



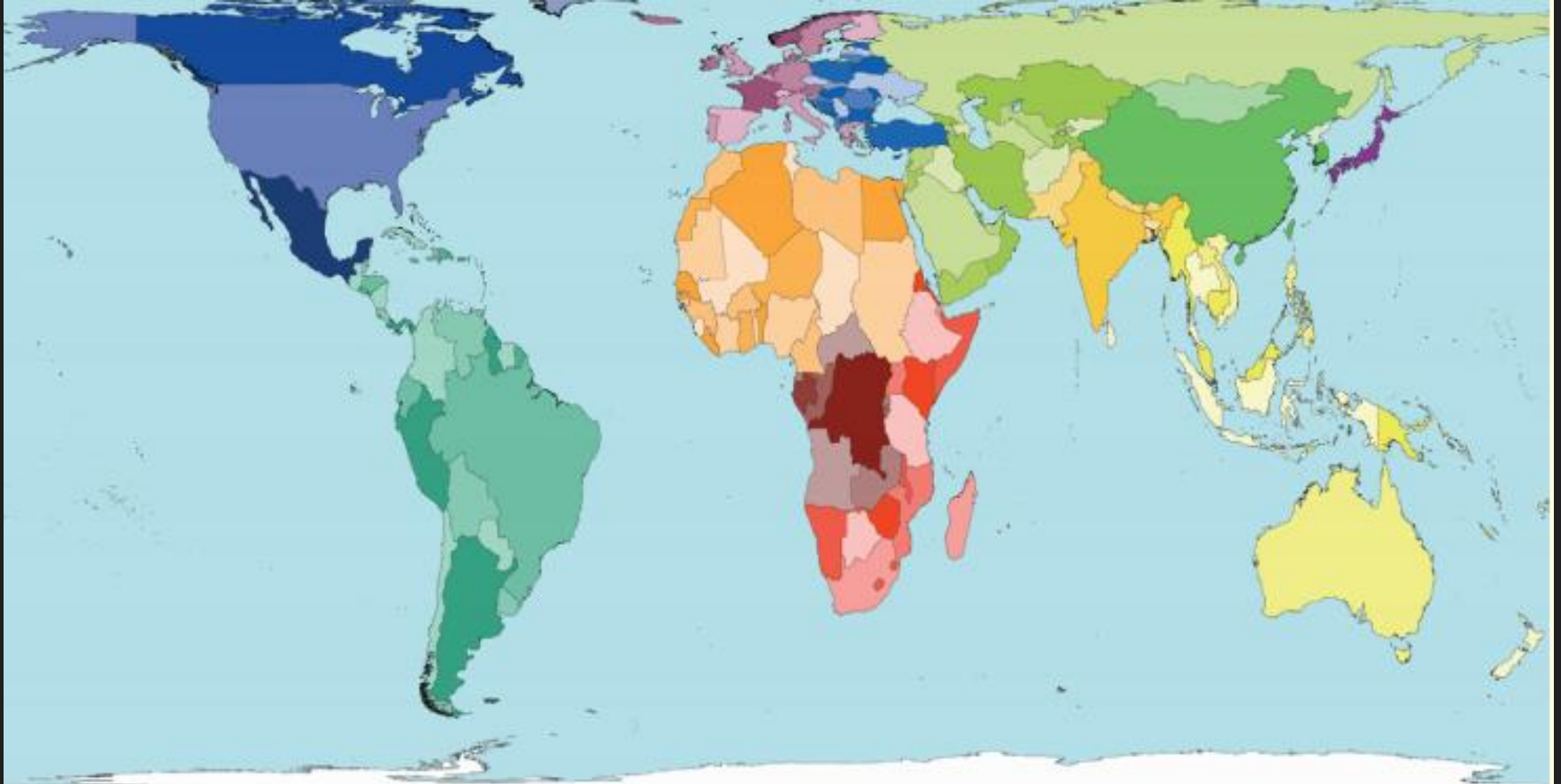
TURKCELL



9th COMCEC Transport and Communications Working Group Meeting

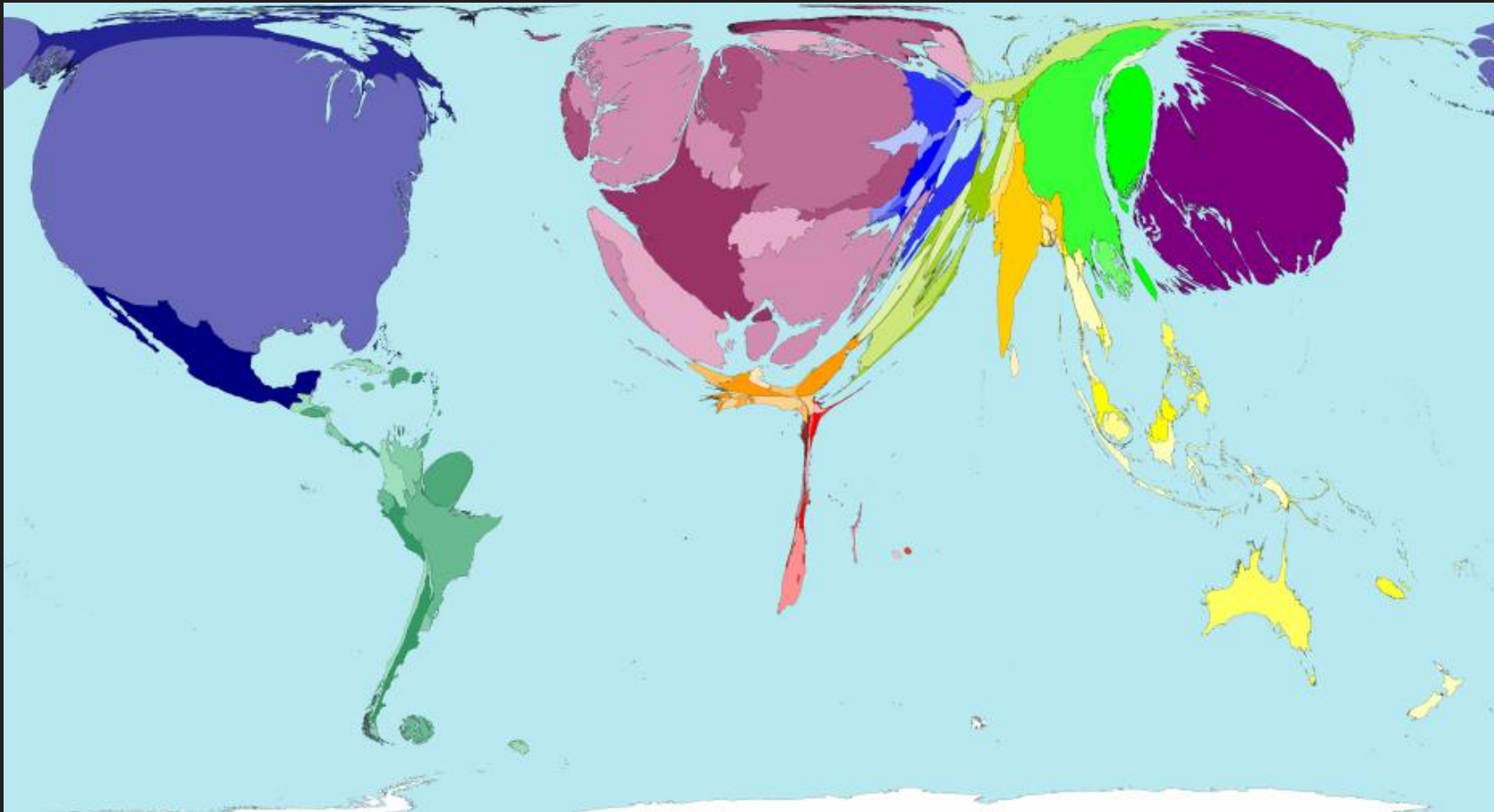
March 2017, Ankara

World Land Map



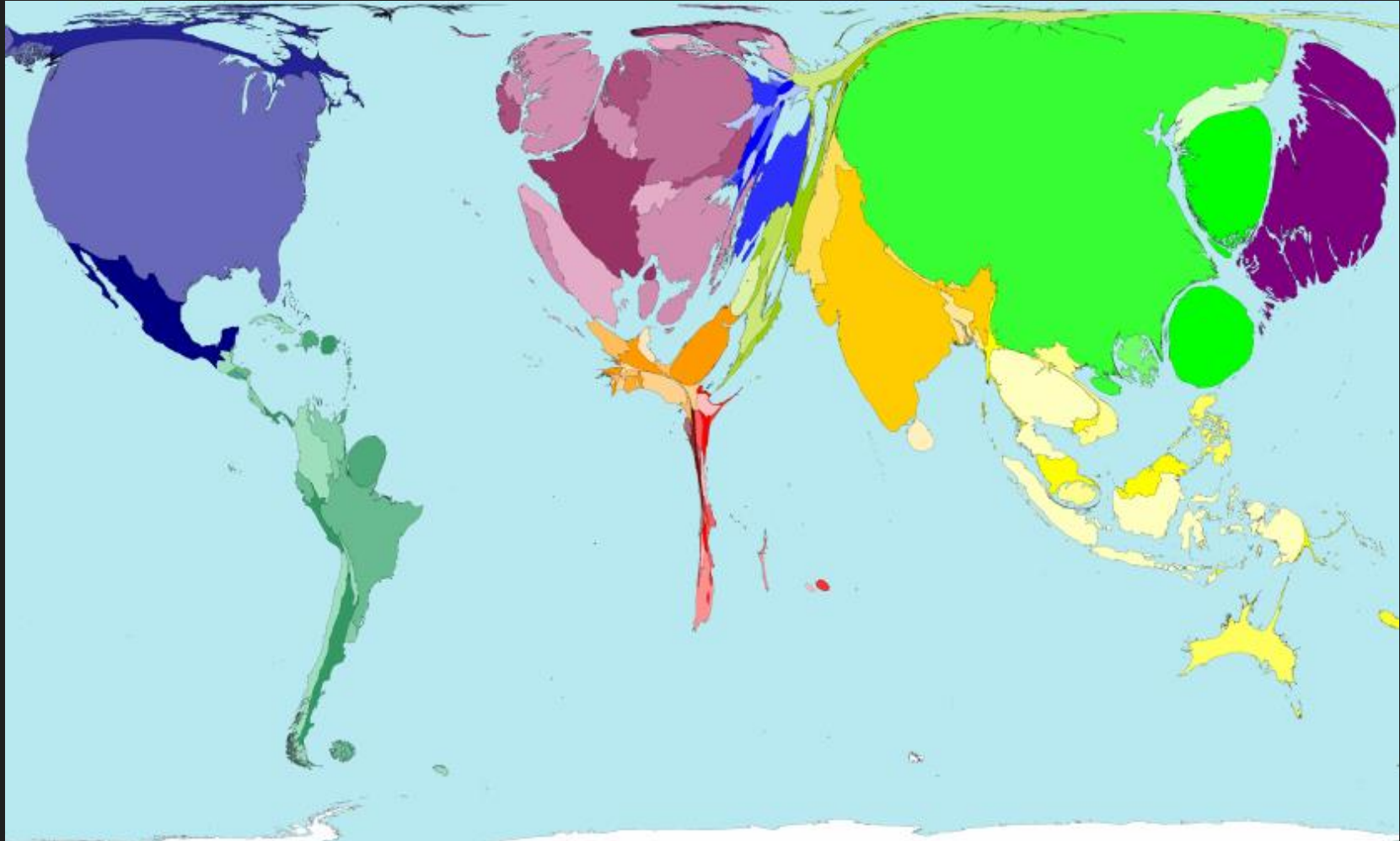
World Wealth, 2002

Big Europe, USA and Japan



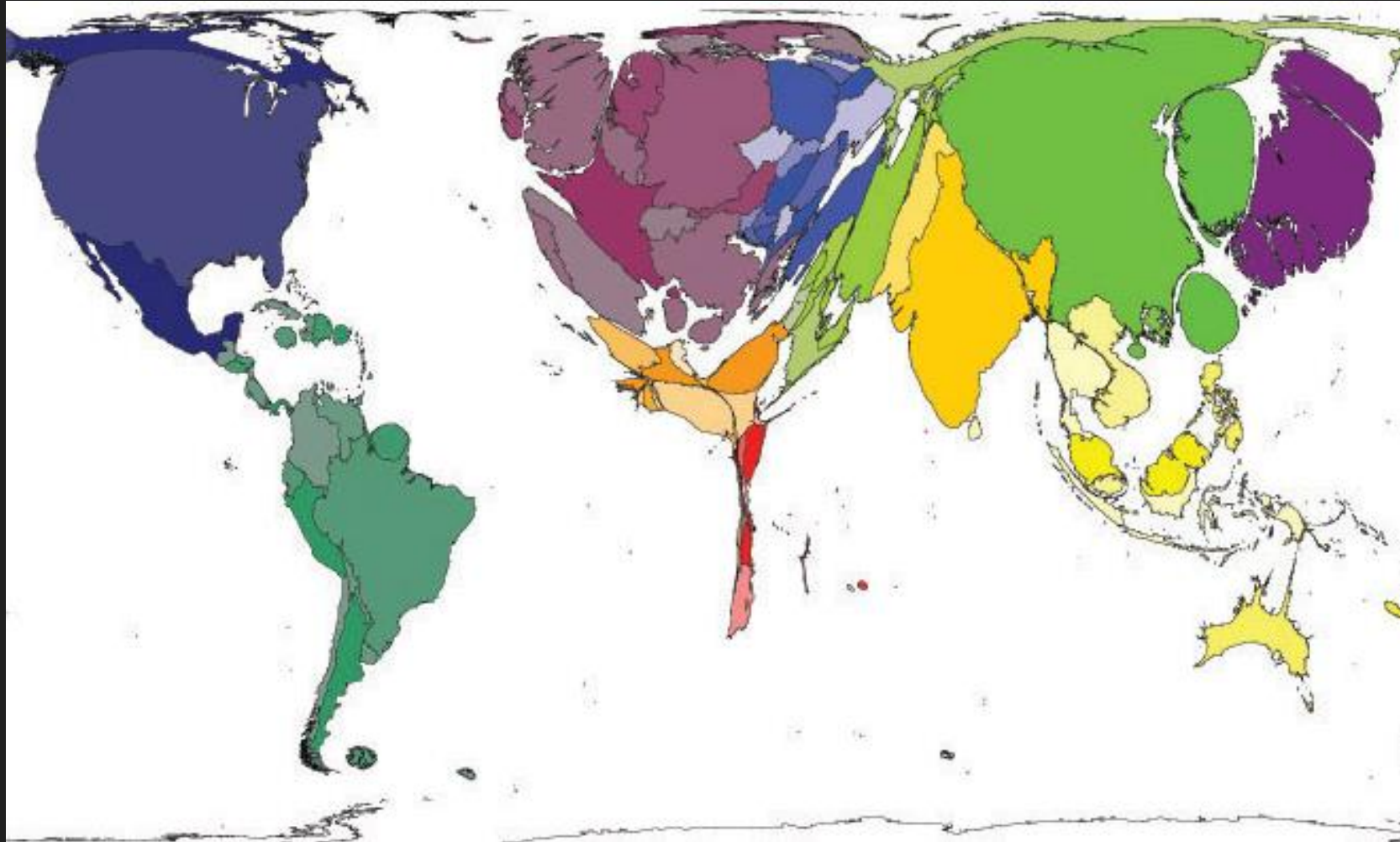
World Wealth, 2015

New players, China, S.Korea and India

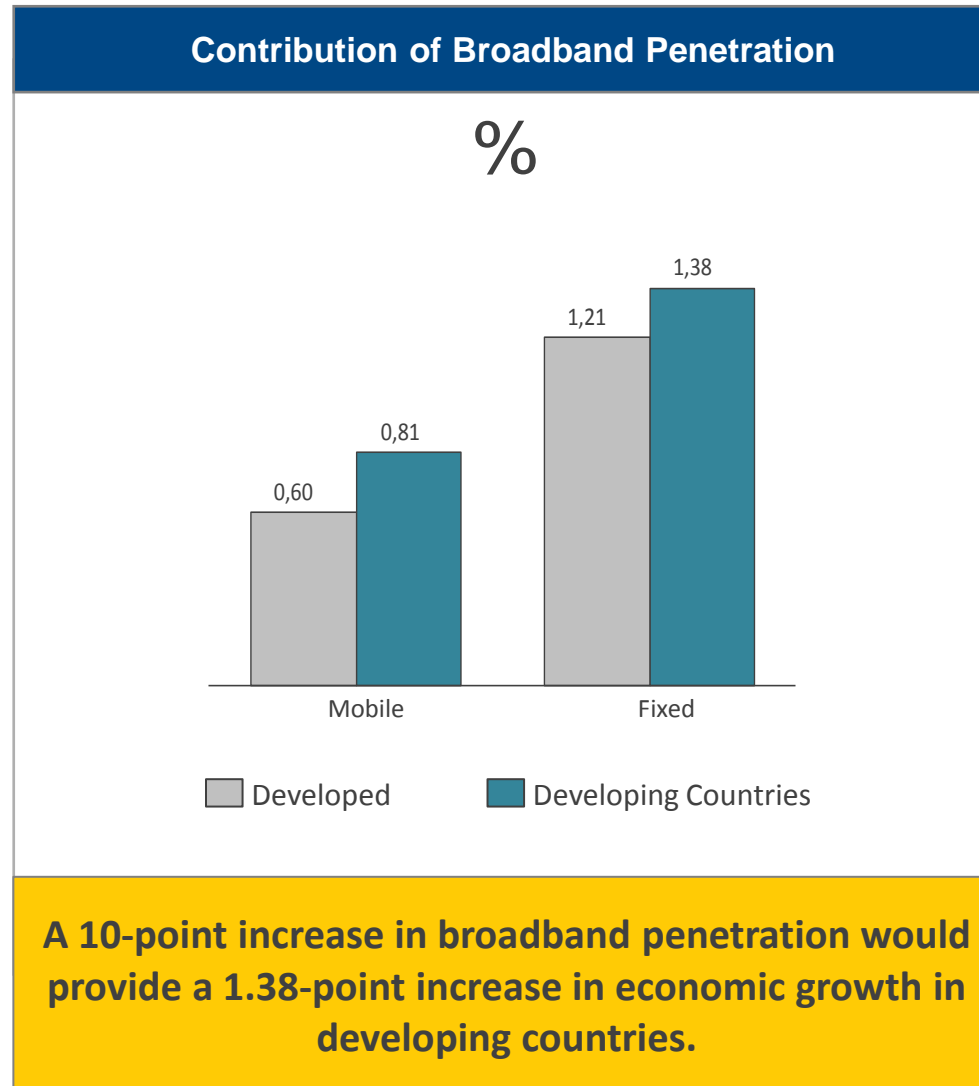


Internet Users, 2007

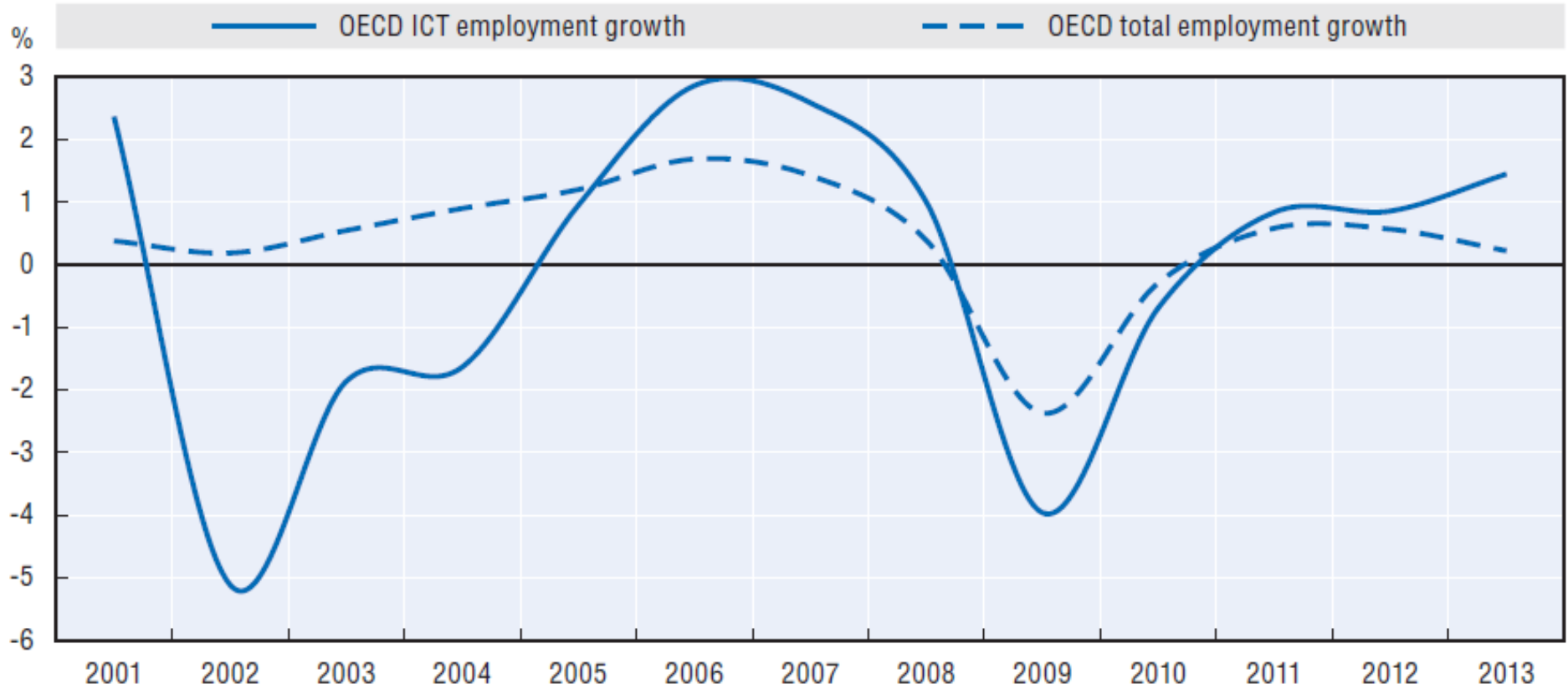
Similar Map of Wealth 2015



Increase in broadband penetration has a direct and indirect contribution to the Economy



Increase in ICT employment growth has a direct contribution to the total employment



Source: OECD, Digital Economy Outlook, 2015 Report

Telecom operators are the major actors in the Internet industry with the generating income, investments and taxes

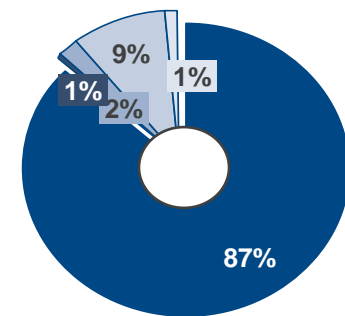
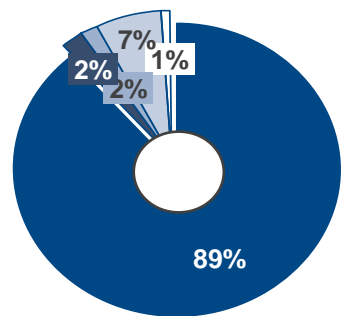
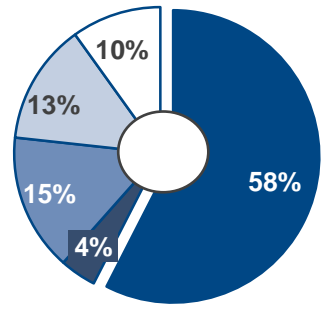
Size of sub-sectors in ICT ecosystem

2013, Developed EU Countries

Revenue
66 Billion €

Investment
8 Billion €

Taxes
4,0 Billion €



- 5 Telecom Operator
- 5 Vendor
- 5 Terminal Producer
- 5 Content Producer
- 5 Internet OTT

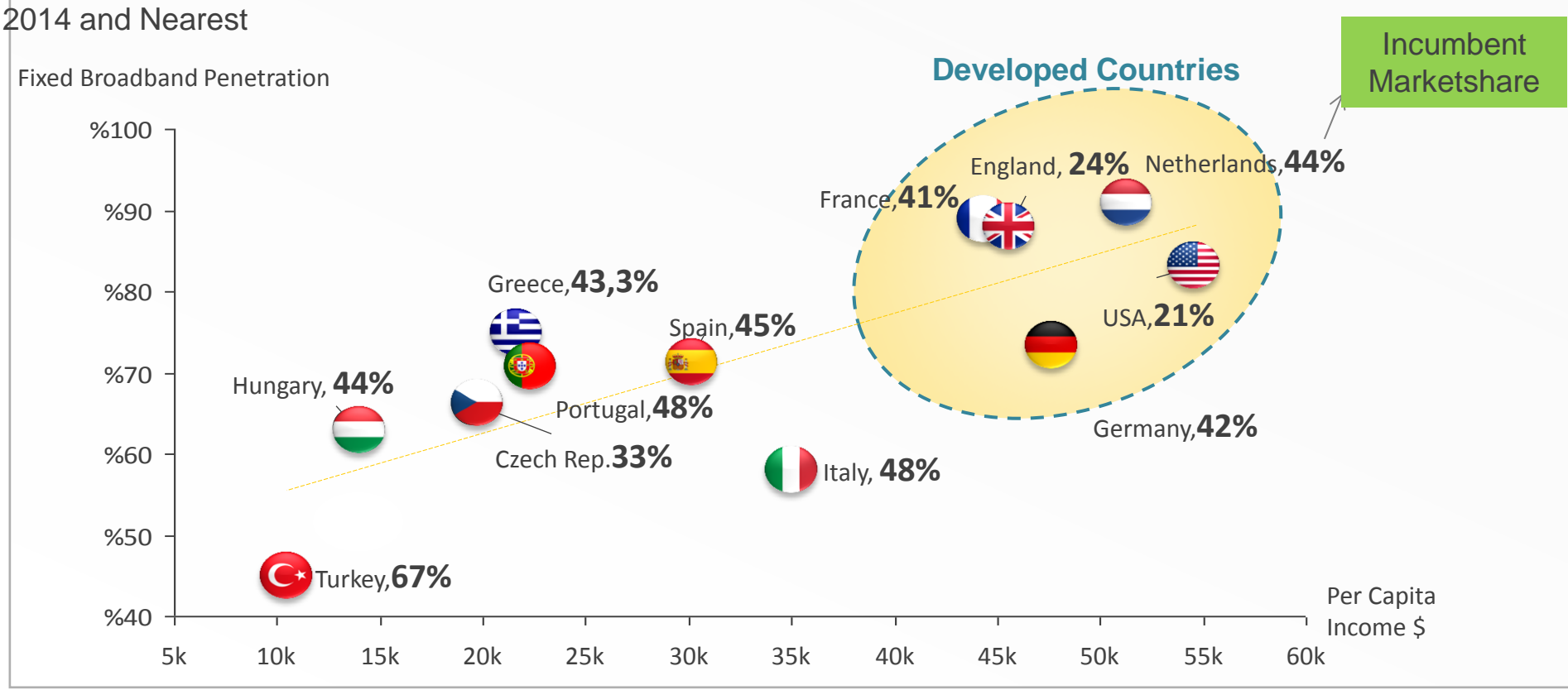
Turkey Broadband Industry

Mobile	Fixed				
3G/4.5G	xDSL	Cable	FTTH/B	Penetration	
19,2 Milion Users	Subscribers (mln, 2015)	7.5	0.6	1.9	10 mio/ %45
	Homepass (mln, 2014)	21.0	3.0	5.5	31 mio
	<p>Homepass Shares</p> <ul style="list-style-type: none"> Incumbent Op.: 100% Cable Operator: %100 Alternatives: 40% Incumbent Op., 60% Alternatives Cable: 82% Incumbent Op., 8% Alter., 10% Cable 				

Source: TÜİK, BTK, Arthur D. Little Analysis, Strategy& Report

Broadband penetration is also observed to be high in countries with high per capita income. Turkey has a way to go.

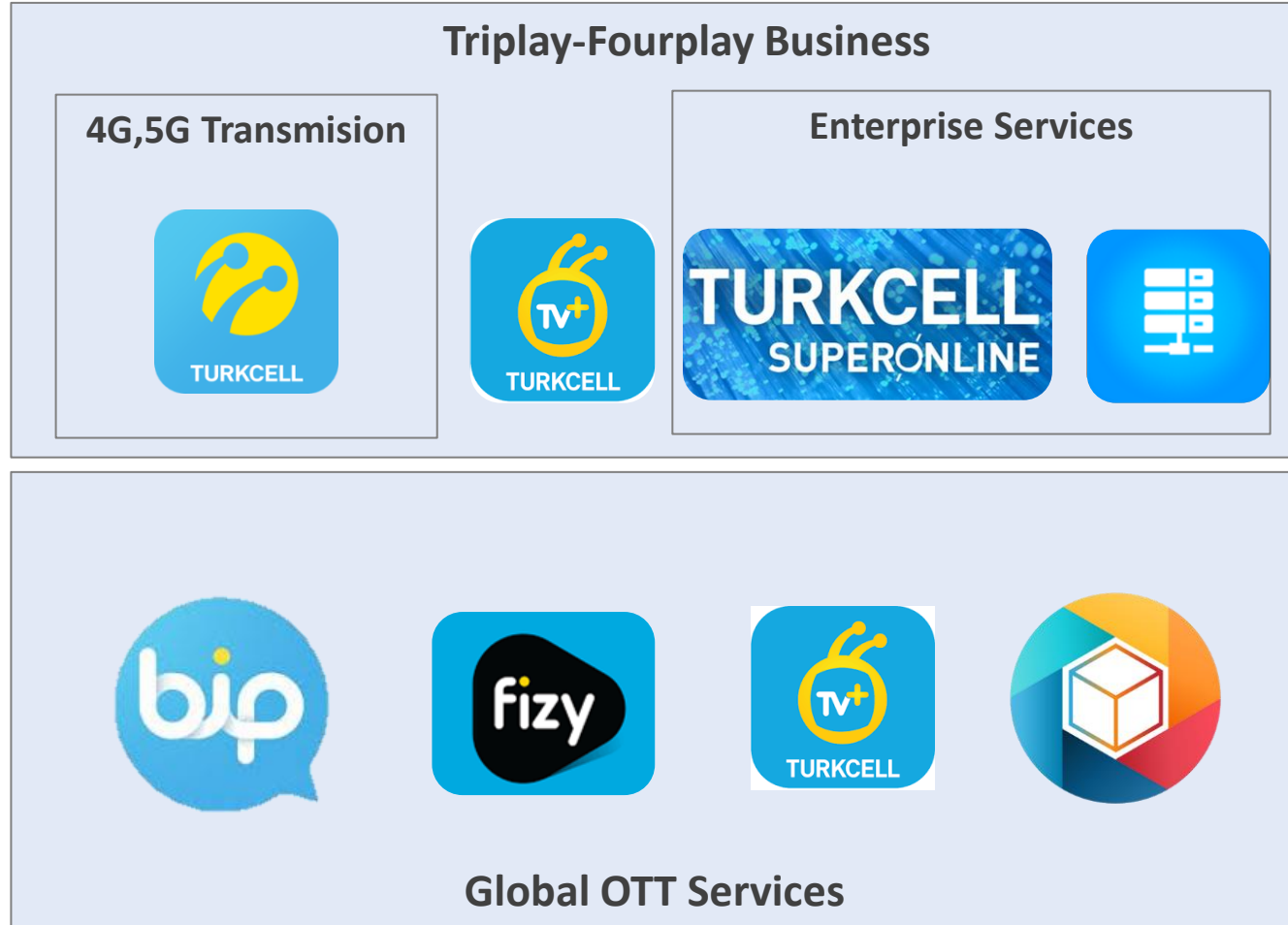
Per Capita Income vs. Broadband Penetration (Household)





**Country –
Industry
Has to
Invest
in Fiber
Network**

FOR



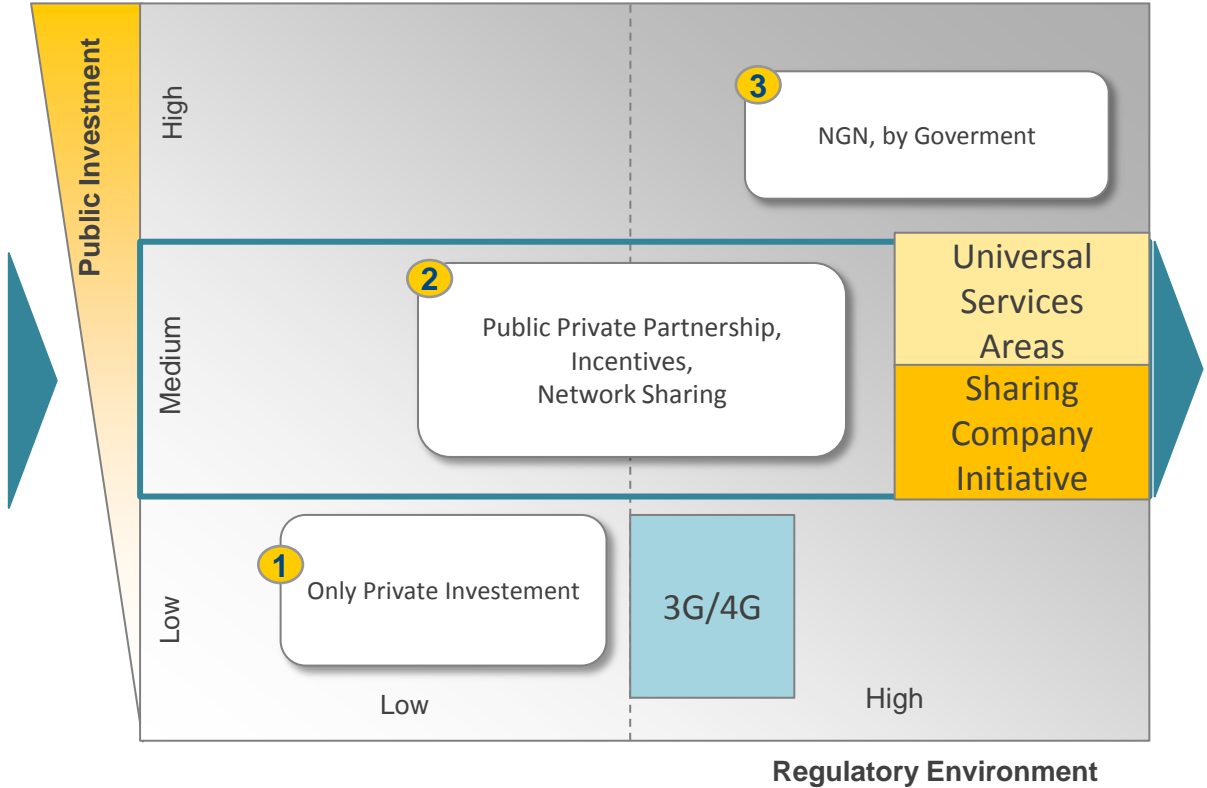
**If
alternative
operators
invest**



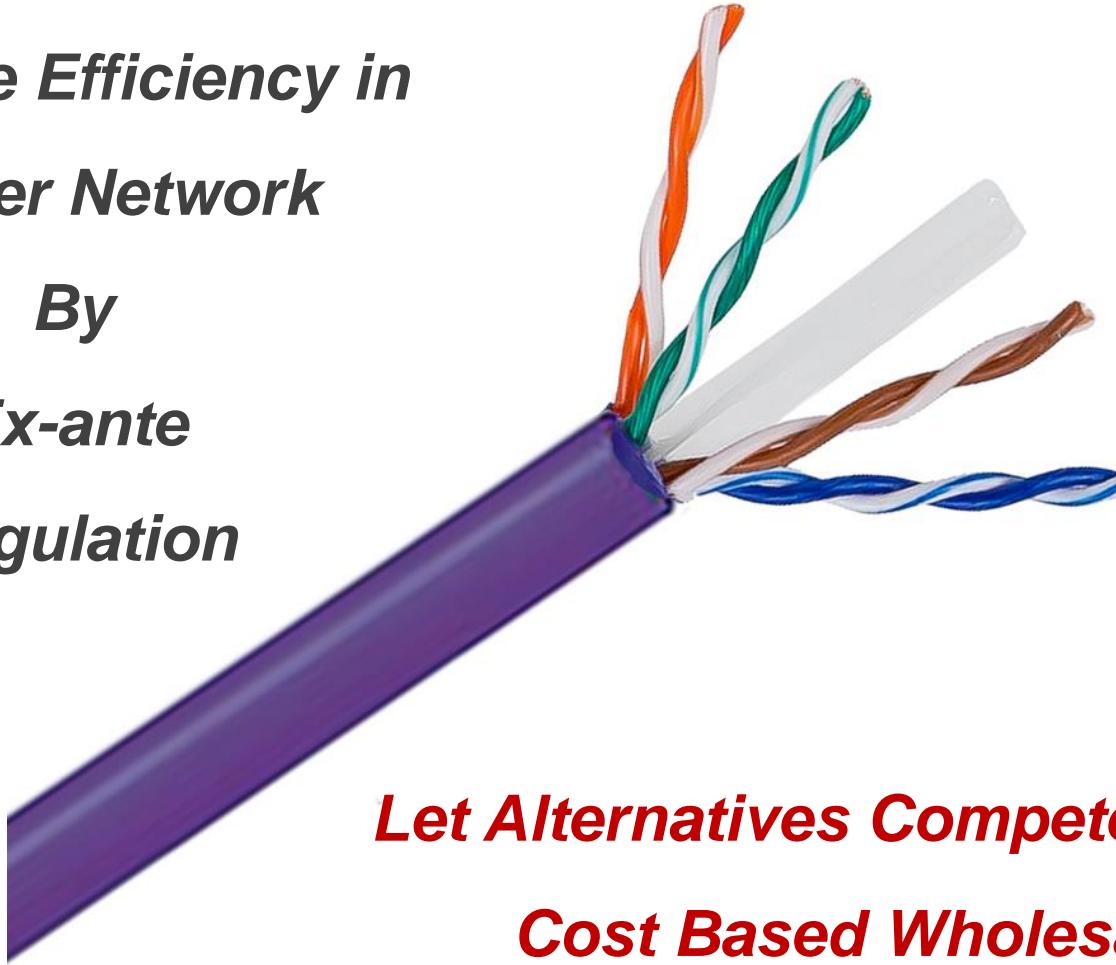
**Incumbent
operator will
do,
definitely**

New investment models should be created to reduce high investment costs.

**PPP,
Incentives,
Sharing**



*Leverage Efficiency in
Copper Network
By
Ex-ante
Regulation*



*Let Alternatives Compete in the Market
Cost Based Wholesale Prices
Access for New Wholesale Products (VULA)*