

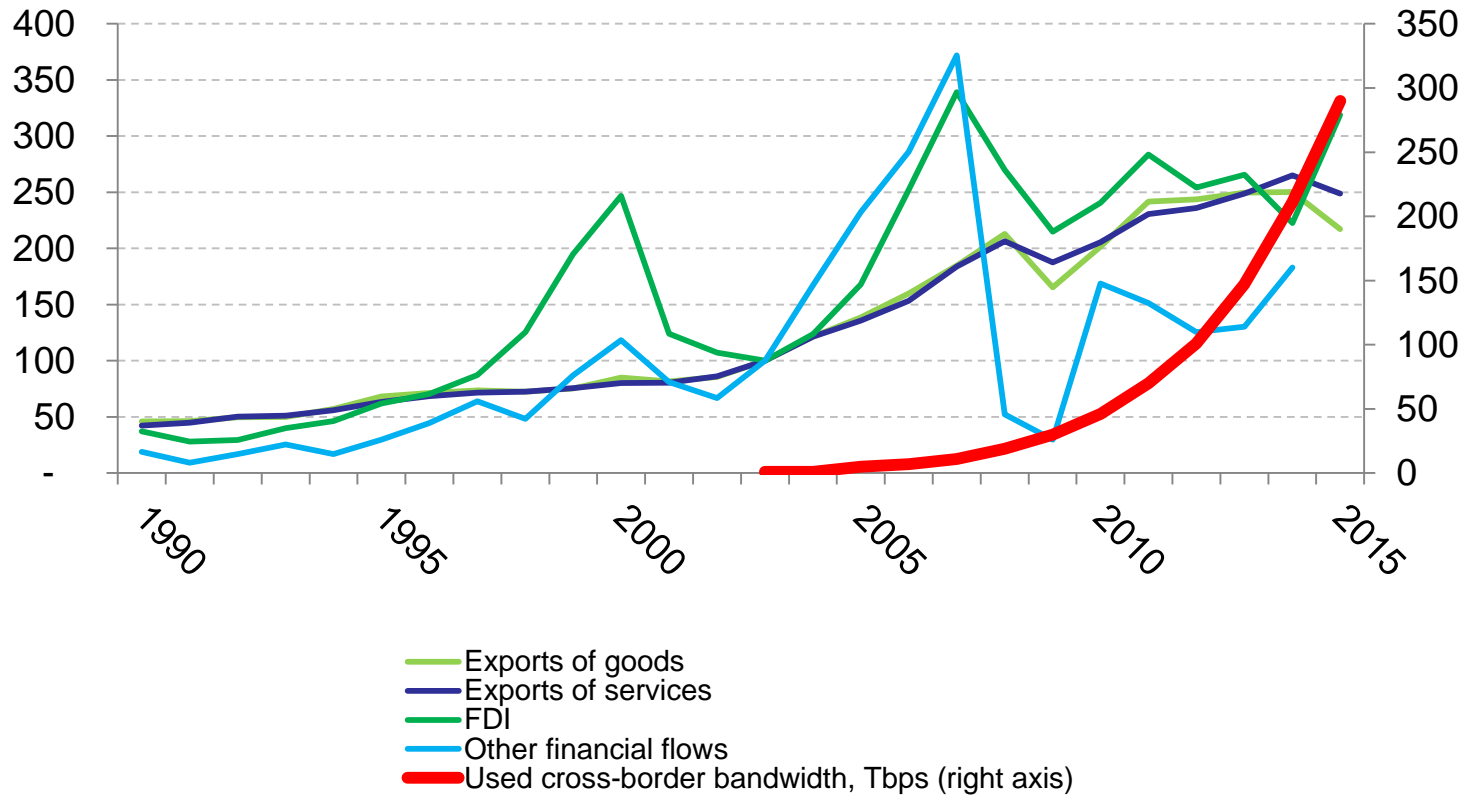
LAC in the 4th Industrial Revolution

K-LAC Forum
Intellectuals Forum, Session 2
Challenges and Opportunities of the 4th Industrial Revolution
Korea and Latin America
28 June 2017

The Digital Transformation

The core of the 4th industrial revolution

(Indexes 2003=100 & Tbps)



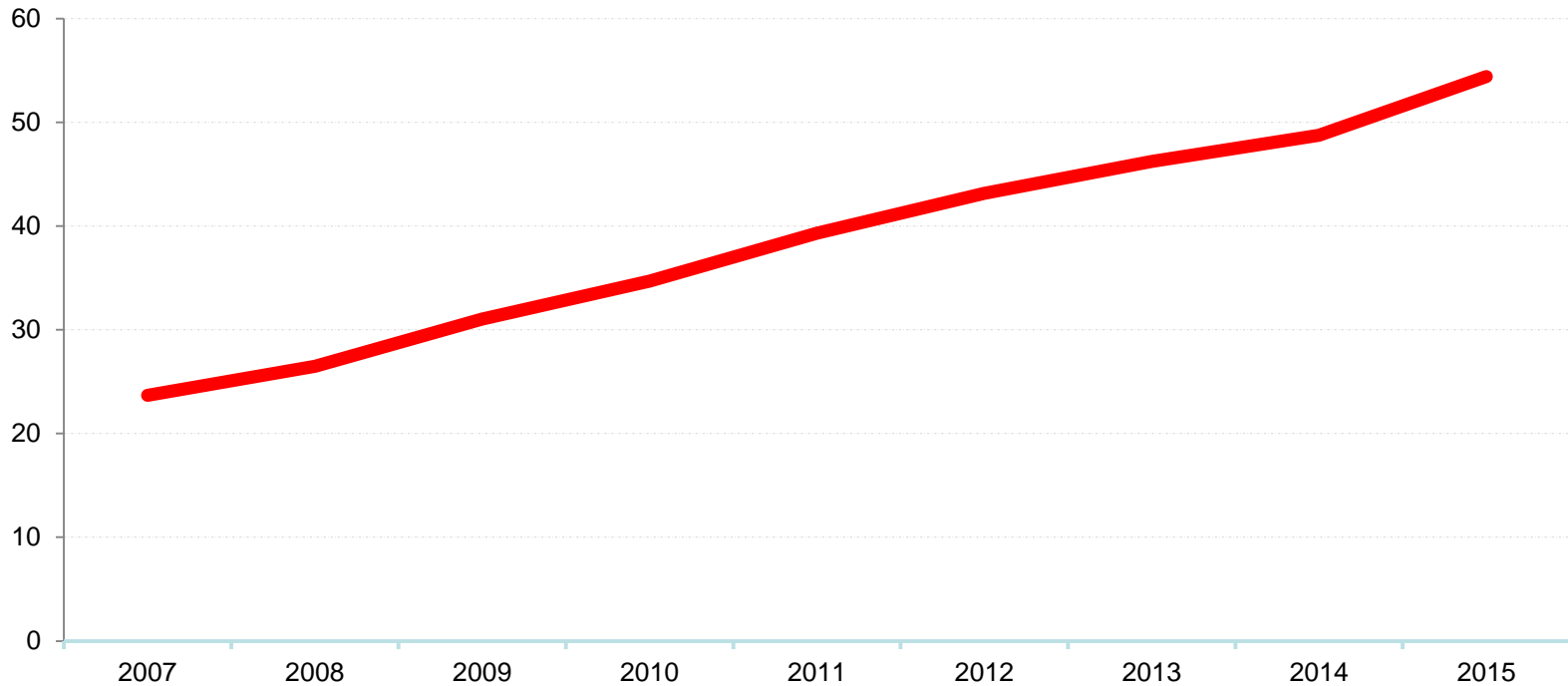
Source: ECLAC based on IMF, WTO, McKinsey Global Institute and TeleGeography.

**LAC should fast track its
digital transformation**

Internet users in LAC

(percentages)

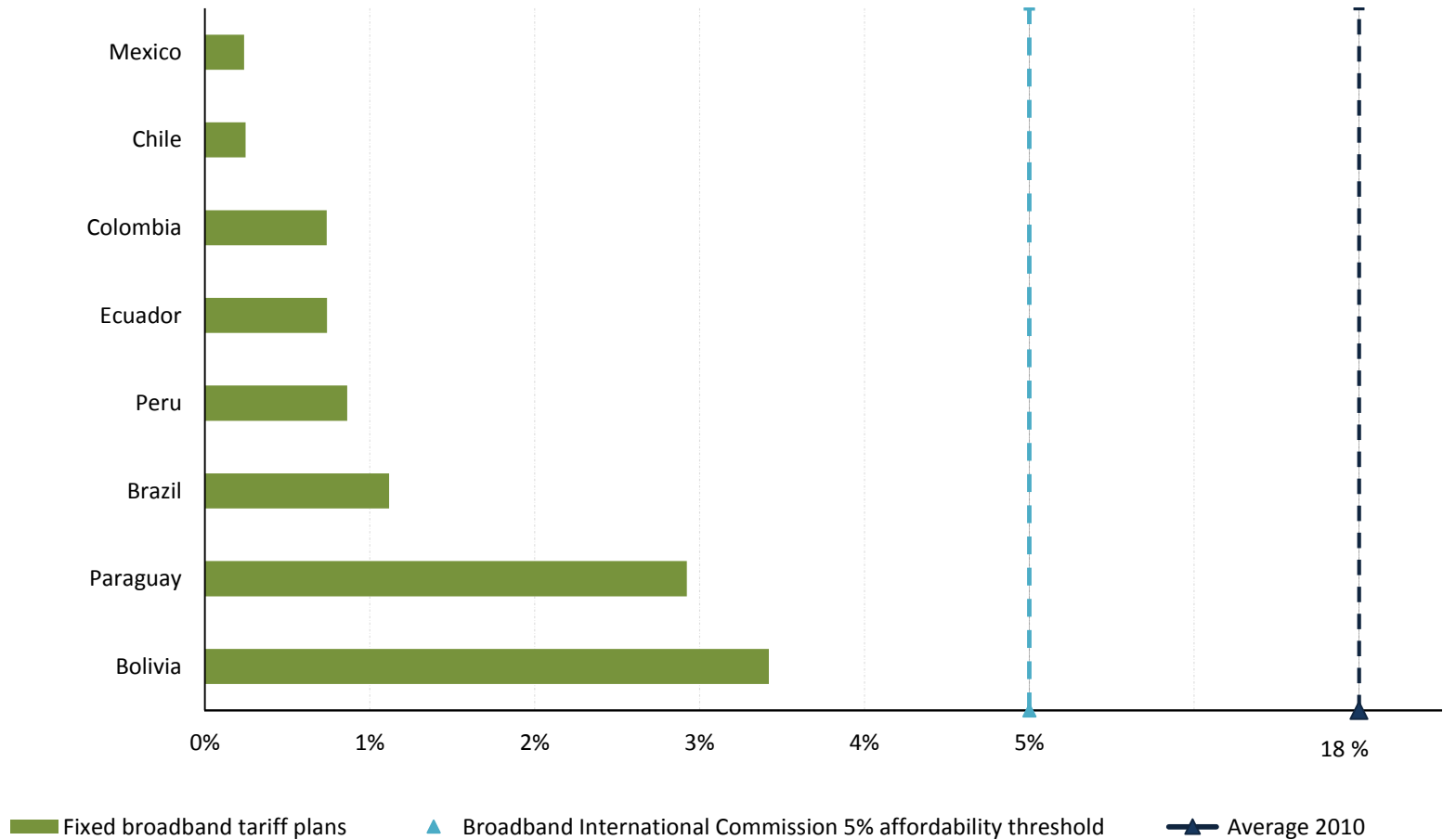
75% of millennials uses Internet



Source: UIT, World Telecommunications Indicators Database, 2016.

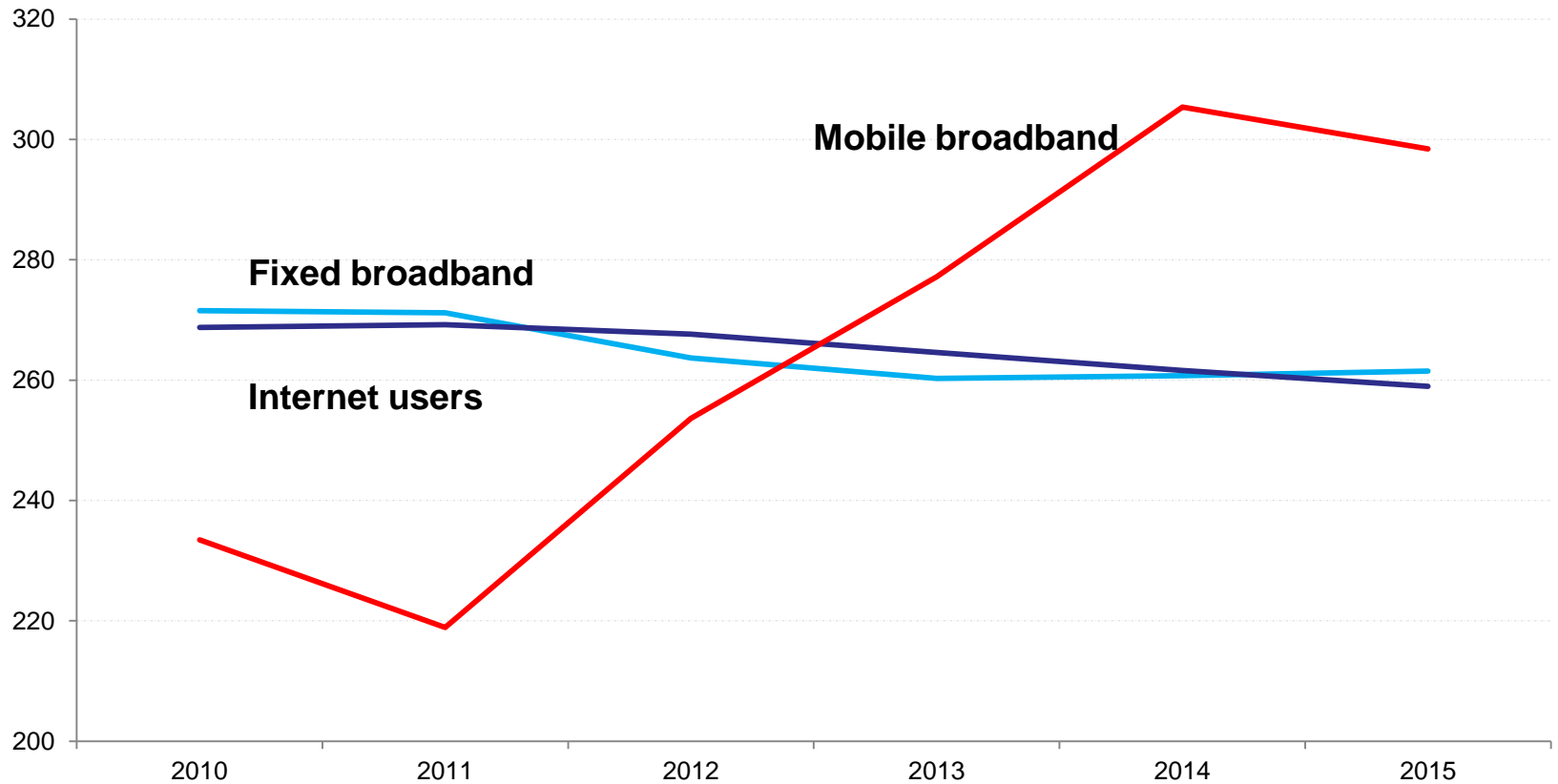
Fixed broadband tariff plans as percentage of per capita GDP

(monthly data)

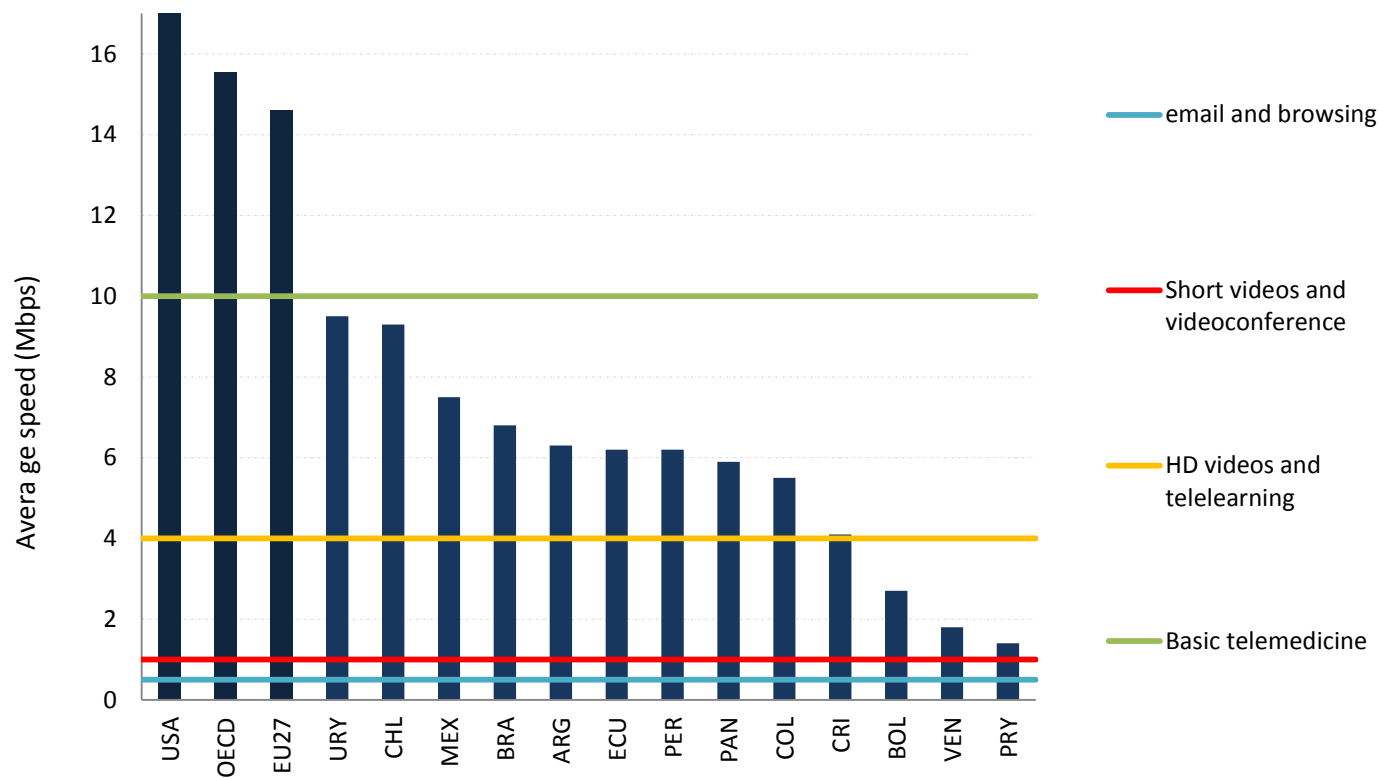


Internet access and use

(Variation coefficient, among countries)



Required connection speeds



Source: ECLAC Regional Broadband Observatory (ORBA), based on akamai's [State of Internet], Q3 2016 Report, and *Federal Communications Commission*.

Limited progress in 4G and optic fiber connections

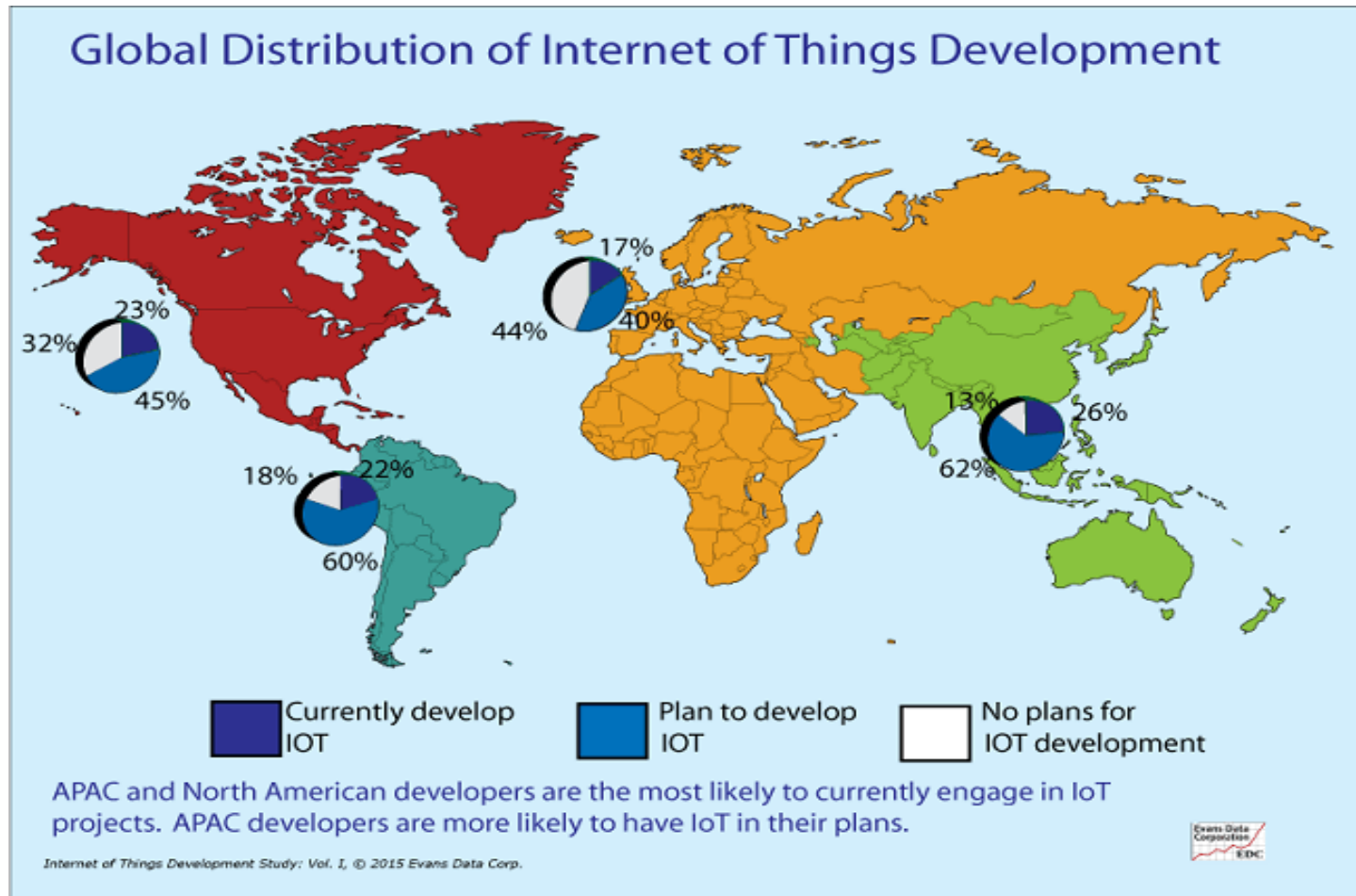
In LAC in the fourth quarter of 2016,

~22% of mobile connections used 4G
(by 2020, 3G share will be 51%)

~12% of optic fiber access

**Making progress in new
technologies**

IoT development in South America

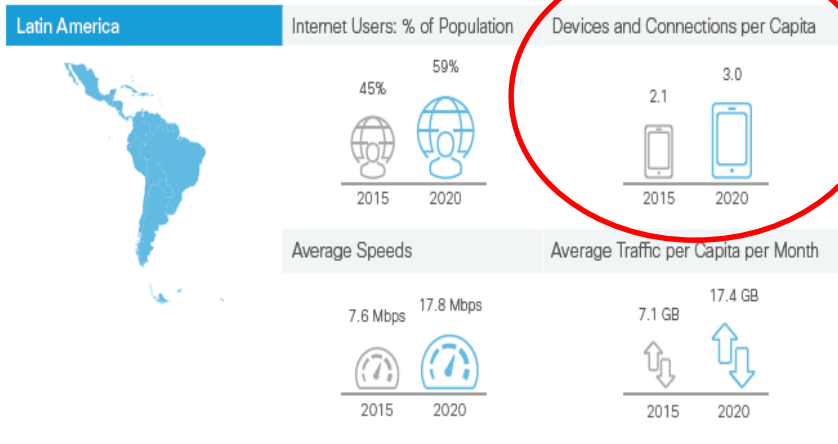


A few examples

- **Gerdau** (Brazil, steel)
 - 30,000 sensors in 1,000 machines by 2020
- **Volkswagen**
 - Brazil and Mexico: *Modularer Längsbaukasten (MLB)* platform
- **Daimler** (Mexico)
 - First assembly plant in North America with Modular Front Architecture platform (MFA)
- **Tecnoparque Network Colombia**
 - Wireless sensor network to monitor banana crops
- **SIGFOX**
 - Landed in the 4 largest LAC markets with LPWAN in 2016

Constraints/opportunities

CISCO's LA 2020 forecast



Source: VNI Complete Forecast Highlights, CISCO, 2016

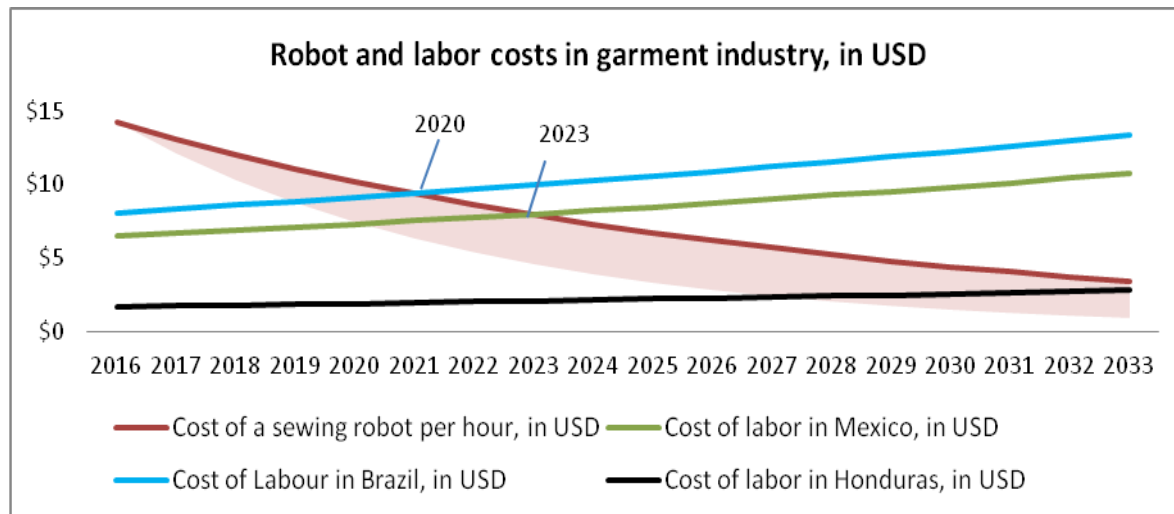
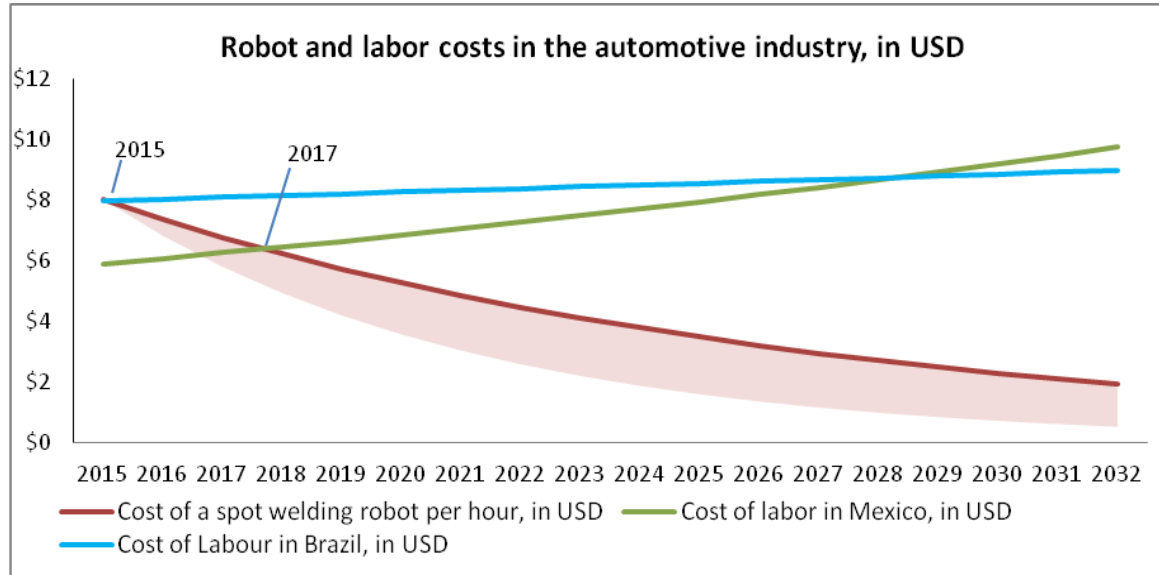
Brazilian manufacturing 2016

48% of firms use at least one medium/advanced digital technology

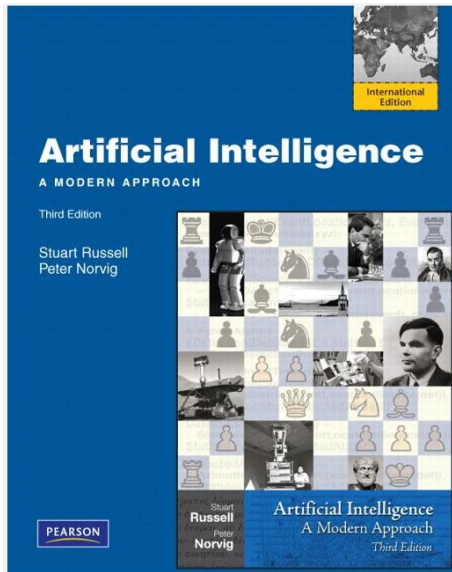
57% of small firms ignore the importance of these technologies for industrial competitiveness

Source: Indicadores CNI, 66, Brasilia, April 2016

Robots and labor cost



Schools worldwide that have adopted Russell and Norvig



Adopted for use by 1334 schools in 118 countries or regions for at least 1647 courses.

<http://aima.cs.berkeley.edu/adoptions.html>

Country	Number
Brazil	39
Mexico	13
Argentina	10
CHI, COL	6
GUAT, VEN	4
Peru	3
BOL, PAR, URU	2
ECU, NIC, CR, CUBA	1
USA	518
India	68
Rep. of Korea	16

Focus: fast tracking the digital transformation

- Increase investment in connectivity and data centers
- Embrace disruptive innovations: gig economy
- Big data-based policy design and implementation
- Reduce information asymmetries: digital platforms and infrastructure operators / policy makers

Towards a regional digital market

- Ensuring intraregional connectivity
- Develop economies of scale
- Coordination of standards and regulations
- Conditions to expand e-commerce platforms
- Facilitate the circulation of services that use digital platforms