REUNA
Ciencia y Educación en Red

REUNA, hub of digital connectivity and articulation of the Research, Education and Innovation ecosystem

Sandra Jaque, sjaque@reuna.cl
Technology Manager – REUNA

Chilean Telemedicine Workshop, 29th Nov 2017, Coquimbo

REUNA is for the research and education institutions

36 Institutions in total

19 Universities

5 Astronomical Centers

11 Research centers

CONICYT

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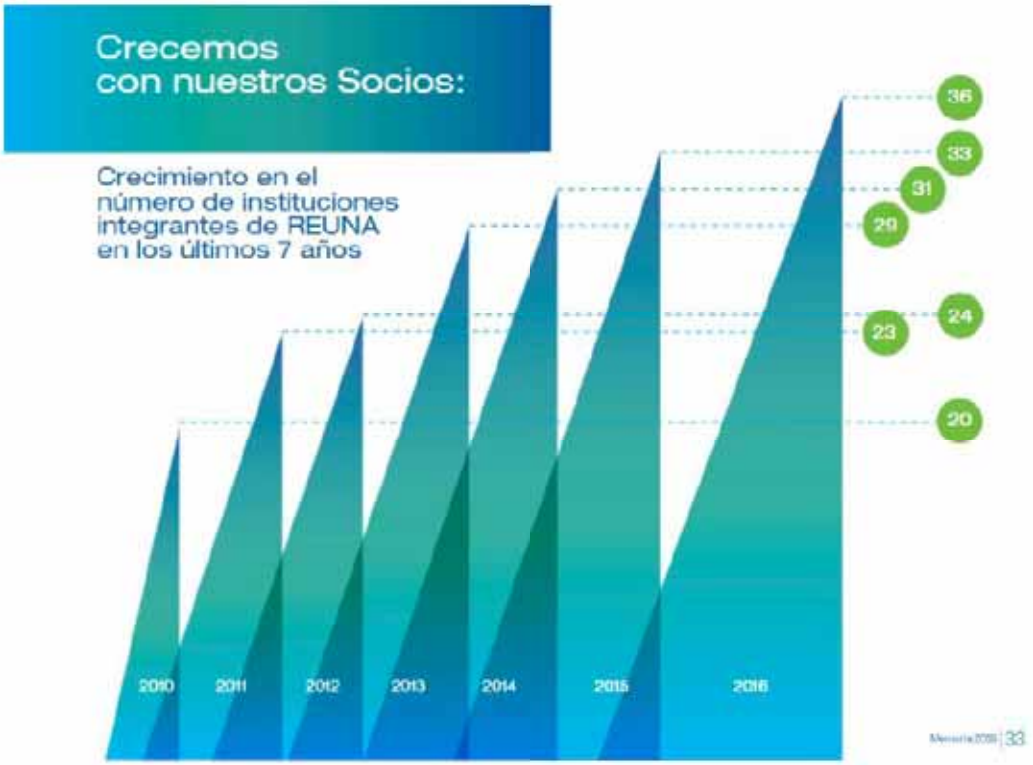
Growth in the last years



50% of all the Institutions with Medicine Faculties are connected already to REUNA

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What are the networks for research, education and innovation?

- High network capacity
- Robustness infrastructure
- Dedicated for I+D+E+i
- Local and global connectitity
- **Institutions and people networking to collaborate and move the knowledge frontier**

Our network infrastructure has presence in 13 out of 15 regions of the country

3000 Km of network

1 to 10 Gbps over a capacity model

First **100G** just implemented!

The Institutions are connected to the nearest PoP at 1G or 10G

There is “unlimited” traffic at national level

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Moving forward to have an optical national network for Science & Education

Based on a model of "building infastructure" instead of renting capacity

High Capacity Network, 100G backbone

- Model:
  - Right of use of 1 pair of fiber for a long term period
  - The fiber is lighted with DWDM technology
  - Optical channels of 100/200Gbps
- State:
  - La Serena – Santiago: First 100G already on place
  - Santiago – Concepción: Deployed during 2018
  - La Serena – North: Seeking for solutions
  - Concepción to South: Planed to be prospecting

Our community is globally connected

Amligth, RedCLARA

- Optical spectrum from AL to USA
- 100G leased capacity ring as backup

BELLA
Building Europe Link to Latin America

- Latin American terrestrial network by NRENs
- New submarine cable to connect directly AL-EU
- The research community will have owned spectrum over the cable. 4Tbps at current technology.
- In 2019 it is planned to transport the 1st 100Gbps by the fiber

Services for collaboration

How the research community use this infrastructures

music and dance between Chile and different countries abroad

English/Spanish workshops between universities in the USA and Chile

A rock hammer in Codelco was operated from Tokyo

Research laboratories between Brazil and Chile uses remote instrumentation

A simulated telescope almost 11,000 km in diameter

CCTVal (USM) is part of the ATLAS-CERN project

Services for facilitate the collaboration

Studia

Aproach with Telemedice innitiatives

- We have been in touch with several innitiatives since the last 10 years

A national network for telemedicine

- We are ready to collaborate in improving the connectivity
- The network architecture allows to deploy specific purpose networks

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