



Financing of the Digital Inclusion Initiatives

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- ICTs in Economic and Social Development
- Brazil: recent evolution and current stage
- The role of financing and the action of BNDES
- Options and possible priorities on future agenda

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- Information and Communication Technologies (ICTs) are unmistakably on the Development's agenda
 - ✓ **Closely associated to the technical progress wave in the end of last century (integration of the national innovation system)**


 - ✓ **Caused changes in production ways and organization**
 - Intra and inter-productive chains relationship: optimization/*supply chain*
 - New products and services: mobile telephony, web services
 - Processes engineering

 - ✓ **Changed relation between producer and consumers**
 - More information, in many cases, means less “monopoly power”
 - Reduction of “geographic barriers”: the territory is less important as the “limit” of the national trading space (and, in many cases, international)

TICs incluídas na Agenda Social

- Natural consequence: impact on the exercise of citizenship and on social relations
 - ✓ **Transparency: “*accountability*”**
 - Control over budgeting accomplishment
 - ✓ **Services provision: relations governments / tax payers**
 - Countless initiatives in e-gov: public purchasing, certifications, public use information, tax payments, etc
 - ✓ **Employment: preparation for the new production ways**
 - ✓ **New ways of social relation: “Information Society”**

- ICTs in Economic and Social Development

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- Governments started considering access to “Information Society goods” – digital exclusion *proxy*

Access (%) of Brazilian homes

	2001	2002
Oven	97,6	97,7
TV	89,0	
Refrigerator	85,1	86,7
Telephone	58,9	
Only Cell phone	7,8	8,8
PC	12,6	
PC with Internet	8,6	

Particularity of Brazilian case

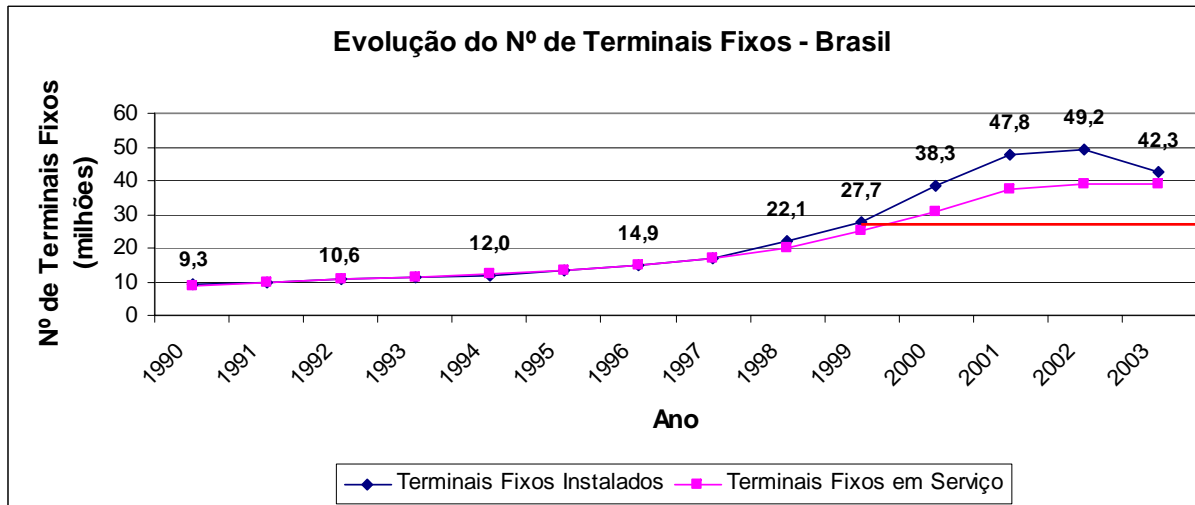
There are more homes with TV and telephone than with sewers access

Considerable recent expansion of telephony service

Fonte: PNAD / IBGE; vários anos

Brazil: Fixed Telephony Expansion (1)

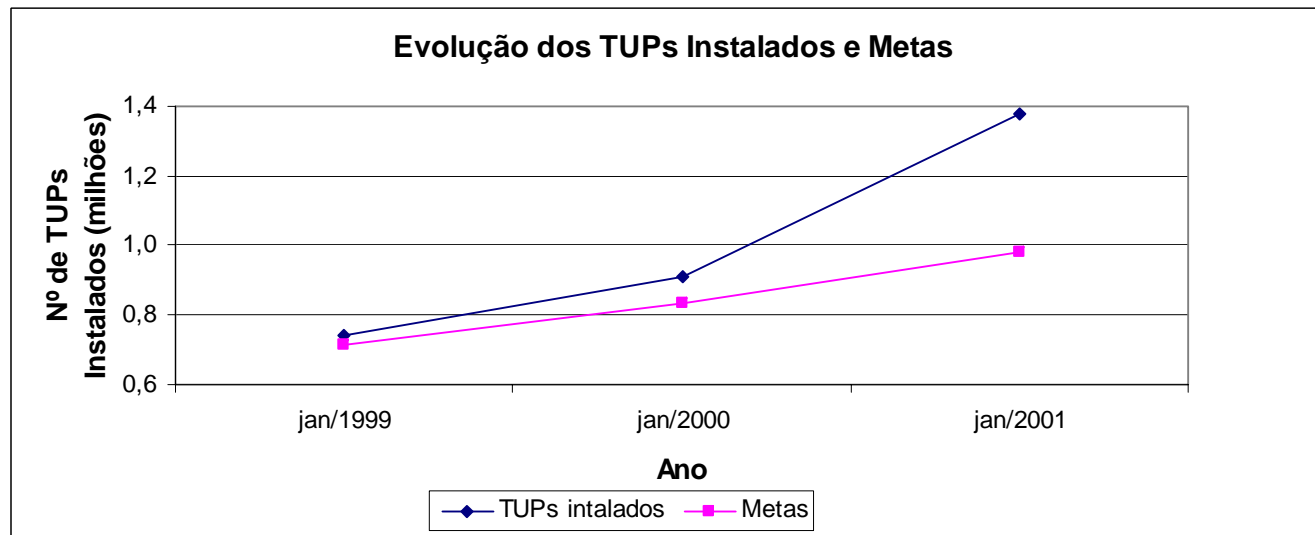
- Telecommunications Privatization
 - ✓ 1st Phase: planned universalization restricted (PGMU) to voice services - expansion via commuted fixed telephony
 - ✓ High investments between 1999 and 2001 (earliness of the 2003 concession goals)
 - ✓ Considerable expansion of private and public terminals



In just two years (end of 1999 to 2001), more than 20 million new fixed terminals were installed in the whole country

Brazil: Fixed Telephony Expansion (2)

- Considerable increase of access to public terminals in low demographic density areas
 - ✓ **Minimum of 8 terminals per 1000 inhabitants (until Dec 2005)**
 - ✓ **Geographic distribution: 1 terminal each 300 m**

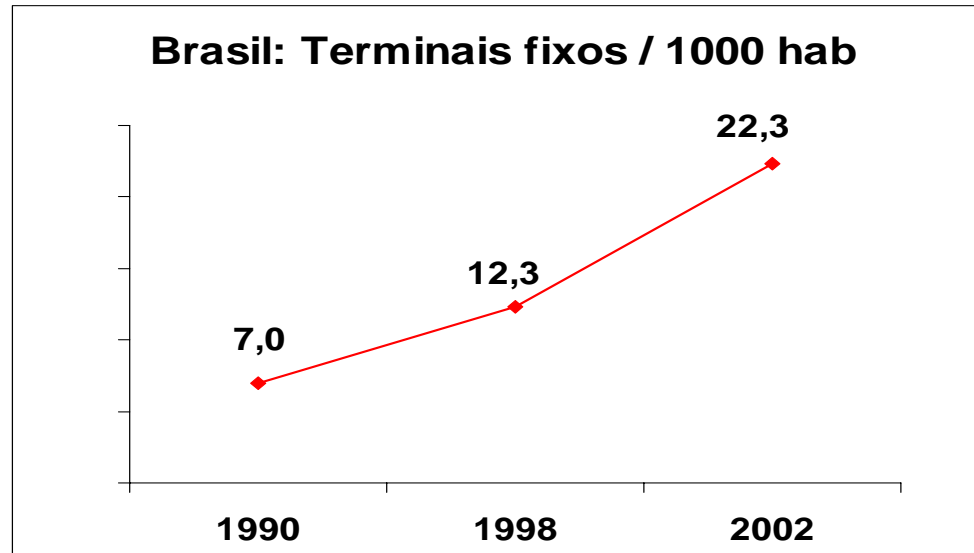


Source: Telecom online, a partir de dados da ANATEL

Brazil: Fixed Telephony Expansion (3)

- Brazil reached higher indicators than its pairs in fixed telephony:
 - ✓ **2nd highest density of public use terminals per 100 inhabitants (ITU 2003)**
 - ✓ **Increase of more than 250% in the installed terminals per 100 inhabitants ratio in the last 13 years**

Brazil: Fixed Telephony Expansion (3)

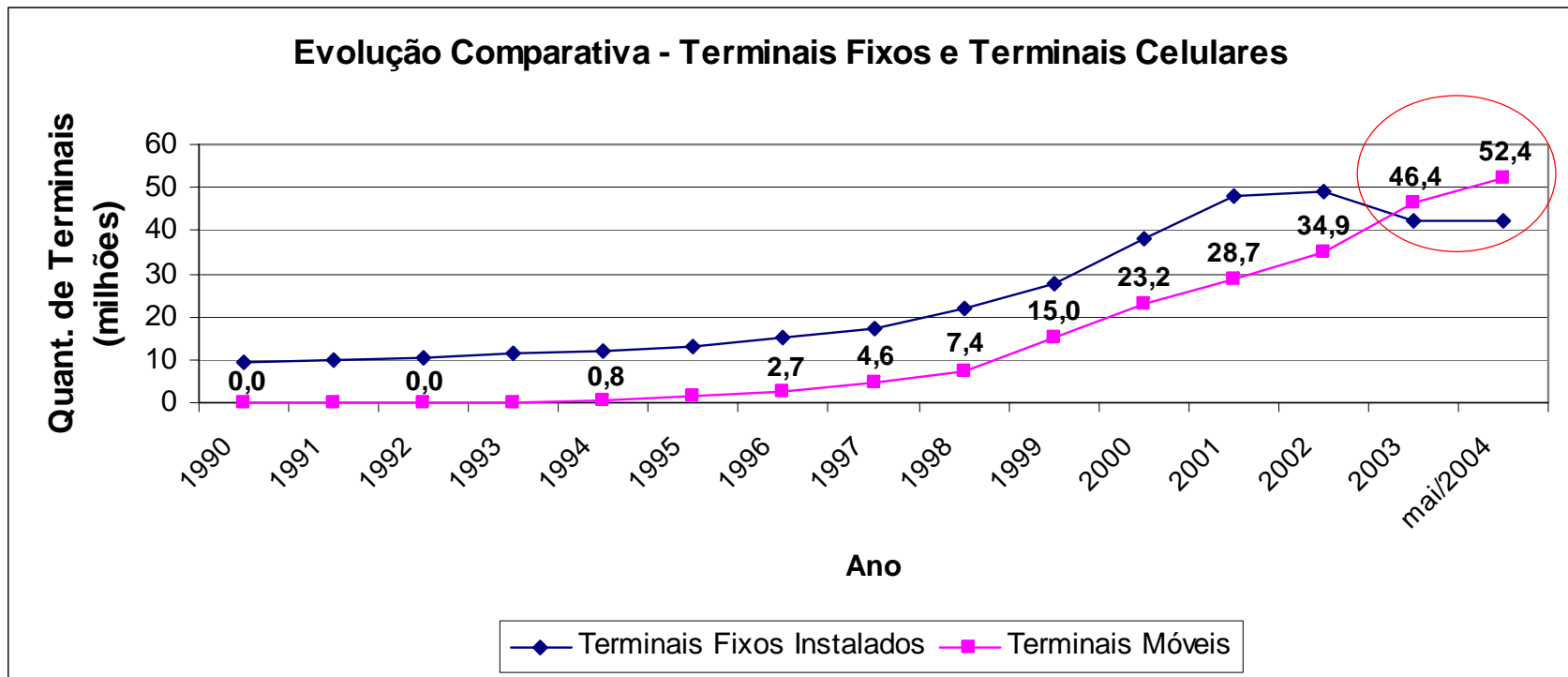


Country	Fixed Telephones (per 100 inhabitants)	Personal Computers	Internet Users	Internet/ Telephone Relation
Brazil	22,32	7,48	8,22	0,36
Chile	23,04	11,93	20,14	0,87
USA	65,89	62,5	53,75	0,6
World	18,04	9,22	9,72	0,51

Brazil: mobile telephony boom (1)

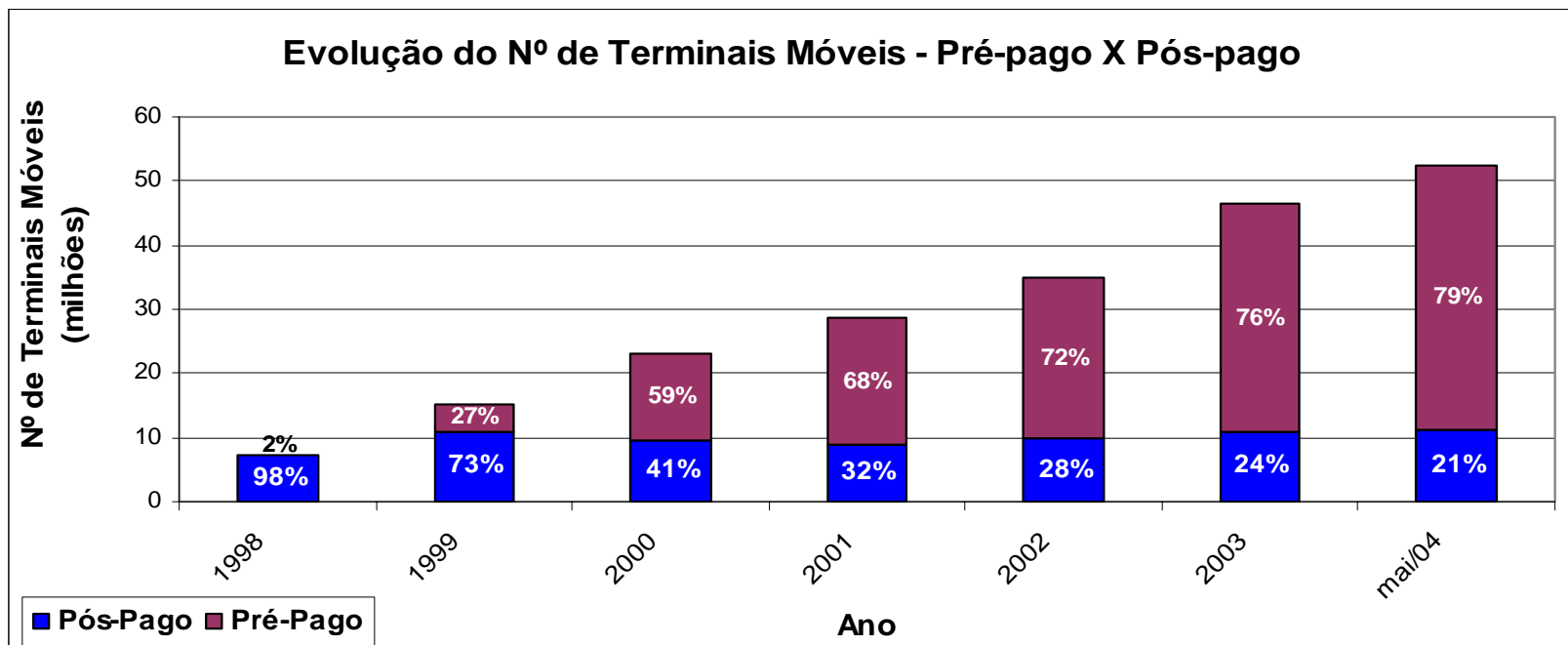
- Despite universalization and goals being bound to fixed telephony, there was an explosion on mobile access
 - ✓ **Number of cellular terminals surpassed fixed terminals in 2003**
 - ✓ **Between 1997 and May/2004, there was a 48 million terminals raise**
 - ✓ **Despite being a low income country, Brazil followed the worldwide phenomenon of mobile communications expansion**

Brazil: mobile telephony boom (1)



Brazil: mobile telephony boom (2)

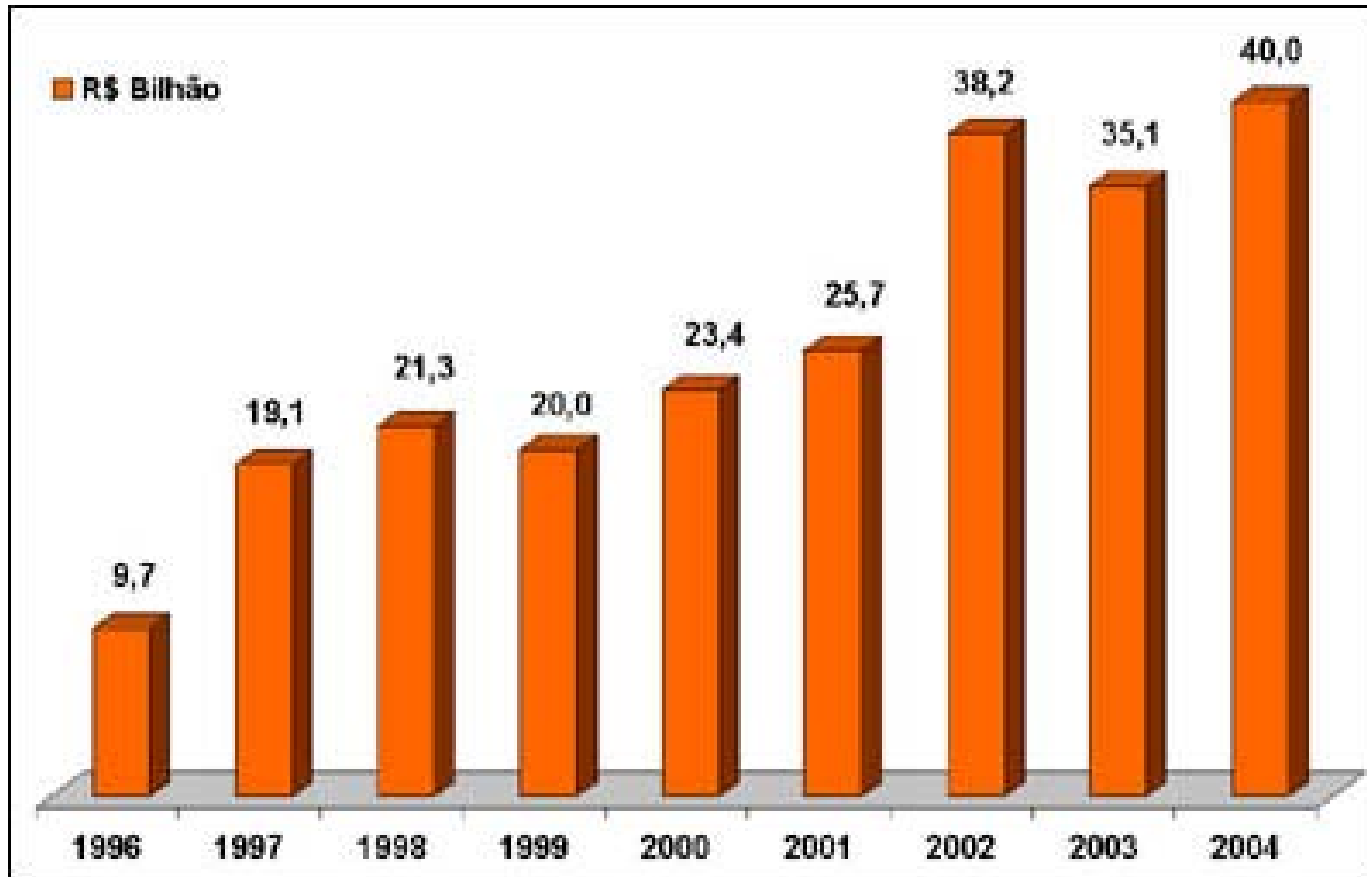
- Cell phone growth had a fundamental role on the universalization of telecommunications services infrastructure
 - ✓ **The obstacle of low familiar income was solved with pre-paid cell phone**



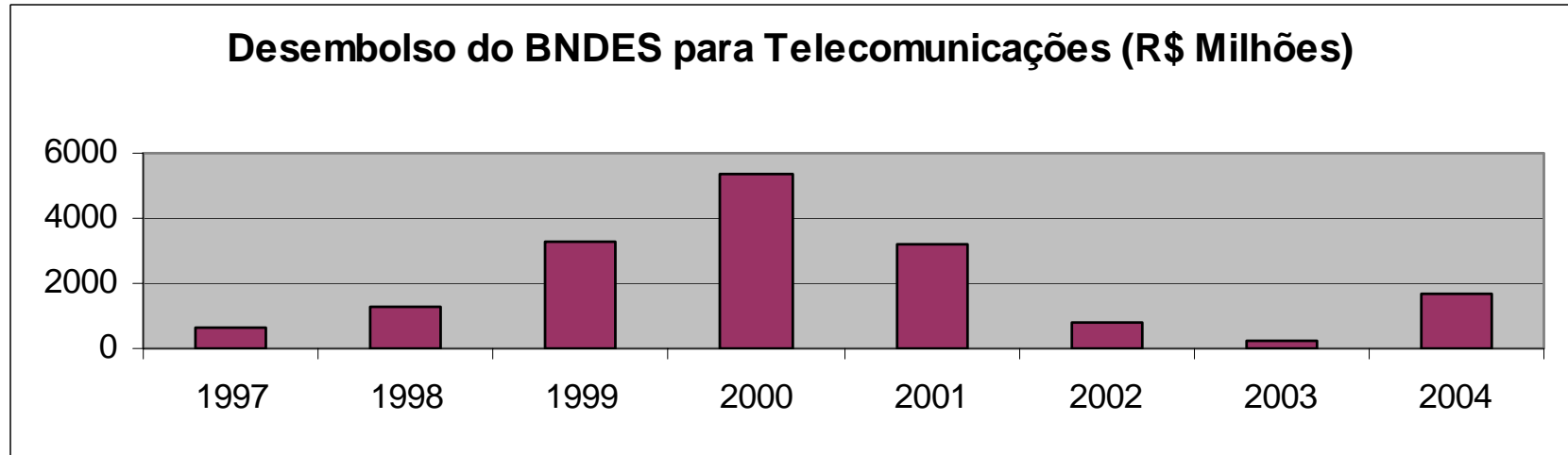
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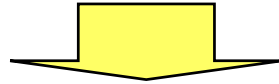
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Regulation "levering"




Regulation "levering"



Inducing Decisions on Public Policies

- Prize Mechanisms (rates, deadlines, participation level, supportable items, guarantee structure)
 - **BNDES's acting reduced deficit on equipment trade balance**
 - **Support to the strategic sectors of PITCE (financing programs)**
 - **Acting focused on the diagnosis of structural funnels**

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1) "Regulation leveraging" => new goals after reviewing contracts

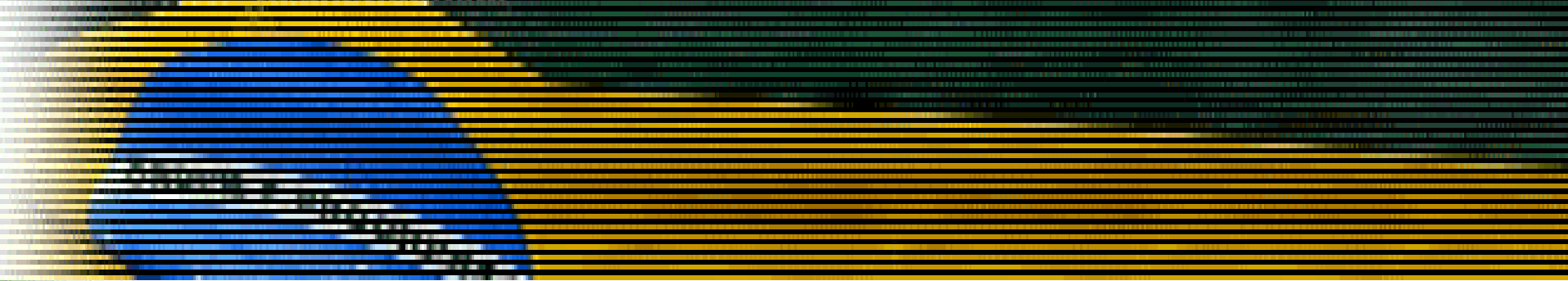
2) Inductive acting:

- By the demand side => question linked to income:
 - ✓ Financing “on top” for reducing commitment of monthly income on digital access (Ex.: PC Conectado)
 - ✓ Support to model adopted for FUST

1) "Regulation leveraging" => new goals after reviewing contracts

2) Inductive acting:

- By the offer side => question linked to technological solutions:
 - ✓ Financing for industry innovation. Ex: FUNTEC (support to cooperative research), PROSOFT (financing without real guarantees), FUNTTEL (TR + 1 a 4%py).
 - ✓ PITCE => enhancing of electronic complex productive chain by prioritizing aspects related to innovation. Ex.: attraction/development of ASICs manufacture.



THE END

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