IFLA President's Meeting 2018

Roger Baig Viñas

Understanding Community Networks to Explore Collaborations with Libraries

Leading the Way: Libraries as Motors of Change

guifi·net

*Building a **COLLABORATIVE ECOSYSTEM** over Networks held in **COMMON***

Understanding Community Networks through the case of guifi.net

to explore collaborations between these initiatives and libraries

IFLA President's Meeting 2018

March 19th 2018
guifi.net Foundation
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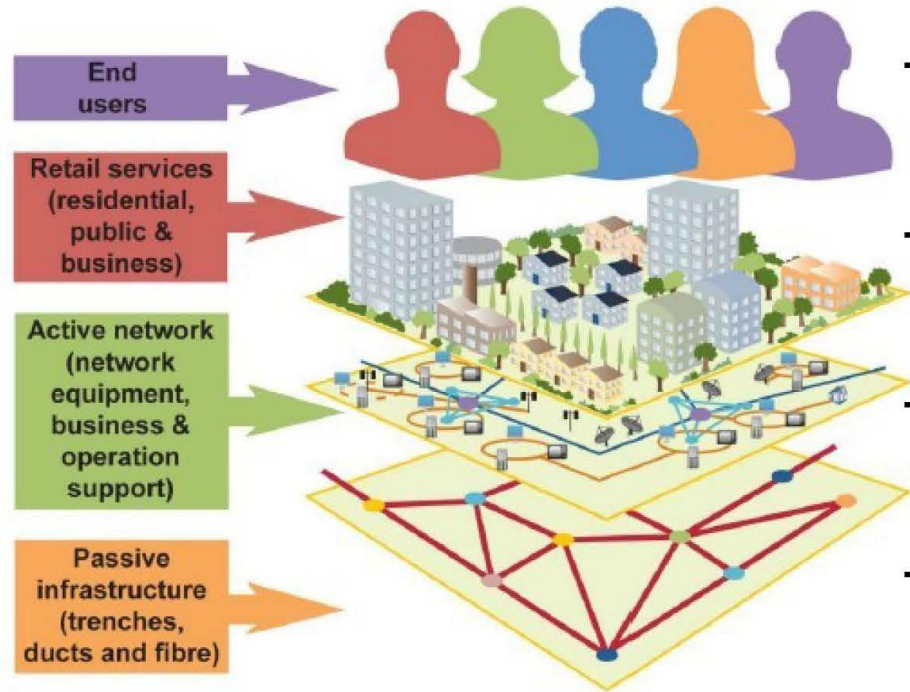
European Broadband Award 2015

Innovative model of financing, business and investment category

- Introduction
  - Community Networks
  - Problem statement
  - Guifi.net response
- Theoretical framework
- guifi.net experience
- Collaboration opportunities

Contents

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- Community Networks (CNs)
  - Community networks are networks built by citizens and organisations who pool their resources and coordinate their efforts to build network infrastructures
  - Traits: open, free, neutral
  - Examples: FreiFunk (Germany), FunkFeuer (Austria), wlan Slovenia, etc.
- Problem / challenge
  - Frequently based on voluntary efforts and non-refundable contributions
    - How to make them **sustainable** and **scalable**?
- Guifi.net response
  - Network **as a commons**
  - Enable a **multistakeholder ecosystem**
  - Enable **professional activity**
  - Ensure **reinvestment** of a fraction of the benefits of this professional activity
  - Ensure **diversity** in participation
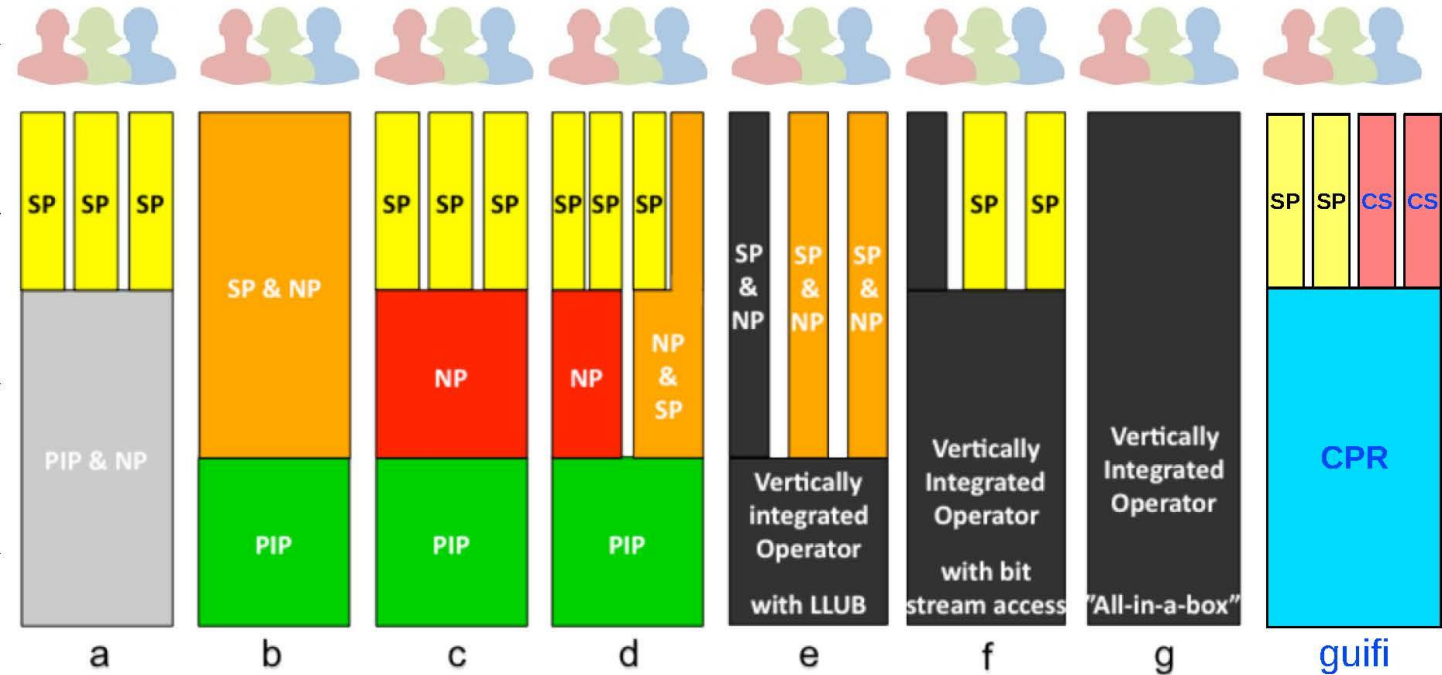 - Etc.

Introduction

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- Introduction

- **Theoretical framework**

  – Bringing the commons to the telecoms sector

- guifi.net experience

- Collaboration opportunities

Contents

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Access network layers

Supply chain models

End users

Retail services (residential, public & business)

Active network (network equipment, business & operation support)

Passive infrastructure (trenches, ducts and fibre)

(Alcatel-Lucent)

a   b   c   d   e   f   g   guifi

SP SP SP
PIP & NP

SP & NP
PIP

SP SP SP
NP
PIP

SP SP SP
NP
NP & SP
PIP

SP & NP SP & NP SP & NP
Vertically integrated Operator with LLUB

SP SP
Vertically Integrated Operator with bit stream access

Vertically Integrated Operator "All-in-a-box"

SP SP CS CS
CPR

PIP – Physical Infrastructure Provider
NP – Network Provider
SP – Service Provider
LLUB – Local Loop Unbundling

CPR – Common Pool Resource
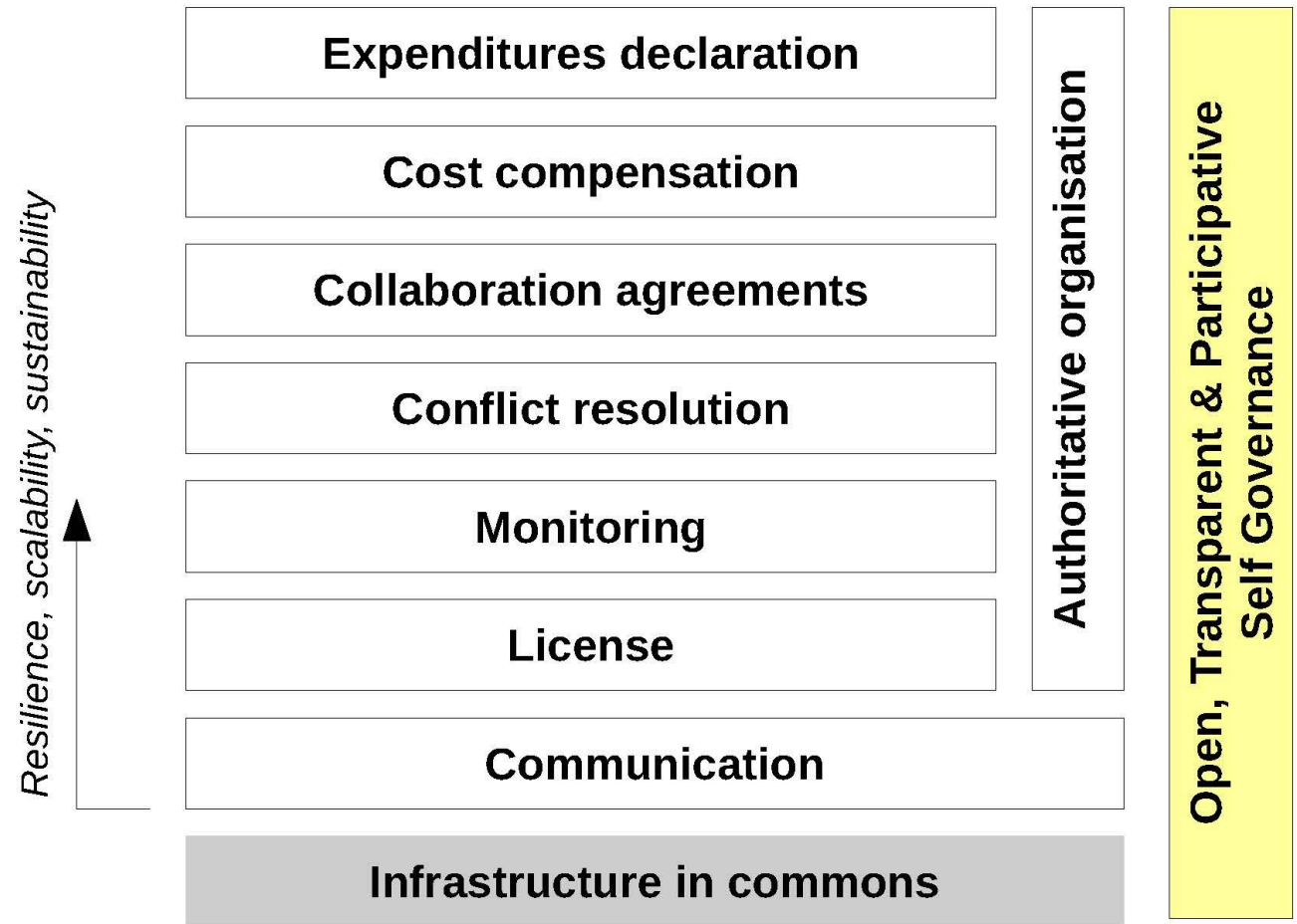**CS – Community service**

(Forzati 2010)

Access network layers & Supply chain models *guifi·net*

- Increases the efficiency *(better performance or wider coverage for the same investment)*
  - Stimulates cooperation
  - Prevents duplication of infrastructure/efforts
  - Facilitates economies of scale
- Maximises freedom choice
  - Coexistence of DIY and professional options
  - Equalises business opportunities
    - Lowers entry barriers
    - Expands the market
- Professional activity
  - Involves dependency on the infrastructure (to meet SLAs with customers)
    - Reinvestment needed
- Well aligned with CNs principles

Benefits *of the network as a commons*

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- CPR $\Longrightarrow$ **Depletion** (& others)
  - Well-known problems in other fields
    - E. Ostrom works, etc.

- Introduction
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- **guifi.net experience**
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Contents

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- Sustainability by design
- Based on the commons collaborative economy
  - E. Ostrom (2009 Nobel Prize in Economics) principles
- Based on supply-demand pricing, but
  - Non-speculative
  - Fair trade
  - Prevent externalities
- A win-win ecosystem
  - Rises funding
  - Enables economies of scale
- Accountable
- Implemented through
  - Written consensus rules (license)
  - Signed agreements

Resilience, scalability, sustainability ↑

Expenditures declaration

Cost compensation

Collaboration agreements

Conflict resolution

Monitoring

License

Communication

Infrastructure in commons

Authoritative organisation

Open, Transparent & Participative Self Governance

Principles – Self-Governance stack

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A Collaborative Economy with ...

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Network as a Commons

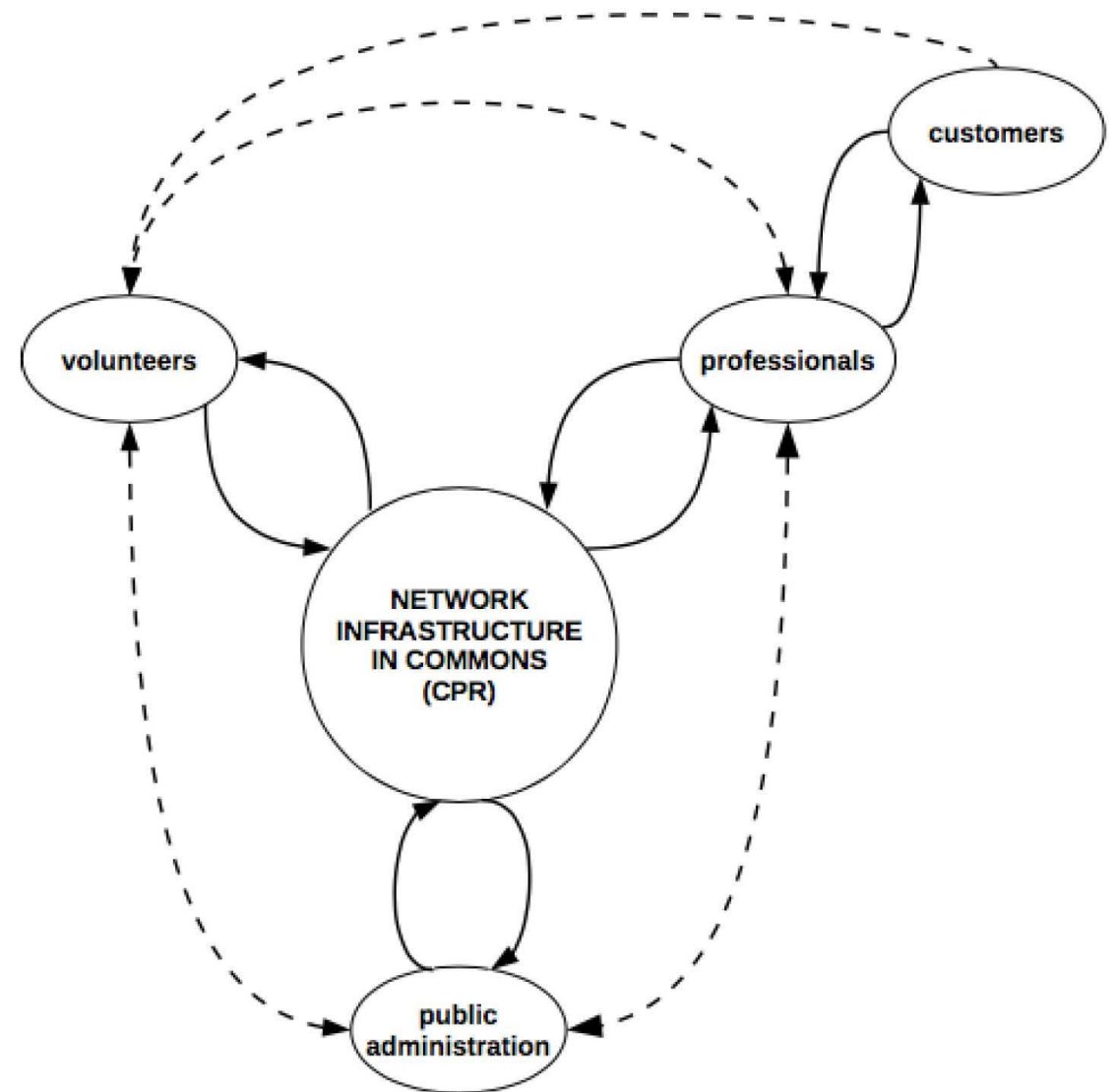Smart Citizens (Volunteers)   Smart Governments   Smart SME's & Orgs

Ecosystem: Participants & Stakeholders

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- Foundation
  - Common Pool Resource (CPR) Governance
- Public Administrations
  - Manage Public Domains
- Professionals
  - Provide services
  - Generate Income from customers
- Volunteers
  - Contribute to the CPR

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- **Expenditures declaration**
  - Public
    - Criteria
    - Information
- **Economic compensation**
  - Balances
    - Contributions
      - CAPEX
      - OPEX
    - Resources usage
      - Bandwidth, # of fibre connections, ...
  - Clear return of investment & fair business models

Totals mensuals per l'any 2014

Supplier	gen	feb	mar	abr	mai	jun	jul	ago	set	oct	nov	des	Total
59855-Gurbtec Telecom	2,688.55	461.91	3,286.92	2,999.42	487.58	3,409.20	15,462.74	1,500.42	10,562.02	9,230.01	4,134.68	8,735.37	62,958.81
61891-Priona.net	-	-	-	853.05	-	-	-	-	2,699.54	-	275.68	39.53	3,867.80
61722-Gaufix.net - Internet a l'abast de tothom	2,643.26	3,875.98	5,592.41	1,590.64	396.80	641.30	1,535.03	1,671.10	3,386.53	3,211.91	3,801.38	2,747.77	31,094.11
31251-http://www.setup.cat	326.70	36.30	238.04	477.11	84.38	113.84	75.64	369.84	-	-	-	-	1,721.85
71369-Ramon Roca	-	-	-	-	-	-	1,200.00	720.00	-	480.00	-	-	2,400.00
													102,042.57

Expenses & Contributions (e.g.: = 100€)

30
25
15
25
5 (sys. operation)

Resource Usage (%)

45
10
15
30
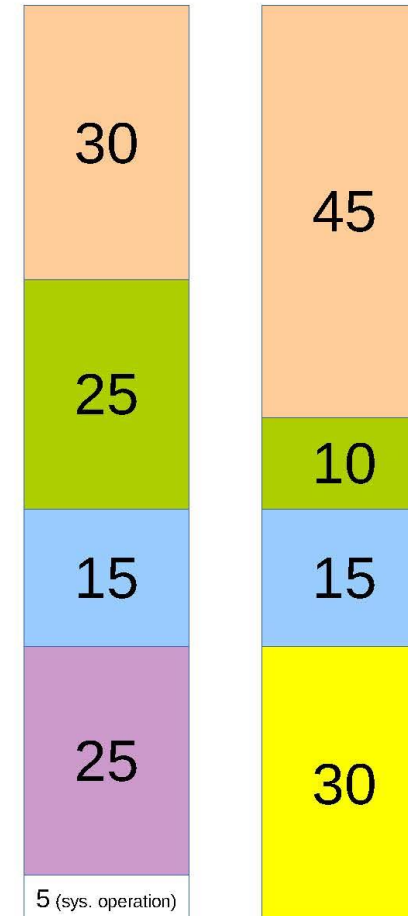
Compensation settlement
To Compensate or to Pay
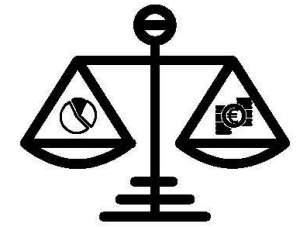
Orange Operator
30 - 45 = **-15€**

Green Operator
25 - 10 = **+15€**

Blue Operator
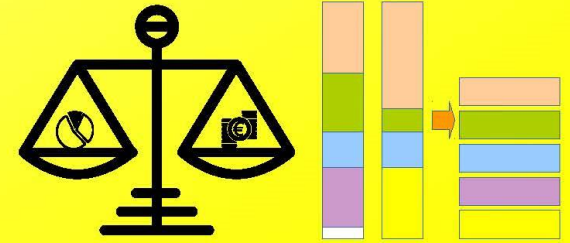15 - 15 = **0€**

Installer/Maintainer
25 - 0 = **+25€**

Yellow Operator
0 - 30 = **-30€**

System operation
5 - 0 = **+5€**

$\sum = 0$

Expenditures declaration & Compensation settlements

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Compensation tables

- Stablish the territorial compensation criteria
- Monthly periodicity

Operadors/ Service providers @

Rights
- Voice and vote
- To receive compensations
- To make proposals

Duties
- To settle the compensations
- To provide the data to calculate the compesnations

Public Admin. or Investors

(optional)

Rights
- Voice i vote
- Quality vote & veto on issues related to benefits or administration of public resources
- To Make proposals

Duties
- To stick to criteria of
- non-discrimination & equality

Fundació *guifi·net*

Rights
- Voice
- Quality vote & veto on issues related to the Commons

Duties
- To make proposals targeting the consensus
- Accounting
- Execute the compensations

Implementation of the Compensations Settlements: the Cleaning houses

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- Acknowledgement of the investment
- Deployment of the network as a commons
- Connection of users
- Billing
- Bill split (parts):
  - Exploitation by the service provider
  - Infrastructure maintenance
  - Return of investment
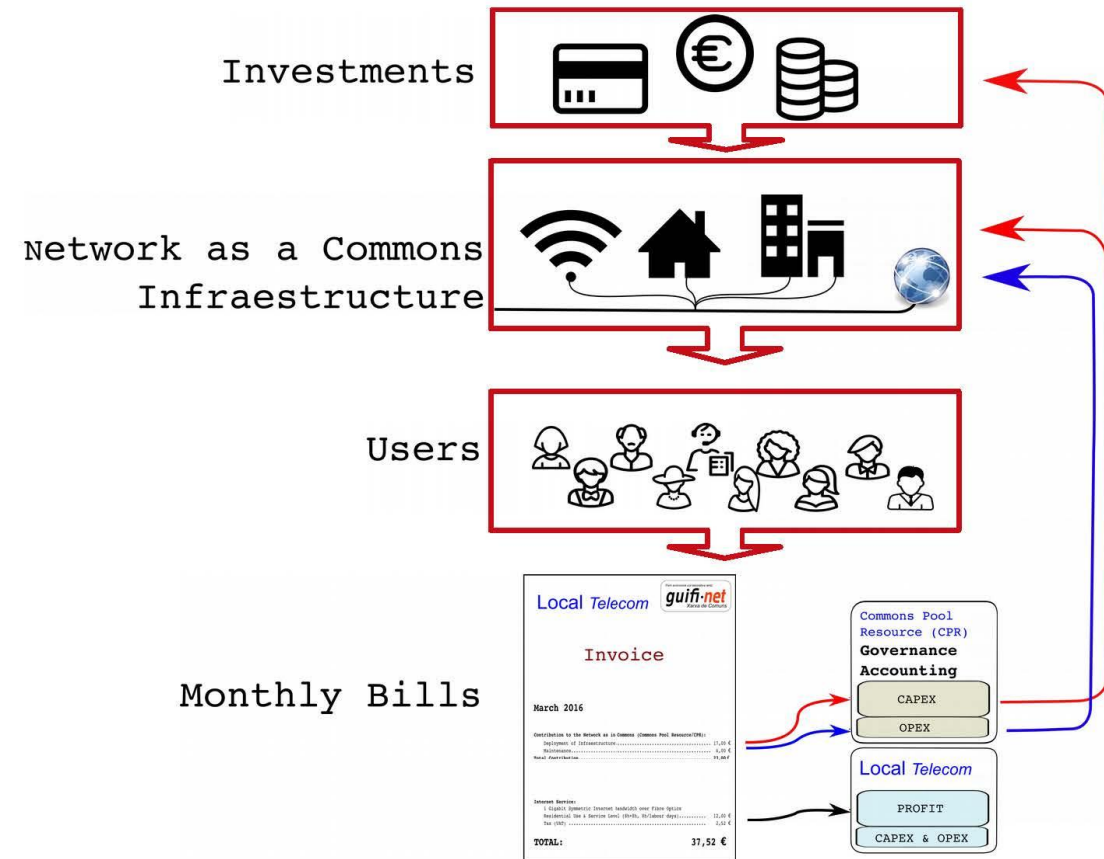
- Introduction

- Theoretical framework

- guifi.net experience

- **Collaboration opportunities**

Contents

- What you have
  - Leadership
    - Reference point for the citizenship
  - Capacity building
    - Centre of knowledge
    - Experience in training
  - Social network
    - Public authorities
    - International relationships
  - Facilities
    - Internet connection
    - Electricity
    - Security

Collaboration opportunities with libraries I

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- What you can do
  - Leadership
    - Lead the initiative – *be the seed*
  - Capacity building
    - Training materials
    - Workshops
  - Social network
    - Public authorities – *make the contacts, support the initatives*
    - International relationships – *international coordination, mutual support*
  - Facilities
    - Electricity, Security – *Initial location*
    - Internet connection – *initial uplink*

Collaboration opportunities with libraries II

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- Potential partnerships
  - Internet Society (ISOC)
    - e.g. Beyond the net initiative
  - Institute of Electrical and Electronics Engineers (IEEE)
    - Connectivity coalition
  - Internet Research Task Force (IRTF)
    - GAIA WG
  - Internet Governance Forum (IGF)
    - Dynamic Coalition on Community Connectivity
  - Existing communities
    - Guifi.net
  - *? Find more*

Collaboration opportunities with libraries III

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