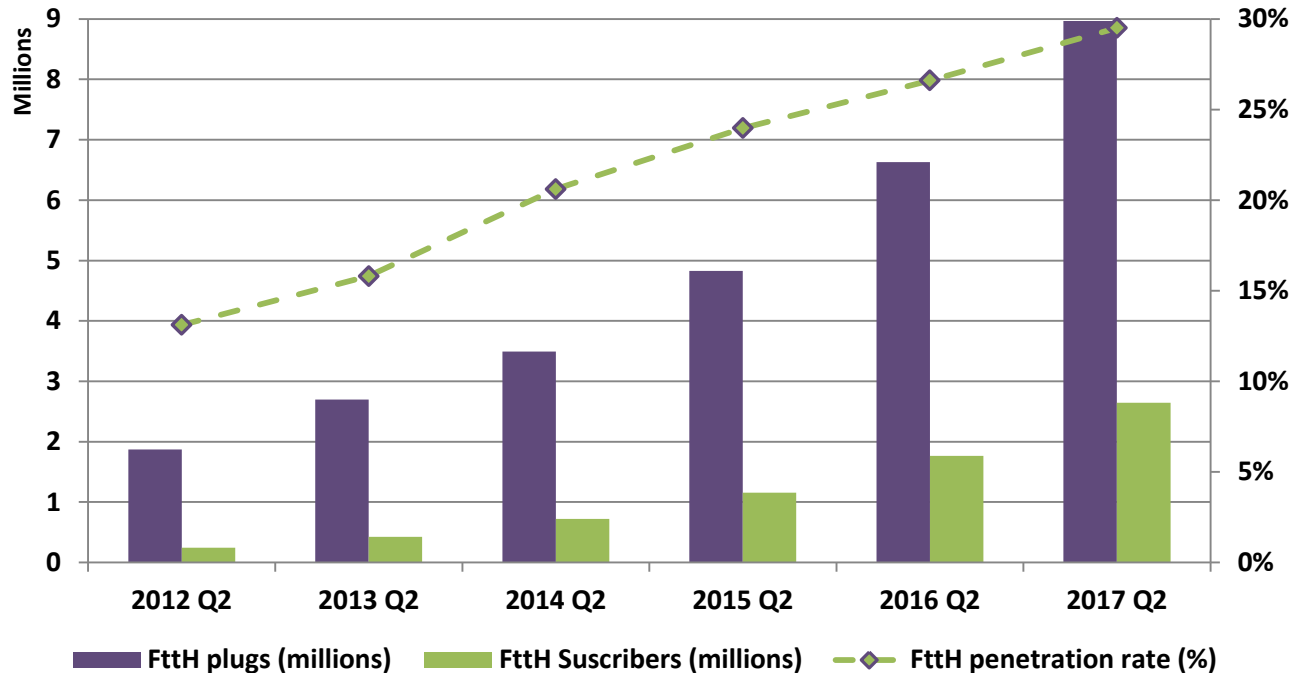


Broadband rollout in France

Broadband Days 2017

Brussels, 20 November 2017

NGA technologies offer speeds above 100Mbit/s to a third of the French population, with FttH increasing rapidly



Market overview

1. Cable footprint is expected to remain below 30%
2. FttH rollouts undergo rapid growth (+37% yoy) and 29% penetration

Competitive outlook

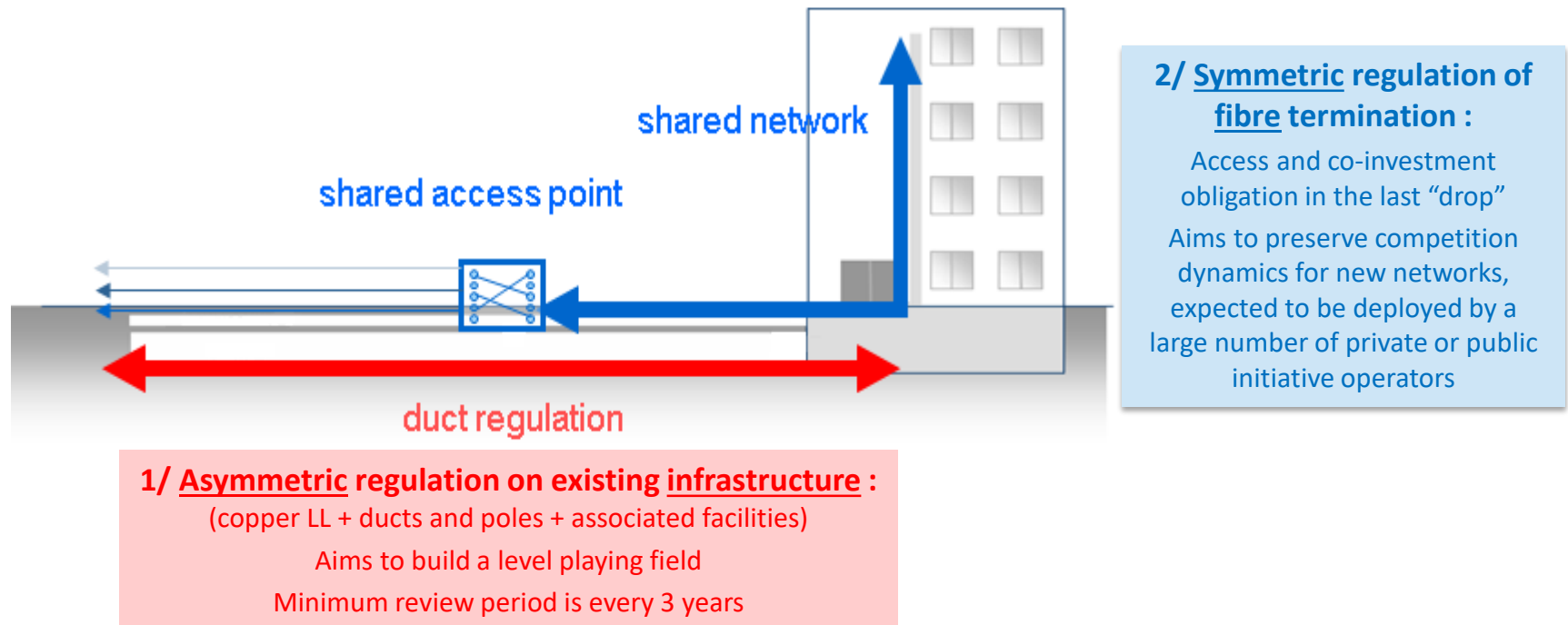
Strong presence of fixed alternative operators at the local level, in a market based on 4 fixe/mobile convergent operators

Market consensus that only **passive access** allows for sustainable competition and innovation.

Passive access is unfeasible with FttLA. Copper sub-loop generally too long to deliver NGA throughputs.

ARCEP's FttH regulation consists of both asymmetric and symmetric obligations

- ▶ ARCEP's regulation for NGA networks is based on two complementary pillars

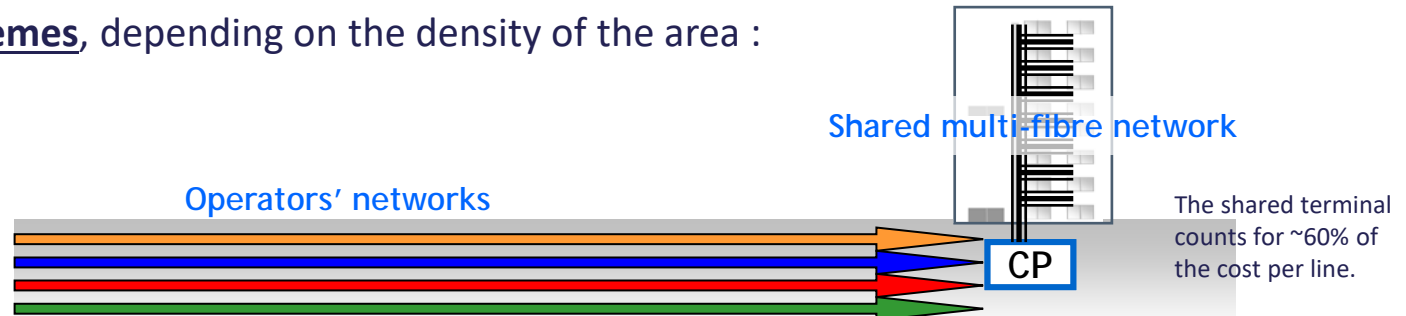


- ▶ France's market conditions required openness of NGA networks to be guaranteed:
 - by specifying conditions of network architectures ahead of rollout
 - so that deploying operators adopt **architectures compatible for long-term passive sharing**

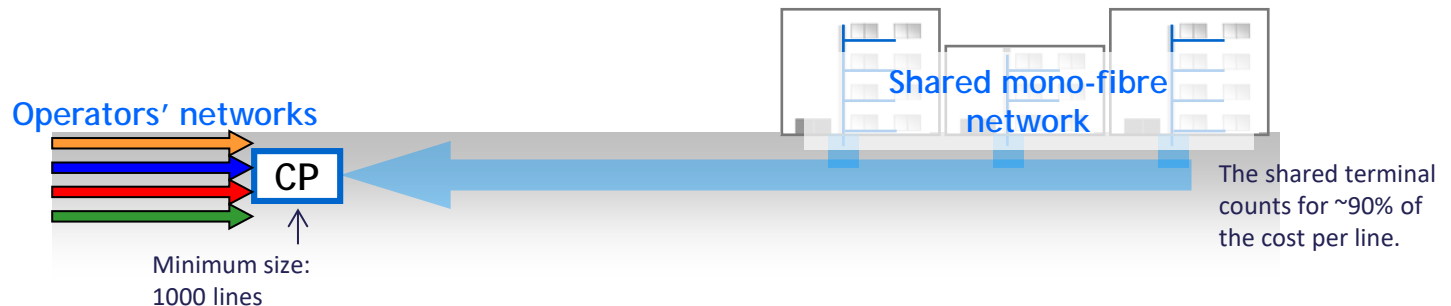
Symmetric rules for fibre vary with area density to strike the balance between competition and costs

- ▶ **Set of obligations** imposed on the operator deploying the last segment of the network
 - Provision of **passive access** at a concentration point
 - Publication of an access offer including **co-investment & line rental** options
 - **Access prices** based on principles of non-discrimination, objectivity, relevance and efficiency
 - Structured exchanges of **technical information** with commercial operators
- ▶ **Flexible setting** fit for all fibre local loop operators: incumbent, alternative ISPs, local authorities
- ▶ **Two sharing schemes**, depending on the density of the area :

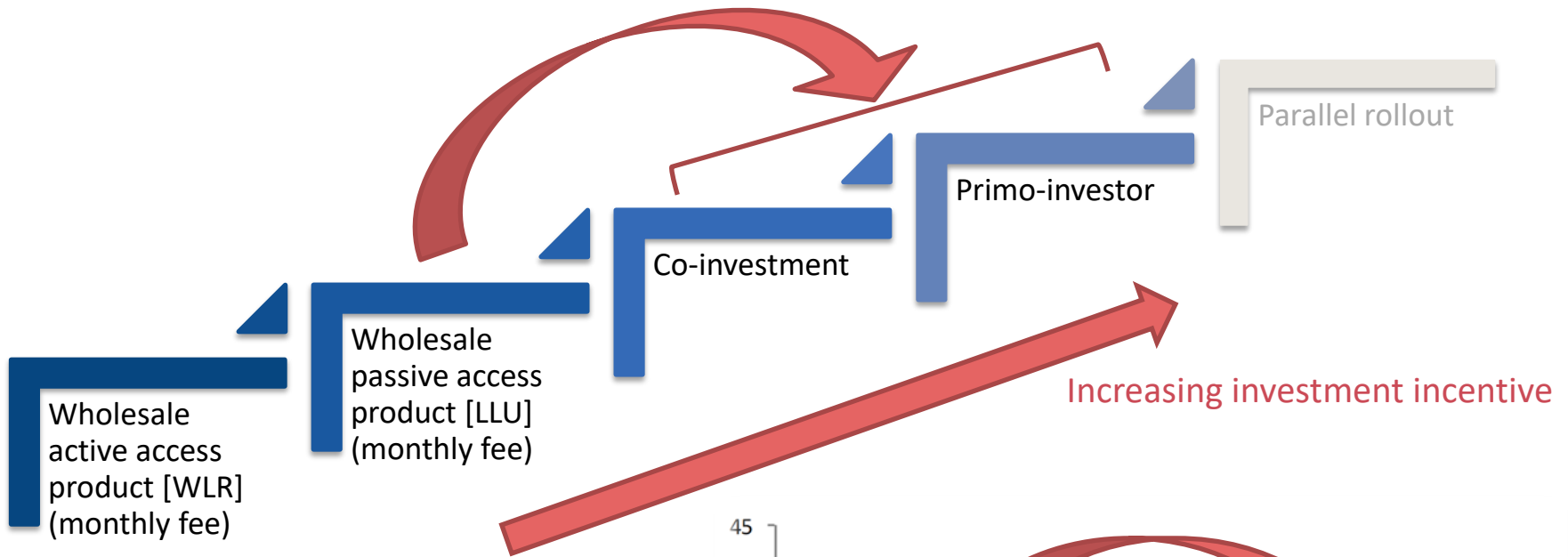
Very dense areas :
(5,5 millions households)



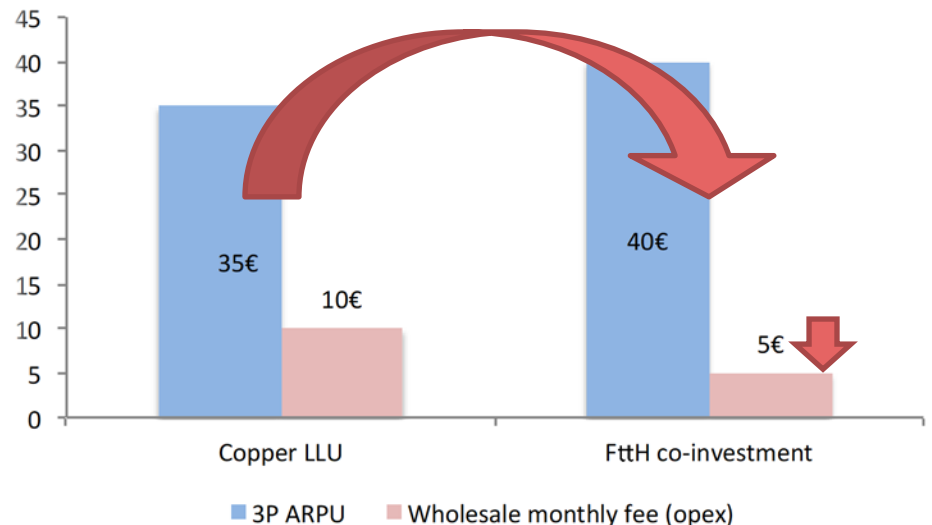
Less dense areas :
(27,7 millions households)



Co-investment model creates a new rung on the investment ladder



- More efficient than pure infrastructure duplication
- Decreases OPEX per line
- **Reduces regulatory exposure and increases predictability**
- **Reconciles regulation and investment**



Preliminary conclusions of the undergoing market analysis in France

- ▶ In France, the high-speed and very high-speed access products belong to a single nationwide market, with Orange designated as SMP on markets 3a, 3b and 4.
- ▶ Regarding legacy infrastructure (copper, civil works...), efforts to fine-tune the remedies to :
 - facilitate the roll out of FttH networks and;
 - in the meantime, preserve the general quality of service of LLU products
- ▶ Regarding FttH, symmetric regulation is considered sufficient but Orange took actions to improve competition focused on
 - on access in very dense areas and ;
 - nationwide enhancement to operational sharing process.
- ▶ But need for specific access remedies to remove competition deadlocks for business end-users, by ensuring a more competitive business wholesale market
 - Orange will also offer wholesale FttH+ (FttH with SLA) to meet SMBs' needs and substitute to LLU with SLAs.

FttH rollout in private initiative networks is expected to cover up to 54 % of households

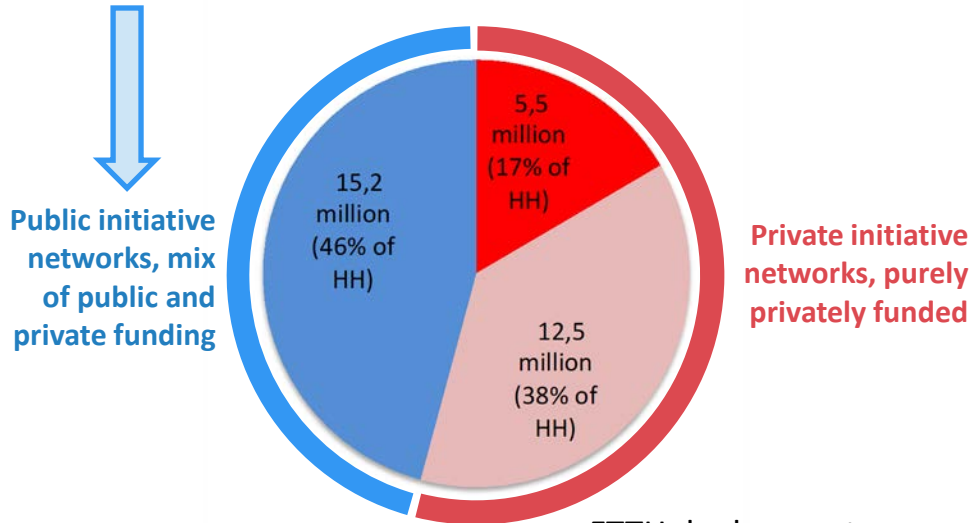
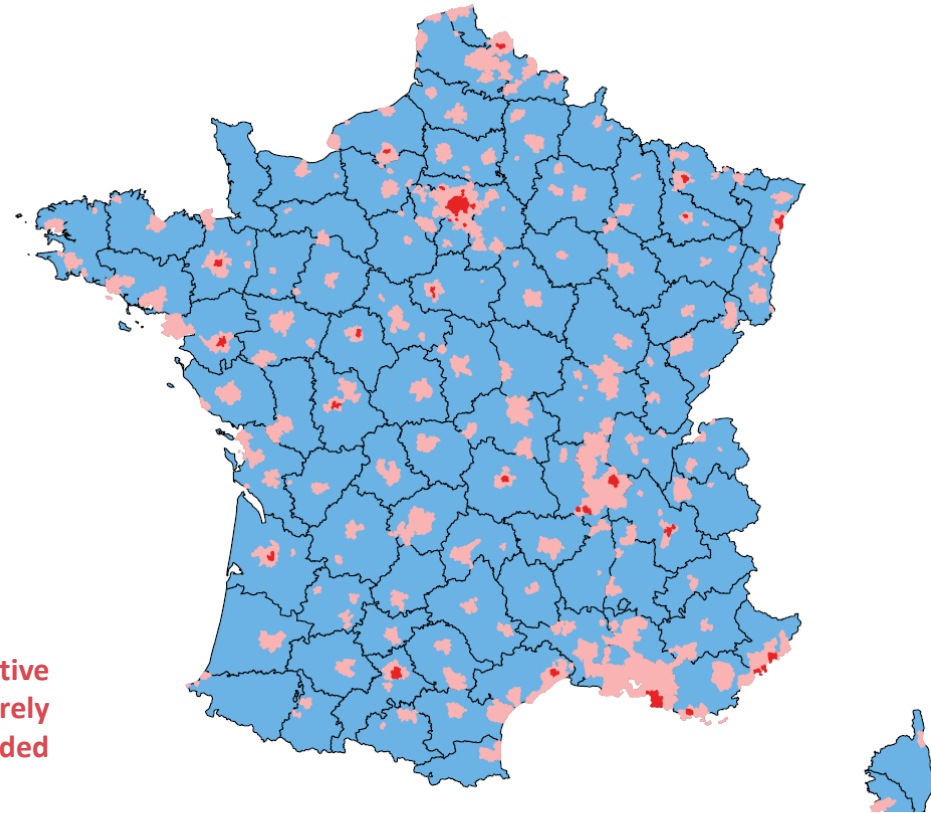
Public Initiative Networks (PINs) set to cover the rest of territory :

13-14 billion funds
(~50% public)



Public Initiative Networks (PINs) in France:
84 wholesale only operators (mostly PPP),
subject to the same symmetric regulation

Enables private operators to co-invest into PINs,
benefitting from financial and technical access
conditions similar to those of privately funded
networks

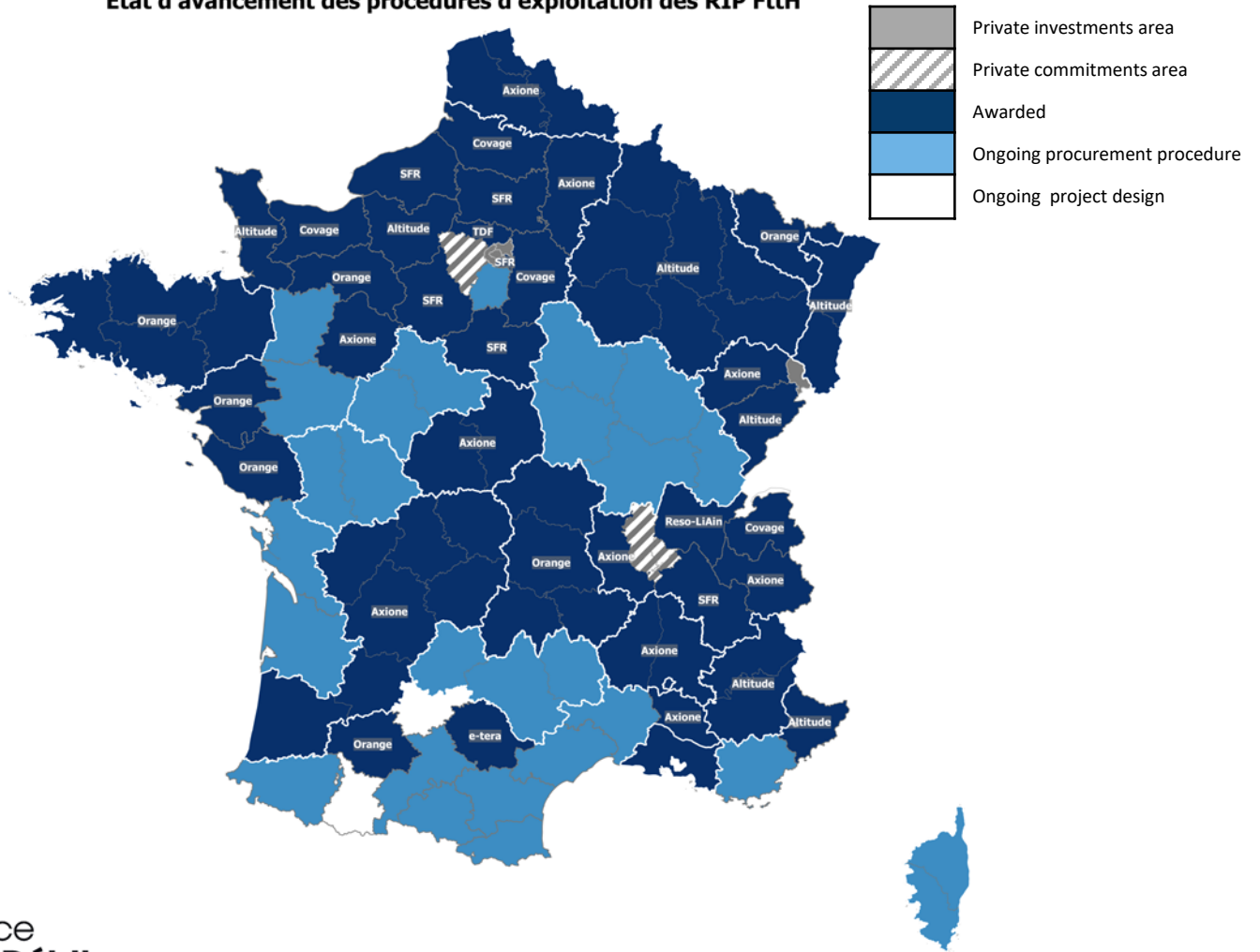







FTTH deployment
by types of investment

State of progress of public initiative networks in low-density areas

L'AGENCE DU
NUMÉRIQUE

Etat d'avancement des procédures d'exploitation des RIP FttH



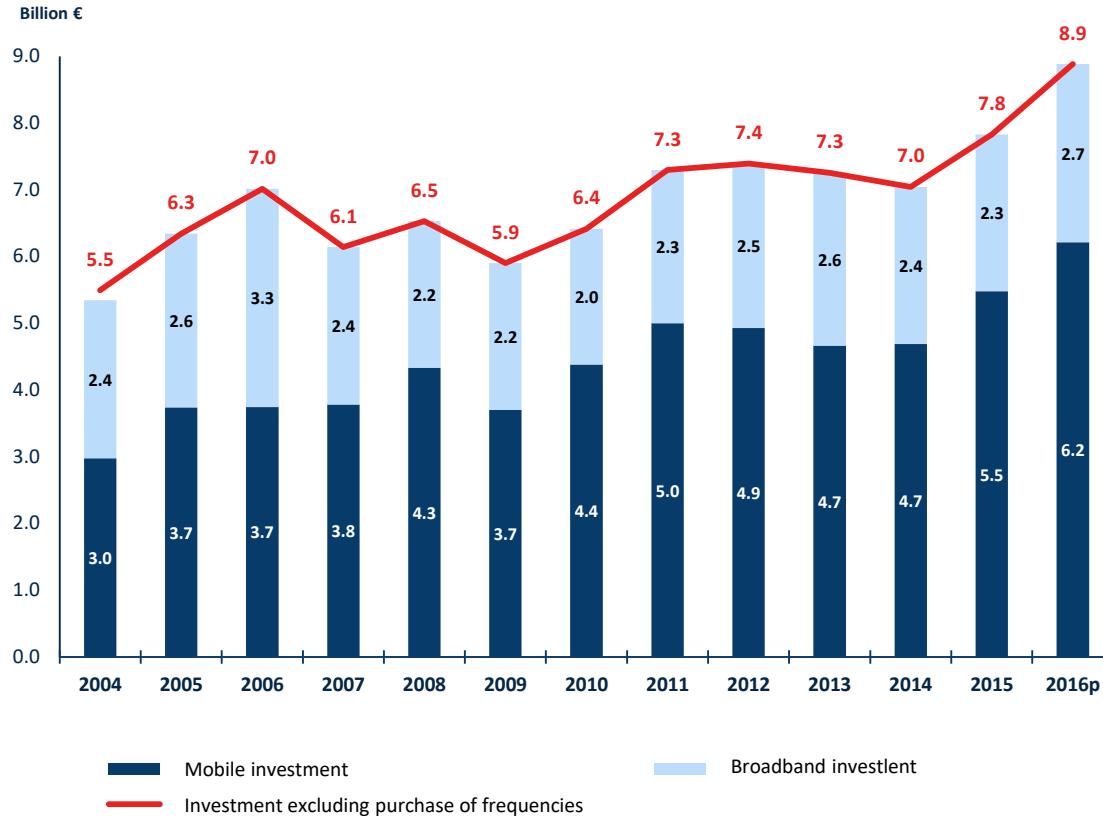
-  Private investments area
-  Private commitments area
-  Awarded
-  Ongoing procurement procedure
-  Ongoing project design

 Plan France
Très Haut Débit
RÉPUBLIQUE FRANÇAISE

Government data

Carte réalisée par l'Agence du Numérique - Mission Très Haut Débit (octobre 2017)

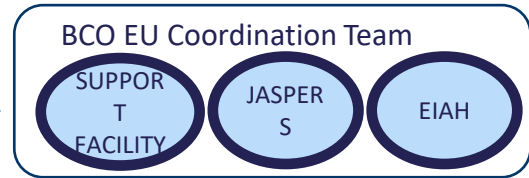
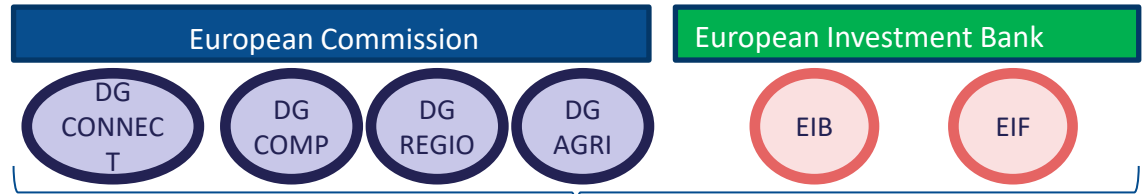
Evolution of telecom investments in France



BCO in France

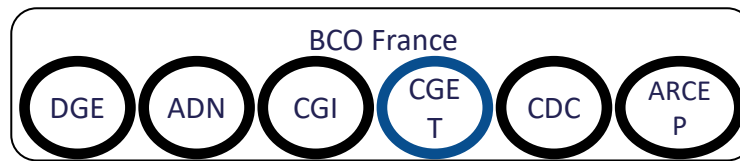


European Institutions



Member State

6 National BCOs



Coordination for France

Information / Contribution

Exchange / Support

Exchange / Support

18 Regional BCOs

