

## Telecenters in Peru Bridging the Digital Divide

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**STATE OF PERU**

**January 2005**

# Public Policy for Bridging the Digital Divide



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Trabajo de peruanos

# Development Goal

Build an Information Society based on the principles of equity, non-discrimination and integration that uses effective and efficiently the information on their development processes through intensive use of information and communication technology.

# Internet market in Perú

## December 2003:

212,000 dial-up clients

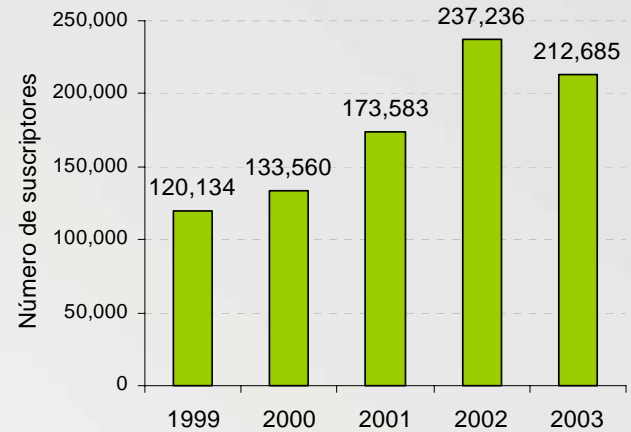
6,122 leased lines

27,002 clients of cable-módem

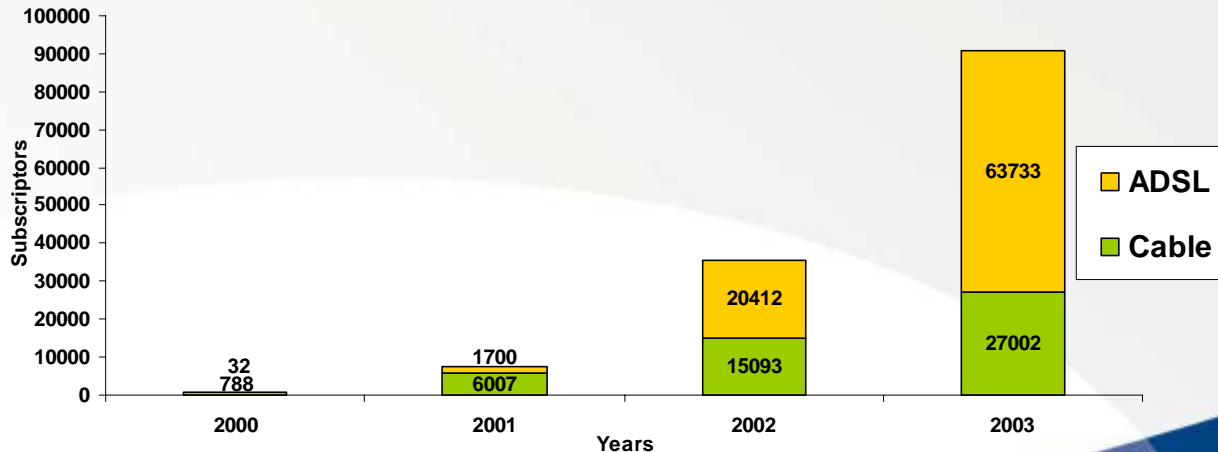
63,733 clients of ADSL

14,000 Internet Kiosks in urban areas: (2004)

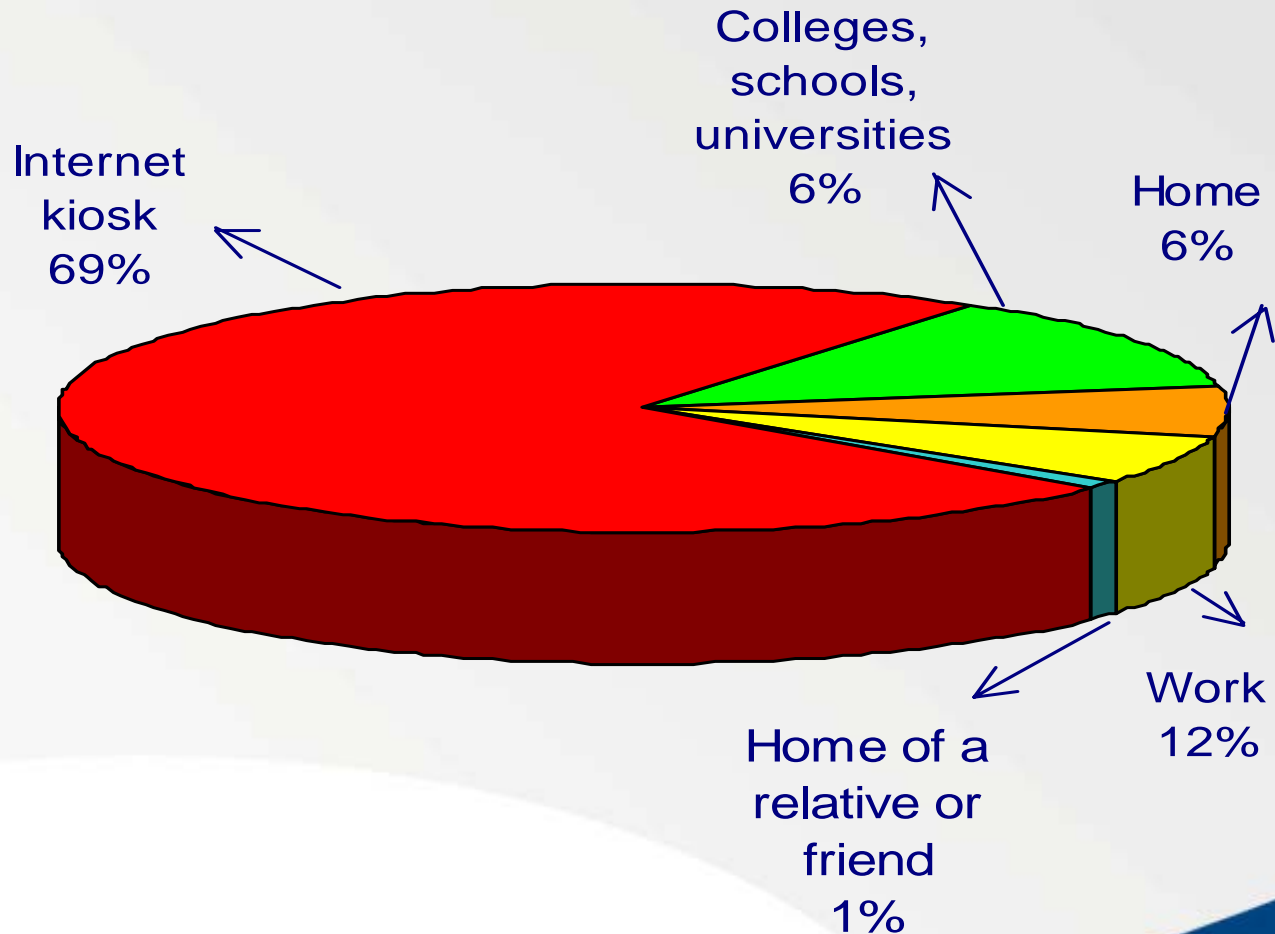
Dial-up subscribers



Broadband Access Evolution

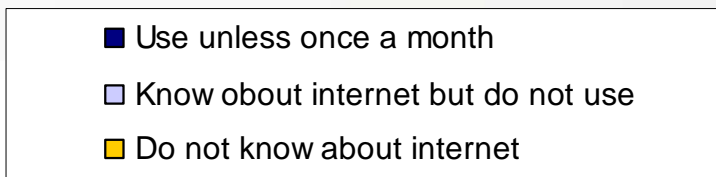
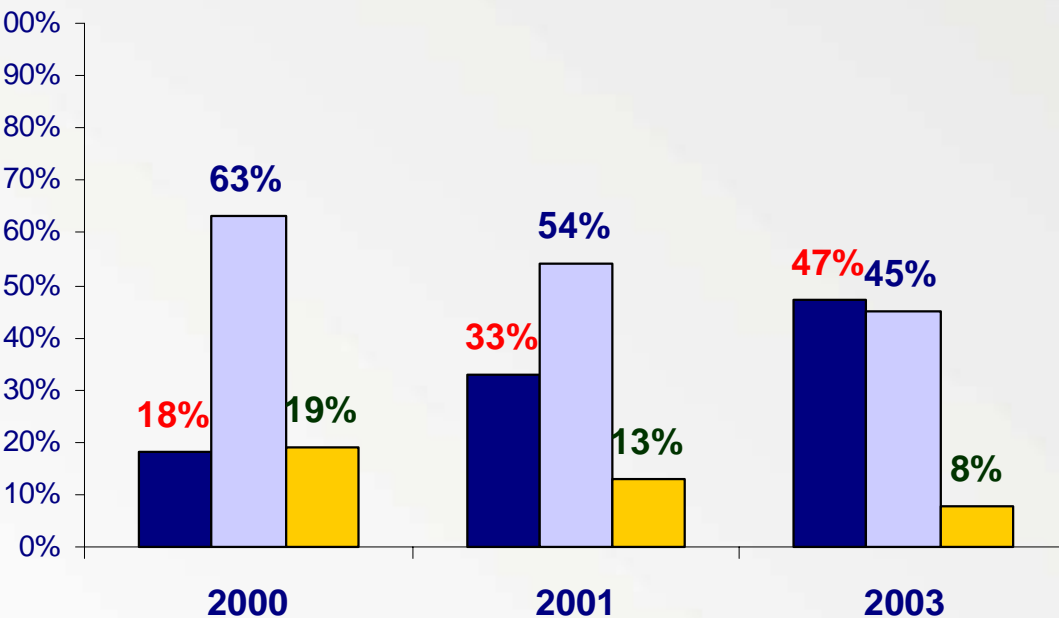


## Places of Internet access (2003)

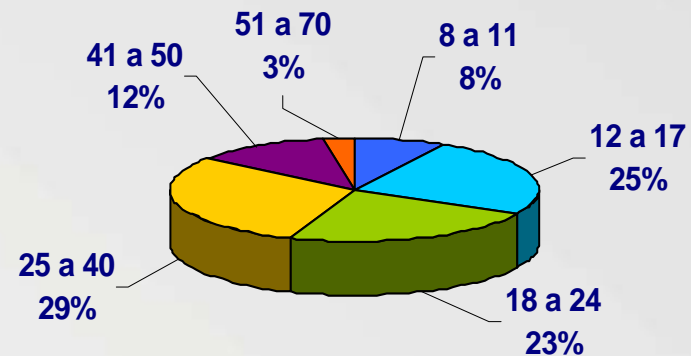


# Internet Access

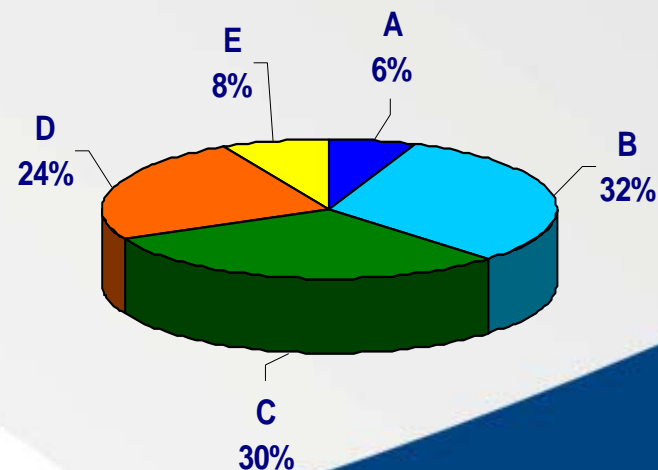
## Internet penetration rate in Lima



## Internet users by age

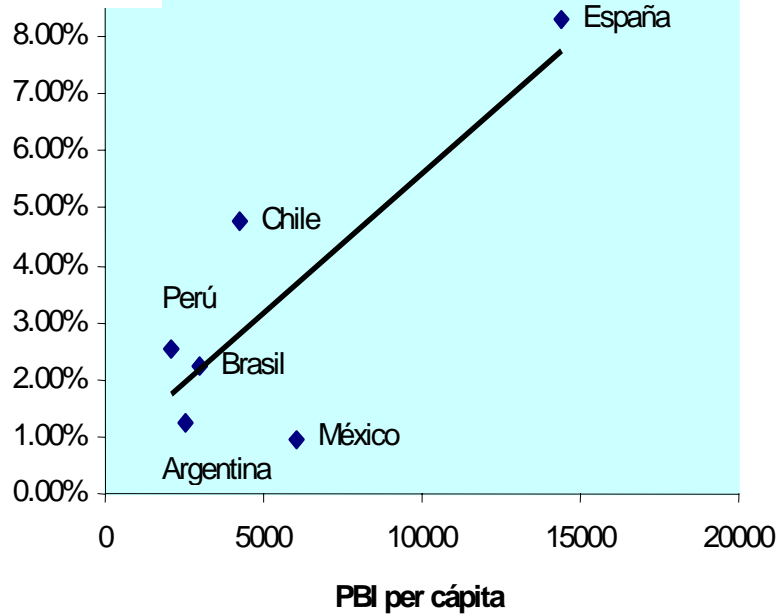


## Internet users by socio-economic level

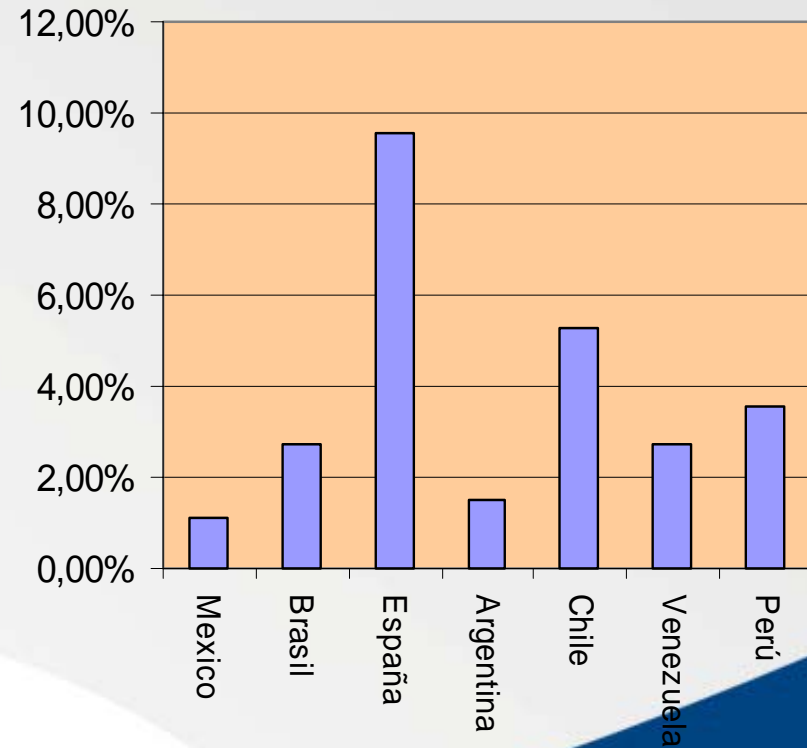


# ADSL benchmark: Perú in LA

ADSL/lín tele

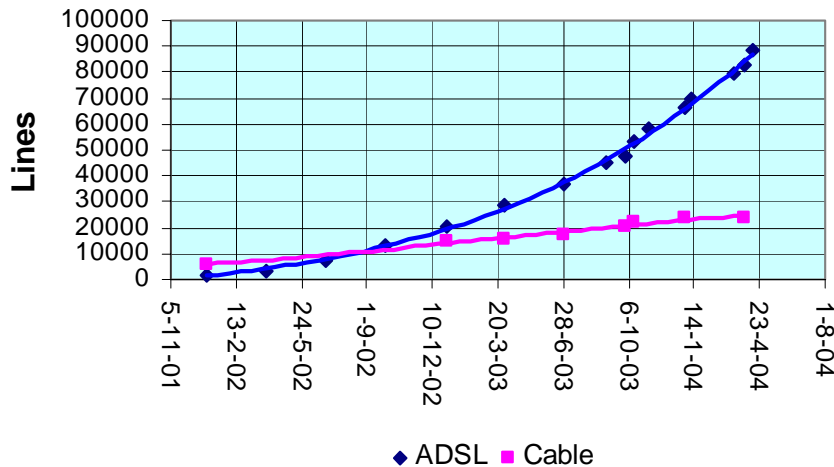


ADSL density (ADSL/phones)



# ADSL market growth in Perú

Broadband CAGR in Perú

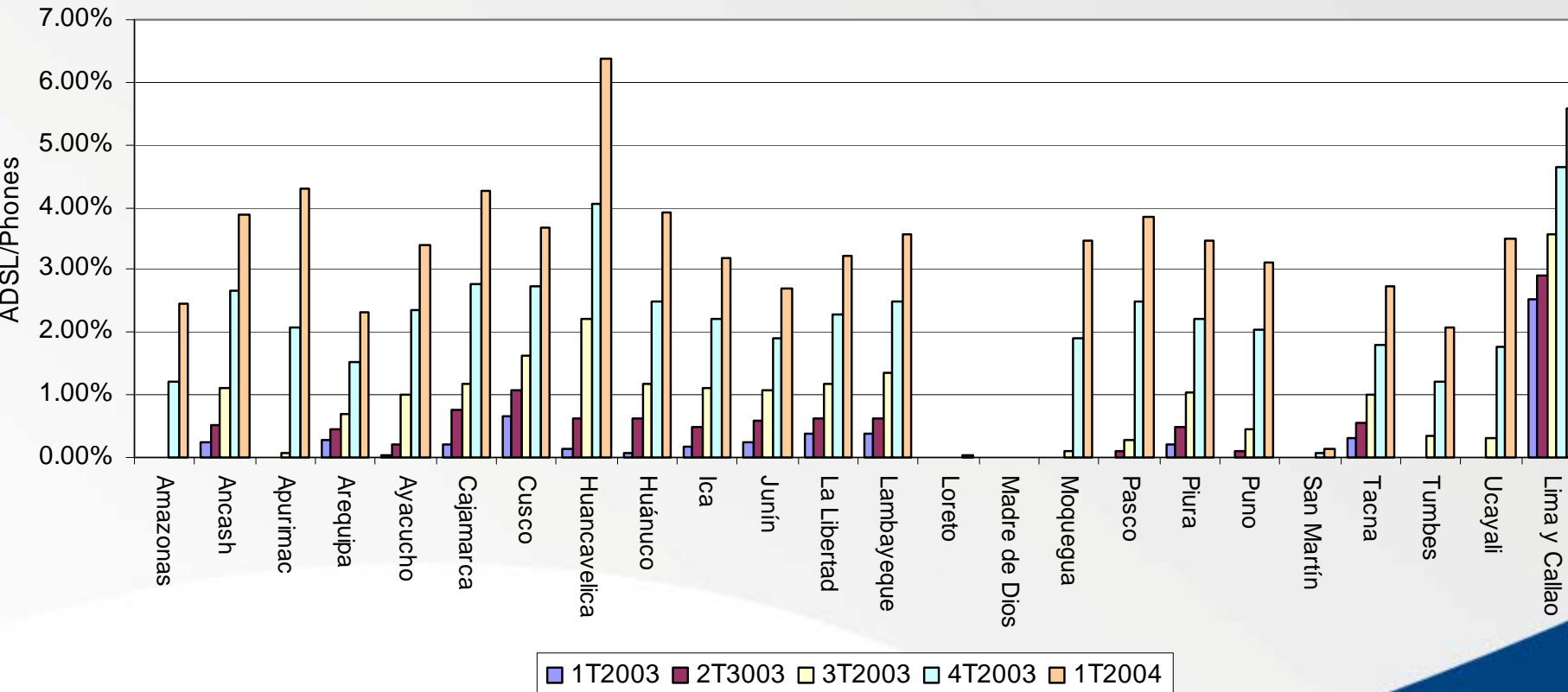


- 2003 Growth rate 220%. Top in America.
- Inland towns represent 26 % of ADSL lines but 30% of bandwidth.
- 80% of internet users already use broadband in Perú. Nearly all “cabinas internet” have changed to ADSL.
- Force new investments in infrastructure(FO/Radio, DWDM)



# ADSL density (ADSL/Phones)

ADSL growth per departments of Perú.



1T2003 2T3003 3T2003 4T2003 1T2004

# Diagnosis

- ✓ 32% of peruvian population lives and have access to:
  - 66% of nationwide telephone lines
  - 70% of nationwide mobile lines
  - 52% of payphones
- ✓ The other 68% of the population have access to only:
  - 34% of nationwide telephone lines
  - 30% of nationwide mobile lines
  - 48% of payphones.

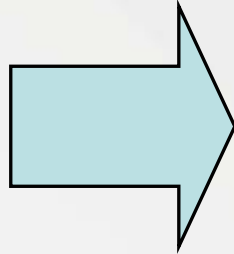
# Situation analysis

- ✓ 87% of internet users access through internet kiosks
- ✓ The *"cabinas de Internet" phenomena* has produced a broad impact in the world, the model known as *"modelo Perú de Acceso a Internet"* is being replicated in several countries.
- ✓ The estimated number of internet users by 2003 is 3,6 million.
- ✓ The model has generated 25,000 direct employment and investments of around US\$ 50 million.
- ✓ The access cost per hour in Perú is US\$ 0.50 in urban areas.
- ✓ But, Internet kiosk has a potential in the area of development that is not yet maximized.
- ✓ Our goal is to make them evolve to be telecenters and increase penetration in rural and underserved areas.

# Transforming the vision of Internet Kiosks to Telecenters

## Internet kiosk

- ✓ Commercial vision and self employment.
- ✓ Internet Access Service.
  - Messenger
  - Chat
  - Mail
  - Games
  - Others
- ✓ Printing and copying.
- ✓ Basic training for users.
- ✓ Selling Groceries & beverages



## Telecenter

- ✓ Development vision.
- ✓ Social gathering point
- ✓ Services:
  - Information Literacy.
  - Capacity building.
  - Appropriate Information services (rural technology, opportunities, prices, weather, irrigation, agricultural planning, etc.)
- ✓ Teleservices:
  - e health.
  - e learning.
  - e government.
  - e commerce.
  - Others.

# Strategic Objectives

- ✓ Build up infrastructure of telecommunications adapted to bridge the internal digital divide
- ✓ Promote the evolution of the internet kiosks into telecenters.
- ✓ Improve the access to the Information Society by means of generating capacities and competition in the use of ICTs.
- ✓ Contribute to the development of the Peruvian society through the access to qualified social services, the promotion of new forms of work, stimulation of research and technological innovation, as well as.
- ✓ Development of an action plan to support production sectors and services using ICTs.

# Peru

## About Rural Towns



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# PERU Map



1,294,000 km<sup>2</sup>  
26 millions inhabitants  
32 % rural inhabitants  
Lima, 8 million inhabitants  
25 Regions  
194 provinces  
1828 districts  
70 000 Minor towns



# Rural small villages

- ✓ According to Universal Access Policies “Rural towns” are:
  - Towns denominated as “rural” by the National Institute of Statistics and Data Processing (INEI).
  - District capitals with 3000 inhabitants, even if they are considered “urban” by INEI.
- ✓ Without telecommunications services.
- ✓ Low demographic density.
- ✓ Isolated villages.
- ✓ High level of poverty.





# PUBLIC SECTOR STRATEGIES FOR BRINGING DIGITAL DIVIDE



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✓ Main Task:

- Design and implement strategies and policy to integrate the country through transport routes and communications services.

✓ Vice Ministry Telecommunications Objectives:

- To promote sustainable development of the communications services and the universal access to them, as well as to increase innovation technology and distribute properly the resources and use them efficiently.

- ✓ The Office of Projects of Communications: is responsible for designing, implementing and evaluating projects in order to contribute to spread out the coverage area of the telecommunication services in extreme poverty regions of the country.

# Activities executed by MTC



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# ERTIC - Huancavelica

- ✓ Project managed by MTC and INICTEL (government organization)
- ✓ Telecentres and libraries in 10 rural towns in the andes
- ✓ The main objective is to use ICT to support social, economic and cultural development as well as impulsing and improving sectors of production and services
- ✓ Web site:  
<http://ertic.inictel.net/>



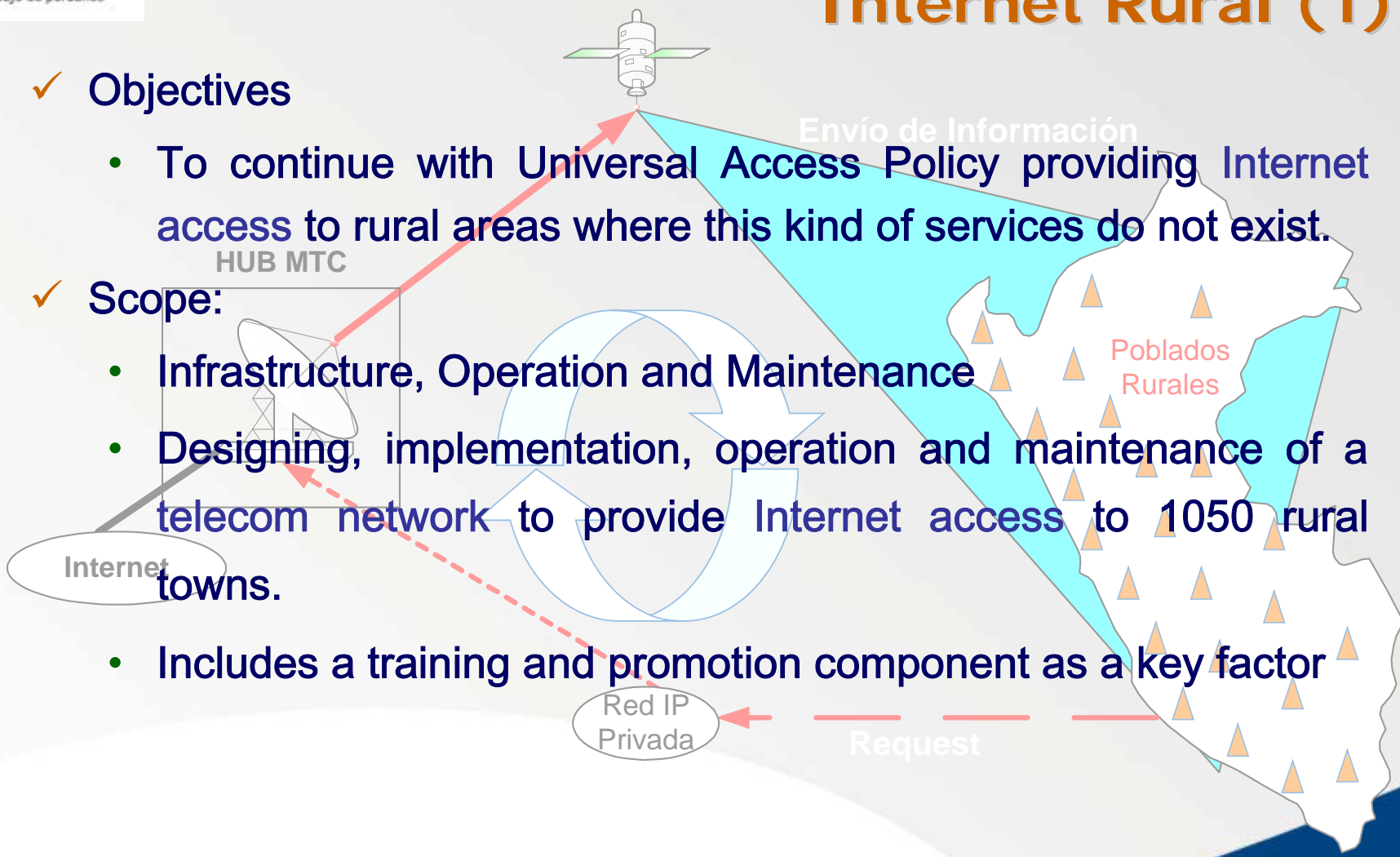
# Telecommunication Rural Program Internet Rural (1)

## ✓ Objectives

- To continue with Universal Access Policy providing Internet access to rural areas where this kind of services do not exist.

## ✓ Scope:

- Infrastructure, Operation and Maintenance
- Designing, implementation, operation and maintenance of a telecom network to provide Internet access to 1050 rural towns.
- Includes a training and promotion component as a key factor



# Program Telecommunication Rural Internet Rural (2)

## ✓ *Implementation Program*

2005

Pilot Project where 30  
telecenters are going to be  
installed

2006-2007

A network of *1,050 telecenters* is  
going to be installed in  
extreme poverty areas of  
Peru.



# **OSIPTEL**

## **Peruvian National Regulatory Agency for Telecommunications**



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✓ Main Task:

- To promote the development of more and better public telecommunications services, in a free and fair competition framework.

✓ Objectives:

- To increase competition in telecommunication markets.
- To promote Universal Access to telecommunications services.
- To advise users and to protect their rights.

✓ OSIPTEL administrates the fund for rural investment in telecommunication (FITEL).

- created to finance telecommunications services in rural areas and areas considered as preferential social interest places.
- Contributions to the fund represent one percent (1%) of gross income received by final service suppliers and carriers.
- FITEL subsidize CAPEX and OPEX needed to bridge market failures.



# Experiences in the implementation of TELECENTERS



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# Pilote Projects funded by FITEL

- ✓ “Information System for Rural Development”, presented by Intermediate Technology Development Group (ITDG). Cajamarca.
  - Business Case at ITU-D web site:  
[http://www.itu.int/ITU-D/study\\_groups/SGP\\_2002-2006/SG2/CaseLibraryRuralTel/documents/Peru.pdf](http://www.itu.int/ITU-D/study_groups/SGP_2002-2006/SG2/CaseLibraryRuralTel/documents/Peru.pdf)
  - Project’s Website:  
<http://www.infodes.org.pe/telefonía/infocentros.htm>
- ✓ “Information and Communication System for personnel of rural health centers”, presented by EHAS Enlace Hispano Americano de Salud.
  - The project was awarded by the Stockholm Challenge in 2004  
[http://www.ahas.org/portal\\_en/Awards/](http://www.ahas.org/portal_en/Awards/)
- ✓ “Agricultural Information Service, for the Valley of Huaral-Chancay, Lima”, presented by CEPES, Centro Peruano de Estudios Sociales.
  - Further Information about the project in:  
<http://newsvote.bbc.co.uk/mpapps/pagetools/print/news.bbc.co.uk/2/hi/technology/4071645.stm>
  - Project website: <http://www.cepes.org.pe/huaral/>

# New projects



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# Internet Access in District Rural Capitals

## ✓ Objectives

- Promoting adoption of development vision in telecenters deployment.
- To provide rural towns with the means required to take advantage of the Information and Communication Technologies (ICTs) using it as tool for both, local and national development.

## ✓ Scope:

- Infrastructure, Operation and Maintenance
- Design, implementation, operation and maintenance of a telecom network to provide Internet access to 68 district capitals.
- Training and promotion component as key factor.
- A Second Stage for 467 telecenters is planned to start after the results of the first stage bid process

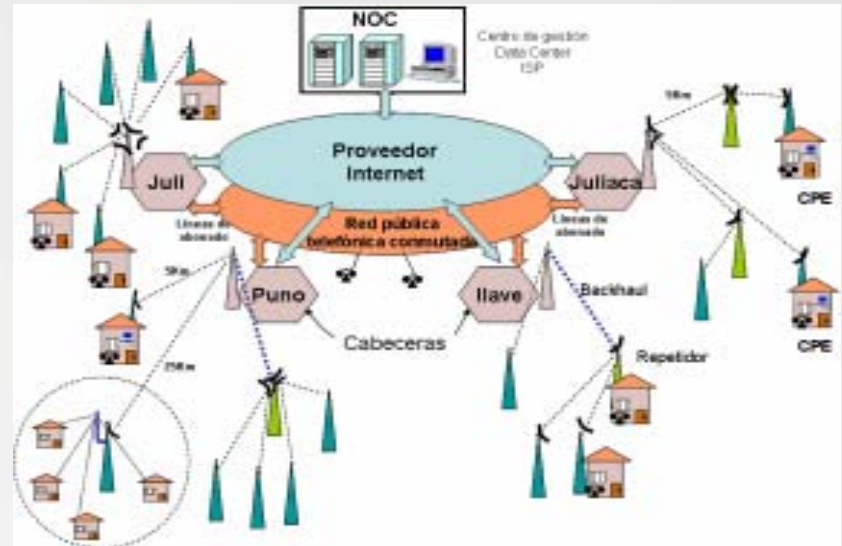
# Internet Access in District Rural Capitals

## ✓ Stakeholders involvement

- Operator: responsible for promoting and training tasks.
- Operator will select the telecenters manager (local resident).
- The manager has to:
  - select the place to install the data ports
  - invest for the implementation of the establishment.
  - buy PCs and furniture, etc.
- The manager can provide additional services to support the profitability of the telecenters.
- OSIPTEL will establish parameters for the services provided by the operator.
- The project includes a capacity building program

# Rural Broad Band Access Project

- ✓ The most aggressive project for bridging the digital divide in Perú
- ✓ Use the ADSL infrastructure and WiFi technology to expand broadband access to 2,900 rural towns for Telephony and internet access services for more than 2 million rural inhabitants
- ✓ The objective is to promote investment and the participation of rural SME through telecenters deployment.
- ✓ The amount of investment estimated for each SME is US\$ 3,500 in addition to the US\$ 15 million of subsidy provided by FITEL.







# National program for capacity building

- ✓ In former projects, FITEC installed 541 internet kiosks in rural villages
- ✓ The next step is to support local capacities in their efforts to transform internet kiosks into telecenters
- ✓ Project objectives:
  - Stimulation and improvement of local content production
  - Design and implementation of local capacity building programs
  - Development of local capacities to use and produce appropriate information
  - Involvement of local stakeholders in the design process
  - Guarantee of social and economic sustainability of telecenters
  - Creation of consciousness of the importance of ICTs in development processes, therefore increasing the number of local organizations making use of ICTs for development
- ✓ Deduction of a project model for sensitization and capacity building for telecenters in rural areas



- ✓ Cotahuasi – Arequipa, promoted by AEDES, a local ecological NGO that works with farmers to improve production
  - The experience was awarded with the “Betinho award in 2003”
  - Website: <http://www.aedes.com.pe/index.shtml>.
- ✓ Plan Puyhuán – Junín, promoted by Puyhuán NGO.
  - Further information:  
<http://www.ids.ac.uk/ids/particip/networks/workshop/torrejon.pdf>
- ✓ Bibliocentro Challhuahuacho
  - Promoted by Callpas Associationa, local NGO
  - Awarded by IADB as “Youth innovation experience” (2003)
  - Web site: <http://www.asociacioncallpas.org>
- ✓ UNITEC, Antabamba, Apurimac, promoted by University ...
  - Web site: <http://www.unitec-peru.org/>
- ✓ Llaqtared, promoted by Telefónica del Perú.
  - The first stage started in 2004 with 20 rural towns
  - Web site: <http://www.llaqtared.com>