From FTTH pilot to pre-rollout in France

Paul-François Fournier
senior VP, advanced products and services
marketing NExT

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agenda

1 what we have learned from our customer pilot

2 orientations for 2007-2008

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more bandwidth for more services

HDTV
with interactive programs, on multiple TV sets or PCs

VOD movies and programs
streaming or download

video games
on-line or download

video blogs / online photos
for digital cameras and camcorders

online storage and back-up
data security for consumers and SoHo's

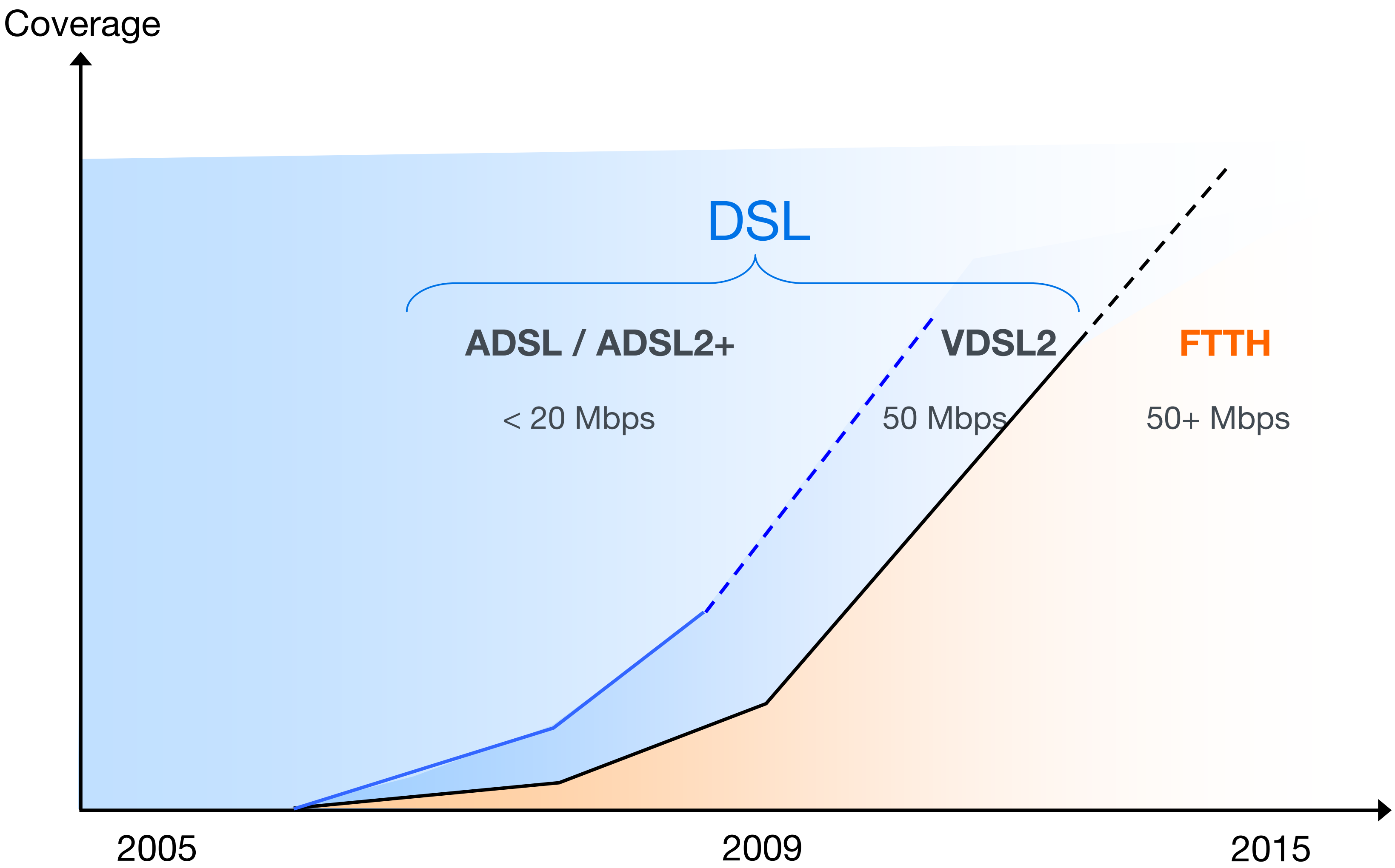
simultaneous and symmetrical usage
powered by the livebox

Orange role is to meet customer demand beyond what ADSL-type solutions can provide, for mass market take-off in 2009

FTTH is enabling new usage patterns right now

		fiber access	ADSL access	
		download and upload at 100mbps	download at 8mbps	upload at 1mbps
			copper lines eligibility : *8mbps / 1mbps → around 65%* *15mbps / 1mbps → around 25%*	
full HD quality movie	**30 Gb**	40min	>8h	>66h
DVD quality movie	**4.8 Gb**	6min 30s	1h 20min	>10h
amateur quality video	**800 Mb**	1min	13 min	1h 40min
20 photos with uncompressed 8M pixels	**480 Mb**	40s	8 min	> 1h
10 MP3 music tracks	**40Mb**	3s	40 sec	5 min

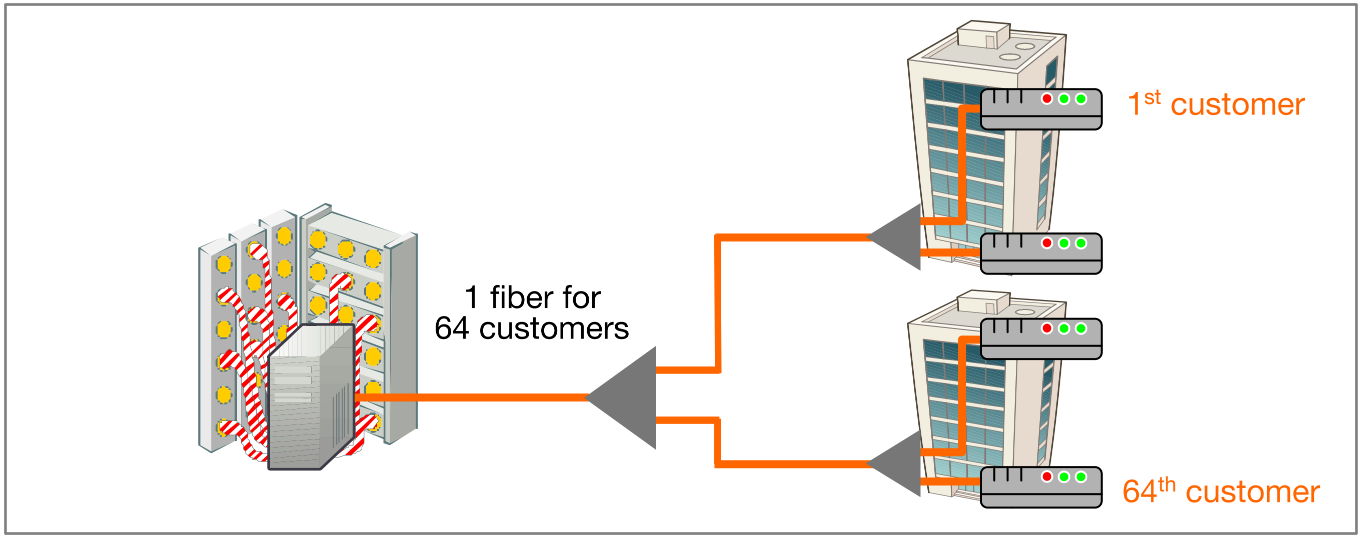
customer keep asking for more bandwidth



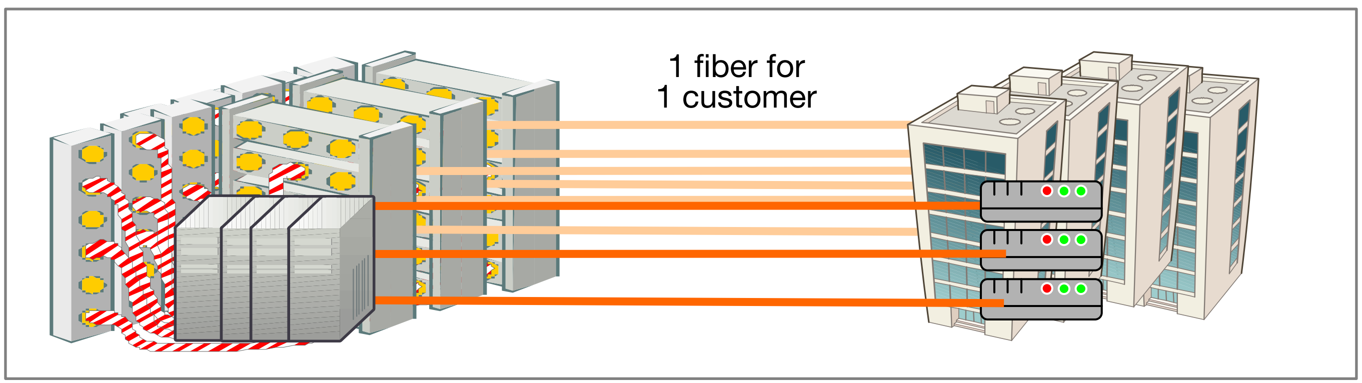
we chose FTTH as it is the most upward scalable, therefore future proof, solution

which architecture should we use ?

point to multipoint



point to point



point to multipoint (on GPON) is the most CAPEX efficient (lower duct occupancy with less fiber) and saves OPEX at the central office, with no foreseeable limit in available bandwidth.

customer pilot (june 2006 – february 2007)

- 5 cities in the Hauts-de-Seine
  Asnières-sur-Seine
  Boulogne-Billancourt
  Issy-les-Moulineaux
  Rueil-Malmaison
  Villeneuve-La-Garenne

- 6 districts in Paris
  3rd, 4th, 6th, 7th, 13th, 16th

all-included offer

- 100mbps symmetrical Internet access
- simultaneously 2 HDTV streams on TV and 1 stream on PC
- unlimited VoIP
- dedicated Web 2.0 portal
- on-site home installation and services activation
- dedicated hotline

€70 / month

14 000 homes passed
900 agreements with managing agents for collective buildings ("syndics")
1 000 customers (7% penetration)
less than € 5 m CAPEX

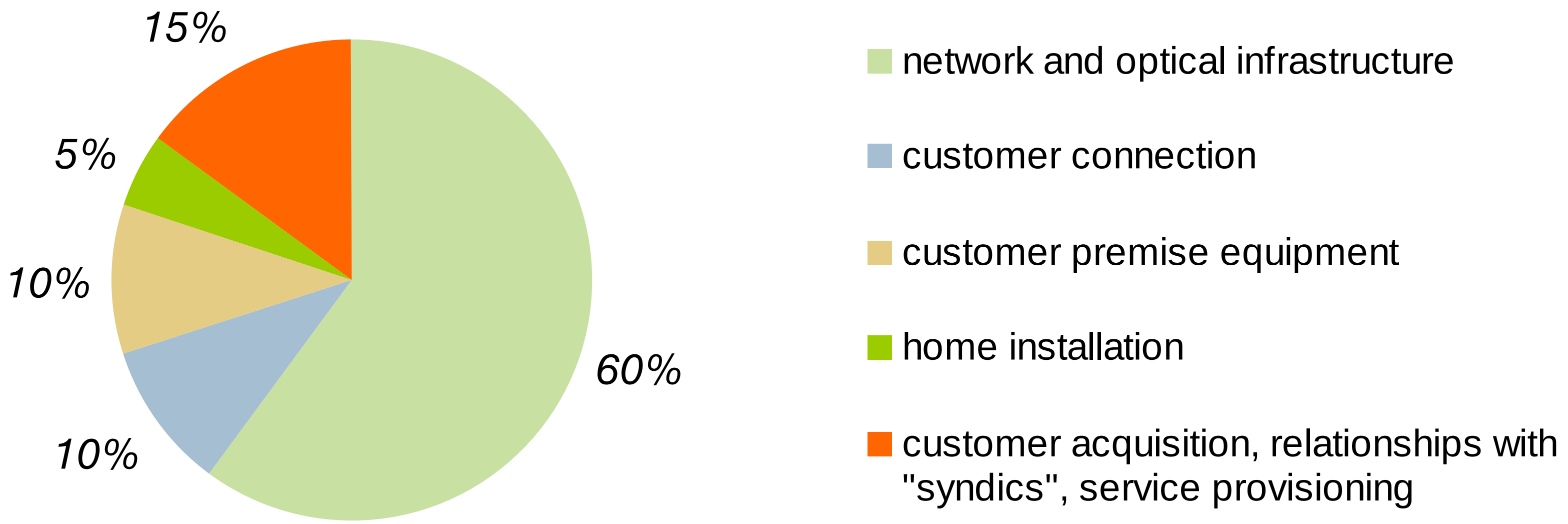
lessons learned from our customer pilot

customers	high level of interest for FTTH symmetrical bandwidth and reliability, with technical support required for mass market adoption main applications are : HDTV, multi-access, photos, video, home working, sharing of user generated content	70% of customers own 2 or more TV sets 30% of customers own a HDTV set
roll-out	key parameters are : lead time to get agreements from “syndics” lead time to connect and install customers on-site pilot helped define end-to-end roll-out processes in various habitations (old or recent apartment buildings, detached houses)	several months to get agreement with “syndics” between 4 and 12 hours for on-site home connection and service activation
technology	our technology choices (GPON, FTTH livebox) proved effective we learned how to best leverage our working relationships with industrial partners	first consumer box to have been upgraded for 100 Mbps symmetrical throughput France Telecom is 1st major incumbent to deploy GPON

deploying a FTTH infrastructure takes time, resources, and the skills of a fixed local loop operator

pilot helped us to accurately assess our cost structure

cost structure derived from pilot phase



for a 10% penetration rate (subscribers / home passed)

we have launched action plans to reduce these costs for most efficient deployment

during roll out phase, cost structure will evolve according to identified drivers

network and optical infrastructure	to decrease as penetration rate increases, manufacturing costs for active equipment go down along with cumulated worldwide GPON units shipped, and network studies costs go down through cumulated experience
customer connection	to decrease, as lead time to connect a customer goes down through cumulated experience
customer premise equipment	to decrease as manufacturing costs for various customer equipment go down along with cumulated worldwide GPON units shipped, and equipments become more integrated
home installation	to decrease, as lead time to install a home network goes down through cumulated experience, more “do it yourself” behaviour by educated customers, and better integration of customer equipment
customer acquisition, relationship with “syndics”, service provisioning	to decrease, as customer facing processes improve so that costs converge towards corresponding costs for ADSL customers, and negotiation with “syndics” become easier through snowball effect

fill-up of optical infrastructure, drop in equipment prices and human learning are the major drivers of cost reduction per subscriber

what we have learned from advanced countries

USA	fixed operators respond with fiber to cable predominance, and to customer demand for HDTV FTTH PON is the architecture chosen by Verizon (≈ 500 K customers by 3Q06) and by AT&T
JAPAN	main lever is bandwidth : Internet remains the “killer application” end-2006, ≈ 5 M FTTH / PON-based customers installed

very high speed access is gradually taking off throughout the world, mainly by means of FTTH PON

Sources: Idate, Infocom, 2006

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conditions are now met for phase 2

ducts	" we are working to create a propitious environment for very high-speed network development by encouraging infrastructure sharing and particularly the reuse, whenever possible, of existing ducts in the local loop." (Paul Champsaur, November 16th, 2006)
indoor wiring	" we feel that sharing indoor wiring is crucial" (Paul Champsaur, November 16th, 2006)
access to content	" first, the stakes and risks involved in very high-speed network investments (...) would seem to demand, from an economic standpoint, that a share of the revenues earned by service providers go to access providers. (...) I also think that the best guarantor of consumers' freedom of choice is lively competition, as is currently the case, not only in the downstream broadband and very high-speed access market, but also lively competition in the upstream content and services market, particularly for audiovisual services ". (Paul Champsaur, November 16th, 2006)

FTTH now entering phase 2: pre deployment in 2007 and 2008

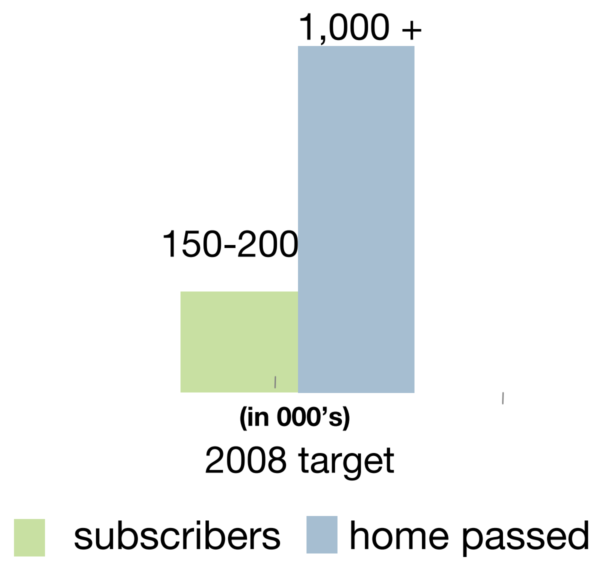
offer FTTH in 10 additional major and medium cities

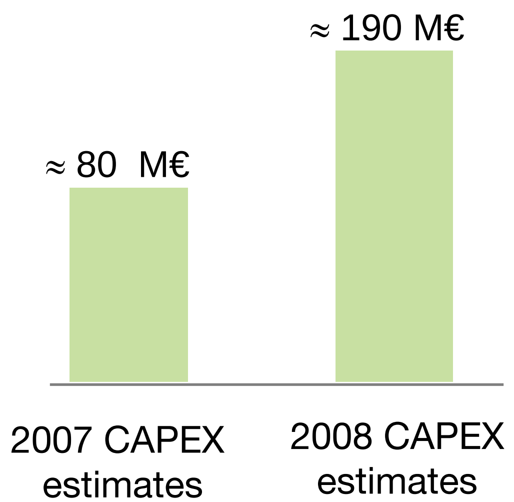
starting with Lille, Lyon, Marseille, Poitiers, Toulouse on top of the Ile de France area

with 150 000 – 200 000 active customers by 2008

total Capex: around 270 million euros cumulated 2007-2008

with pragmatic, focused tactical roll out





CAPEX for FTTH is consistent with our 2007-2008 Group guidance of 10-11% IT&N CAPEX to sales ratio

How we defined the marketing mix for FTTH

insight from marketing research	main customer motivations are **innovation** through 100mbps Internet access, **simplicity** of a triple play offer, a **high level of customer support** and quality of service there is **segmented** demand for new services, such as HDTV there is a psychological **price barrier** at 50/month Orange **brand recognition** and high level of **service** allow for a sustainable **price premium**
competitors' triple play offers with Internet speed > 50mbps	- coming offer starting at 29.90 - cable starting at 49.90

launch of « la fibre » on march 1st, 2007

positioning to competitively meet early stage demand

new offer starting march 1st 2007

la fibre
une expérience du très haut débit

€44.90/month*

* 12 month subscription

Internet 100Mb
up to 100mbps download & up to 10mbps upload

Web 2.0 portal,
TV on PC

Orange TV

free access to 45 French and international channels

unlimited voice

to fixed numbers in mainland France

fiber optics livebox

€3/month

options

multi screen TV in order to watch different channels on 2 TV sets — **€7/month**

HD time control in order to control live TV, record one's preferred programs, watch them anytime and enjoy high definition programming — **€7/month**

symmetrical 100mbps, a throughput of up to 100 mbps for upload and download, in order to send one's photos, or videos even more faster — **€20/month**

services

optical connection fees offered until june 2007, including installation of the optical plug and optical network termination

Included TV decoder and optical line termination

free technical and commercial **hotline** (0800 10 75 75)

domestic network installation on sale for €1 until june 2007 (Internet, TV, Phone)

combining entry level pricing, premium options and strong customer support

new offer was warmly received by the press

L'INFORMATICIEN

Orange Fibre Optique : débuts à Paris le 1er mars

Le très haut débit résidentiel c'est vraiment parti ! Après Erenis à Paris et Mediafibre à Pau, les grands FAI se mettent à la fibre. Et finalement Orange devance Free. […]

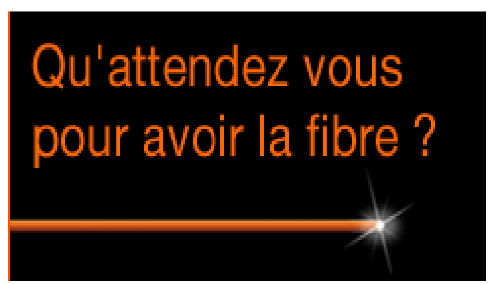
Published on february 16th, 2007

L'ATELIER
Une société de BNP PARIBAS

La Fibre: Orange annonce son offre de fibre optique pour 47.90 euros par mois

La fibre optique devient une réalité chez Orange. La filiale de France Télécom vient d'annoncer le lancement de son offre d'accès à Internet à très haut débit pour le mois de mars. Celle-ci, baptisée La Fibre, sera proposée au prix de 47.90 euros par mois dans six arrondissements parisiens et six villes des Hauts-de-Seine. Free doit-il trembler?

Published on february 15th 2007



hebdo Micro

Orange, fort en fibre

C'est fait, Orange a lancé son premier forfait à très haut débit. Il pourrait aller jusqu'à 100 Mbit/s en réception, et 10 Mbit/s en émission. L'internaute bénéficierait ainsi d'un débit dix fois plus élevé que celui de l'ADSL.

Published on march 1st, 2007

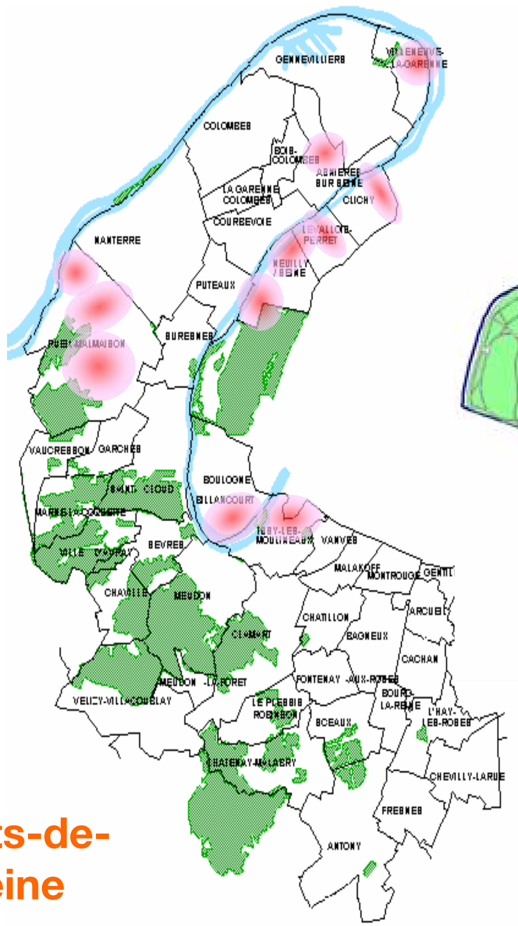
LExpansion.com

La fibre optique chez Orange dès le 1er mars

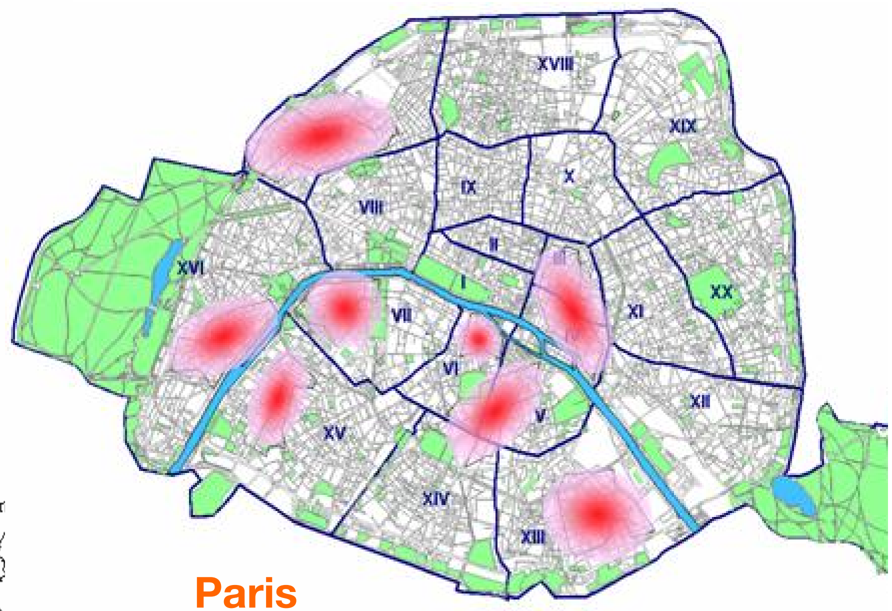
France Telecom lance la fibre optique le 1er mars. Au menu: des téléchargements ultra-rapide à 100mégabits par second pour un forfait « triple-play » de 44.90 euros par mois. Dans la course au très haut débit, Orange vire en tête.

Published on february 15th, 2007

pre-rollout in first semester 2007



Hauts-de-Seine



Paris

Areas where fiber is passing residential buildings

Plus

progressive coverage in boroughs of **Lille, Lyon, Marseille, Poitiers, Toulouse**

entering in close cooperation with the real estate ecosystem

building a close relationship with property managers and owners	- first "Rendez-vous du syndic" organized february 15th, 2007, with more than 50 organisations represented - a dedicated task force to deal with real estate players is in place
developing a quality charter	- a quality charter is being built in close cooperation with the main players in real estate management - objective is to commit on a high level of quality and to meet the concerns of real estate players of disturbance caused by the roll out of a new infrastructure
open infrastructure	- we are offering shared access to in-building wiring to other operators who are willing to reciprocate

good relationships with real estate players and proved network deployment experience will ensure fiber roll out efficiency

new services to enhance customer experience

2006 services

up to 100 Mbps symmetric Internet

Web 2.0 portal — including TV over PC

multi-stream TV

High Definition TV and PVR

2007 evolutions

High Definition communication (voice and video)

sharing of user generated content

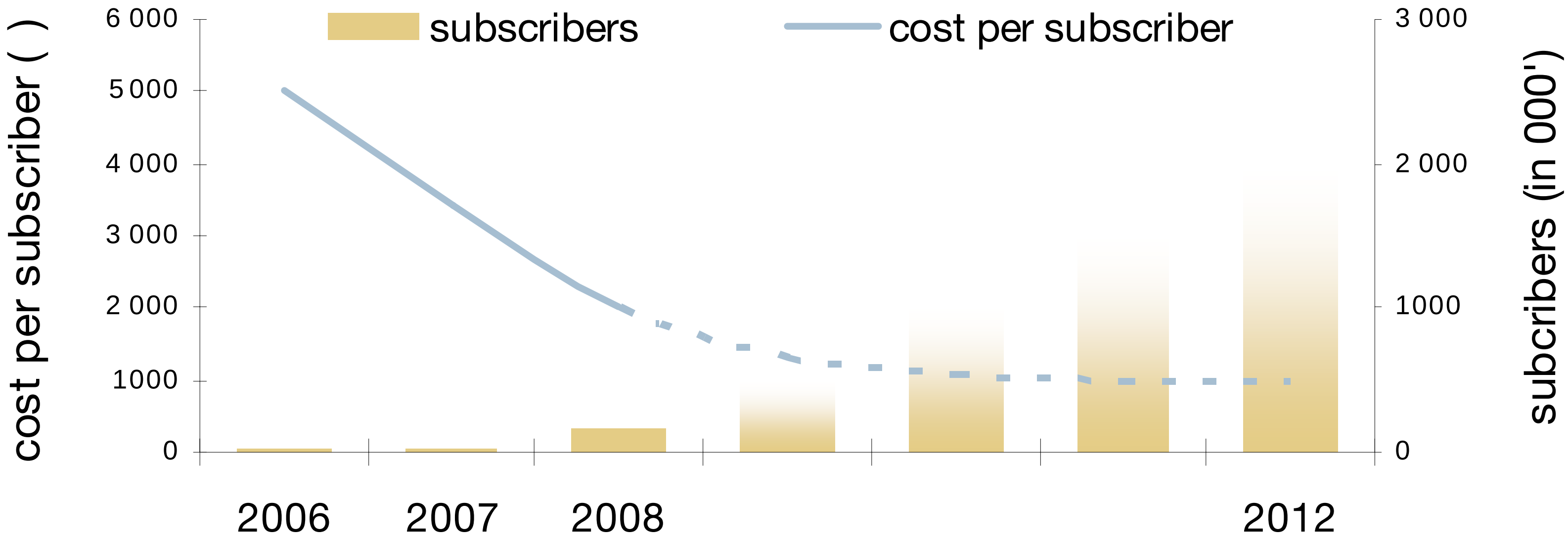
personal broadcast

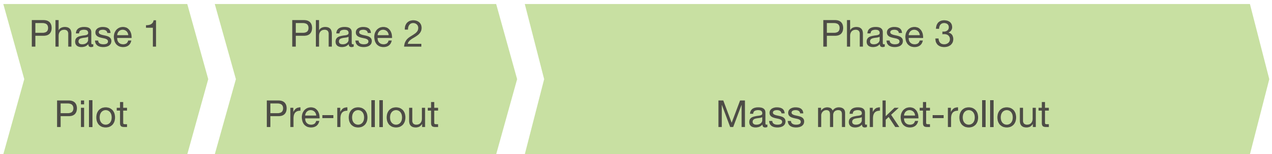
gaming

security : online storage and back-up

convergent services

phase 3 to begin in 2009 : mass market roll out



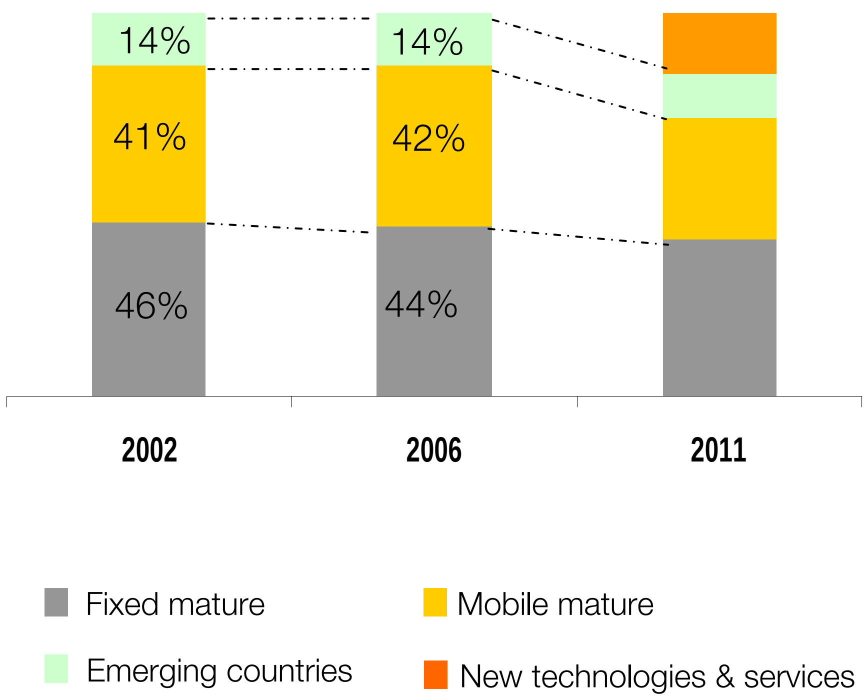


after 2006 pilot successful completion, pre-rollout will start in 2007-2008, to be followed by mass market coverage

FT group capex decrease in mature fixed & mobile markets allows to fuel new growth areas

- capex intensity in emerging countries will reduce as markets mature
- lower requirements for 3G coverage plus network sharing will reduce capex in mature mobile markets
- capex to sales ratio should remain
in average around 13% of revenue over 2007-2012

Evolution of capex split (base 100)



→ as soon as 2009, around EUR1.0 billion each year will be reallocated from current activities to new growth areas (e.g. FTTH)

summary

- demand for very high speed access is emerging, and will achieve mass market status in 2009
- we have started to industrialize our roll-out processes
- our selected technology is mature (GPON, FTTH livebox)
- our pricing approach in 2007 is designed to facilitate migration from ADSL while protecting long-term ARPU potential
- new services will further improve customer experience with FTTH

2006 pilot has been successfully completed and paves the way for phase 2 beginning now