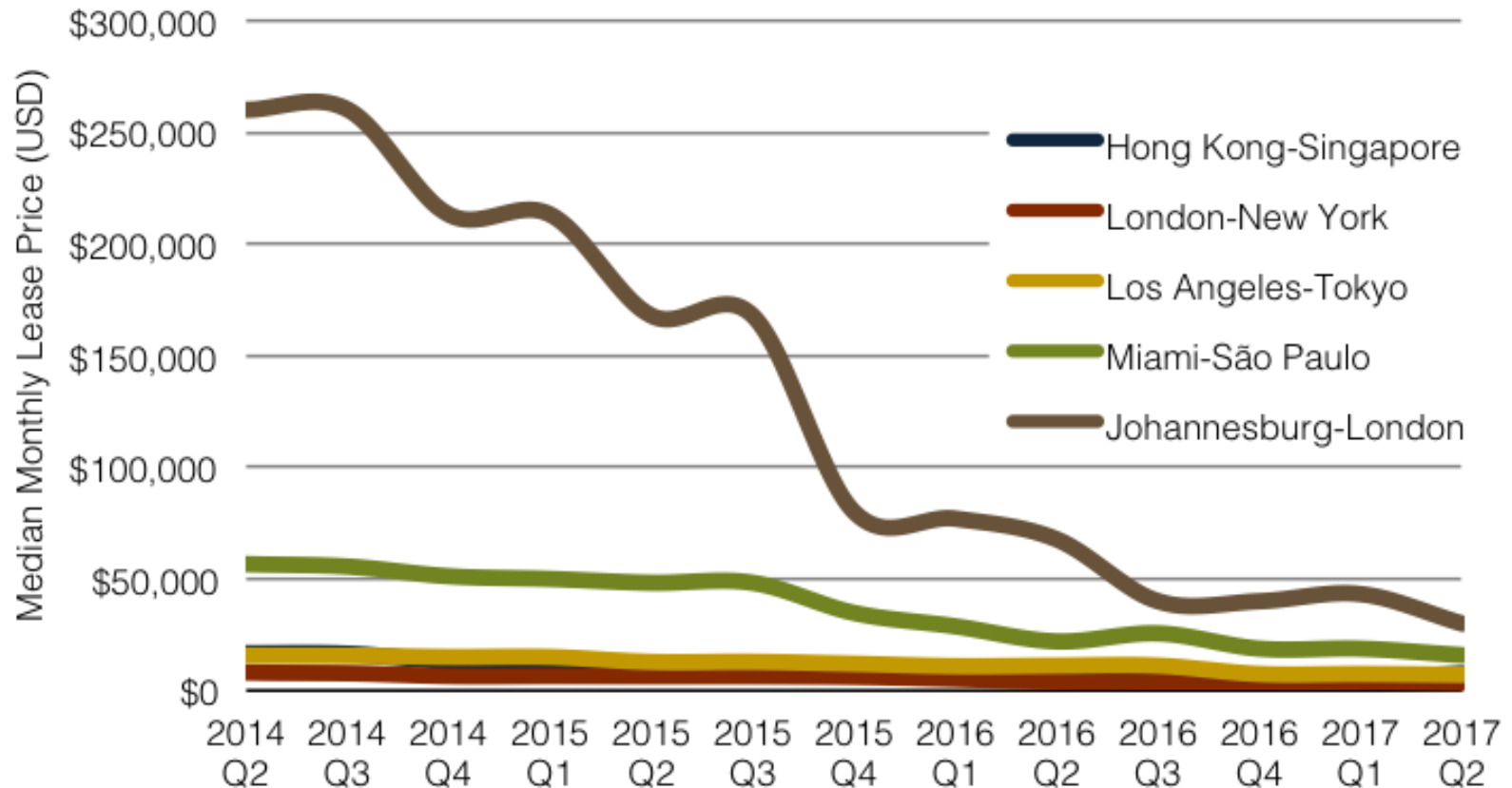
# Content Provider Traffic

Share of Used Bandwidth by Category for Major Routes, YE 2016



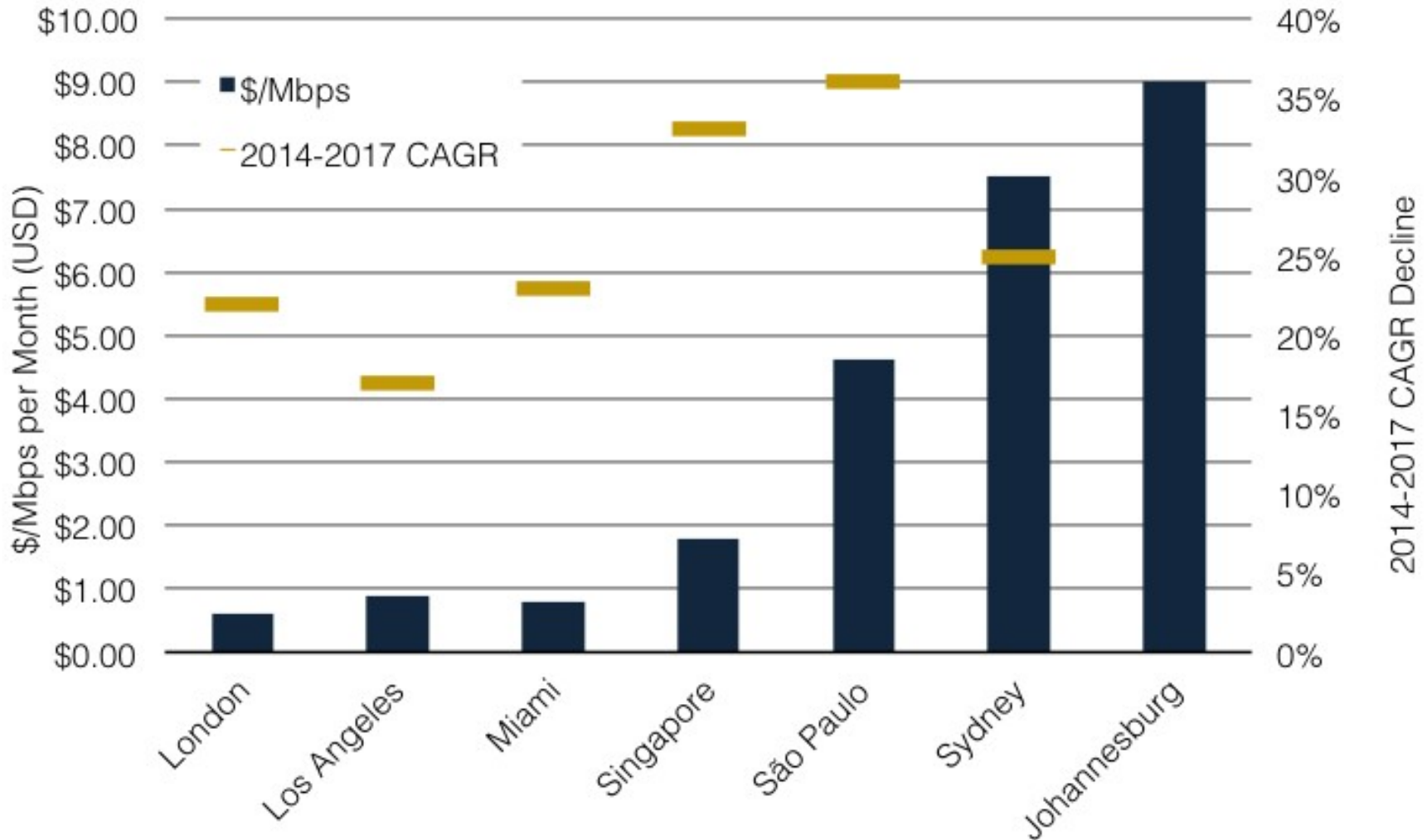
# 10G Wave Prices Dropping Fast

## Median 10 Gbps Wavelength Price Trends on Major Intl Routes



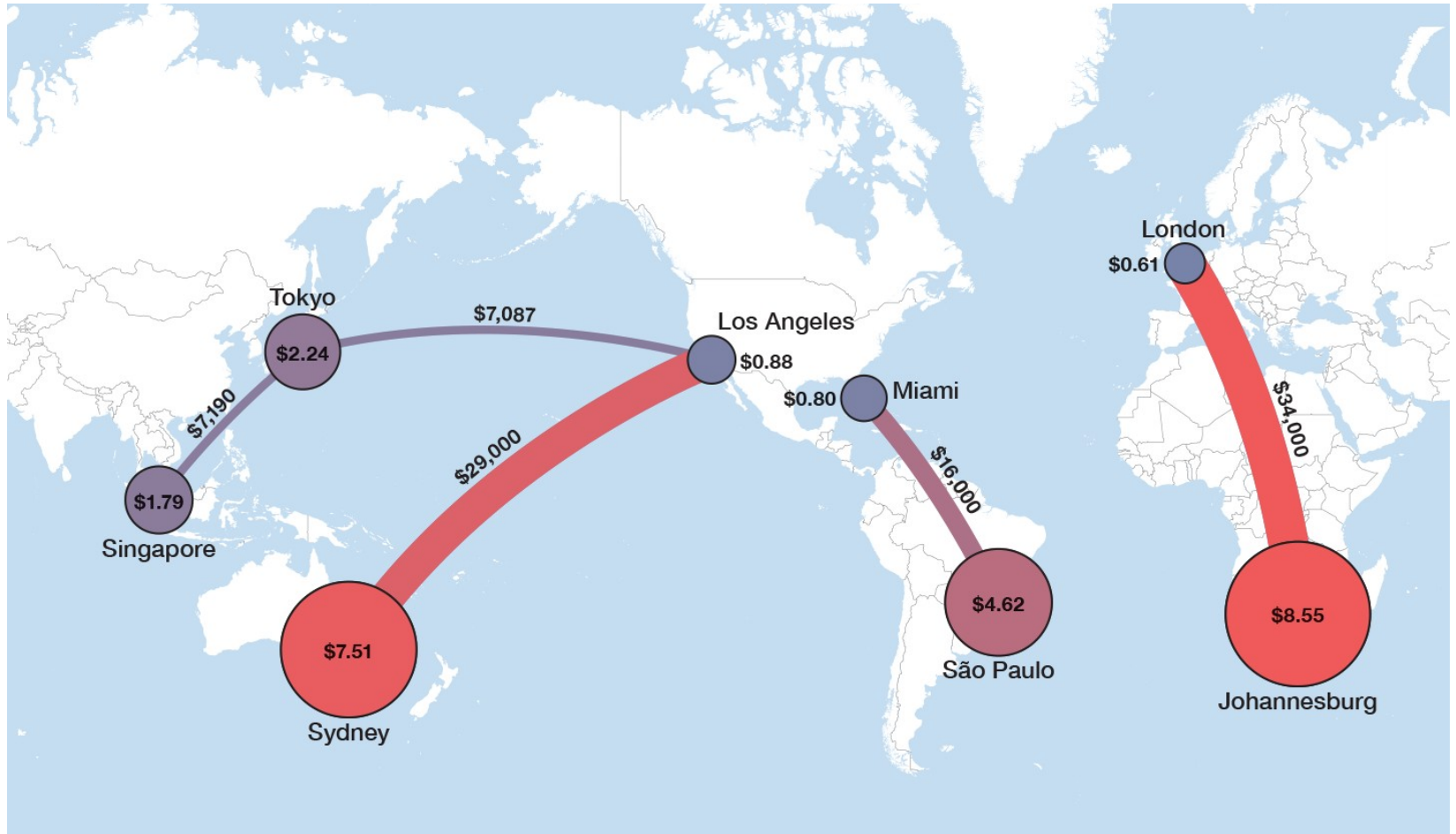
# IP Transit Prices Continue to Drop

## Median 10 GigE IP Transit Prices in Major Global Cities



# Global IP Transit & Wave Prices

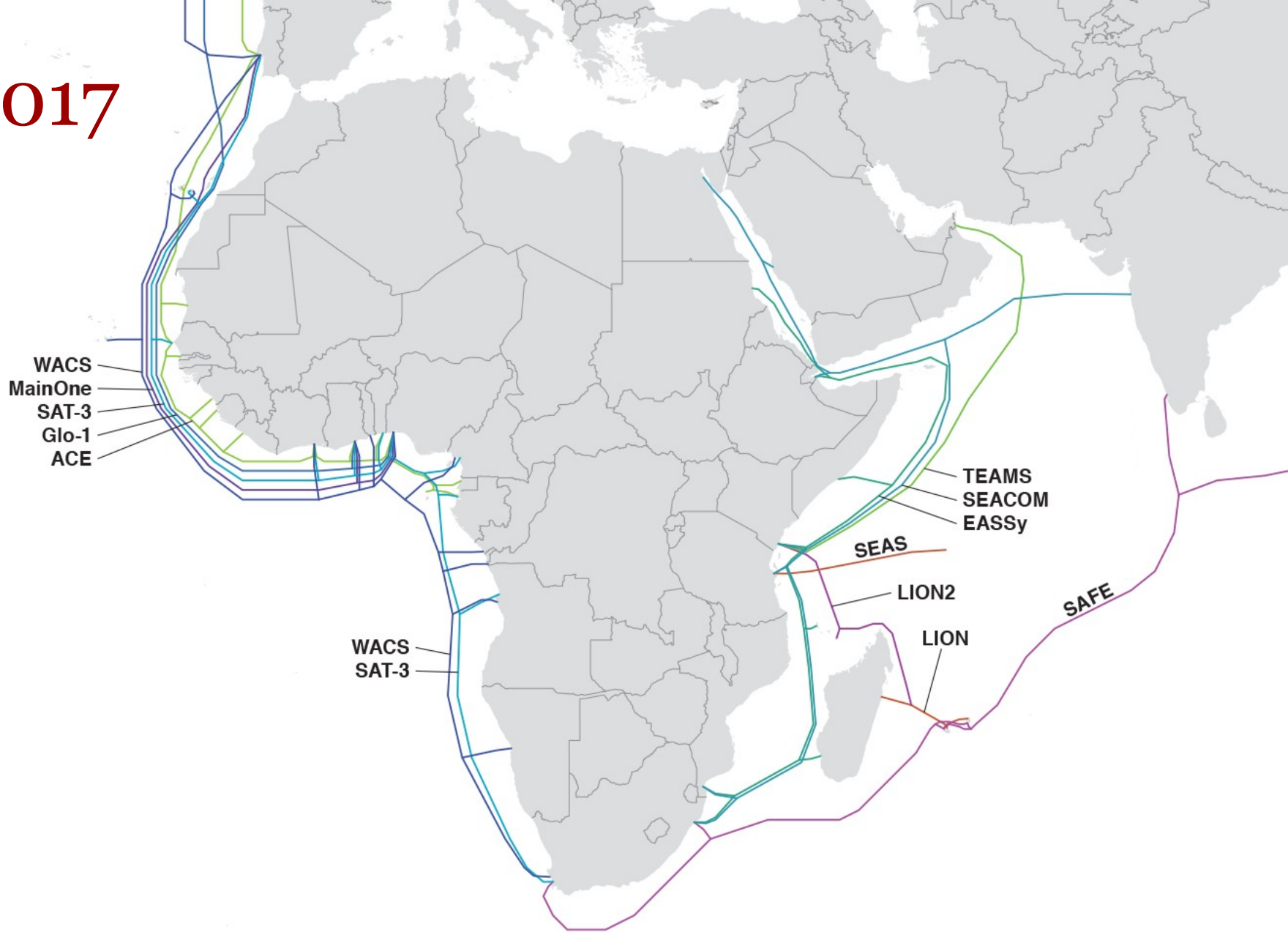
Weighted Median 10 Gbps IP Transit & Wavelength Q2 2017



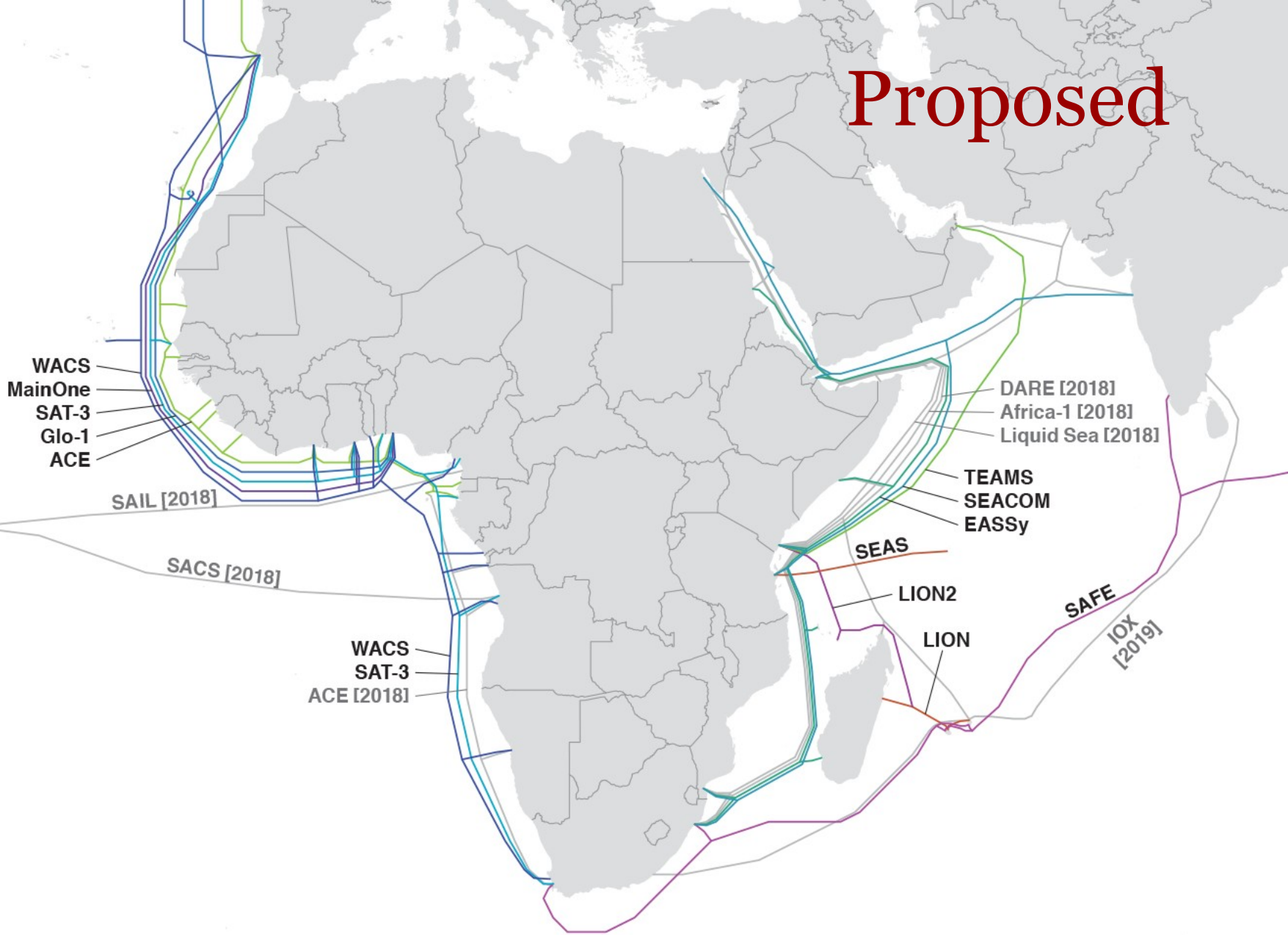


# Submarine Capacity

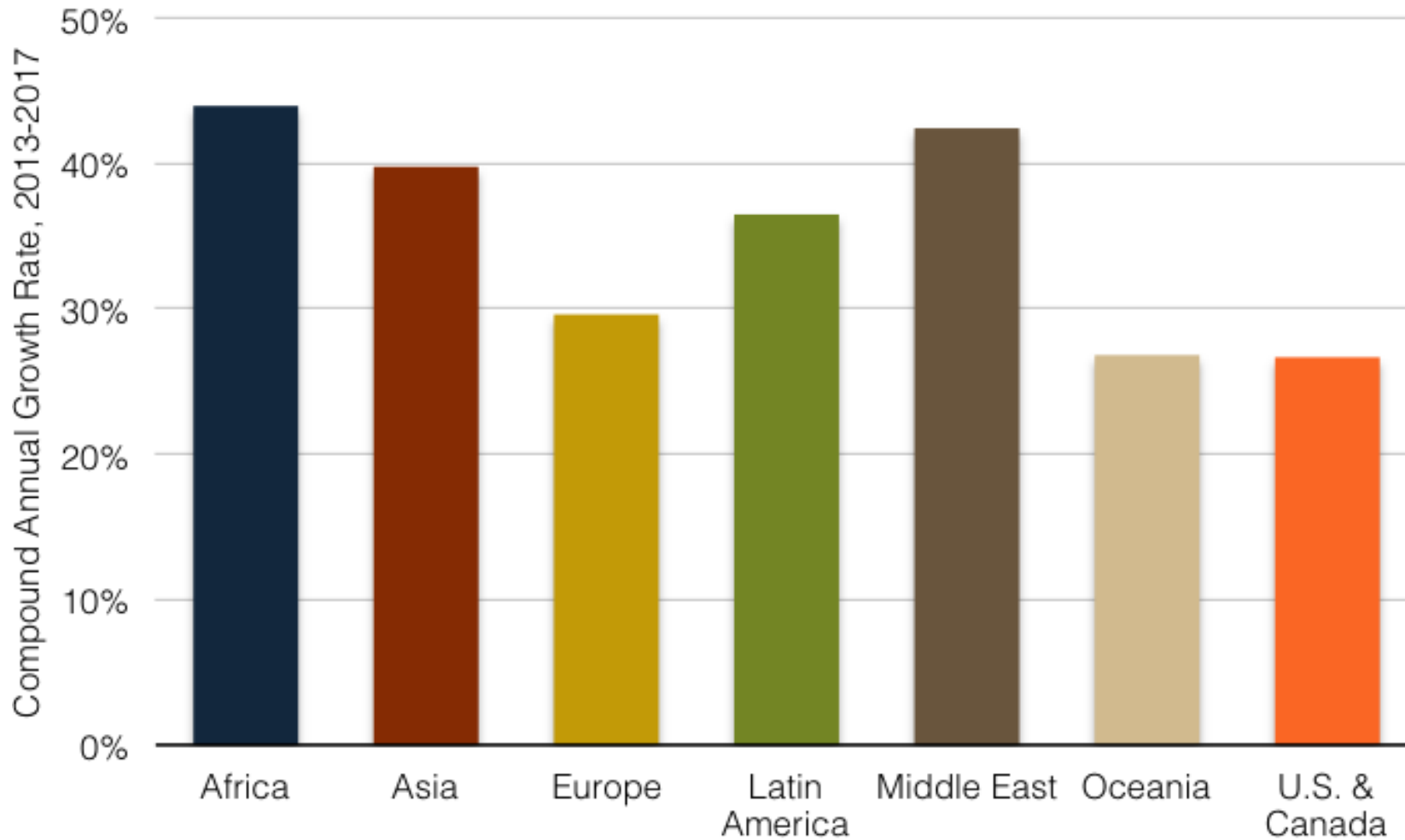
# 2017



# Proposed

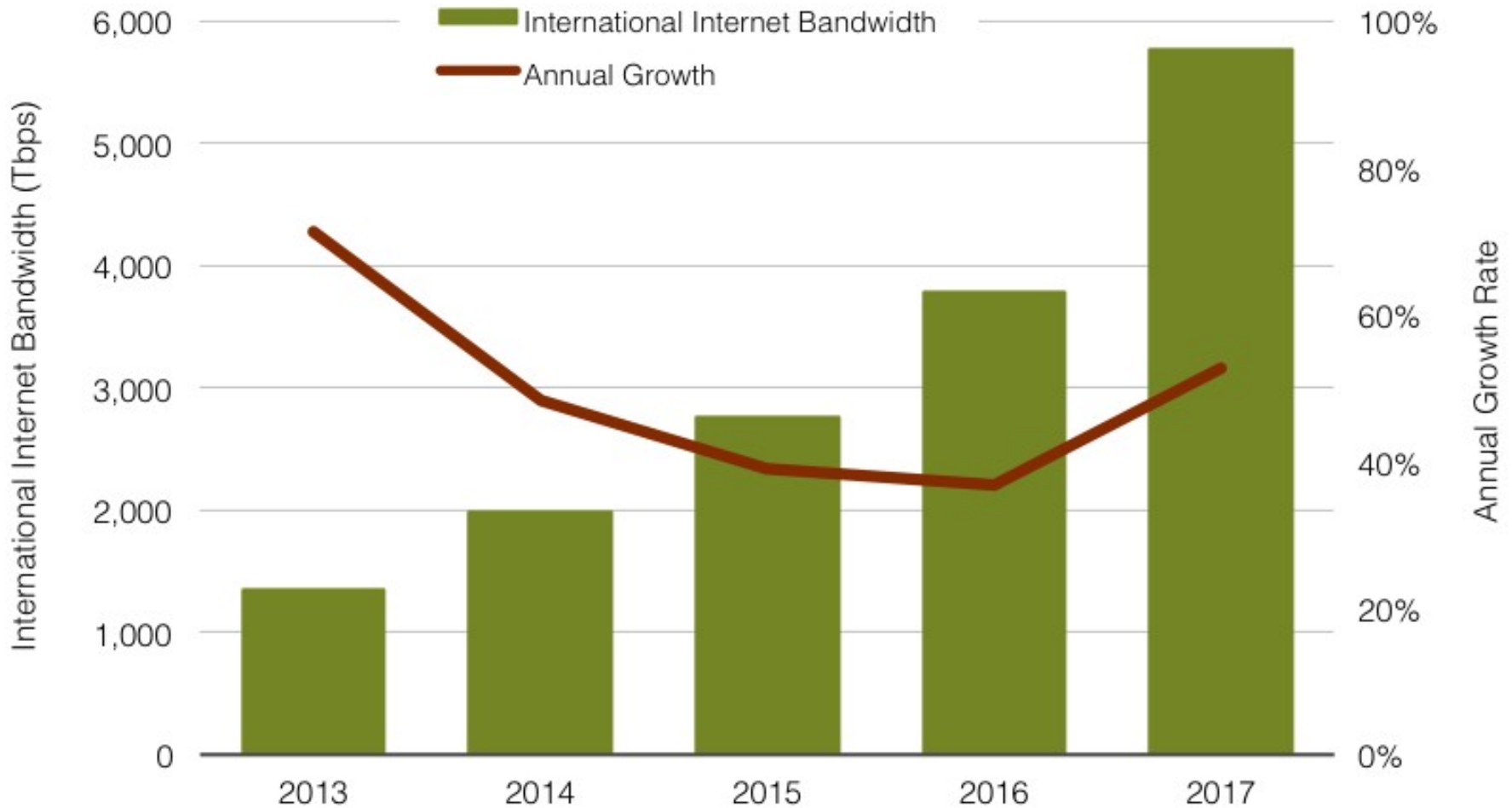


# Africa is the Fastest Growing Region



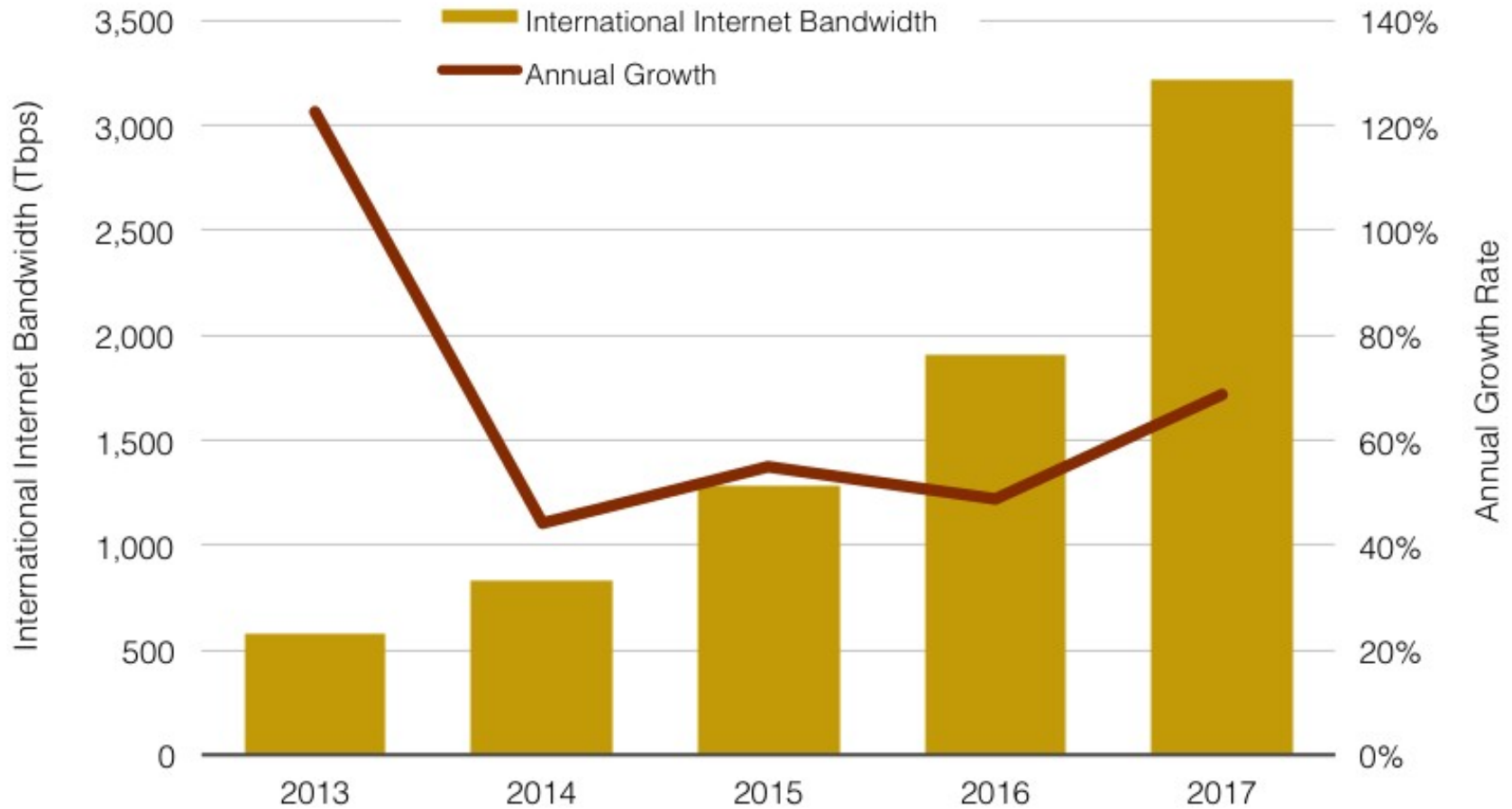
# Capacity Growth in Africa

## International Internet Bandwidth Growth - Africa



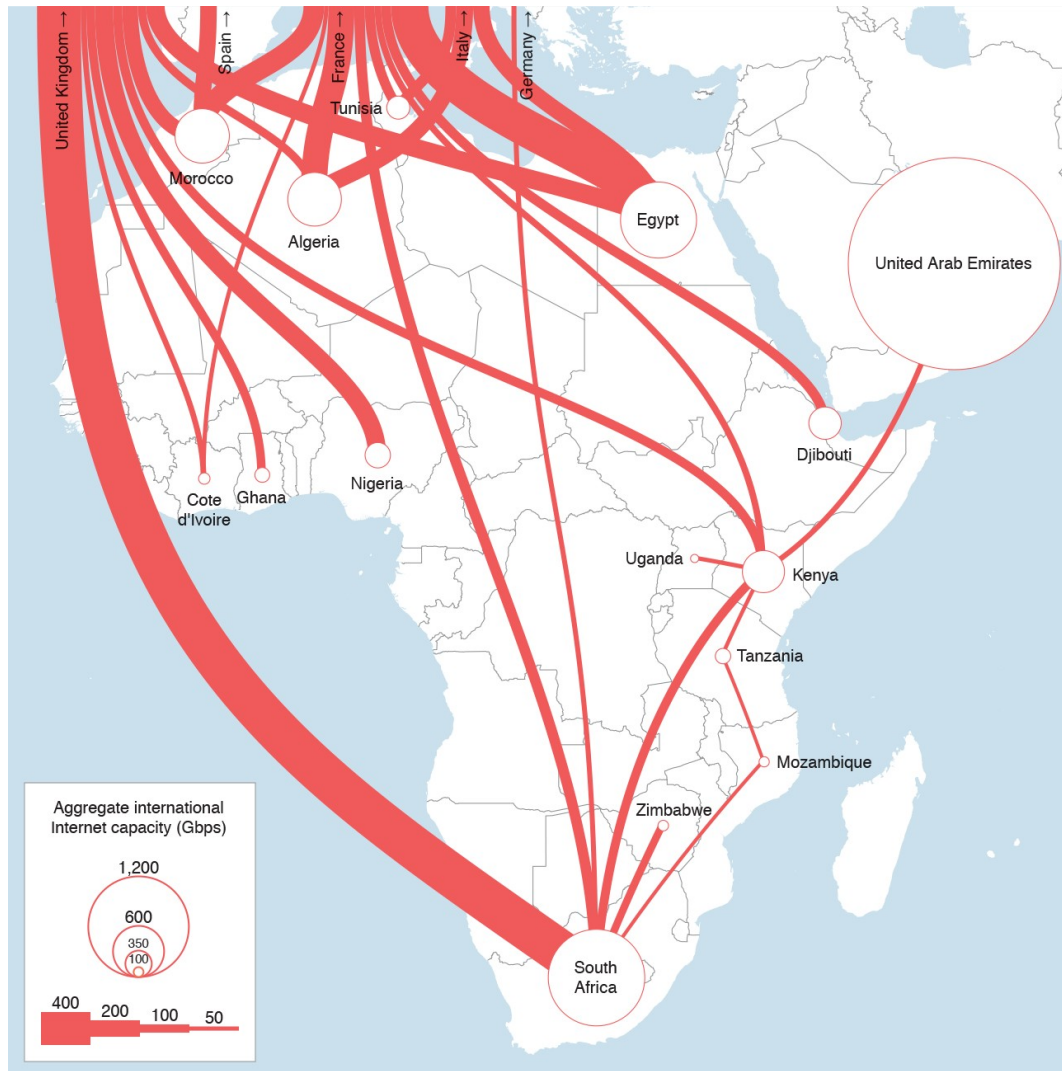
# Growth in Sub-Saharan Africa

## Int'l Internet Bandwidth Growth – Sub-Saharan Africa

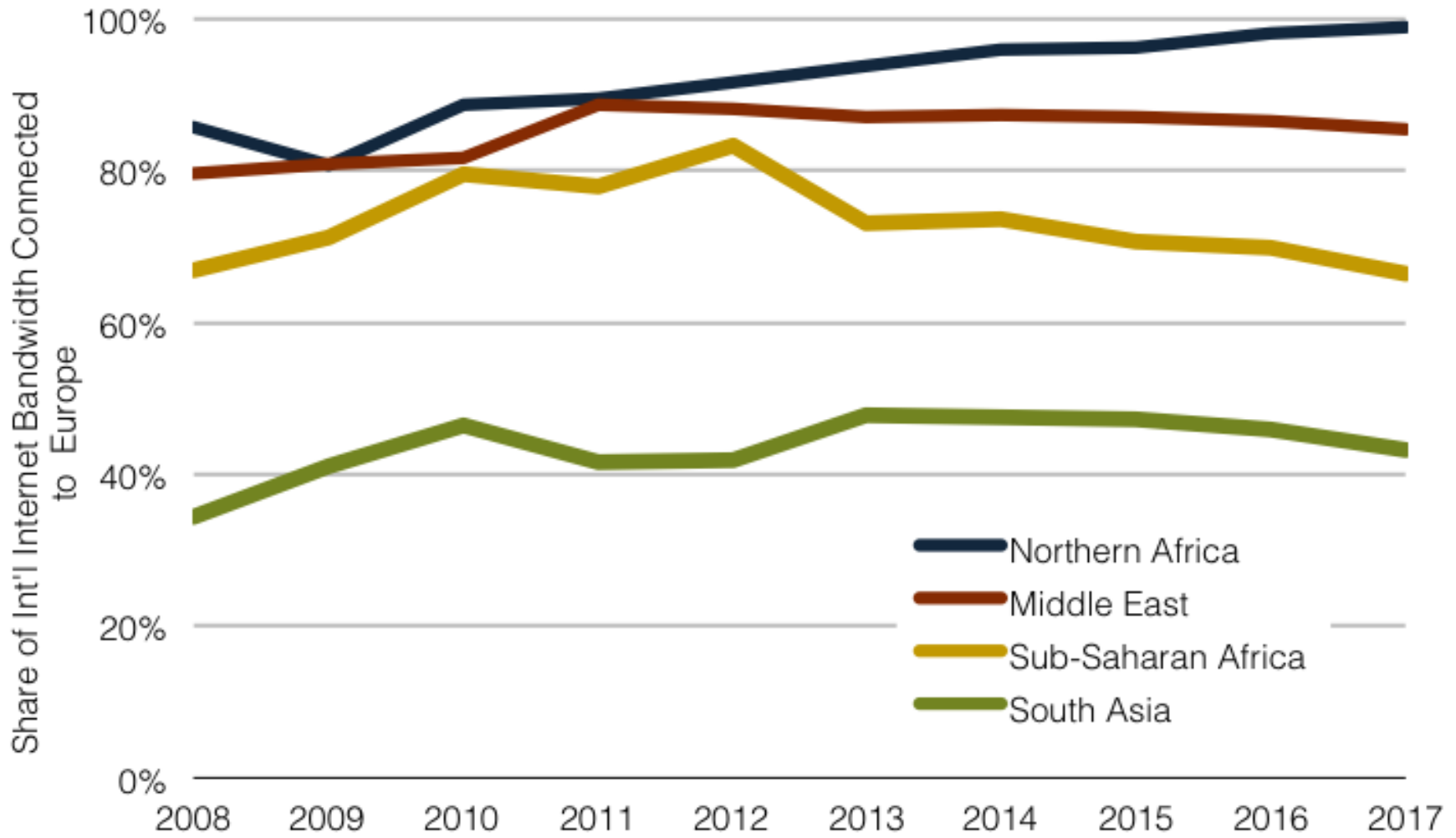


# Connected to Europe

## Major International Internet Routes in Africa, 2017



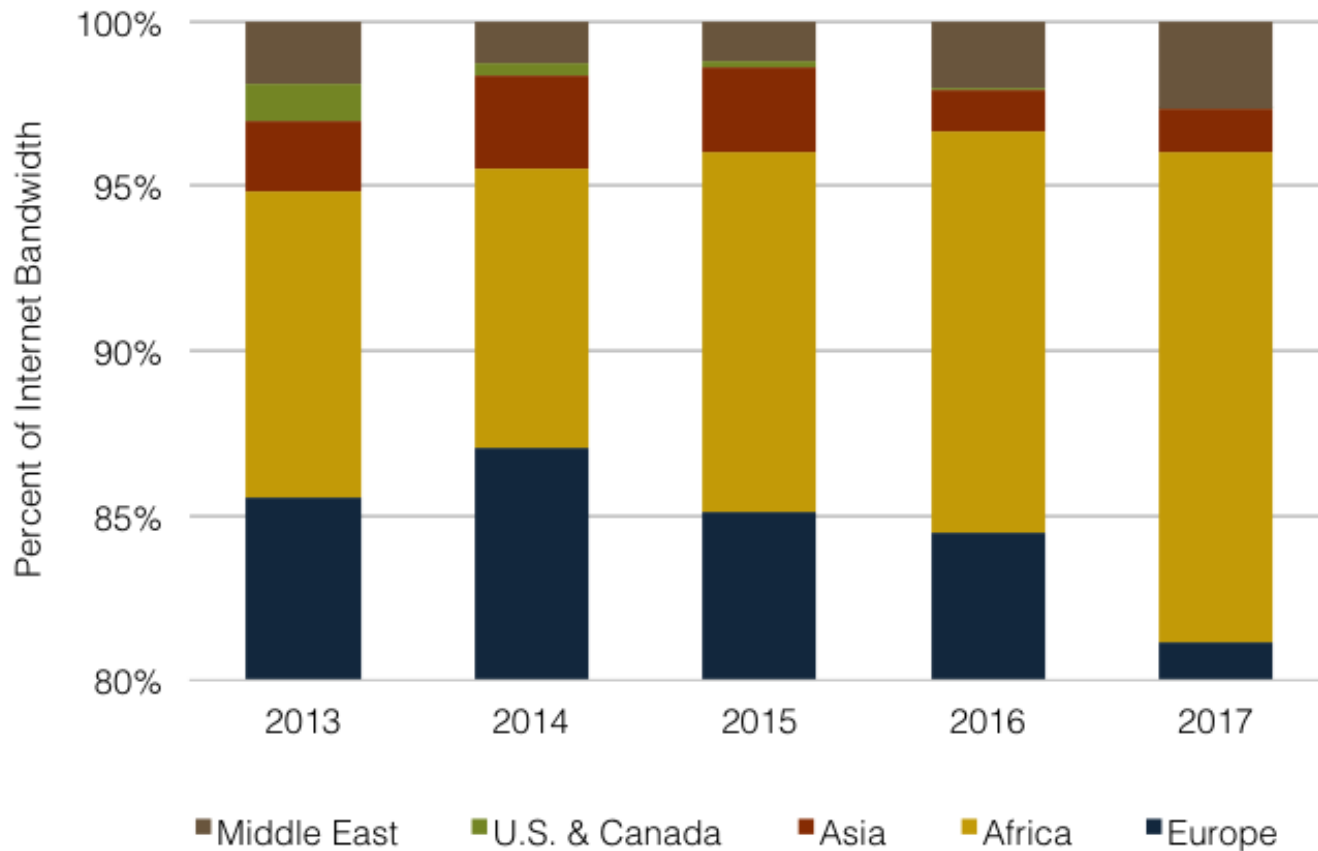
# Europe Hub Not Just for Africa





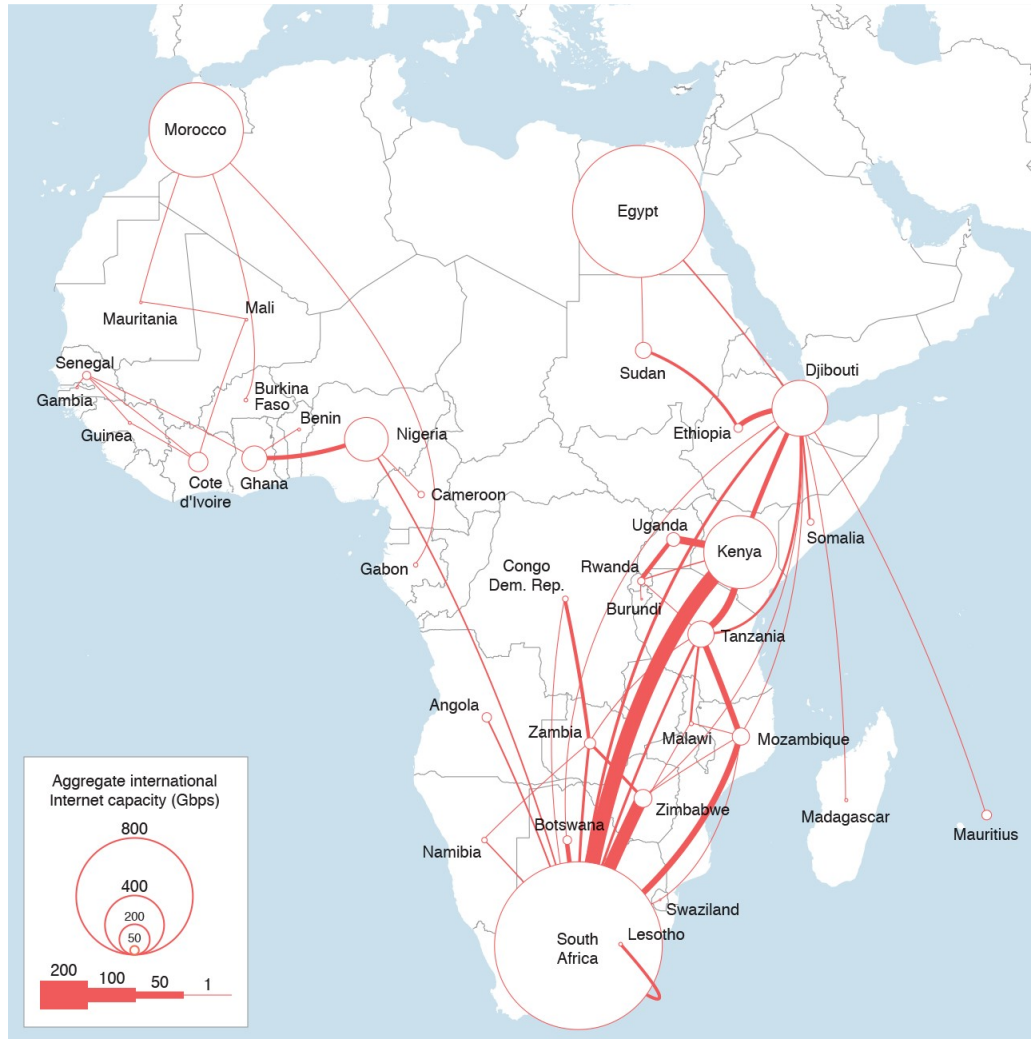
# Intra-Africa Connectivity Growth

Share of Africa Int'l Internet Bandwidth by Region, 2013-2017



# Intra-African Routes

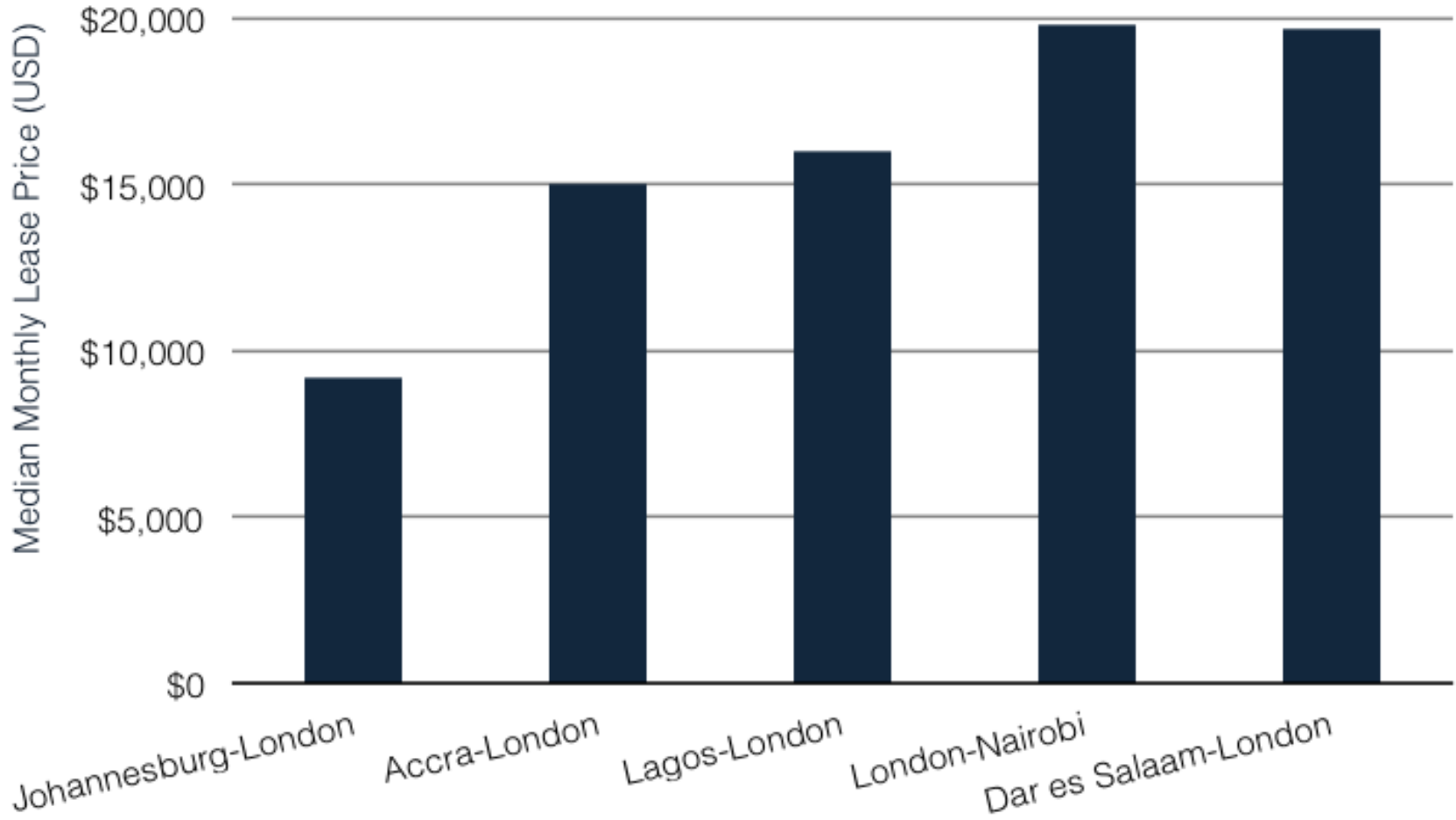
Major International Internet Routes within Africa, 2017



# Transit and Transport Pricing

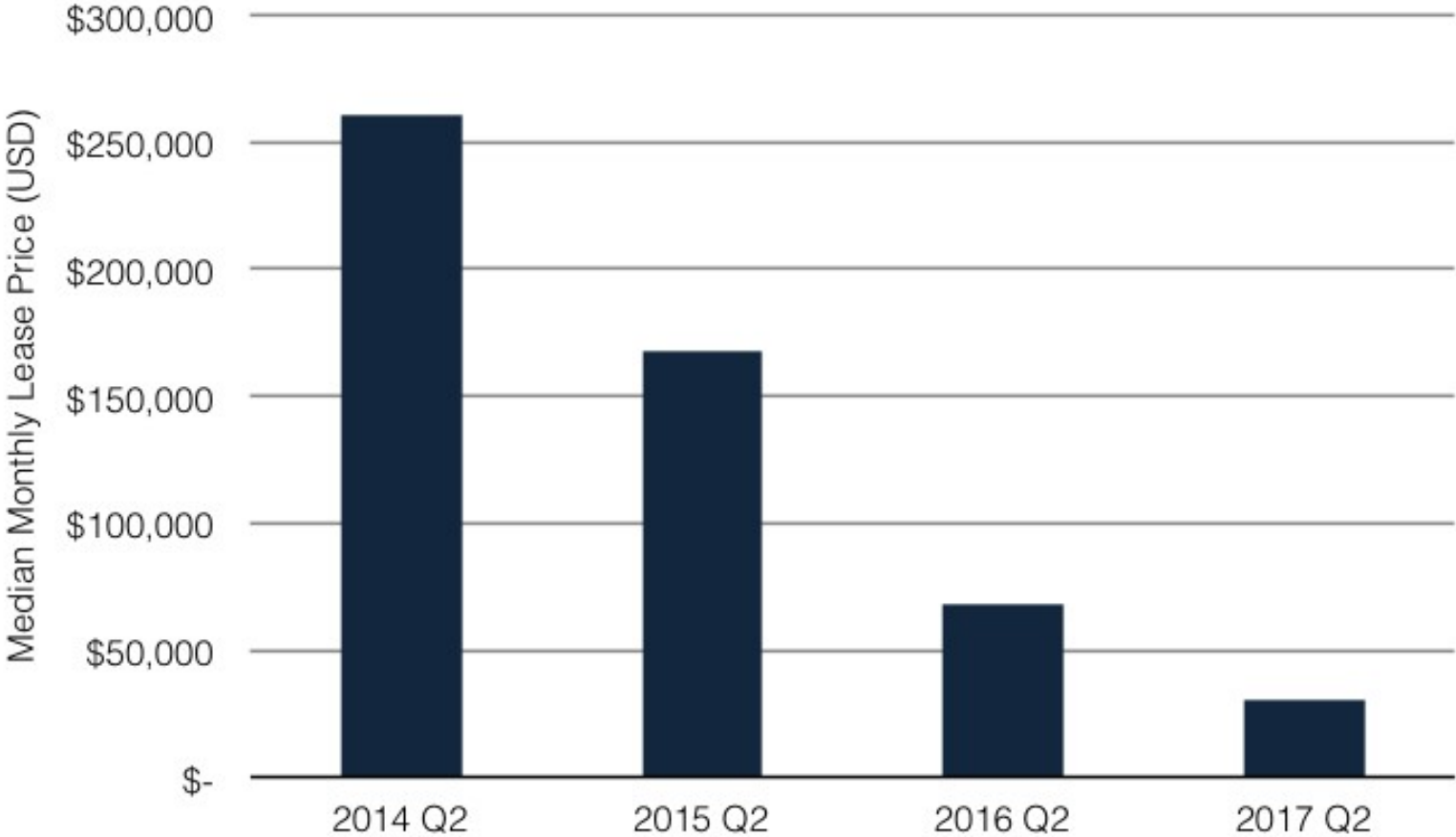
# Transport Prices STM-4

Median STM-4 Monthly Lease Prices in Africa, Q2 2017



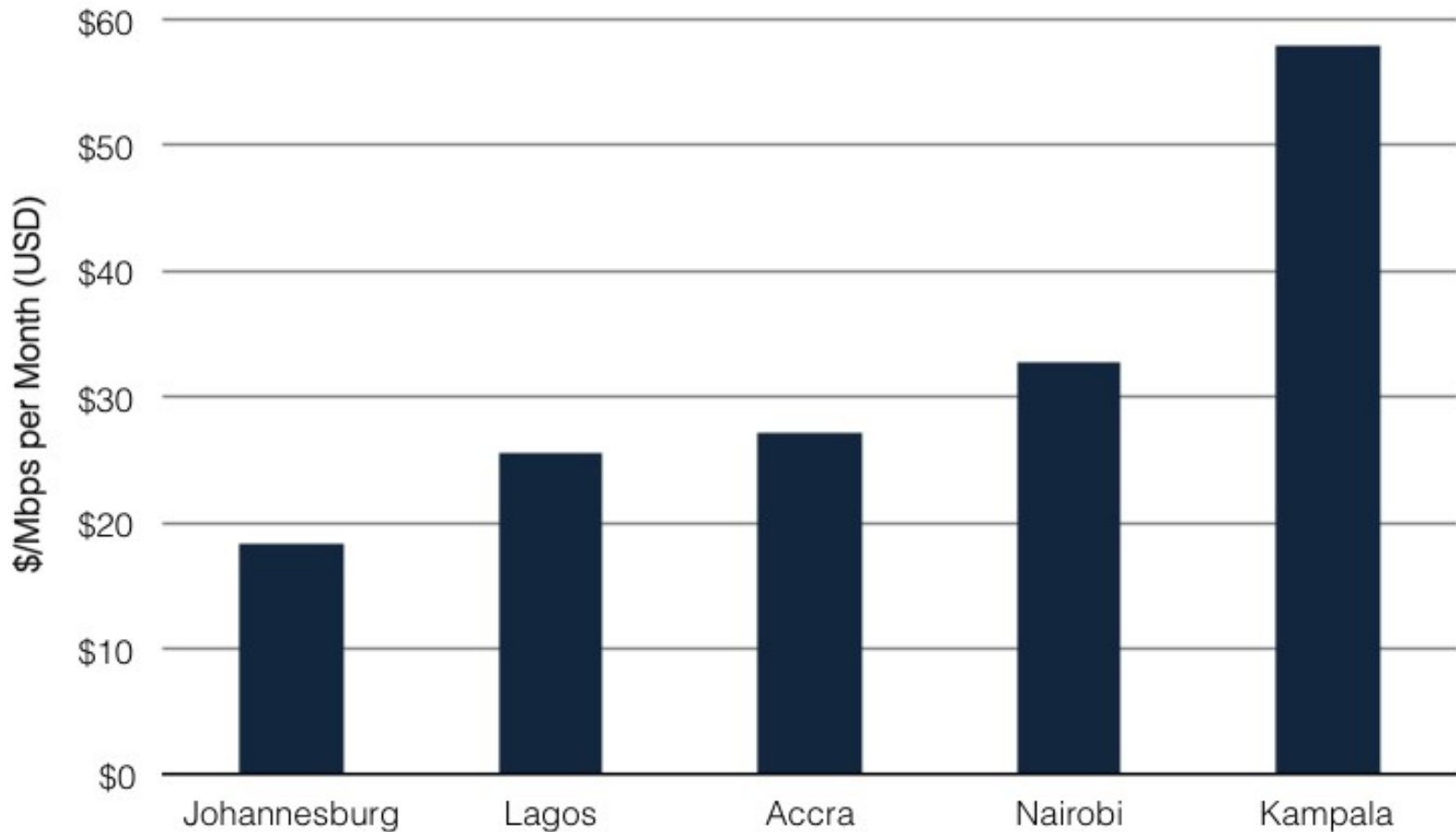
# Median Prices 10 Gbps Waves

Johannesburg-London Q2 2014 – Q2 2017



# Regional Transit Prices

Median STM-1 IP Transit Prices in Africa, Q2 2017



# Data Centers

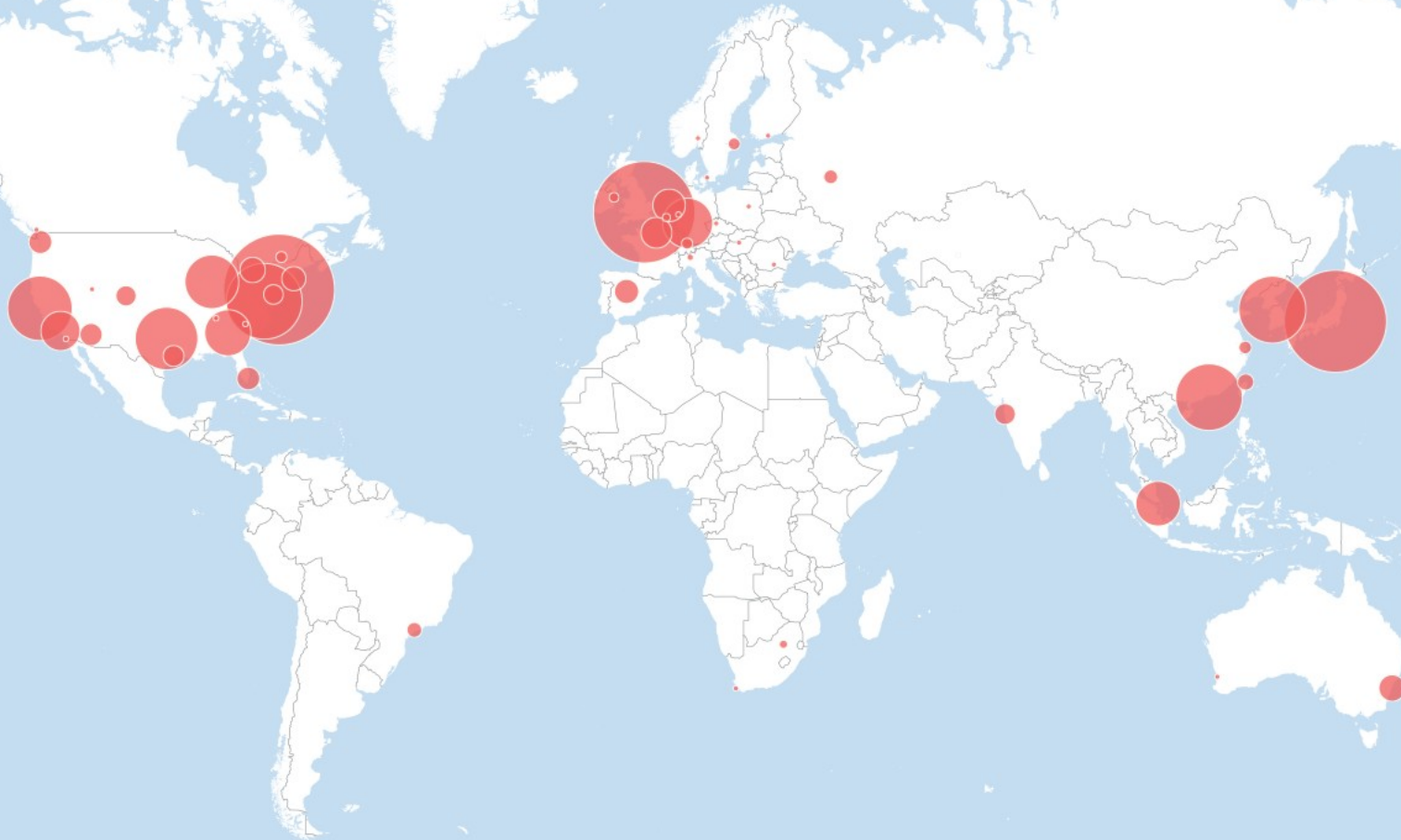
# Carriers Exchanging Traffic

## Colocation Floor Space

Gross Floor Space  
(million sq ft)

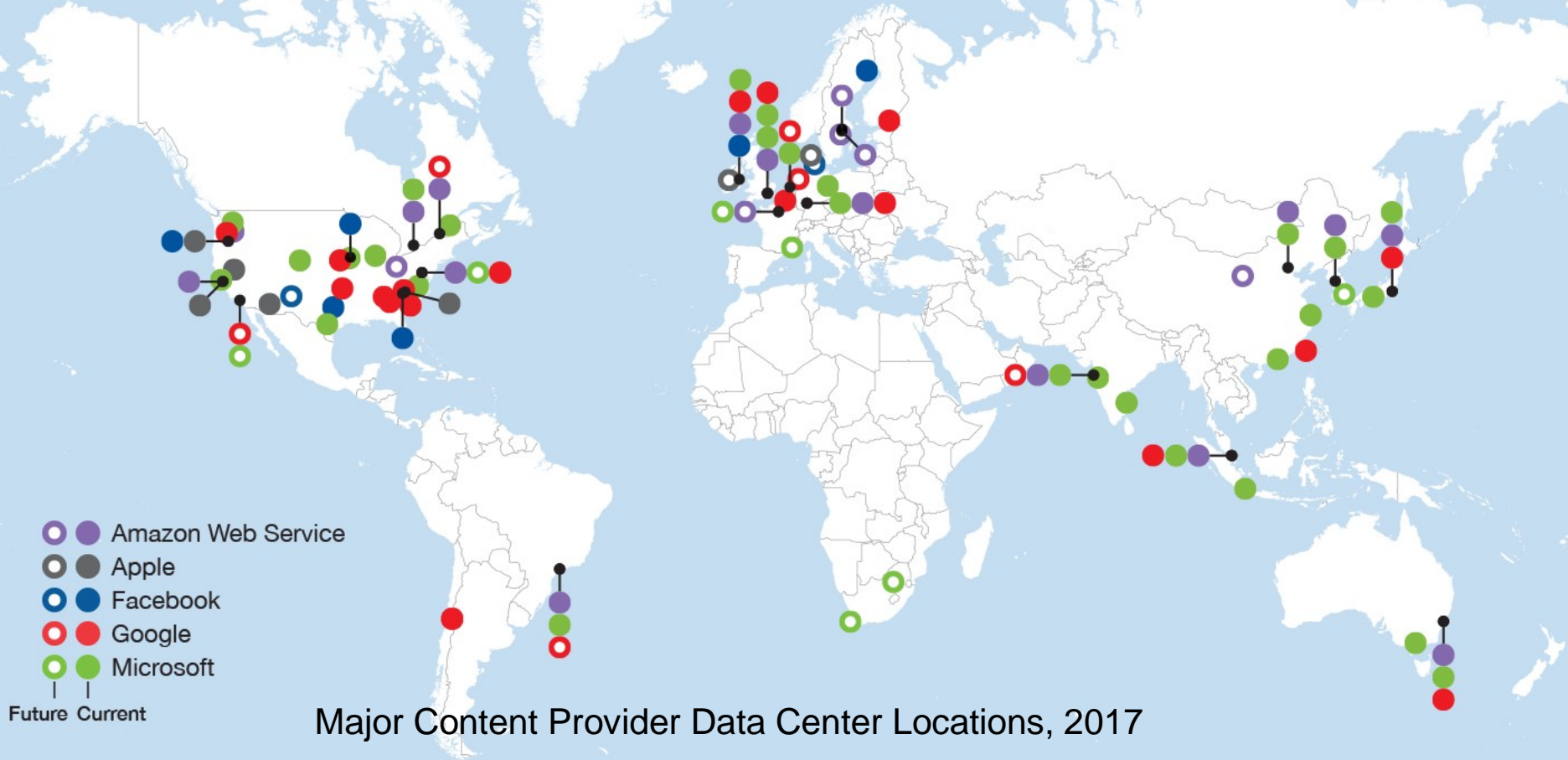
4

0.5





# Linking Content and Applications



# Cloud Data Centers & Direct Connects



# Outlook - Some Numbers

- 44% vs 30% - Africa vs Global - Int'l Internet bw
- 417m to 541m - 3G subs – 2016 - 2021
- 37m to 201m LTE subs – 2016 - 2021
- 51% vs 25% - peering vs transit growth

Merci!

Patrick Christian  
pchristian@telegeography.com