



# High Level Seminar on The Digital Economy: a Policy and Statistical Perspective

Beijing, China  
15-17 November 2018

## Digital Economy: A Policy Perspective from Brazil

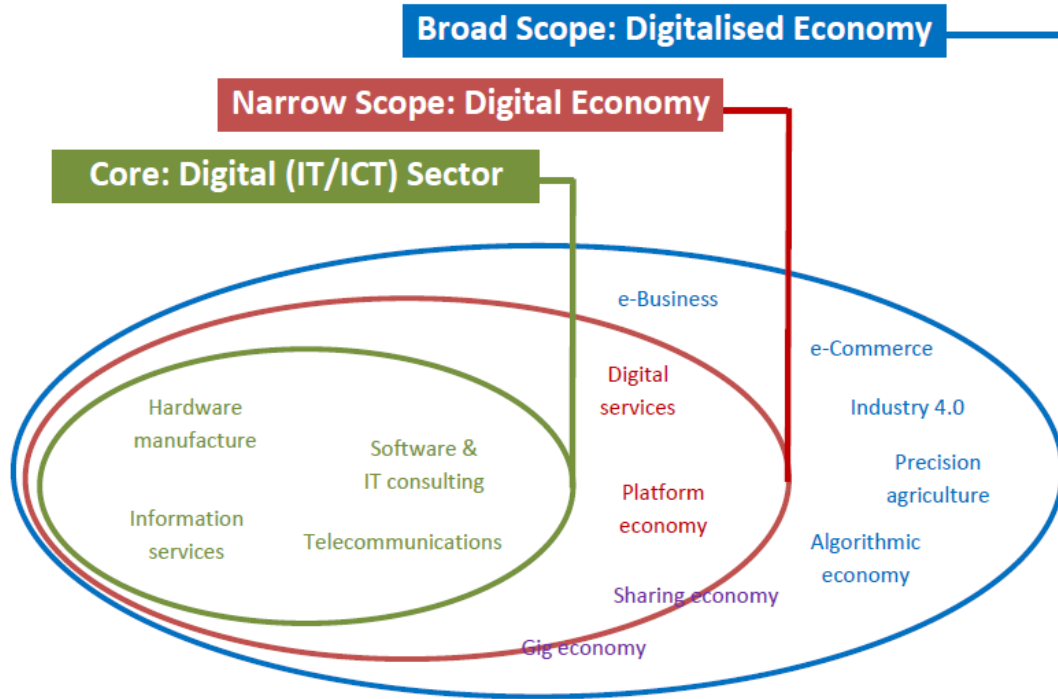
**Daniel B. Cavalcanti**  
Secretariat for Digital Policies  
Ministry of Science, Technology, Innovation and Communications  
Brazil

International Organizations and Coordination Mechanisms are engaged in promoting the digital economy and identifying comparable metrics

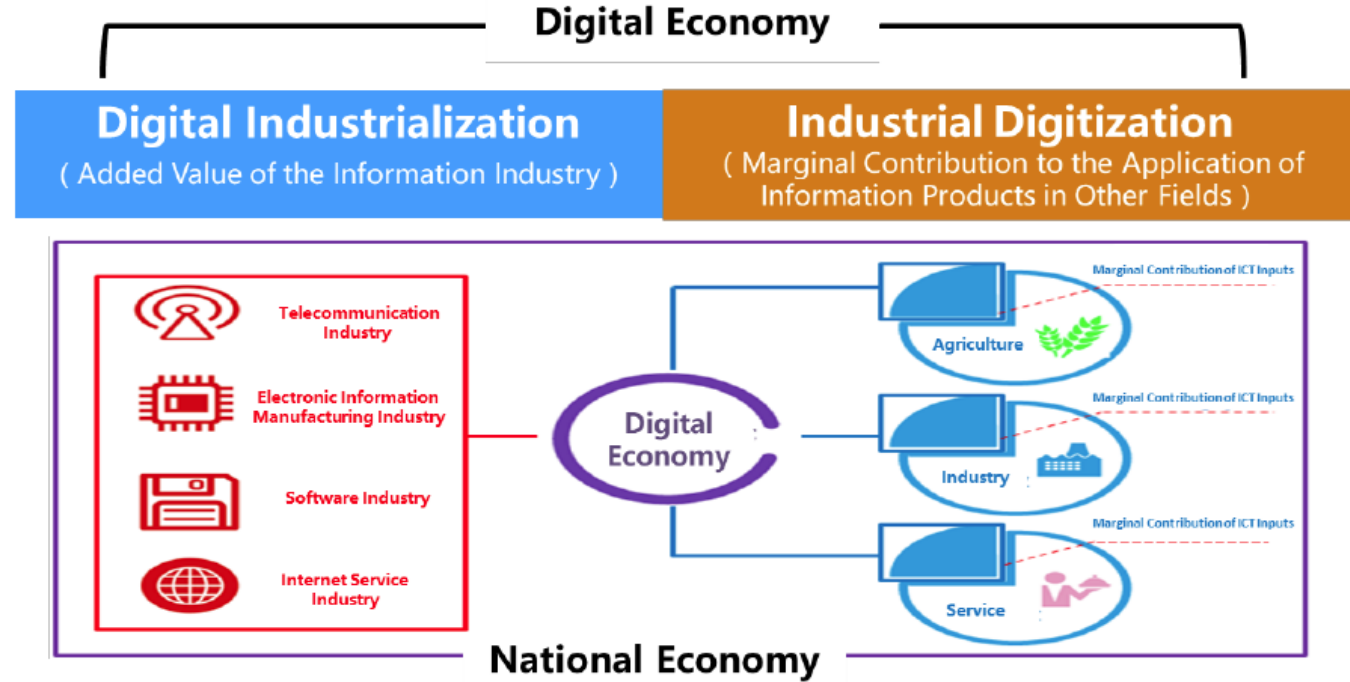


# Digital Economy Definition

## A broader definition of the Digital Economy



Source: Bukht and Heeks (2017)



Source: China – G20 DETF (2018)

G20 DETF 2016: *G20 Digital Economy Development and Cooperation Initiative*

“...a broad range of economic activities that include using digitized information and knowledge as the key factor of production, modern information networks as an important activity space, and the effective use of information and communication technology (ICT) as an important driver of productivity growth and economic structural optimization”.

# Digital Economy Definition



IMF Statistics Department

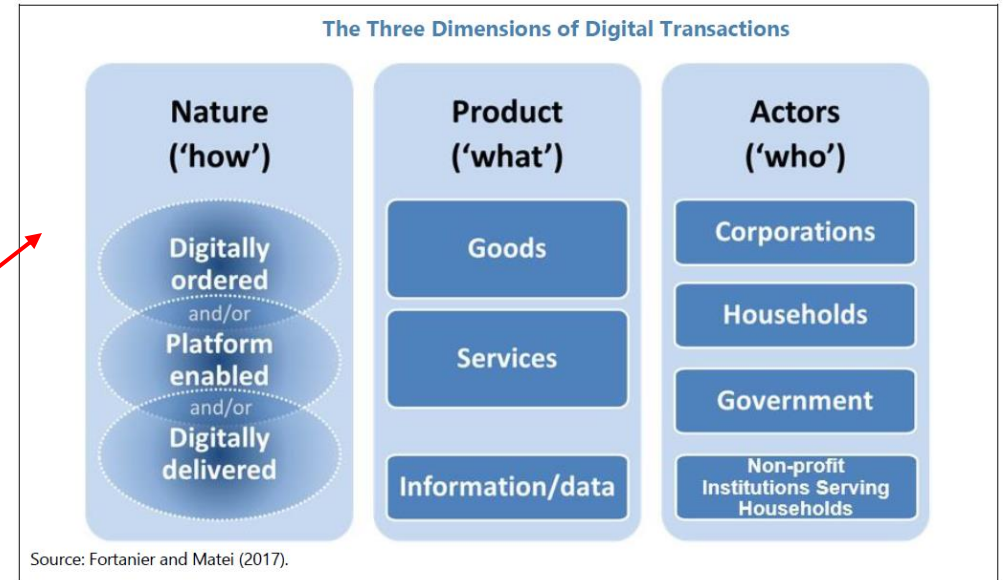


## Definition of the Digital Sector

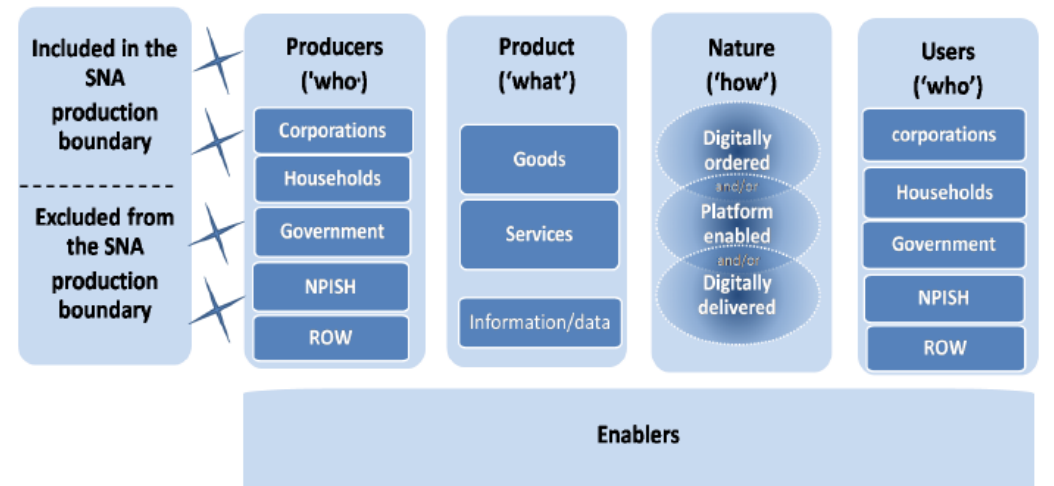
- A less ambiguous term than “the digital economy”
  - Some use “digital economy” to mean the Internet, new activities enabled by the Internet, and production of ICT goods and services
  - Others include all processes, products and transactions embodying digital technology
- Digital sector definition is broader than the ICT sector of ISIC 4
  - More complete/clearer coverage of online platforms
  - Includes platform-enabled services
- Definition of “digital sector” comprises areas of main measurement concern:
  - Producers of ICT equipment, software, and ICT services
  - **Online platforms**
  - **Platform-enabled activities** (the **Sharing Economy**, **gig economy**, ...)
- Online platforms include e-commerce, (social) media, search, sharing/gig/collaborative economy, on-demand property rental, crowdsourcing, fintech, ...
- Definition of **Digital transactions** also needed for analytical purposes
  - “digital ordering” is criterion for defining e-commerce
  - “digital delivery” of services (e.g. in foreign trade)
  - “platform-enabled” services

Source: Reinsdorf (2018)

# Definition x Measurement in the Digital Economy



UN ECOSOC E/CN.3/2018/28 : Conceptual framework for measuring digital trade



OECD STD/CSSP/WPNA(2017)10 : Dimensions of the digital economy

# Digital Economy Indicators and Metrics

The level of readiness of a country for the **Digital Economy** affects the perception of its level of **Competitiveness**



Global  
Cybersecurity  
Index

UNITED NATIONS  
E-GOVERNMENT  
SURVEY

E-GOVERNMENT IN SUPPORT OF SUSTAINABLE DEVELOPMENT



Global Innovation Index



Industrial Development Report



The Global  
Competitiveness Report  
2016-2017



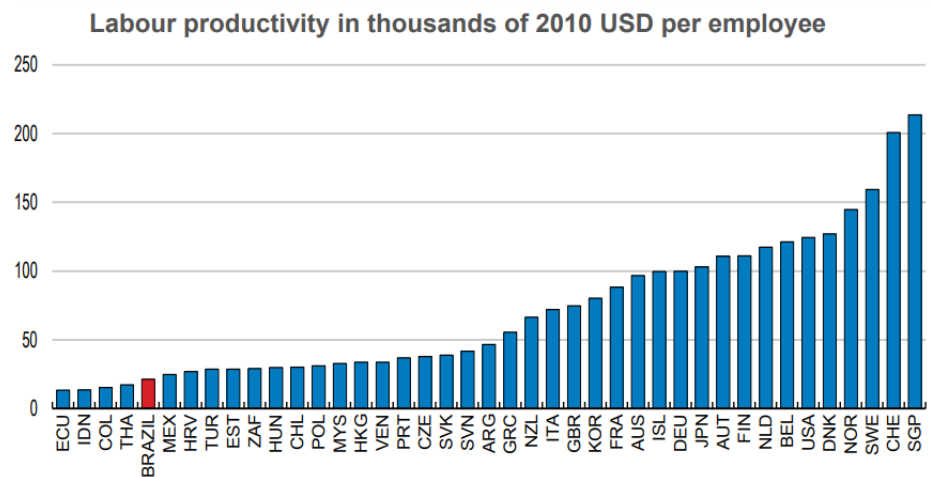
# Digital Economy Challenges and Opportunities

**Digital Economy = opportunity for growth in Productivity and Competitiveness.**  
**Positive correlation between productivity, digital technology intensity and per capita income.**

## Productivity



### Productivity is low

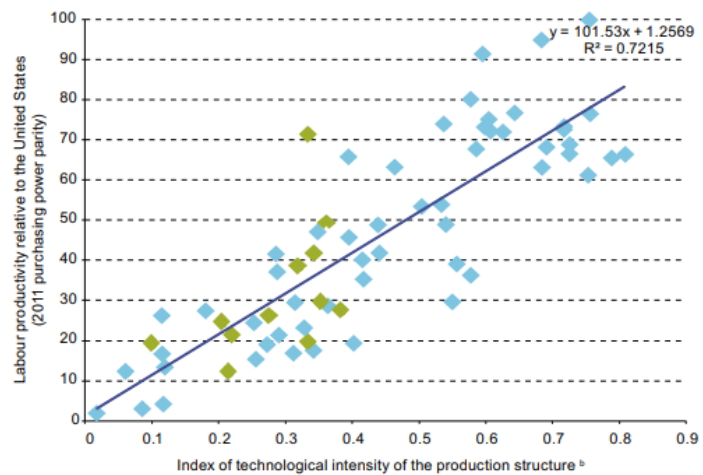


Source: World Bank; ILO; IBGE.

OECD ECONOMIC SURVEY OF BRAZIL 2018

## Technology

### Technological intensity of the production structure and relative productivity, 2013<sup>a</sup>



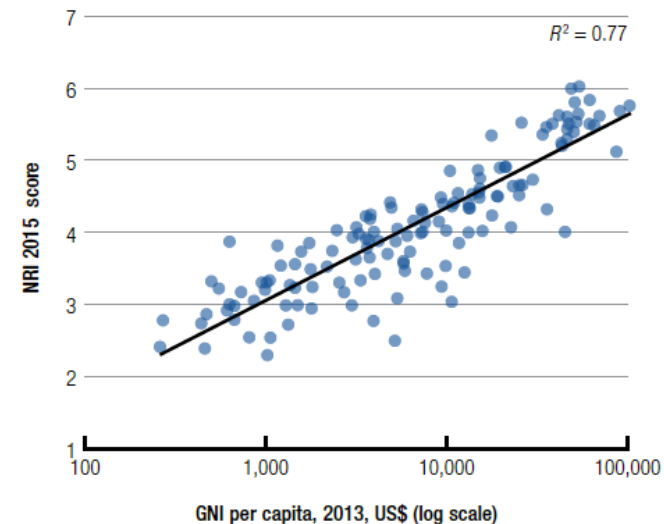
Source: Economic Commission for Latin America and the Caribbean (ECLAC).

<sup>a</sup> Data for 68 countries; Latin American countries shown in green.

<sup>b</sup> Index = 0.125\*patents+0.125\*(I+D)+0.25\*high-tech share of exports +0.5\*ICTs.

## Income

### Networked readiness and income

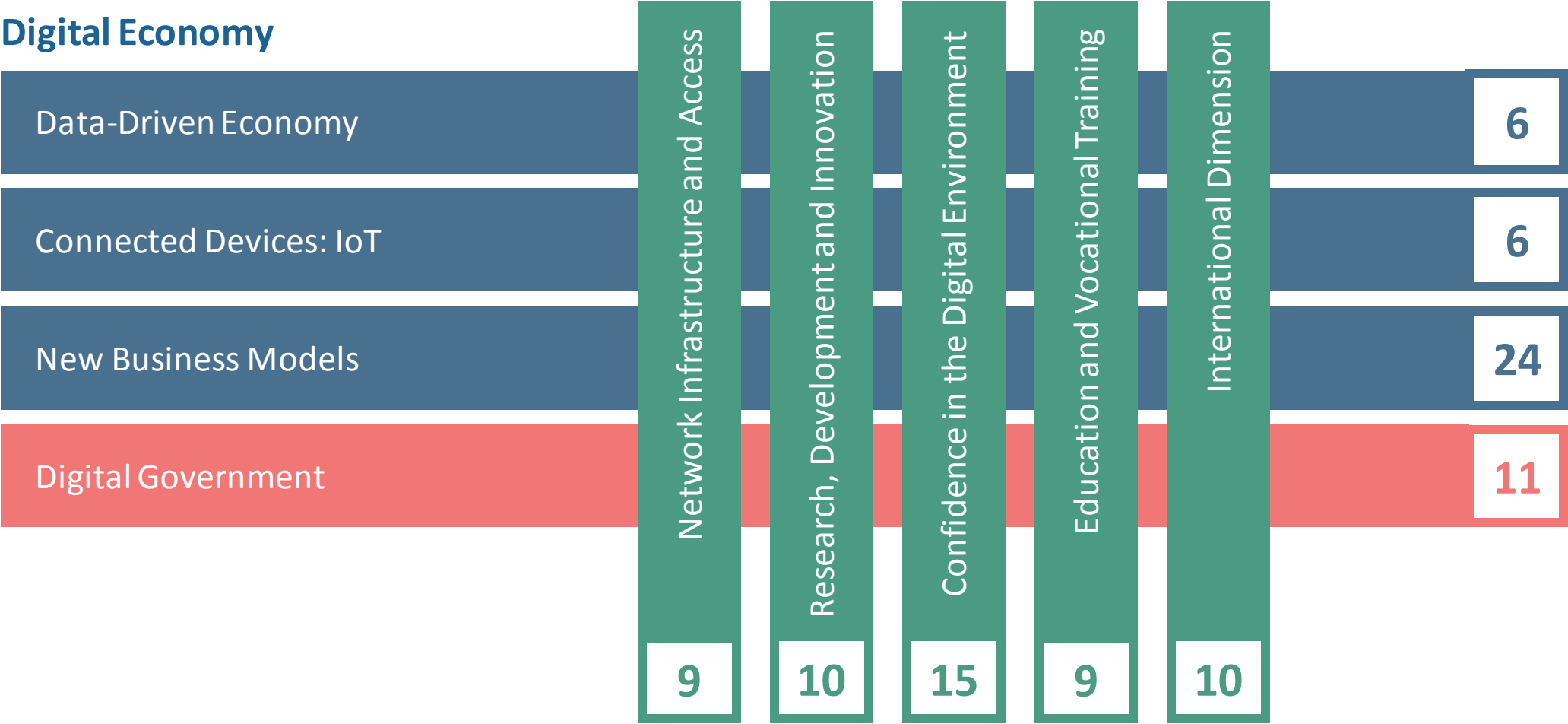


Sources: World Economic Forum; World Bank 2015.  
 Note: N = 138 economies.

# Brazil Digital Transformation Strategy Structure

100 Strategic Actions focused on enablers and drivers of the Digital Economy.

## Digital Economy





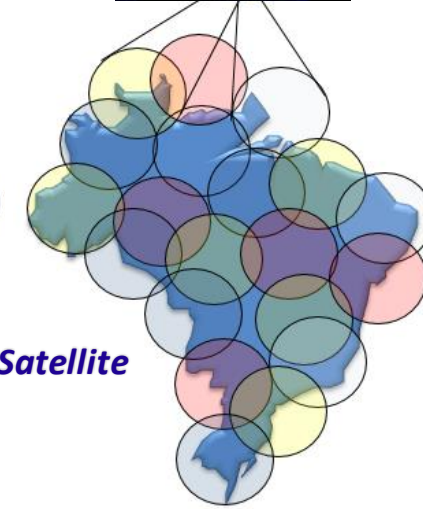
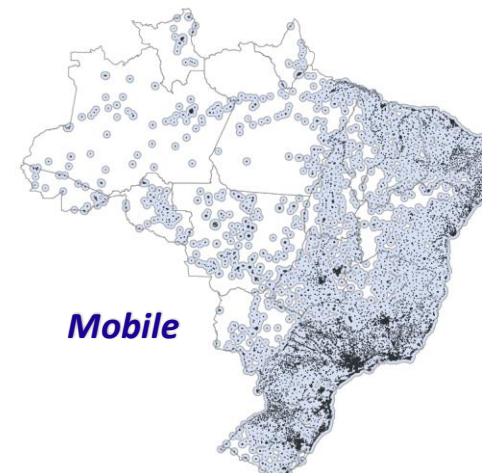
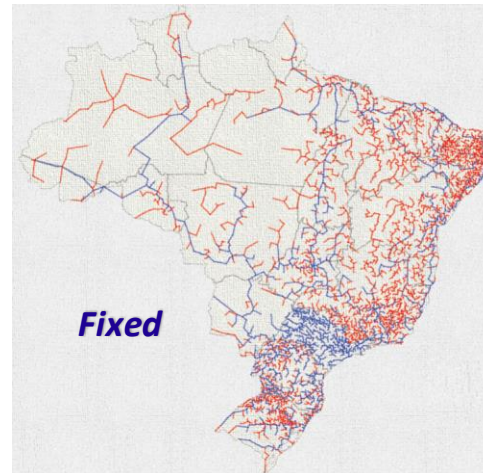
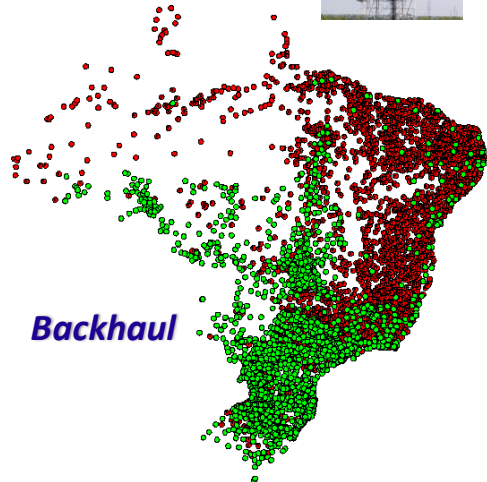
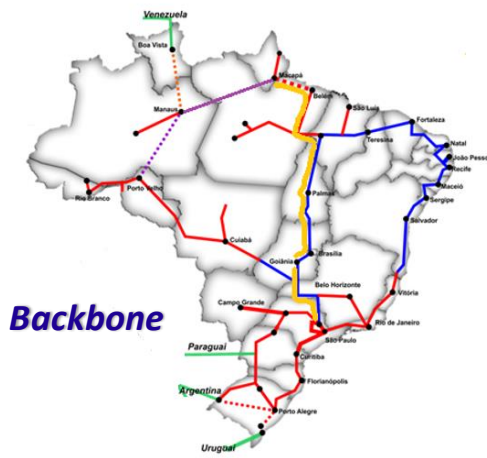
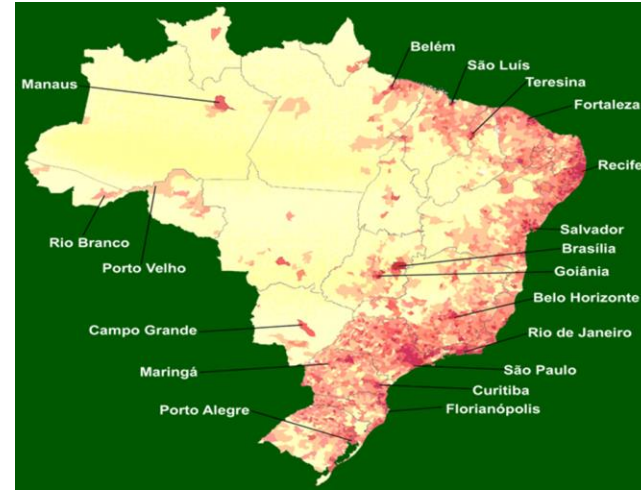
# Digital Economy

## Internet and Telecom Infrastructure

The ICT sector (goods and services) is at the core of the **Digital Economy**.

### ICT “Ecosystem”:

- ✓ Network equipment
- ✓ User devices
- ✓ Telecom services
- ✓ IT services
- ✓ etc.



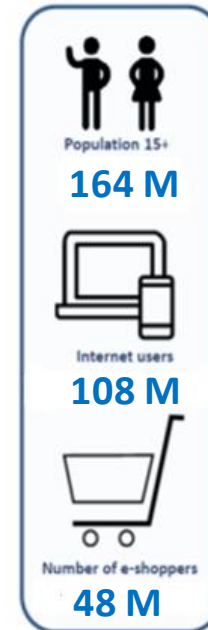
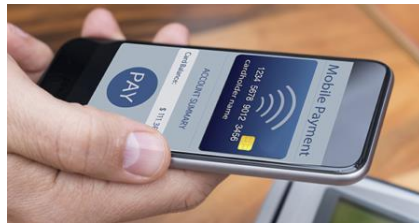


### E-commerce is globally recognized as an important driver for growth in the Digital Economy: Digital Marketplaces + Digital Means of Payment + Goods and Services

#### SMEs TOTAL 9 MILLION COMPANIES:

- 99% of Brazilian companies;
- 52% of Brazilian workforce;
- 27% of GDP;

17% of Brazilian export value, with great potential for growth

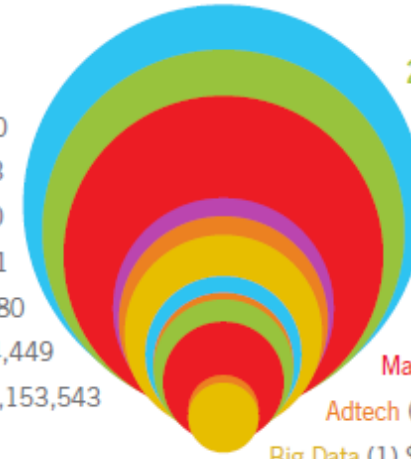


# Digital Economy

## Digital Startups



Fintech (21) \$142,955,200  
 e-commerce (27) \$112,657,033  
 Transportation (3) \$45,120,600  
 Other (33) \$43,129,071  
 Digital Security (4) \$36,799,080  
 SaaS (10) \$26,284,449  
 Edtech (9) \$21,153,543

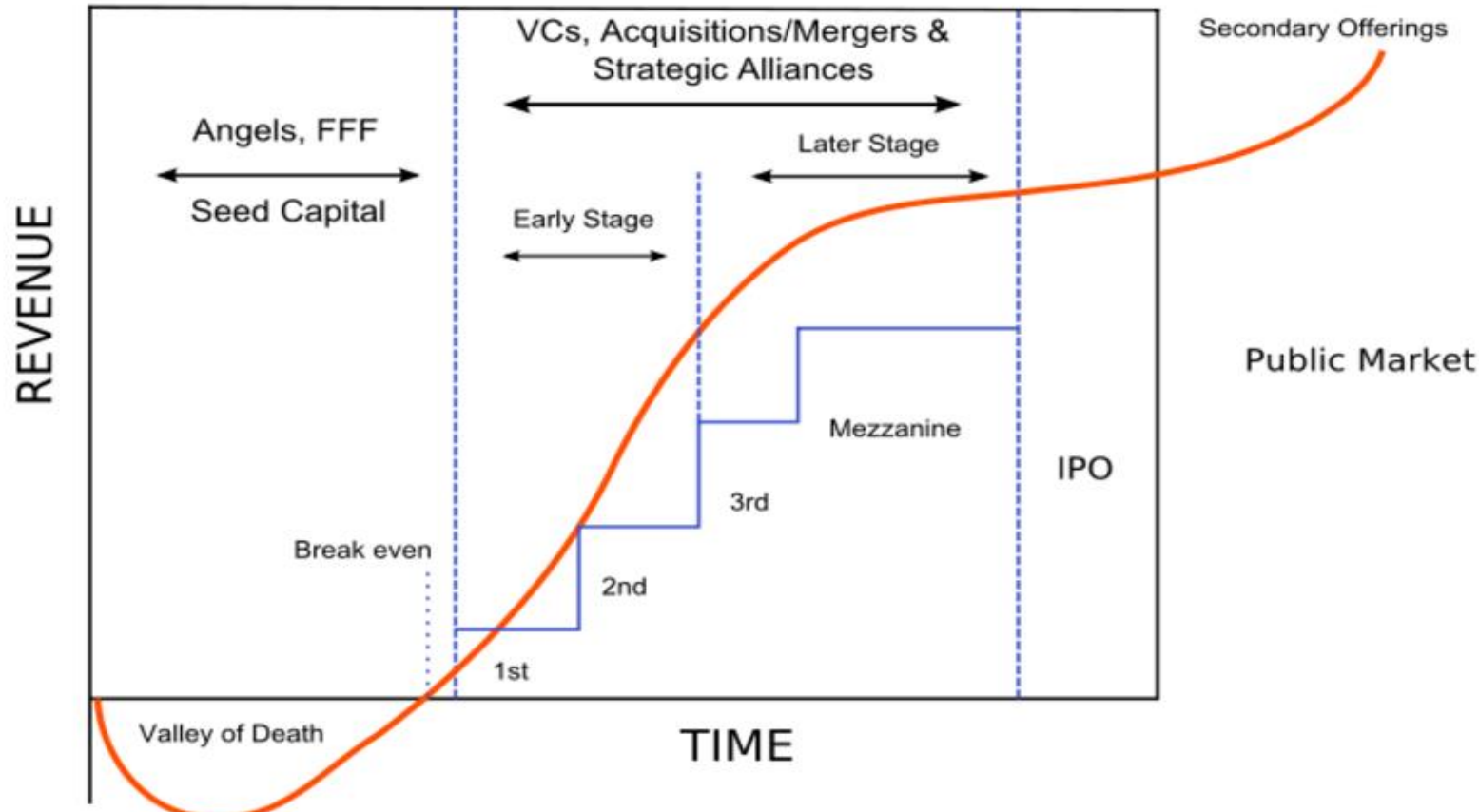


2015 IT SUB-SECTOR BREAKDOWN  
 (# of Transactions) US\$



Logistics and Distribution (4) \$17,642,500  
 Consumer/Retail (1) \$15,930,257  
 Marketplace (8) \$15,712,508  
 Adtech (5) \$11,659,480  
 Big Data (1) \$10,389,200

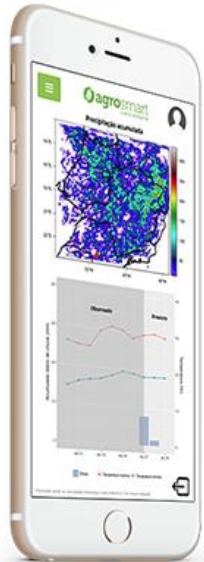
### Startup Financing Cycle



**Digital Startups**  
 (platforms, fintechs, etc.)  
 bring growth and  
 productivity to the  
**Digital Economy.**

# Digital Economy

## Internet of Things



Expand the **Digital Economy** by exploring comparative advantages in key sectors, with the support of **Digital Technology, Big Data and Analytics.**



**Example: Smart Farming & Precision Agriculture**







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## Thank You!

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