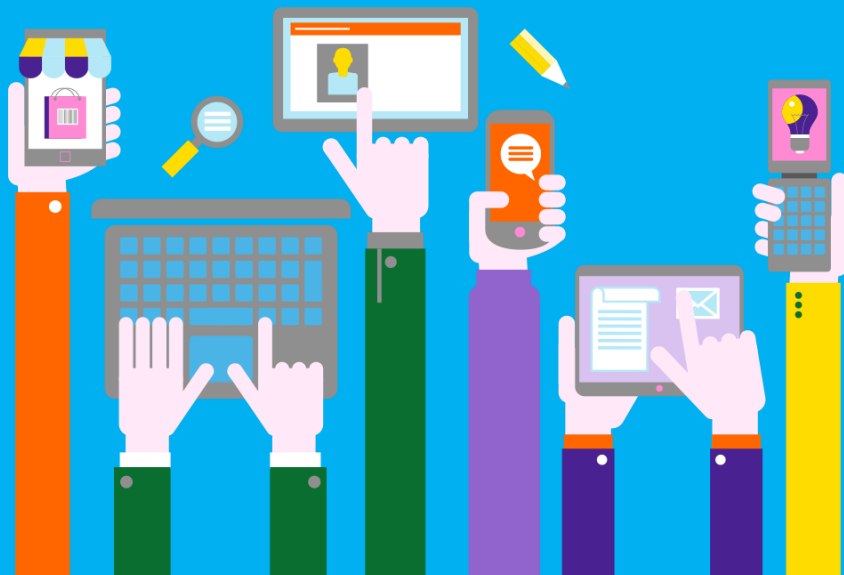


FTTH

on-site visit

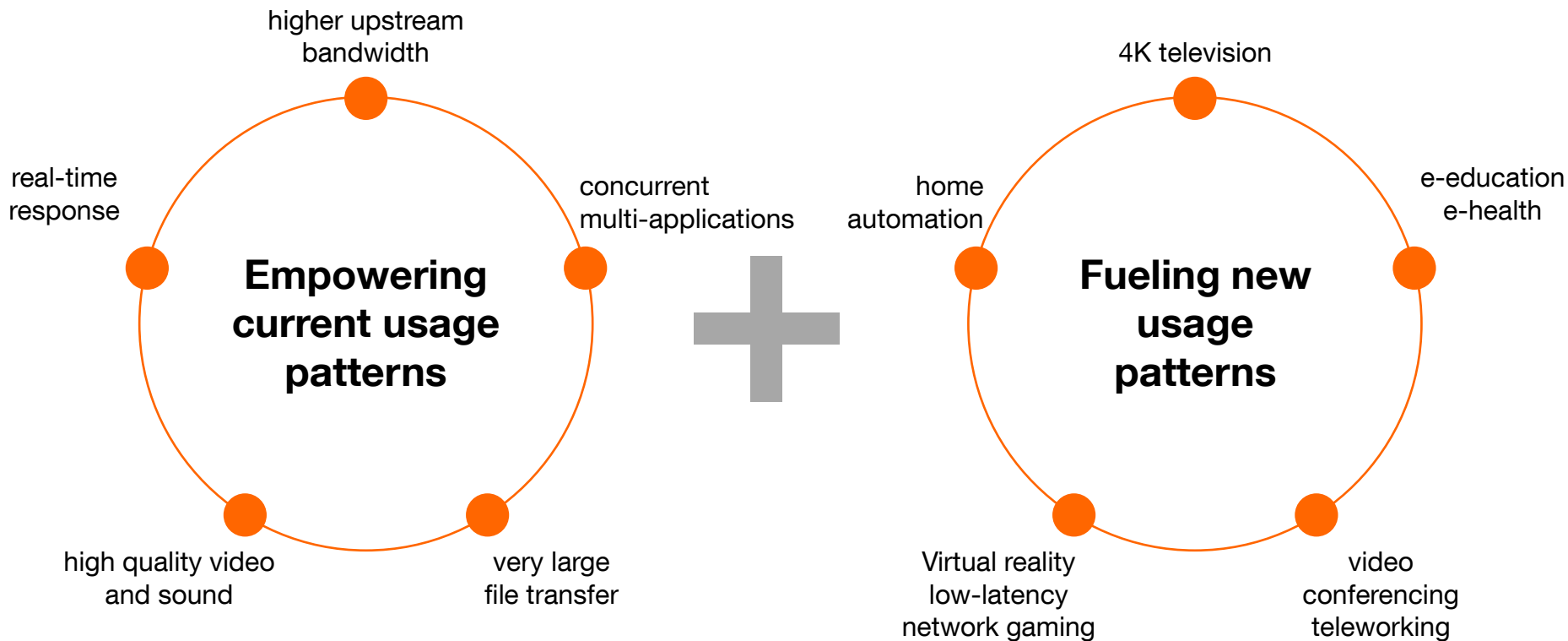


Paris
November 9th, 2016



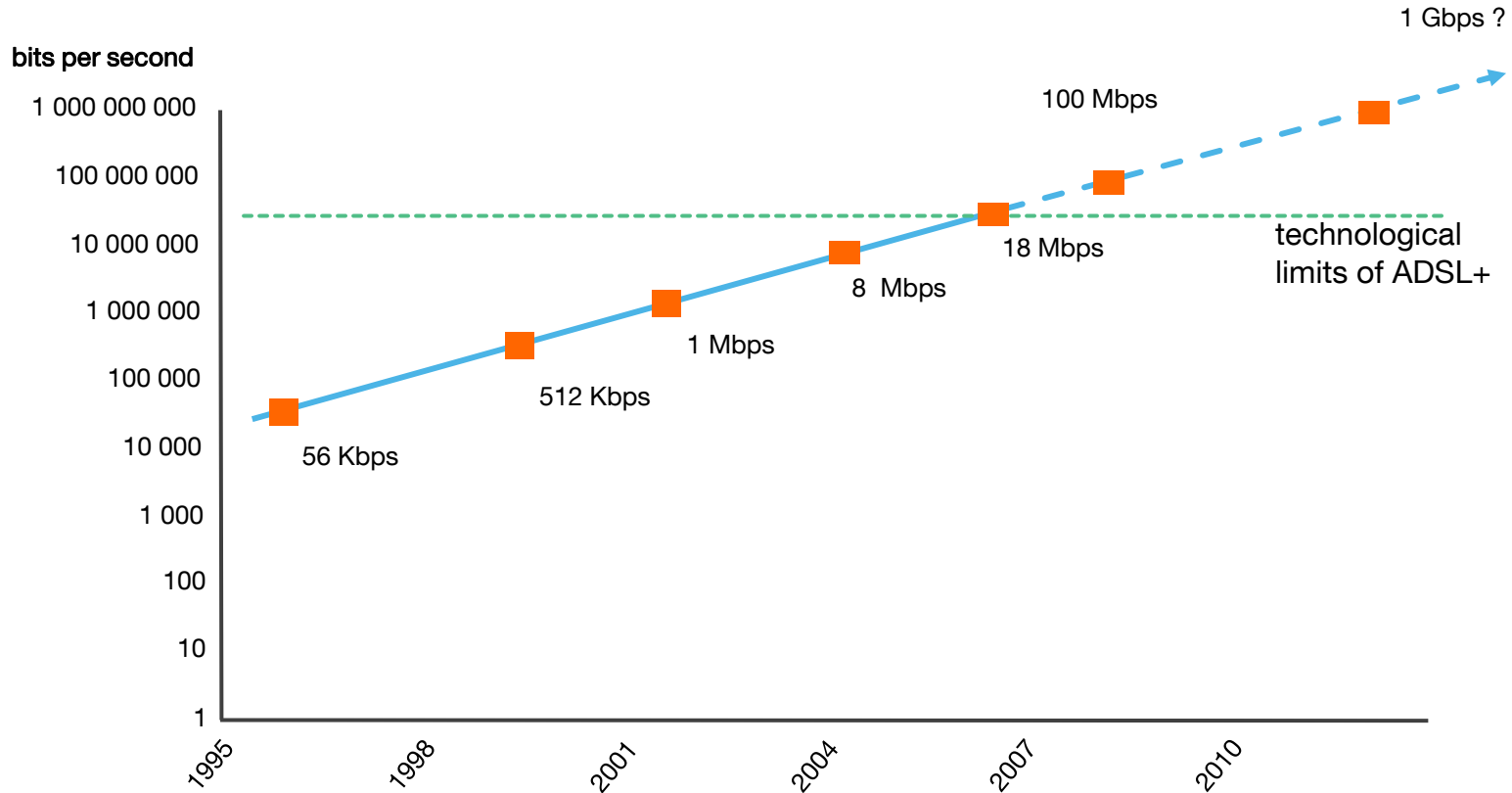
Usage patterns are requiring more bandwidth

All usage patterns concurrently, with stable quality of service

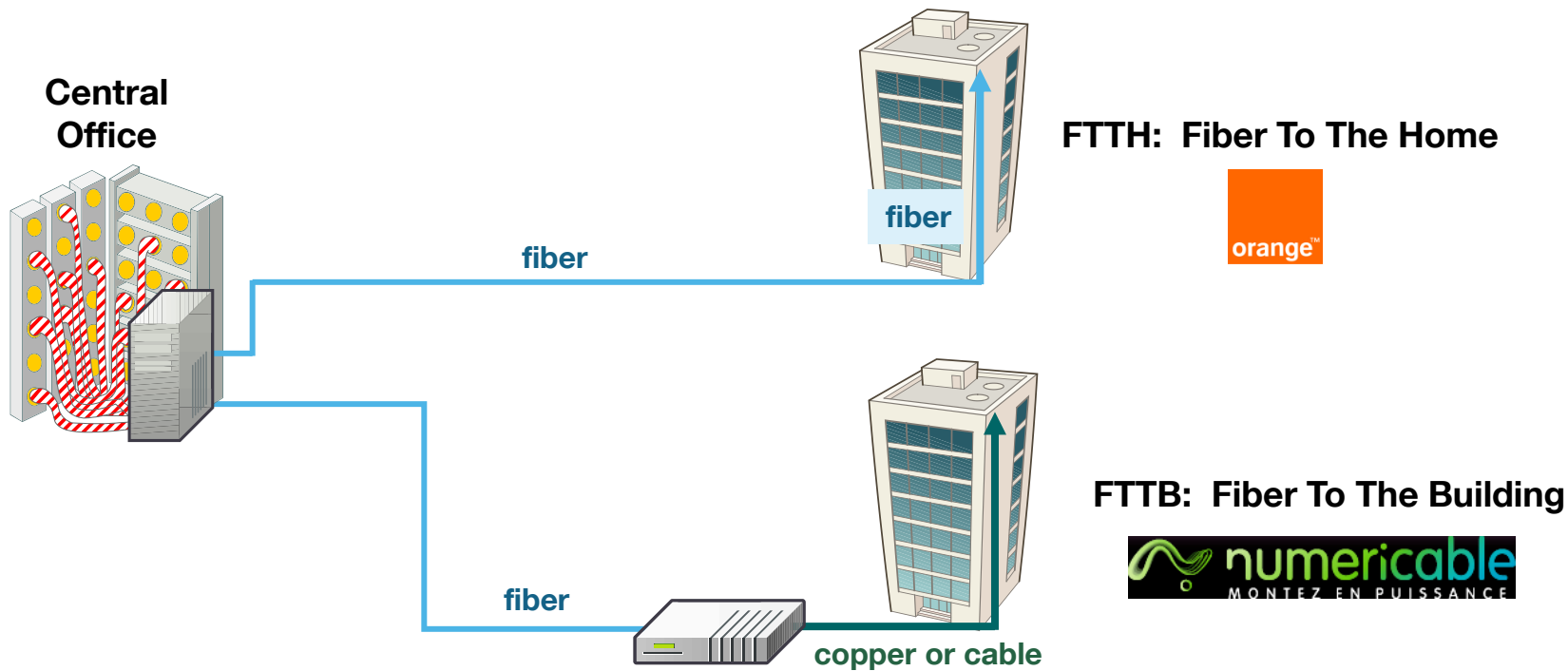


ADSL is reaching its limits, while fiber is “the” future-proof technology

Evolution of downstream bandwidth in France

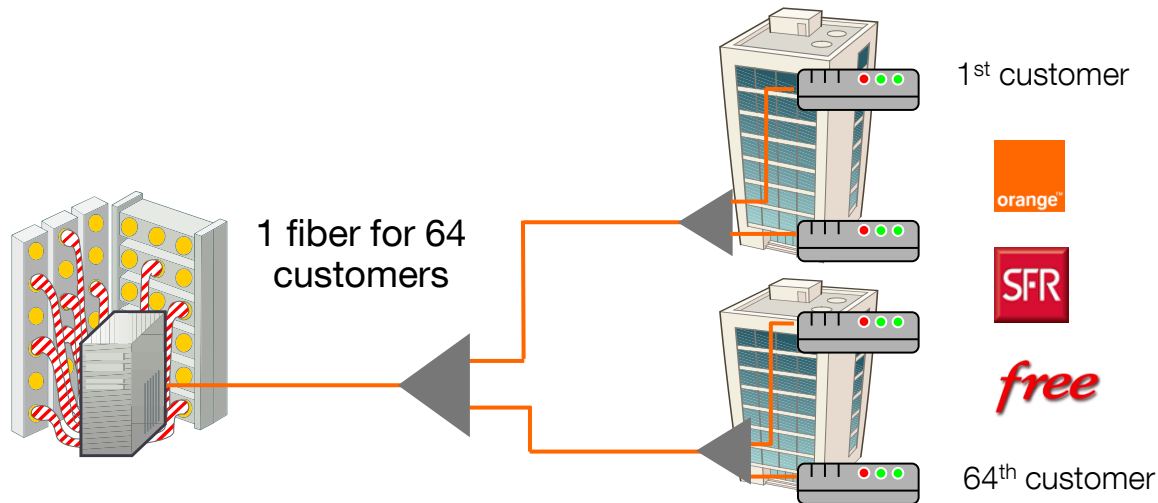


There are 2 different architectures to connect customers in very high broadband

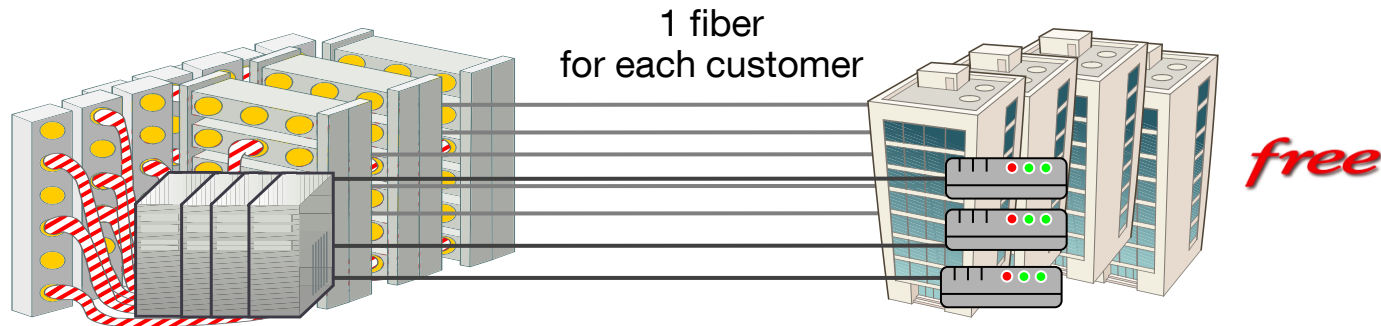


There are 2 different architectures to connect customers with fiber to the home

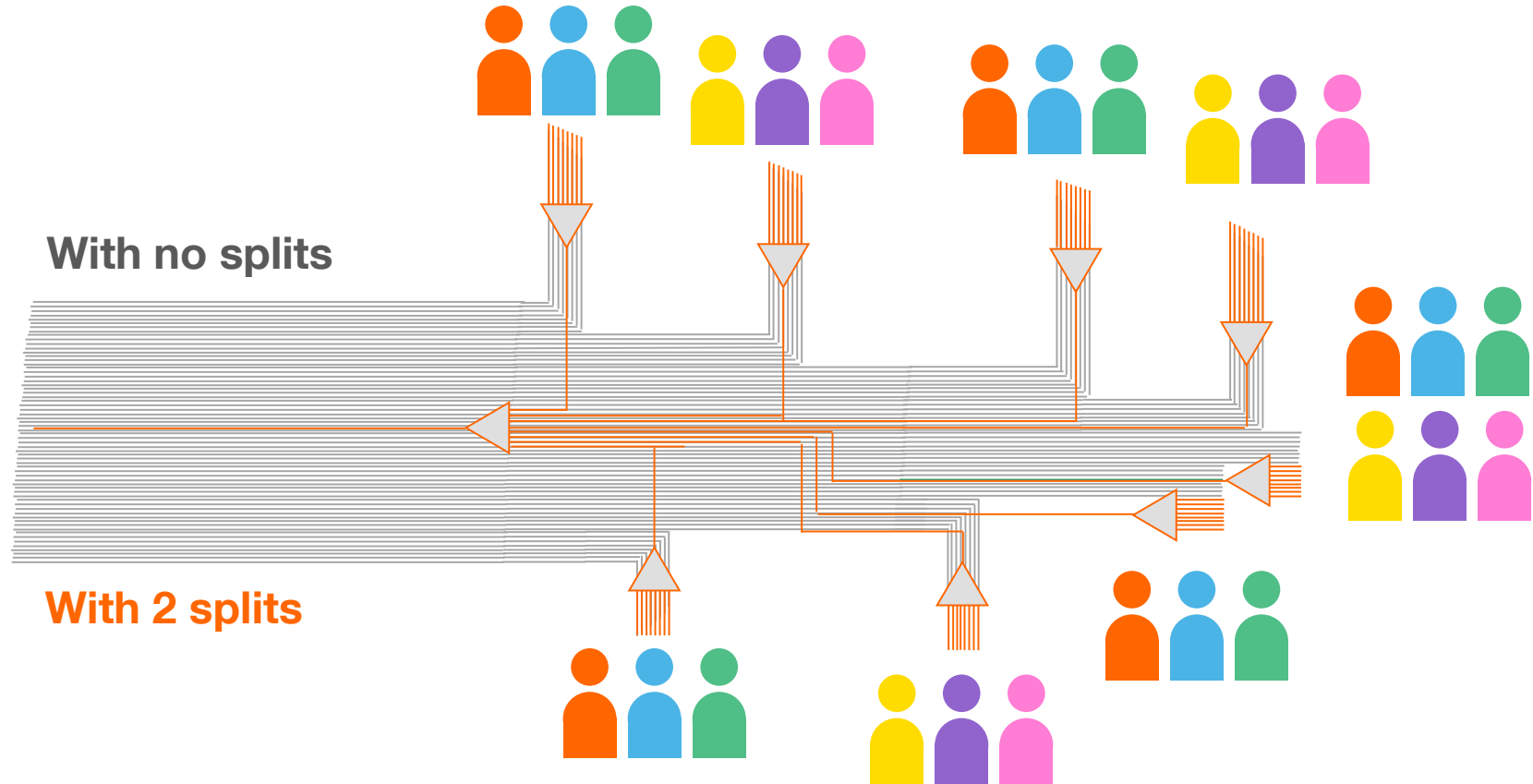
Point to
multipoint
(GPON)



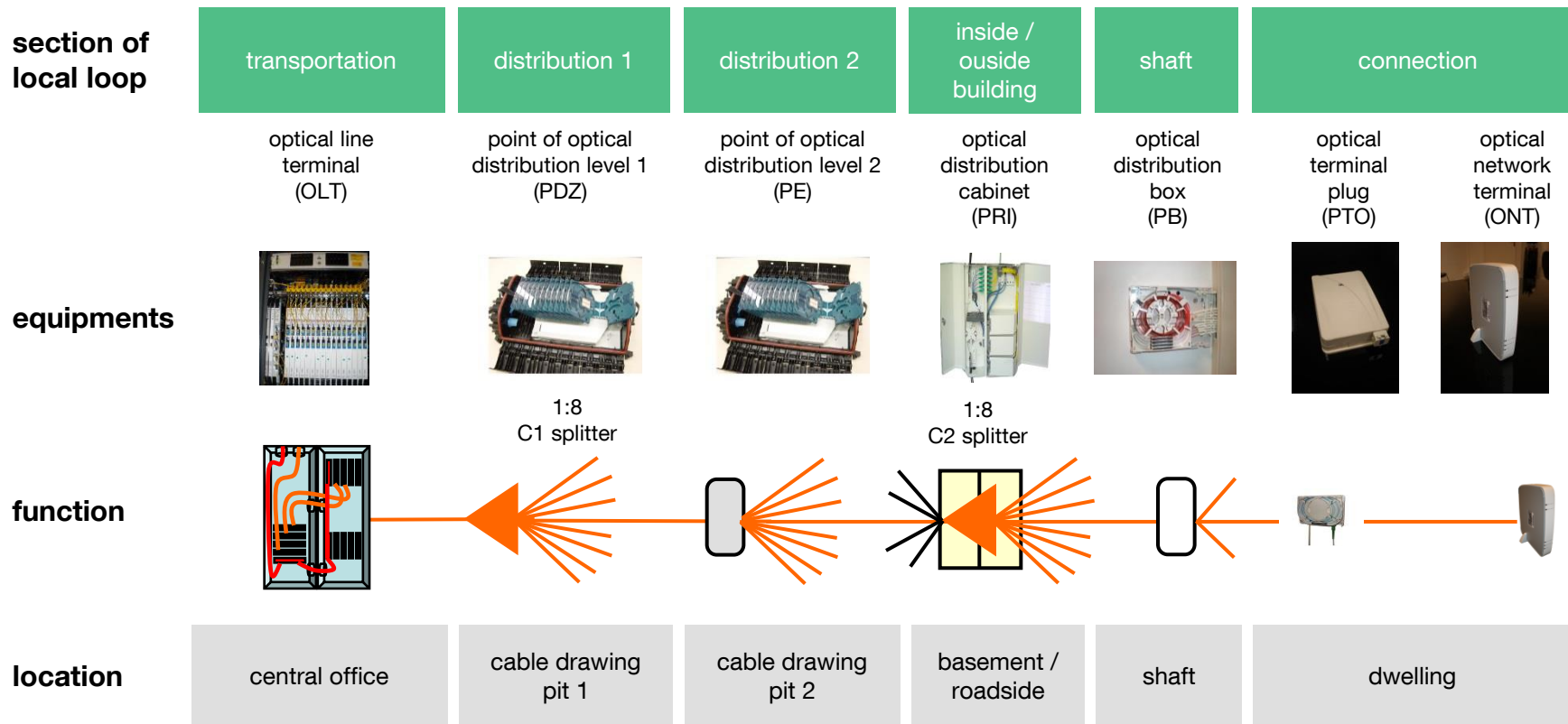
Point
to point



Without splitters, duct space is wasted

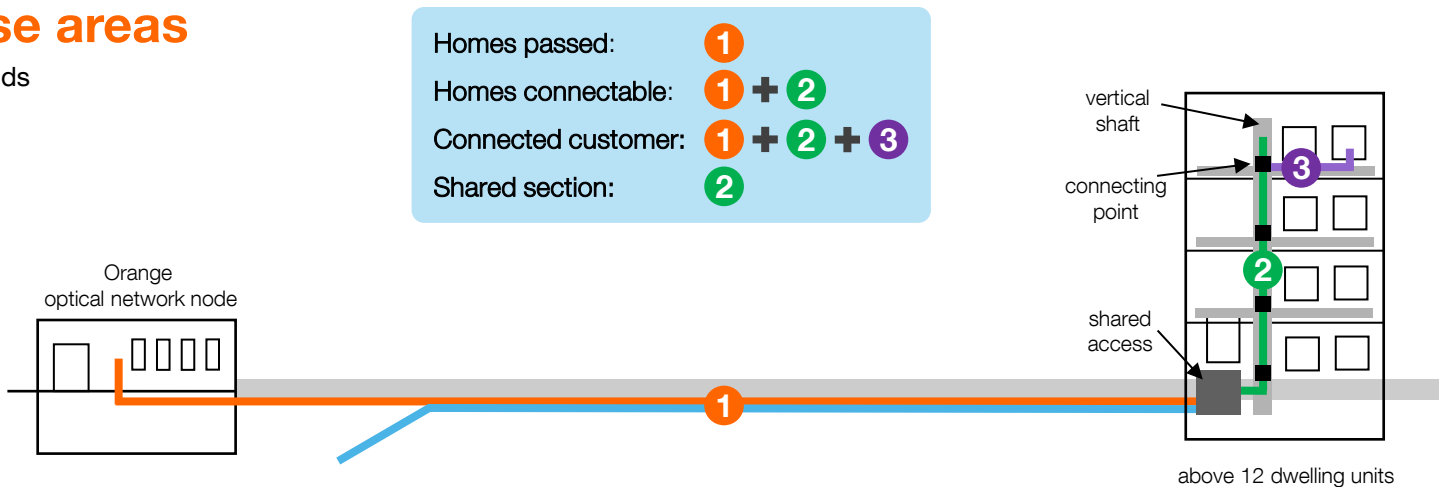


Network rollout



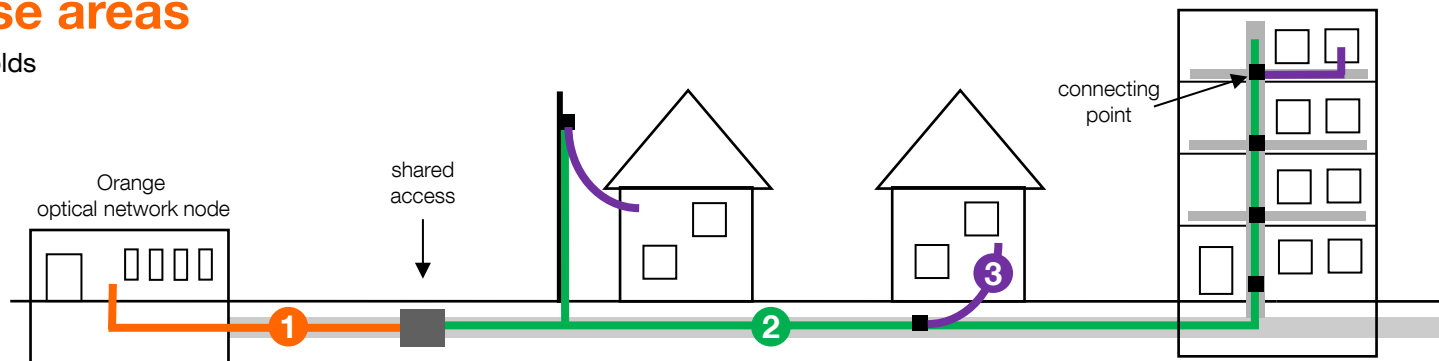
Very dense areas

🏠 6m households

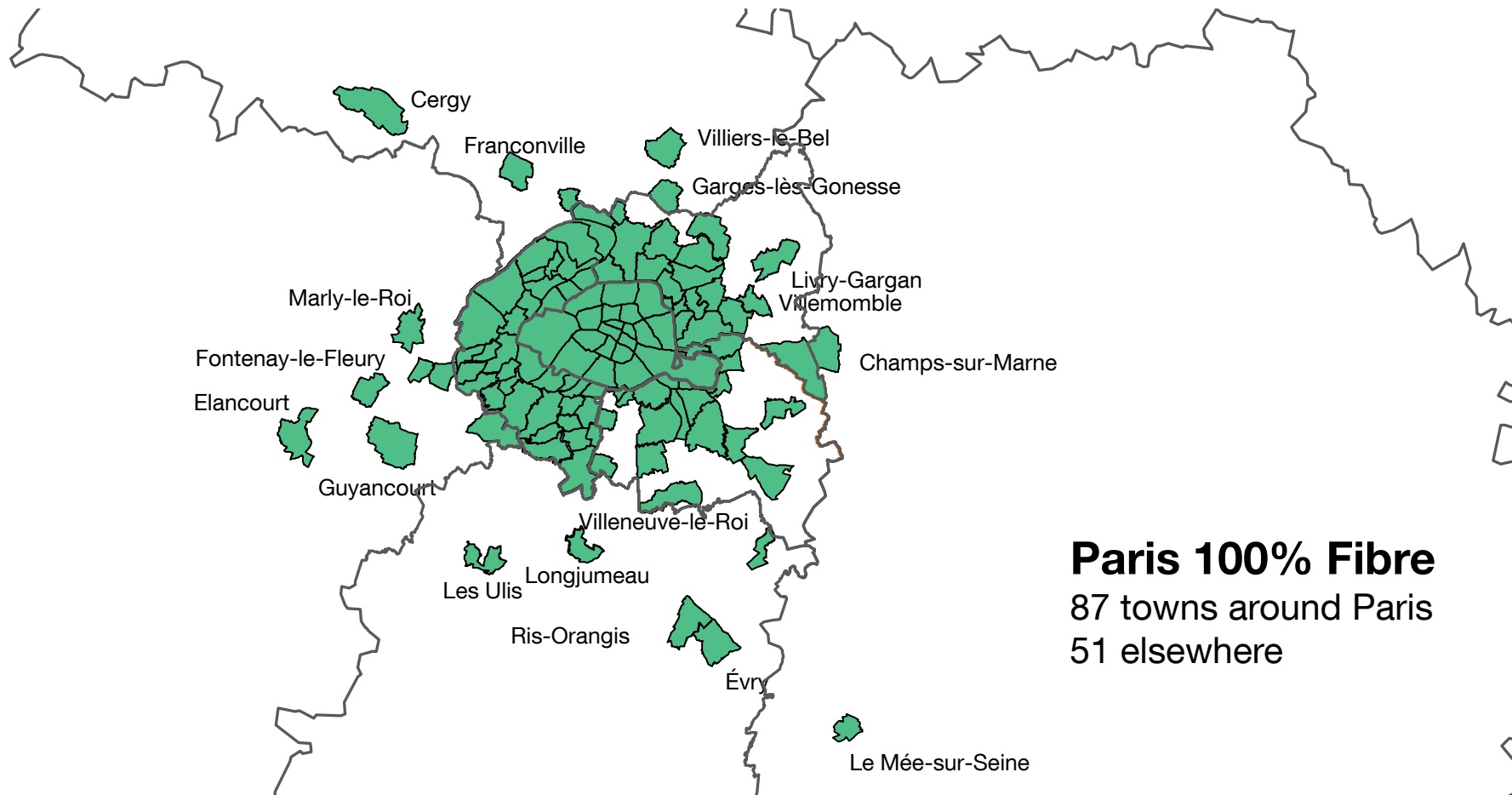


Less dense areas

🏠 14m households



The Very Dense Area in Île-de-France



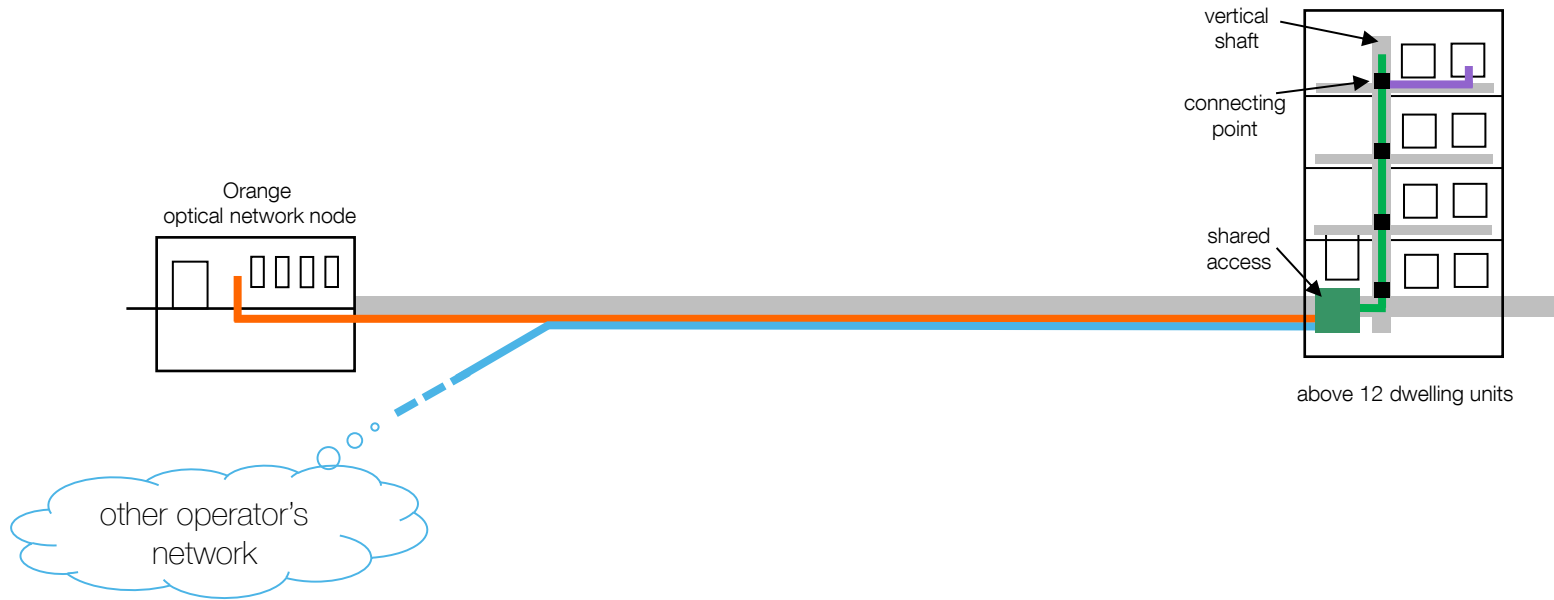
Paris 100% Fibre

87 towns around Paris

51 elsewhere

The first operator accessing a building must share its infrastructure

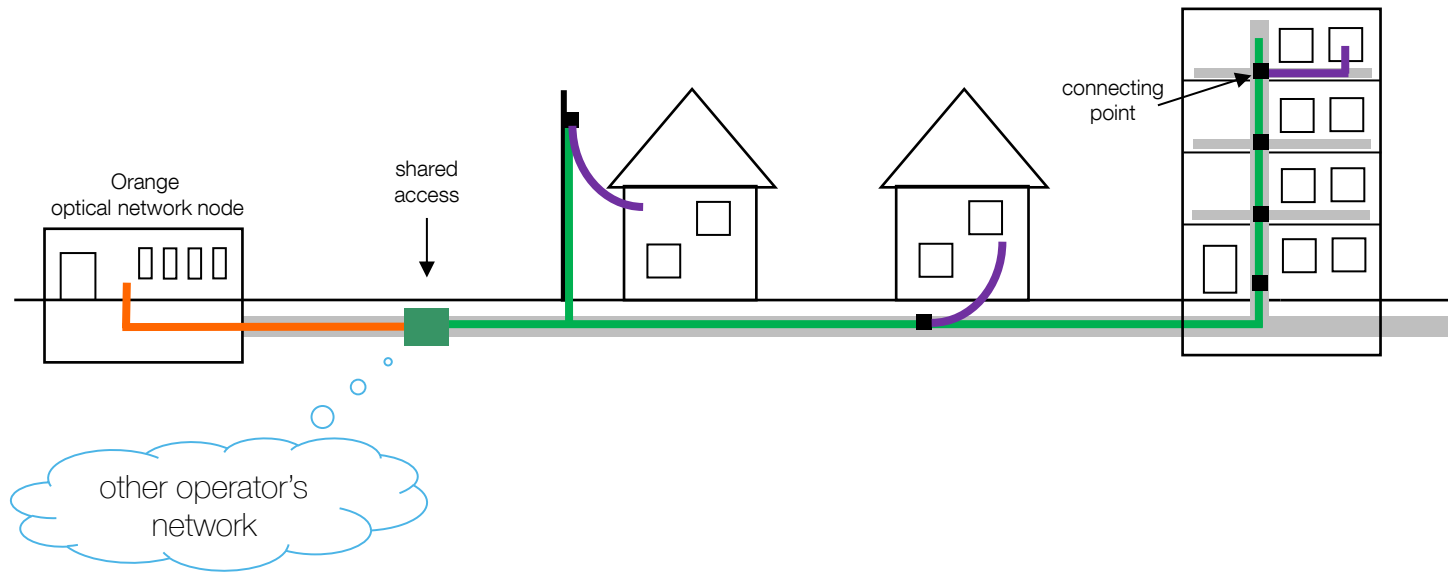
Dense areas



- In dense areas, the sharing point may be installed in the basement of buildings with 12+ flats

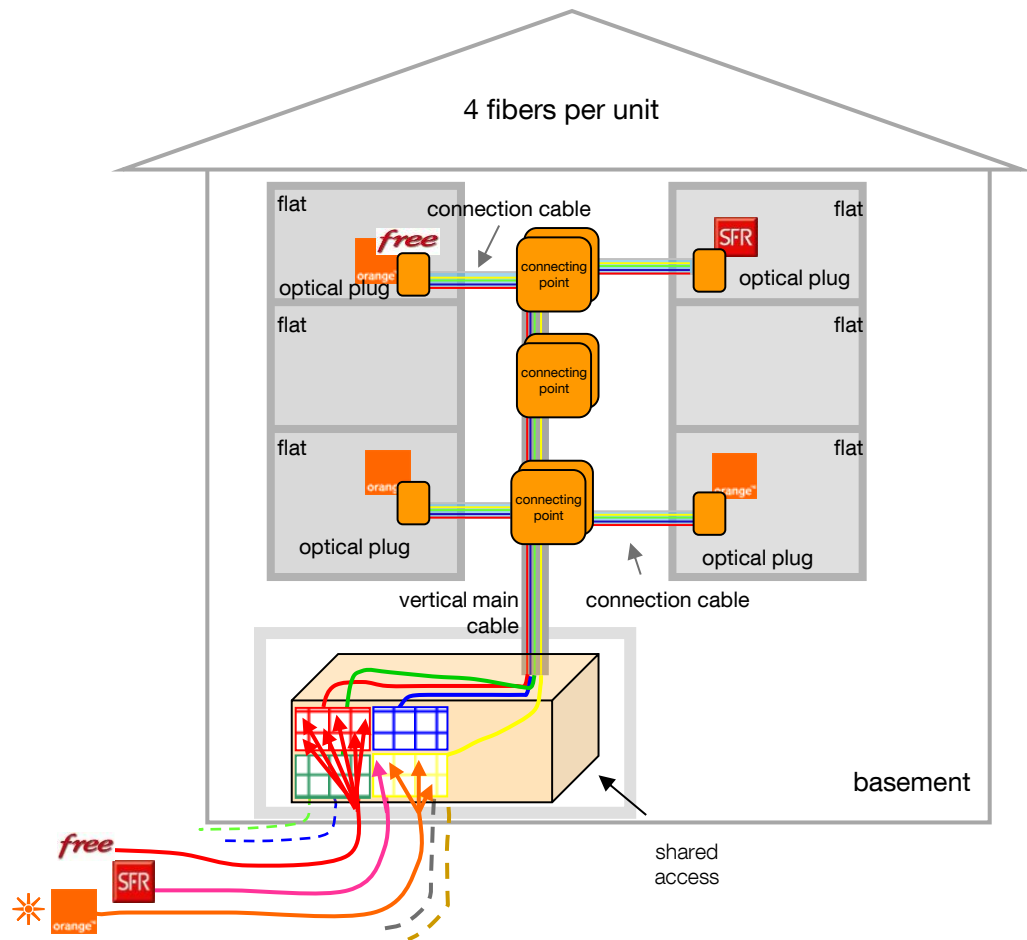
The first operator accessing a building must share its infrastructure

Less dense areas



- In less dense areas, the sharing point is located in the street
- it serves 1,000 homes - or at least 300 homes, when coupled with a wholesale collect offer

Multi-fiber sharing in dense areas



Typical network architecture in less dense areas



central office



building



house

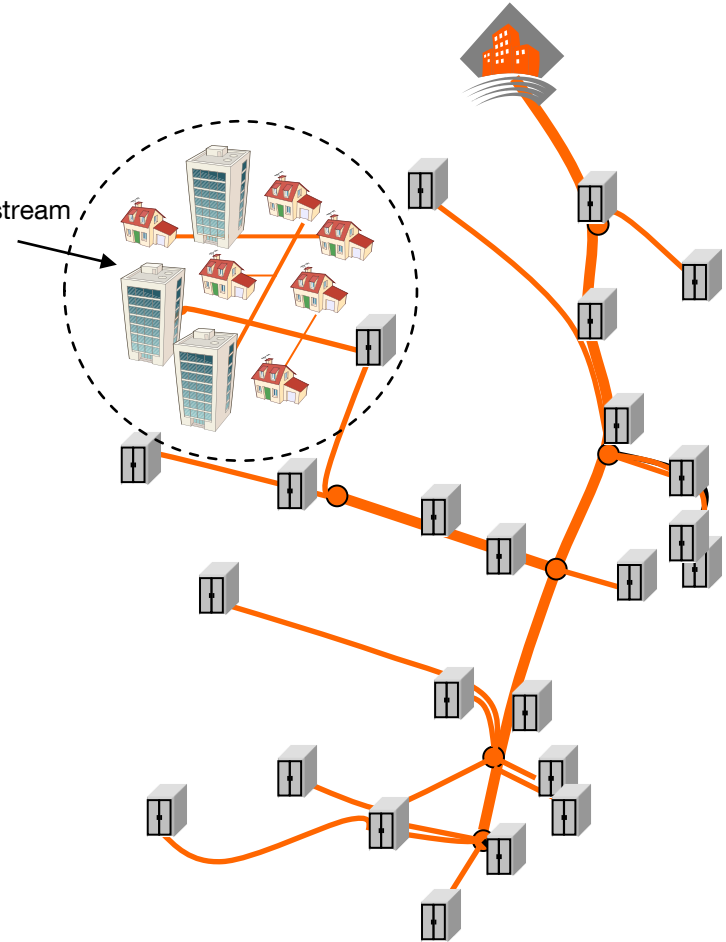


sharing point, serving up to 360 ports



*typical cabinet for a sharing point
serving up to 360 households
—dimensions : 150 x 150 x 30 cm*

distribution downstream
of sharing points



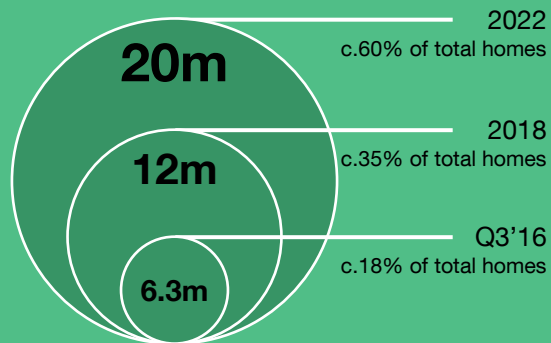
Various types of cabinets



#Q3_2016

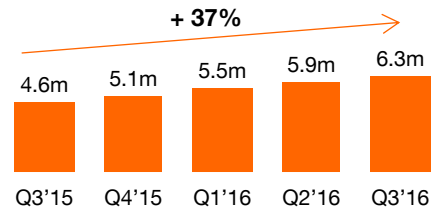
FTTH in France

Connectable homes in private investment area



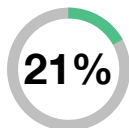
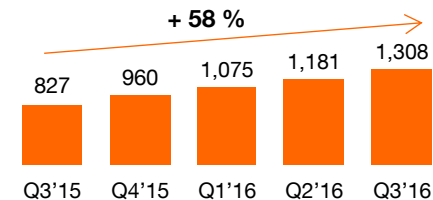
6.3m

FTTH connectable homes



1.3m

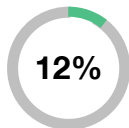
FTTH customers



FTTH adoption rate

FTTH customers as % of total FTTH connectable homes

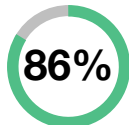
↑ +3 points yoy



FTTH penetration in our BB base

FTTH customers as % of BB customer base

↑ +4 points yoy

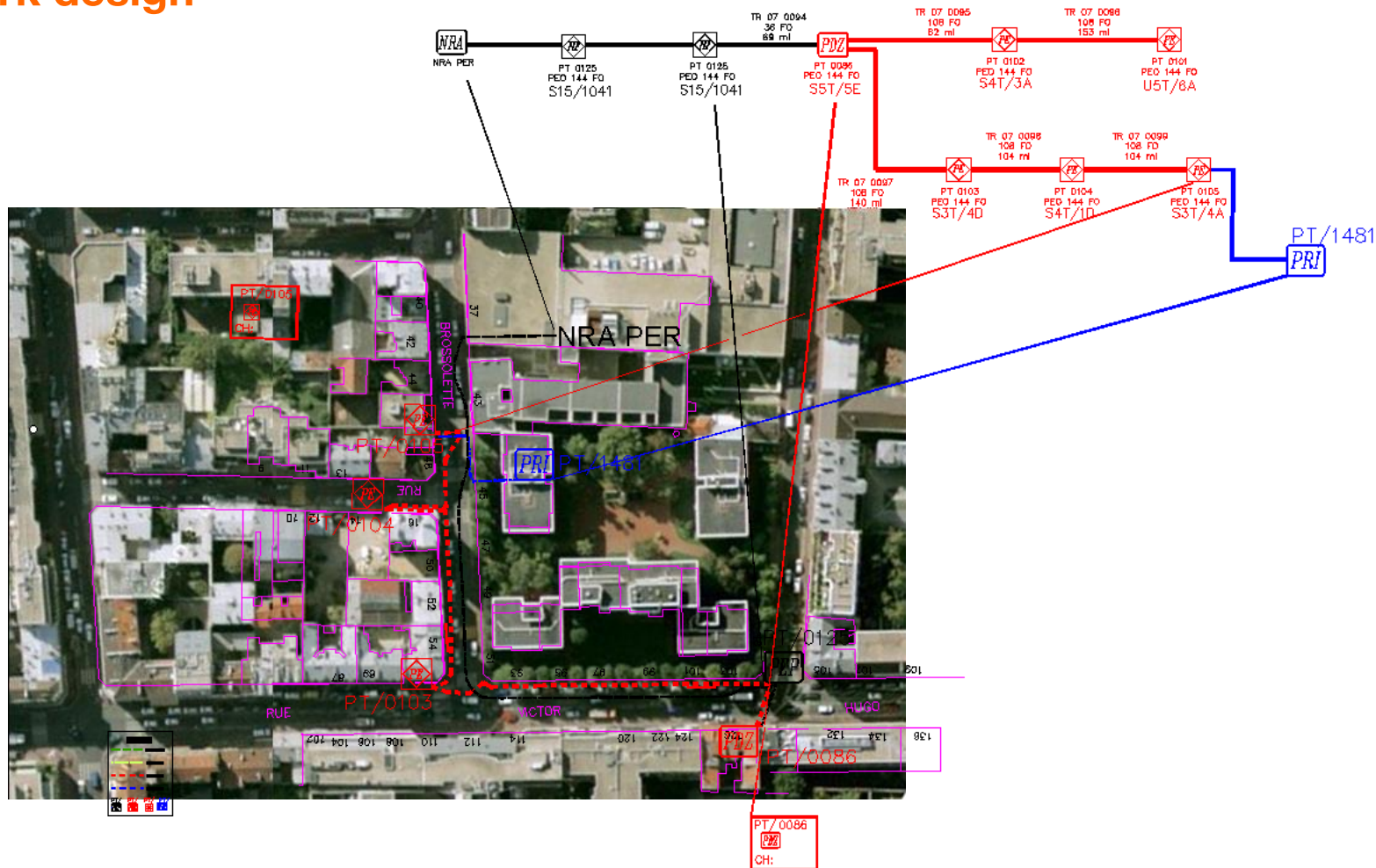


FTTH migration rate

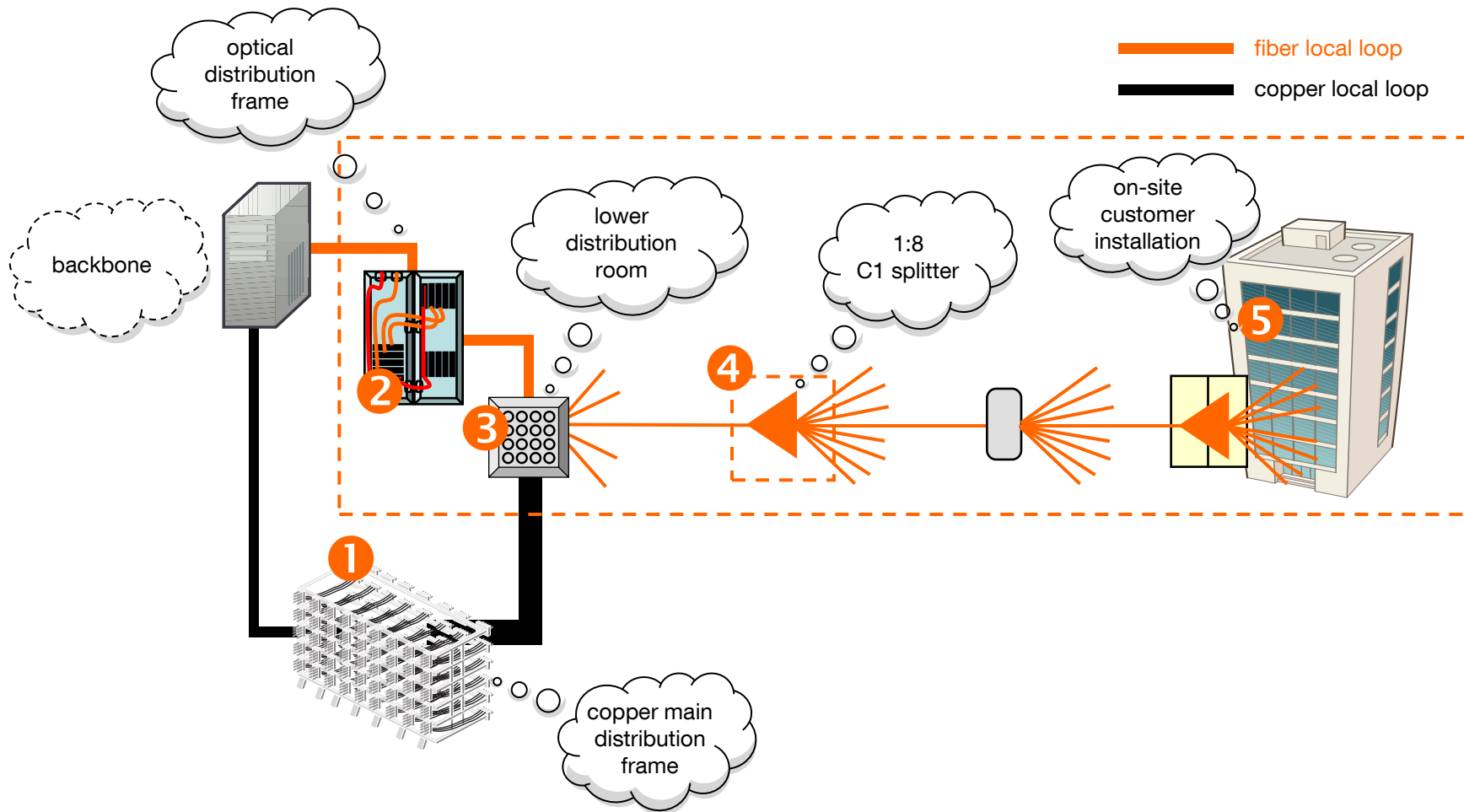
Orange FTTH eligible customers already migrated to fiber

↑ +5 points yoy

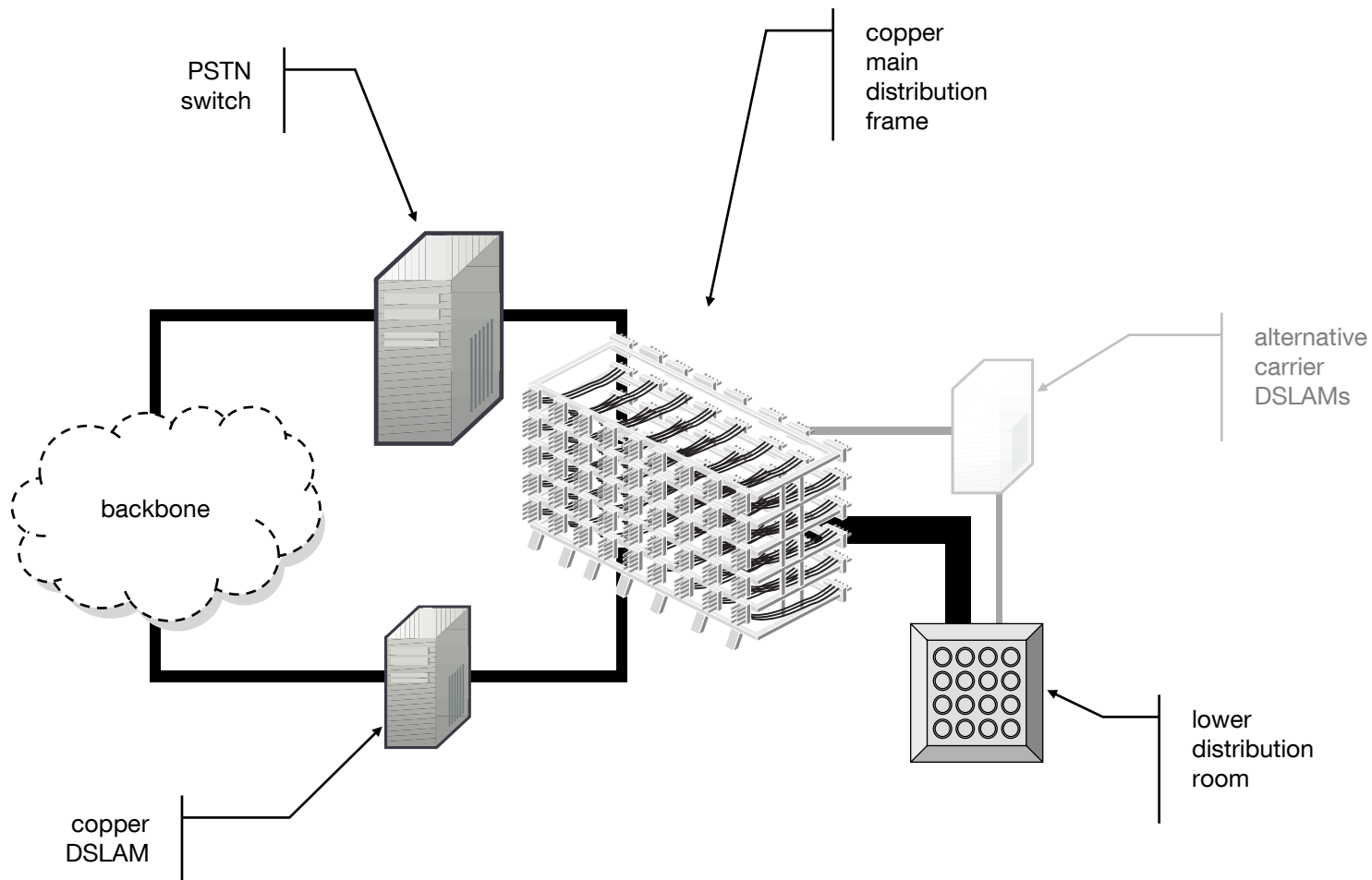
Network design



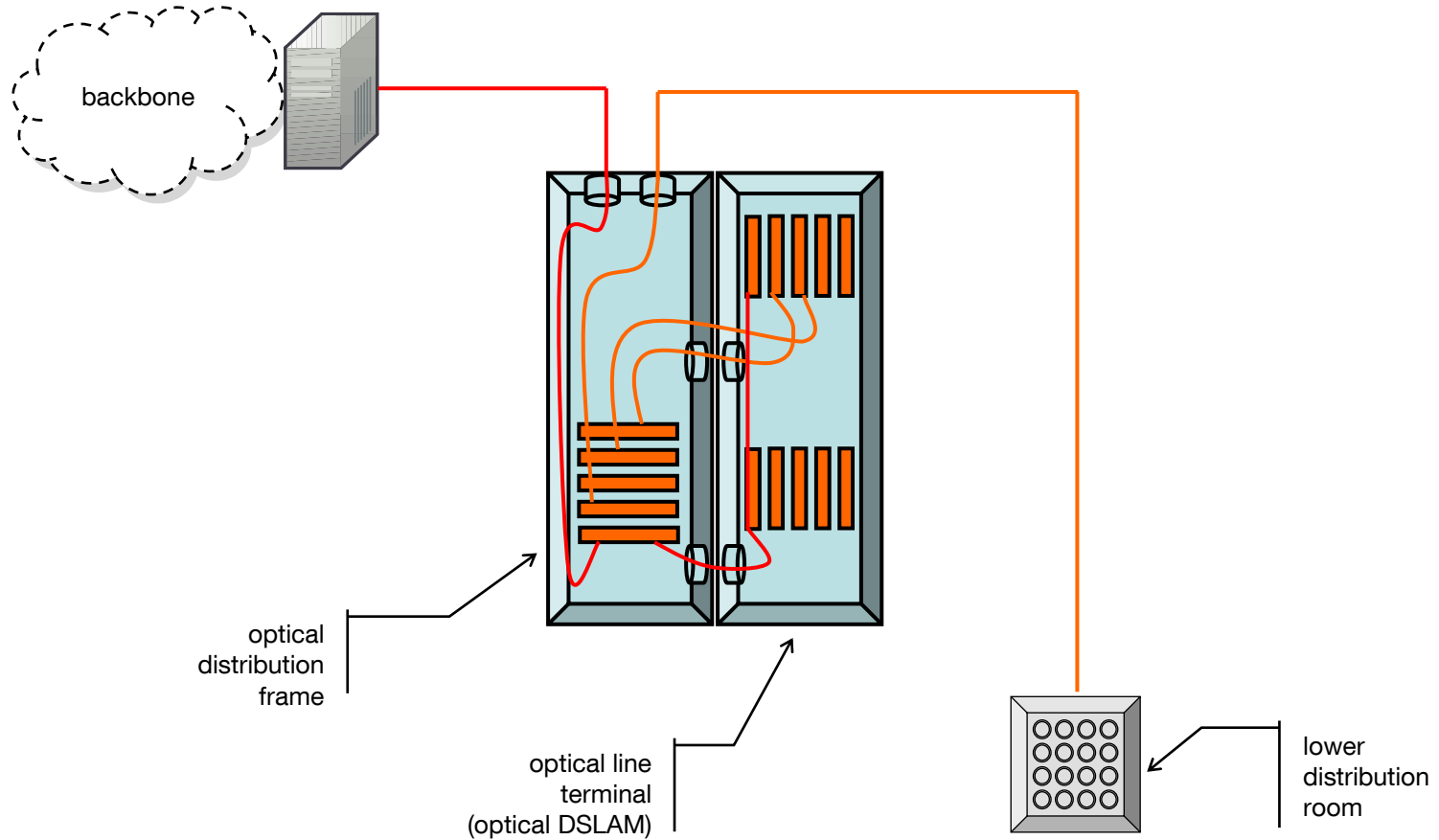
Today's visit stops



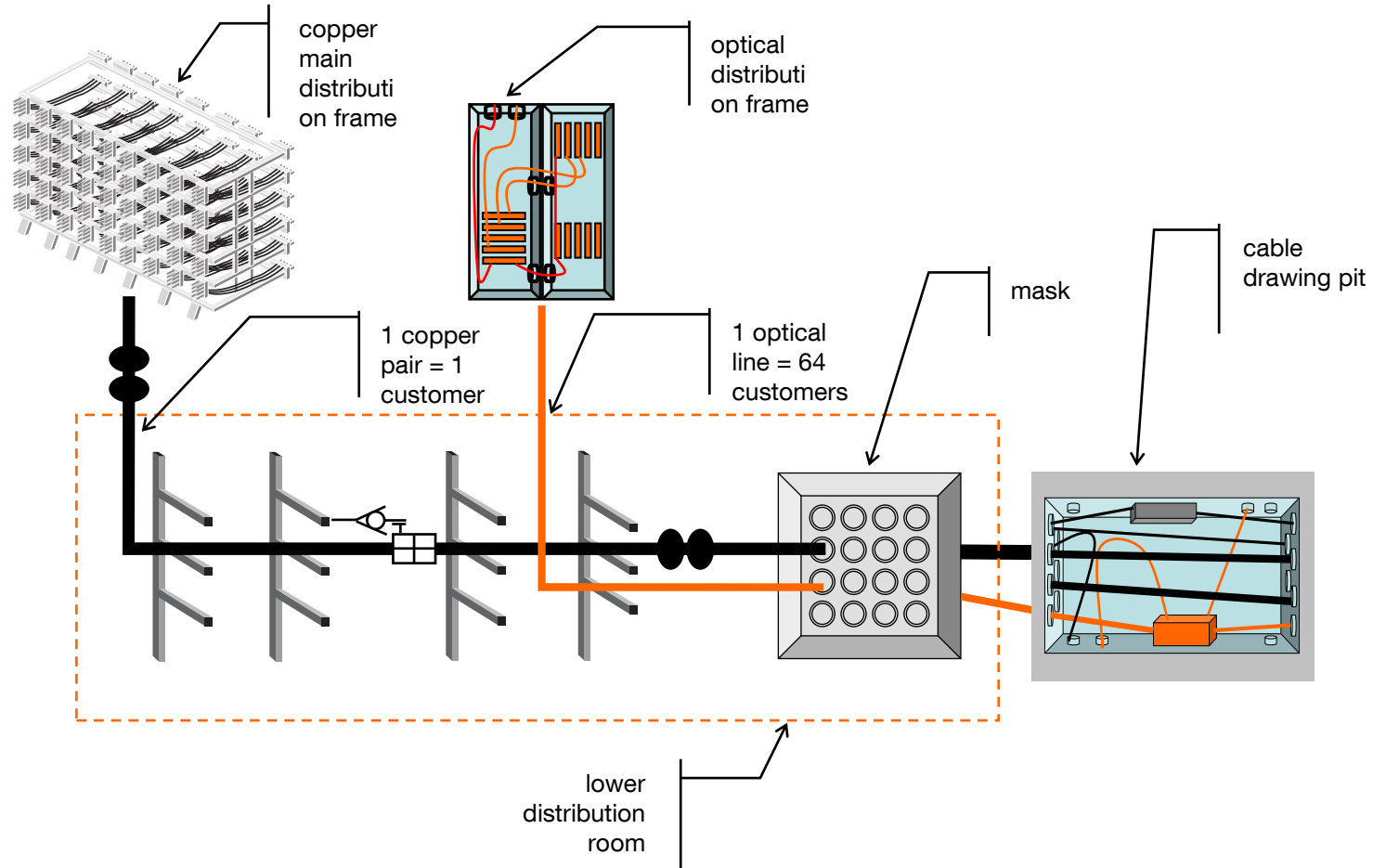
1. Copper main distribution frame



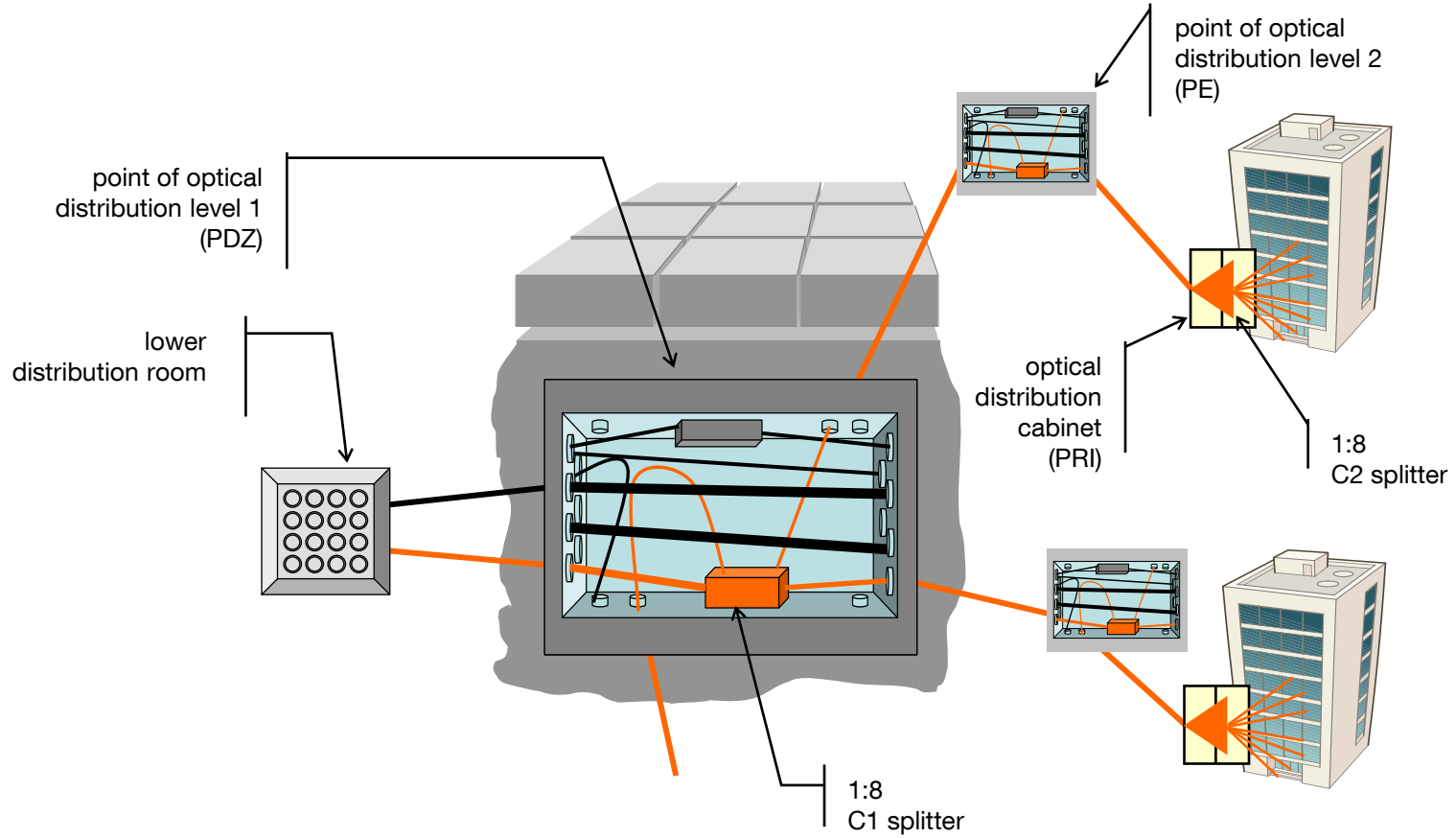
2. Optical distribution frame



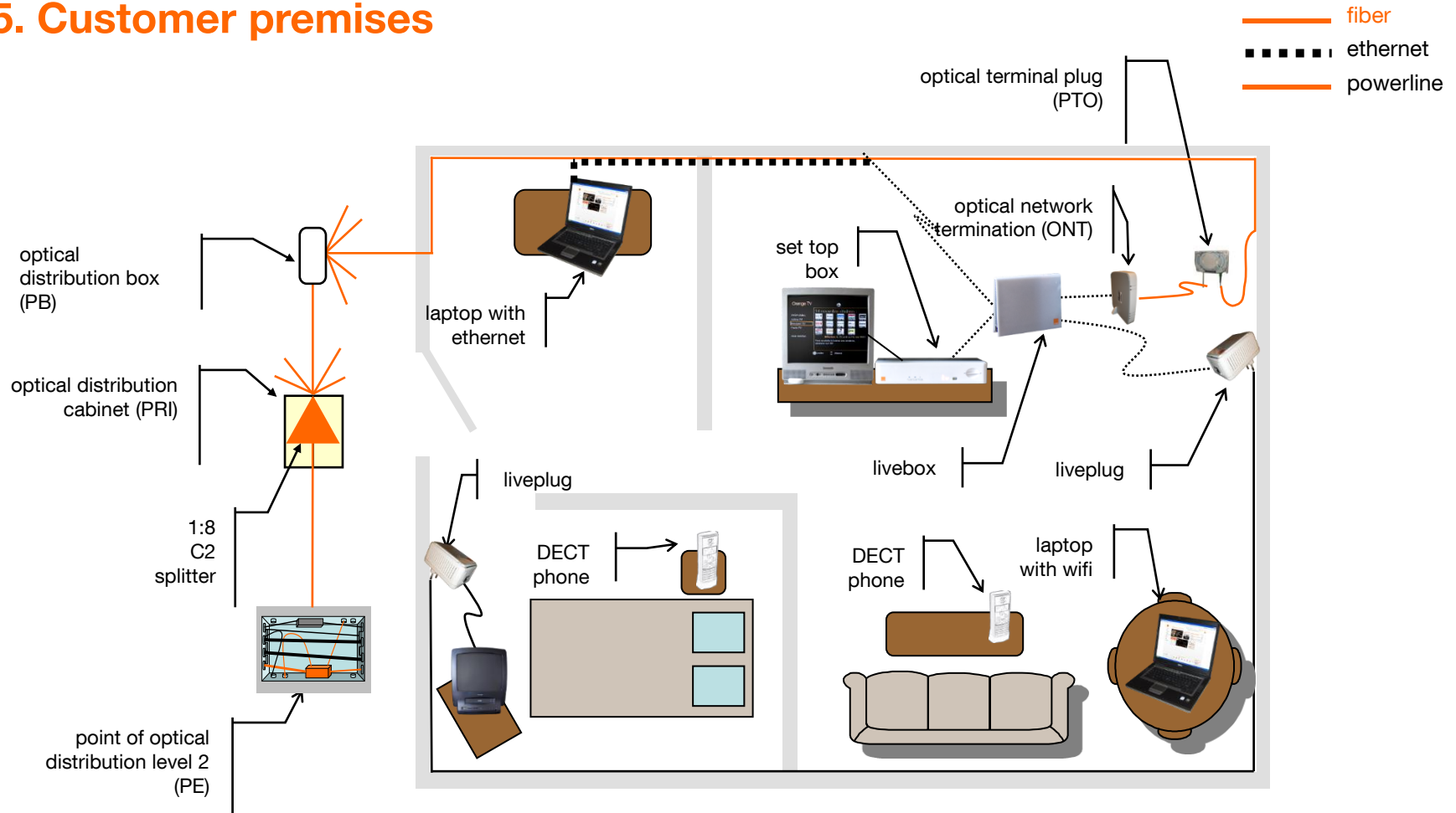
3. Lower distribution room



4. Cable drawing pit



5. Customer premises



Splicing



