

Case Study



R H I Z O M A T I C A



Profile Information

Country Mexico

Organisation Type Indigenous, Non-Profit

Technology GSM (2.5G)

Addressable Region Unserved rural areas in five states

Addressable Population 3 million people

Basic facts

- ❖ Community-owned & operated cellular networks
14 networks, 60+ localities,
~3500 users daily
- ❖ Operates with a Social-Indigenous concession
2+2 MHz of GSM 850 spectrum
- ❖ Organized as a non-profit, membership association

2011-12

2013

2014-16

2016

2017-18



Technology proving
and testing

First experimental
deployment

Pilot project in
10 localities

Permanent
licenses granted

Continued
roll-out

Timeline

Regulatory Innovation

- ❖ Spectrum set-aside for rural/social use by regulator
- ❖ Management of a portion of spectrum
- ❖ Specific targeting of unserved regions
- ❖ Indigenous/community license
- ❖ Spectrum assigned at no cost

Sustainability Innovation

- ❖ Low Power
- ❖ Low-cost GSM
- ❖ Simple Graphic Interface for Local Management
- ❖ VoIP for Call Termination
- ❖ Open Source platform reduces cost, increases flexibility

Sustainability Innovation

- ❖ Licensing of a non-profit entity aimed at social benefit and local ownership
- ❖ Cost-oriented network
- ❖ Local community purchases, owns and operates network
- ❖ Community networks associate to share costs for maintaining legal team, developers, technical support, etc.

Barriers to growth

- ❖ Insufficient spectrum for growing existing network
- ❖ Access to 3G / 4G spectrum
- ❖ Difficulty in finding reliable backhaul from rural sites
- ❖ Community ability to invest can be lacking
- ❖ Tax law does not recognise non-profit users



Additional resources

Websites

<https://www.rhizomatica.org>

<https://wiki.rhizomatica.org>

www.tic-ac.org

Telephony Manual

<https://archive.org/stream/MANUALTICENGFINAL/MANUAL%20TIC%20ENG%20FINAL#page/n29/mode/2up>

Videos

<https://www.rhizomatica.org/resources/>