

guifi·*net*

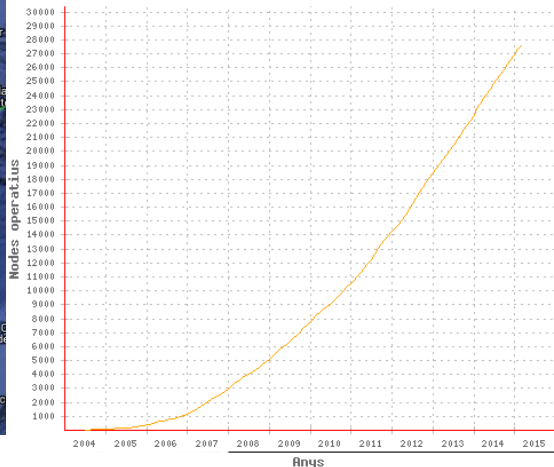
Construint una
ECONOMIA COL-LABORATIVA
sobre la
Xarxa de **Comuns XOLN**

Reunió de Compensacions

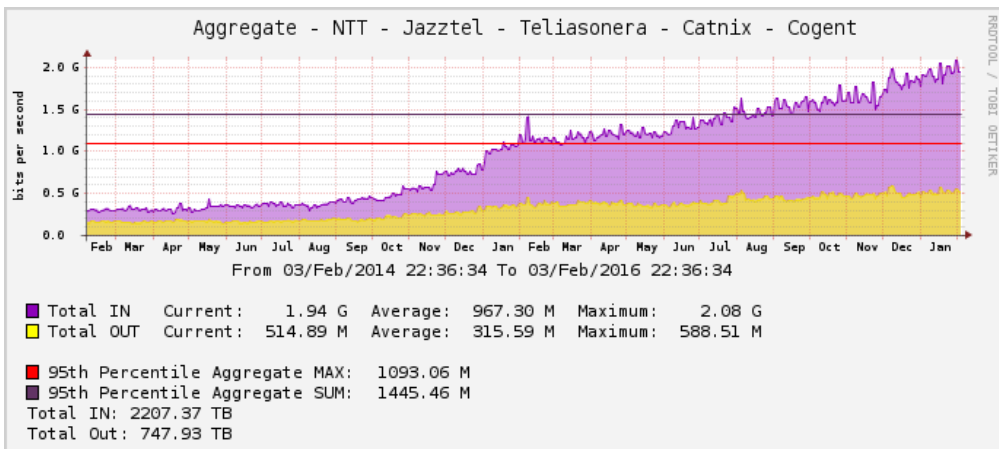
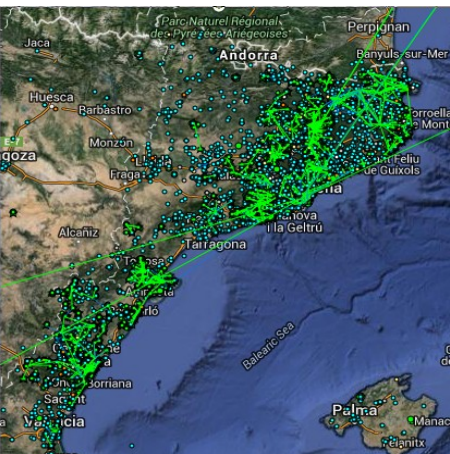
Gurb, Març 2016
Fundació guifi.net
fundacio@guifi.net

- El model col·laboratiu de guifi.net
 - Principis
- Millores en les compensacions

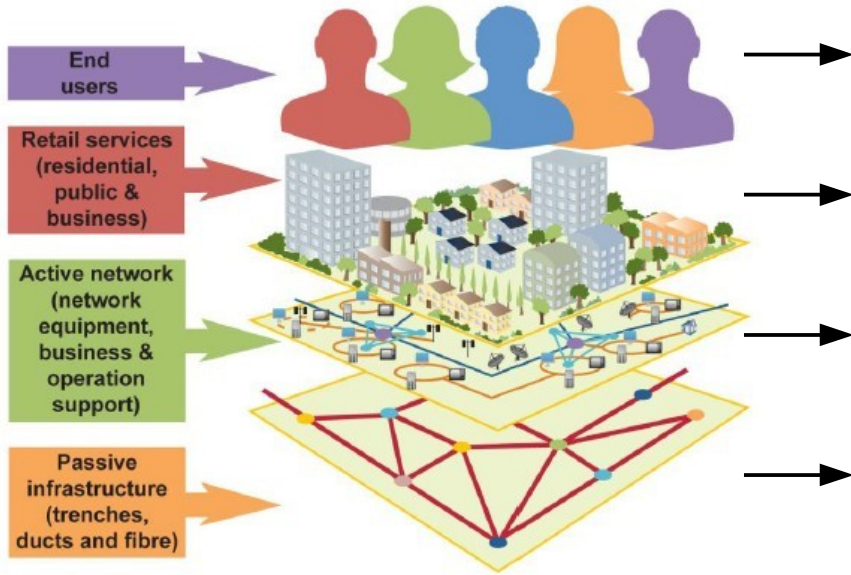
guifi.net
Corba de creixement



- Not just about “we can”
 - But also “we do”
- In guifi.net, since 2004
- With a Foundation, since 2009
 - Non-profit, non-partisan, without conflicts of interest
- Scaling
 - Growing exponentially at triple digit every year
 - > 30k nodes
 - 18 Optical Fibre PoPs around Catalonia
 - CAPEX > 7M€
 - OPEX nearly 3M€ yearly turnover
- Awards:
 - 2007 Catalan National Award – category on Telecommunications
 - 2015 European Broadband Award – category on innovative model of financing, business and investment

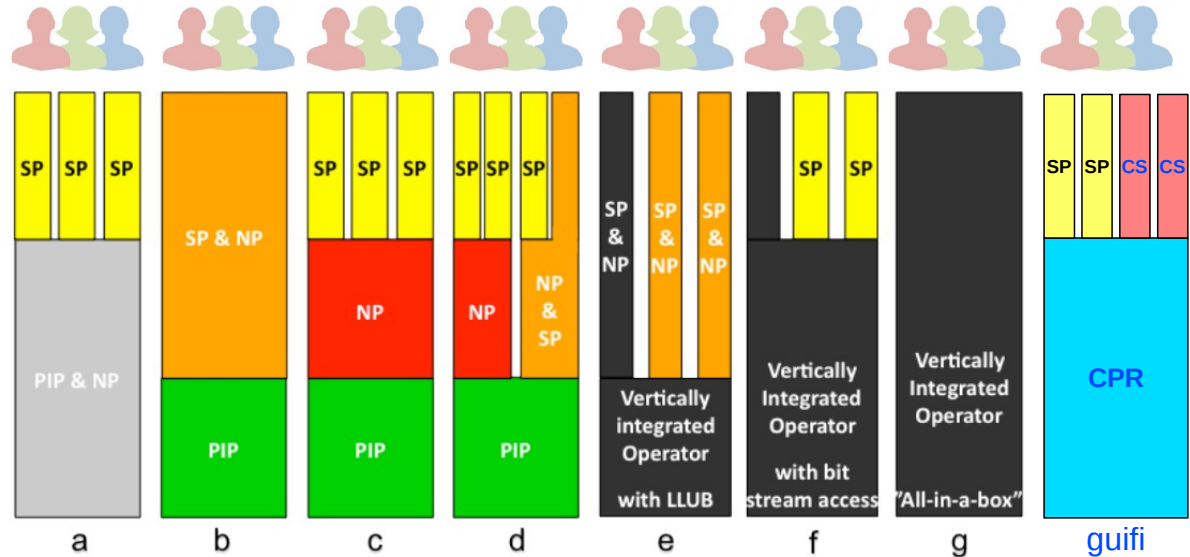


Access network layers



(Alcatel-Lucent)

Business models



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

CPR – Common Pool Resource
 CS – Community service

(Forzati 2010)



- **User Access / Last Mile**

- Goal: internet for everyone
- Typically 90% of the total cost
- Starting wireless
- Later, extending to Fibre Optics: Aerial, conduits...

- **Territorial Transport**

- Needed for Last Mile deployments' interconnection
- Reusing existing public infrastructures: Roads, Railways, Water pipes, Power lines, etc.
- “de facto” a large distributed neutral IX
- Already present in many Catalan counties

- **Full Transit**

- To the Carrier House and to the Regional IX (CATNIX)
- 10Gbps ports
- Redundant internet uplink (independent carriers)
- Peering with almost all the ISPs present at the IX

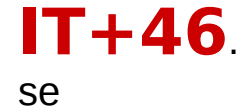
Layers of activity: Full cycle

guifi.net

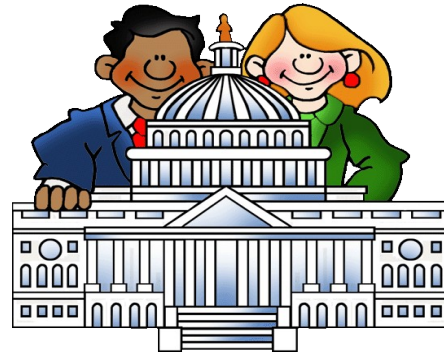
A Collaborative Economy with ...

guifi.net

Network as a Commons



Smart Citizens (Volunteers)



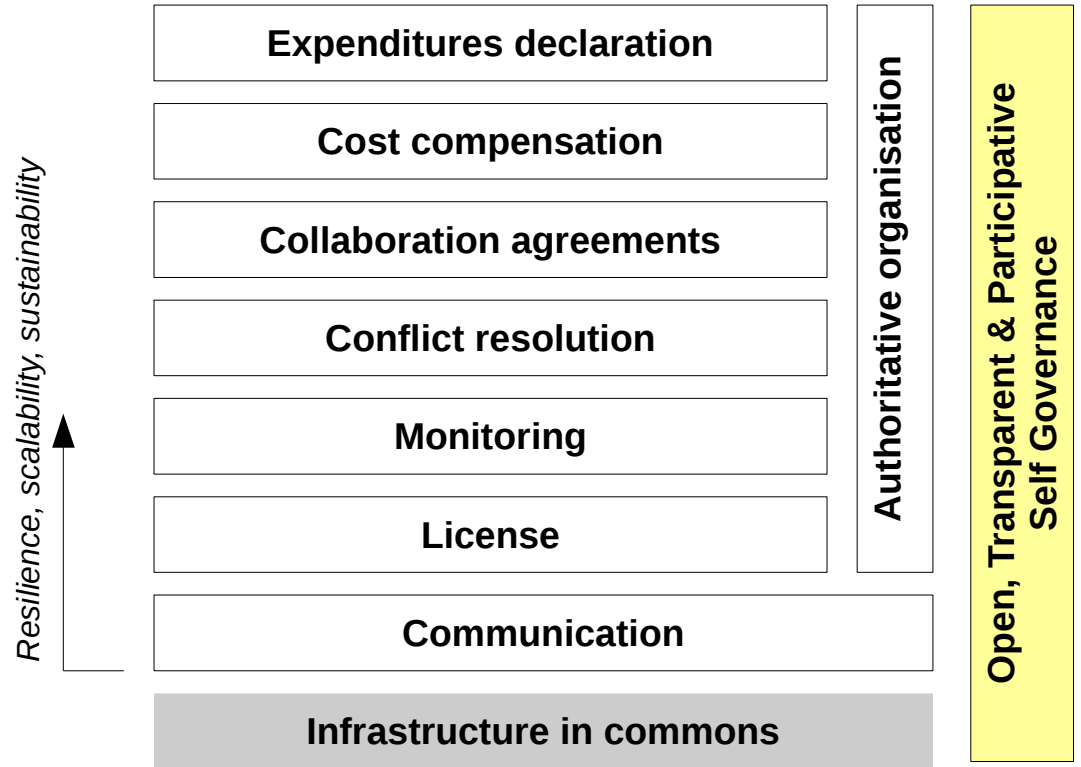
Smart Governments

Smart SME's & Orgs

Ecosystem: Participants & Stakeholders



- Sustainable design
- Based on collaborative economy
 - E. Ostrom (2009 Nobel Prize in Economics) principles
- Based on free market, but
 - Non-speculative
 - Fair trade
- win-win ecosystem
 - Rises funding
 - enables economies of scale
- Accountable
- Implemented through
 - Written consensus rules (license)
 - Signed agreements



- Expenditures declaration

- Public

- Criteria
- Information

- Economic compensation

- Balances

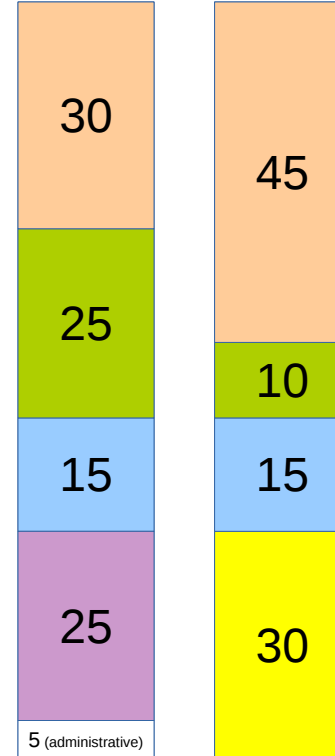
- Contributions
 - CAPEX
 - OPEX
- Resources usage
 - Bandwidth, # of fibre connections, ...

- Clear return of investment & fair business models

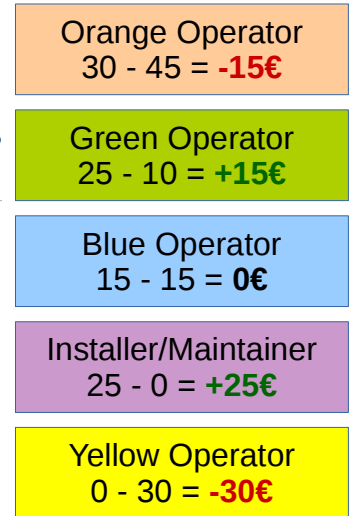
Totals mensuals per l'any 2014													
Supplier	gen	feb	mar	abr	mai	jun	jul	ago	set	oct	nov	des	Total
59855-Gurbtec Telecom	2,688.55	461.91	3,286.92	2,999.42	487.58	3,409.20	15,462.74	1,500.42	10,562.02	9,230.01	4,134.68	8,735.37	62,958.81
61891-Priona.net	-	-	-	853.05	-	-	-	-	2,699.54	-	275.68	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€)

Resource Usage (%)

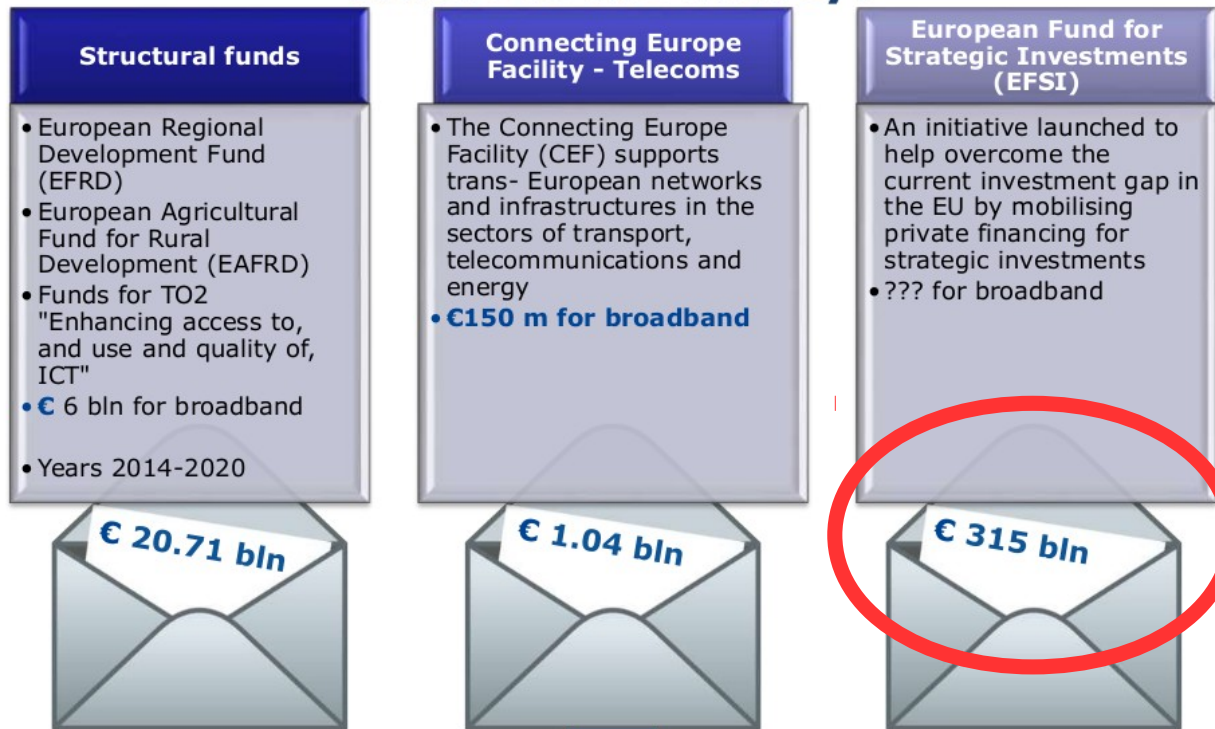


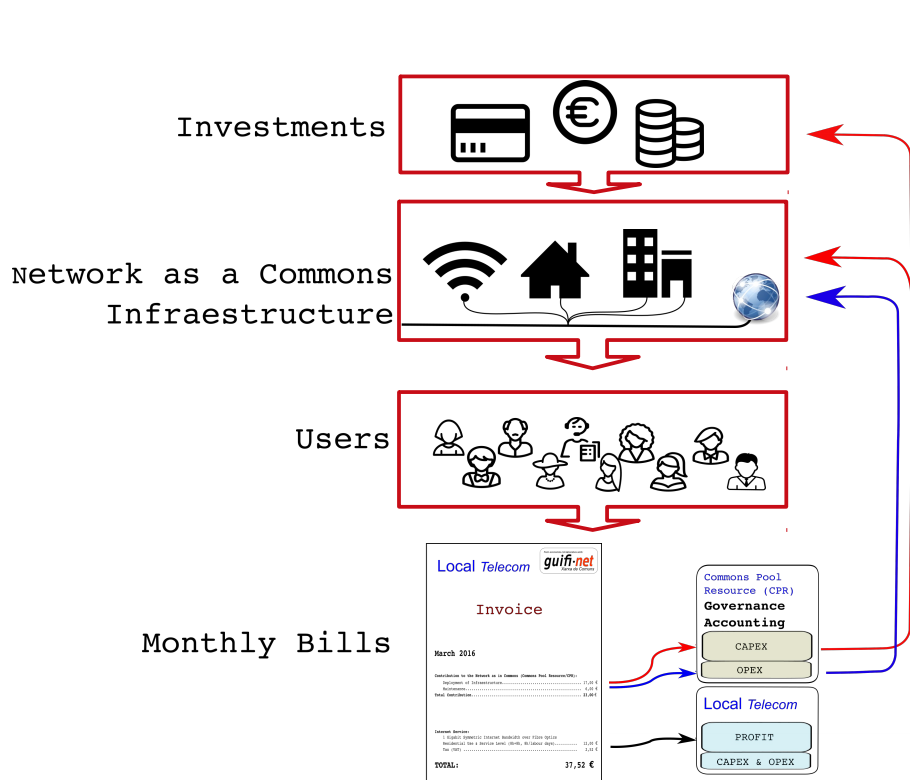
Compensation Balance To **Compensate** or to **Pay**



- El model col·laboratiu de guifi.net
- Millores en les compensacions
 - Objectiu EFSI/EBI
 - Cash Flows
 - Dipòsits
 - Proposta de “Revenue Split” & CAPEX de FO

Where is the money?





- Investment recognition
 - CPR Deployment
 - User / Customer Recruitment
 - Billing
 - Revenue Split
- Sustainability for:
- SP Profit & Expenses
 - CPR Maintenance
 - Return of Investment

Local Telecom



Invoice

March 2016

Contribution to the Network as in Commons (Commons Pool Resource/CPR):

Deployment of Infrastructure.....	17,00 €
Maintenance.....	6,00 €
Total Contribution.....	23,00 €

Internet Service:

1 Gigabit Symmetric Internet Bandwidth over Fibre Optics	
Residential Use & Service Level (8h*8h, 8h/labour days).....	12,00 €
Tax (VAT)	2,52 €

TOTAL: 37,52 €

Commons Pool
Resource (CPR)

**Governance
Accounting**

CAPEX


OPEX

Local Telecom

PROFIT

CAPEX & OPEX

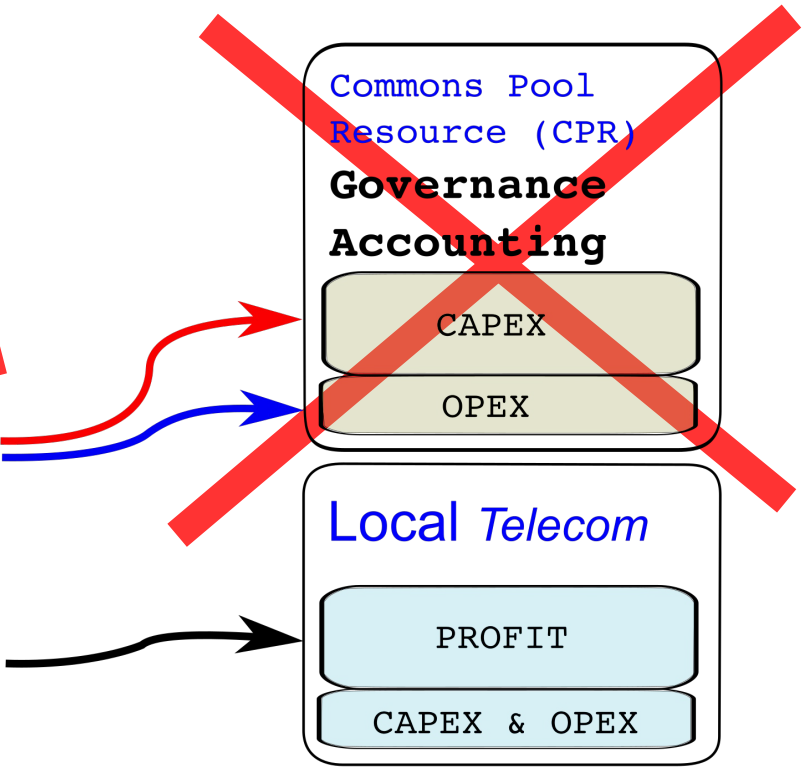
- Implemented by Commons Governance (Compensations)
- Ensures equal & proportional effort to all ISP
- Enable tax deductions when applicable

Local Telecom 

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TOTAL:	37,52 € 13 €



- No ROI
- No network maintenance (Obsolescence)
- Not able to invest in CPR deployments
- **Requires grants or endless subsidized model**

Risk #1: CPR Revenue to Profit or Discount

Local Telecom



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Commons Pool
Resource (CPR)

Governance
Accounting

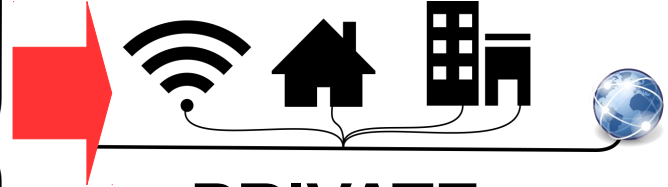
CAPEX

OPEX

Local Telecom

PROFIT

CAPEX & OPEX



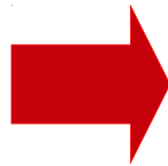
PRIVATE

Risk #2: CPR Revenue to Privative



- **Accounting by Operator to ensure/enable**

- Best accounting practices for sustainability with no extra administrative effort
- Commons Governance
- Transparency
- Tax exemptions when applicable
- Cash flow / Liquidity comfort
- Enforced by signed agreements



Accounting CPR Deposits By Operator

	Income	Outcome
OPEX	Fixed amount from recursive payments from customers for providing services	Expenses from Compensations (Maintenance & Upgrades)
CAPEX	Fixed amount for providing line <ul style="list-style-type: none"> • Upfront (single payment) • Financed, recursive payments at market rates 	Expenses for New deployments

Ràting

Definició:

Segons com fa les inversions i despeses relacionades amb Telecomunicacions de cada operador

A

Sempre en Xarxa de Comuns / CPR

B

En Xarxa de Comuns o Privativa segons el cas

C

Principalment (>90%) en Xarxa Privativa

- El dipòsit el reté l'operador, el titular és la Fundació, B & C transfereixen mensualment els saldos, els A ho inverteixen o es transfereix a partir de llindars.
Ja NO es fa servir per distingir les compensacions de CAPEX (ja està inclòs), però sí per determinar si se li finança o en les d'OPEX.

Connexió FO Definició

Cost

Cost Total

Cost total de la línia funcionant (il·luminada)

1.500 €

“drop”

Cost de connectar una casa on ja hi passa la fibra

350 €

	Sense Fils	FO	Comentaris
Servei ISP		12 €	Cobreix: Beneficis + CAPEX & OPEX del ISP.
CAPEX en el moment de connectar	Contribució al supernode	<ul style="list-style-type: none"> A: Cost del “drop” (350€) B: Cost del “drop” x 2 (700€) C: No se'l finança (1.500€) 	Sense fils, s'aplica l'import que consta com a contribució a l'apadrinament per a la cobertura
CAPEX diferit (mensual)	4 €	17 €	El pagament mensual en fibra només s'aplica quan no s'ha pagat el cost sencer en el moment de la connexió. No calen compensacions per retenció entre A/B/C
OPEX	4 €	6 €	FO: Inclou manteniments de la línia, electròniques (ONU+OLT) i mans amb un nivell de servei mínim (8+8 laborables 8h). Per a nivells superiors, cal posar-se de mantenidor o arribar a un acord amb el mantenidor. Sense fils: NO inclou equips del client Compensació per retenció segons ràting: <ul style="list-style-type: none"> B: 50% C: 100%
TOTALS	20 €	18 € (35 € si finançat)	Tots els ISP comercials han de publicar preus Les entitats sense ànim de lucre NO poden publicar preus comercials