

Next Generation Access Programme



Mark Logan

BT Group announcement of super fast broadband

Next Generation Broadband:

A bold vision for the UK - the July announcement

UK's biggest super fast broadband investment: £1.5 bn
Accessible by up to 10 million homes by 2012
Range of speeds up to 100mbps: with >1,000mbps potential
Basis for nationwide demand led roll out
World's most open super-fast network
BUT we need the barriers to investment removed

- Mixed economy strategy FTTC and FTTP
- We will provide a service capability on an equivalent basis to all CPs
- Deployment must be commercially viable

The Next Chapter: a 'mixed economy' model

	Enhanced copper	Fibre
2008 FY*	<ul style="list-style-type: none"> • ADSL2+ roll out makes speeds of up to 24 Mbps available to 40% population 	<ul style="list-style-type: none"> • Fibre to the home in Ebbsfleet • Operational trials of fibre to the cabinet
2010 FY	<ul style="list-style-type: none"> • Widespread access to ADSL2+ and speeds of up to 24 Mbps 	<ul style="list-style-type: none"> • Fibre available to millions of homes and businesses • BT backhaul investment reduces network bottlenecks
2012 FY	<ul style="list-style-type: none"> • Completion of ADSL2+ national roll out. Continued development of technologies to enable faster speeds and more services 	<ul style="list-style-type: none"> • Fibre roll-out brings range of speeds up to 100Mbps • Fibre available to up to 10 million families • Olympic village, a future fibre showpiece

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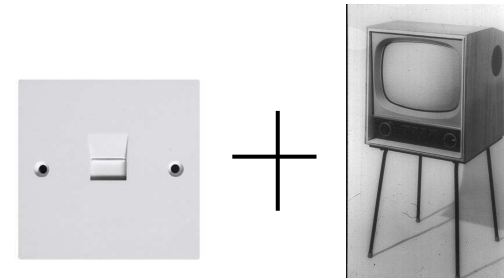
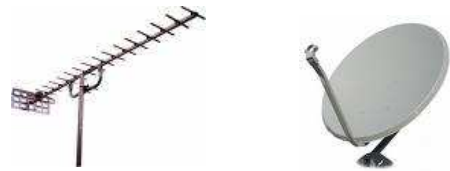
*2008FY = 08/09 financial year



- Roll out will be demand-led, based on CP commitment to Openreach
- We want to build on the success of Broadband Britain in working with local/devolved government



Why is this important?



28kpbs per user



Minimum of 15Mbits

New revenue
Opportunities for CPs



NGA and Backhaul
revenue for Openreach

Video down loads

Home Video's storage

Secure Data storage

Telepresence

Home medical

etc. etc. etc.

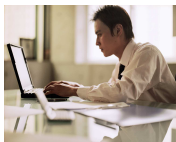
NGA services vision - enterprise market



- Bringing big business fibre services to smaller businesses: speeds > 1 Gpbs



- Improved choice in access speeds providing UK businesses with a competitive edge



- Two way speed allowing collaboration across locations between customers and suppliers



- Improved flexibility in remote and home working

A close look at Super-fast broadband: where and when?

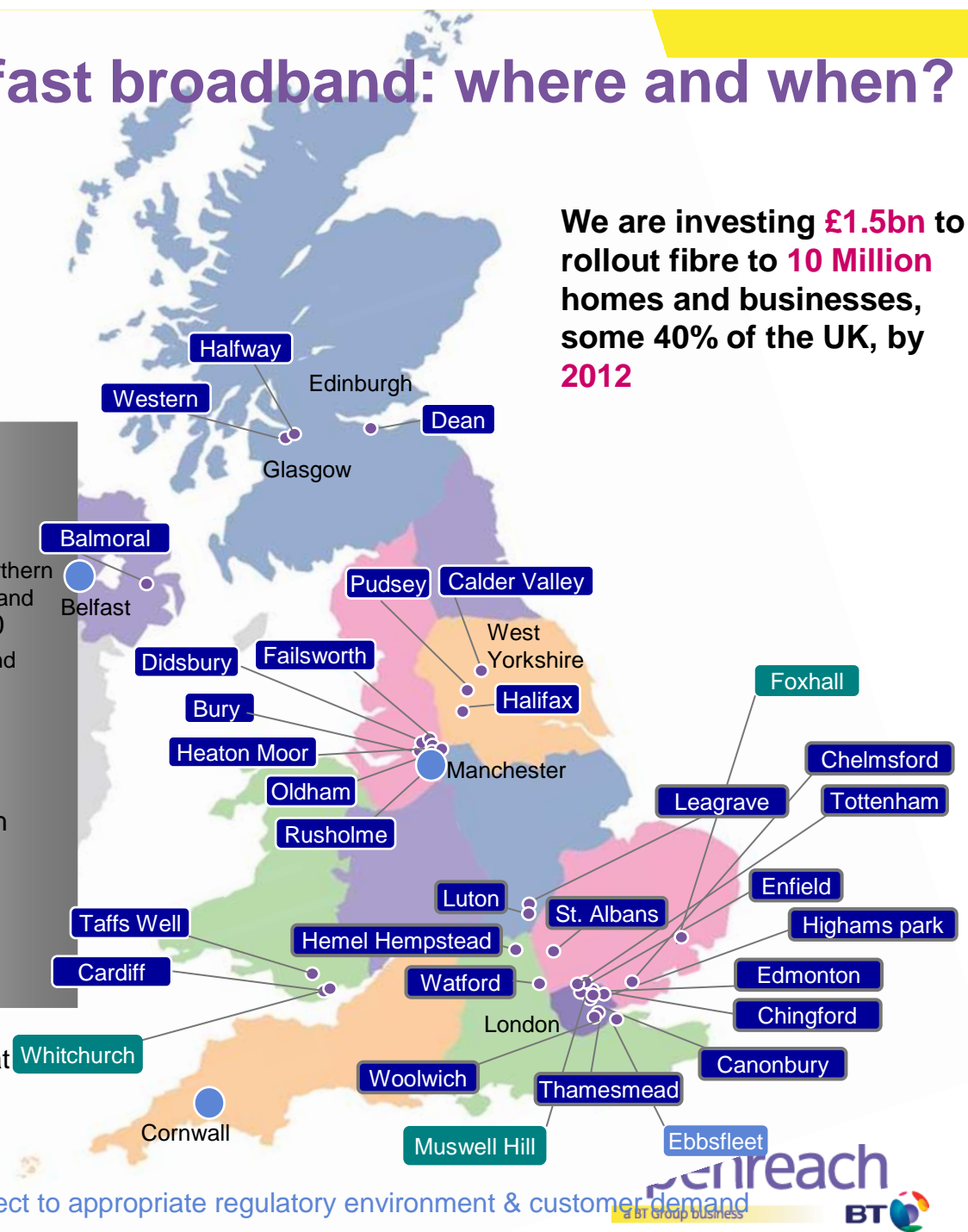
- Fibre to the Premise (FTTP)
 - Sept 2008: first end-users connected at Ebbsfleet Valley, Kent

- Fibre to the Cabinet (FTTC)
 - January 2009; Technical trial begins in Foxhall, Ipswich
 - July 2009: Operational pilot begins in Muswell Hill, London & Whitchurch, Cardiff
 - Up to 30,000 premises passed

- Early market deployment of FTTC January 2010
 - Up to 500,000 premises passed, including urban and rural locations

- **Accelerated** market deployment of FTTC March 2010
 - **Up to 1million premises passed**
 - Further locations to be announced in the summer 2009

- Additional opportunity to work with Regions that share our fibre vision through EU funding

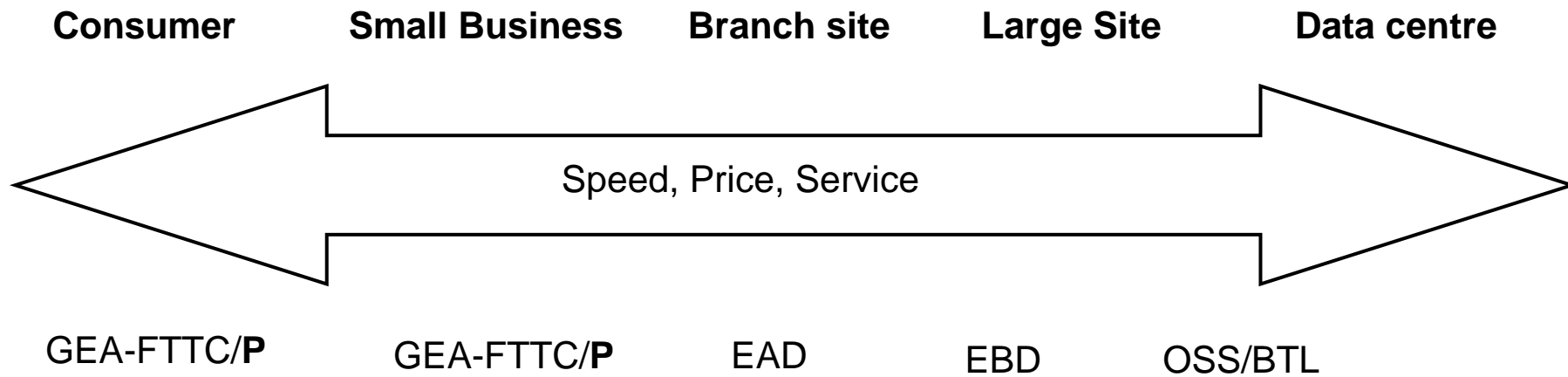


We are investing **£1.5bn** to rollout fibre to **10 Million** homes and businesses, some **40%** of the UK, by **2012**

Subject to appropriate regulatory environment & customer demand



An all ethernet future for business and home



With CPs using these....

As part of an Ethernet network	Corporate Ethernet WAN network
As an access line to a WAN service	Corporate MPLS network
As a core network component to aggregate access ccts , voice or data	Any network
As part of an internet service	Any internet network

Openreach's NGA products

Generic Ethernet Access (GEA)

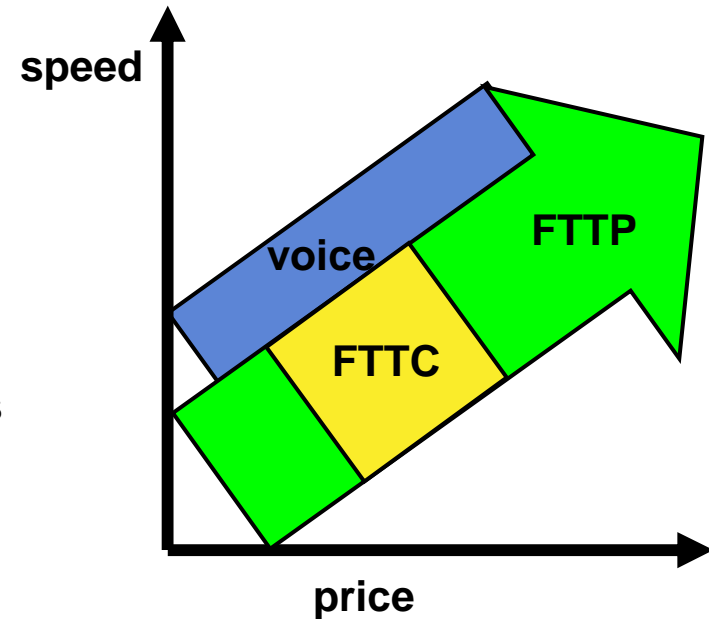
FTTC

- VDSL2 based
- copper access fibre core
- Consumer or business

FTTP

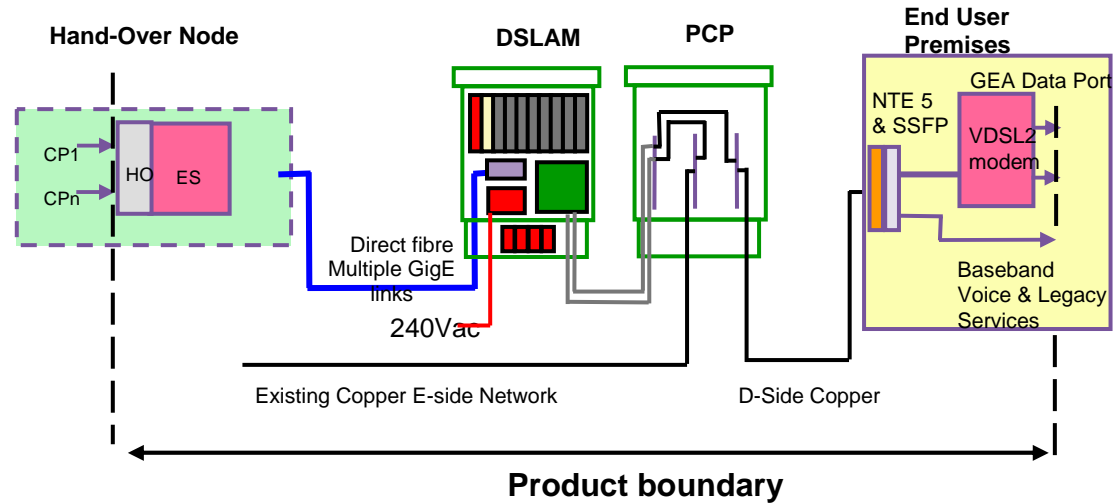
- All Fibre GPON based
- Newbuild and Existing homes
- Consumer or business

Fibre IRS (FIRS) – TV/Radio distribution over Fibre



GEA FTTC

Internal Trials January
 Customer trials May
 Pilot July - March
 500k foot print by Q1 2010
 1m Homes past announced



- Single product “up to 40mbps”
- 2mbits upstream as standard
- 5mbps upstream option
- 15mbps minimum level downstream
- 3 profiles for the line standard, speed, stable

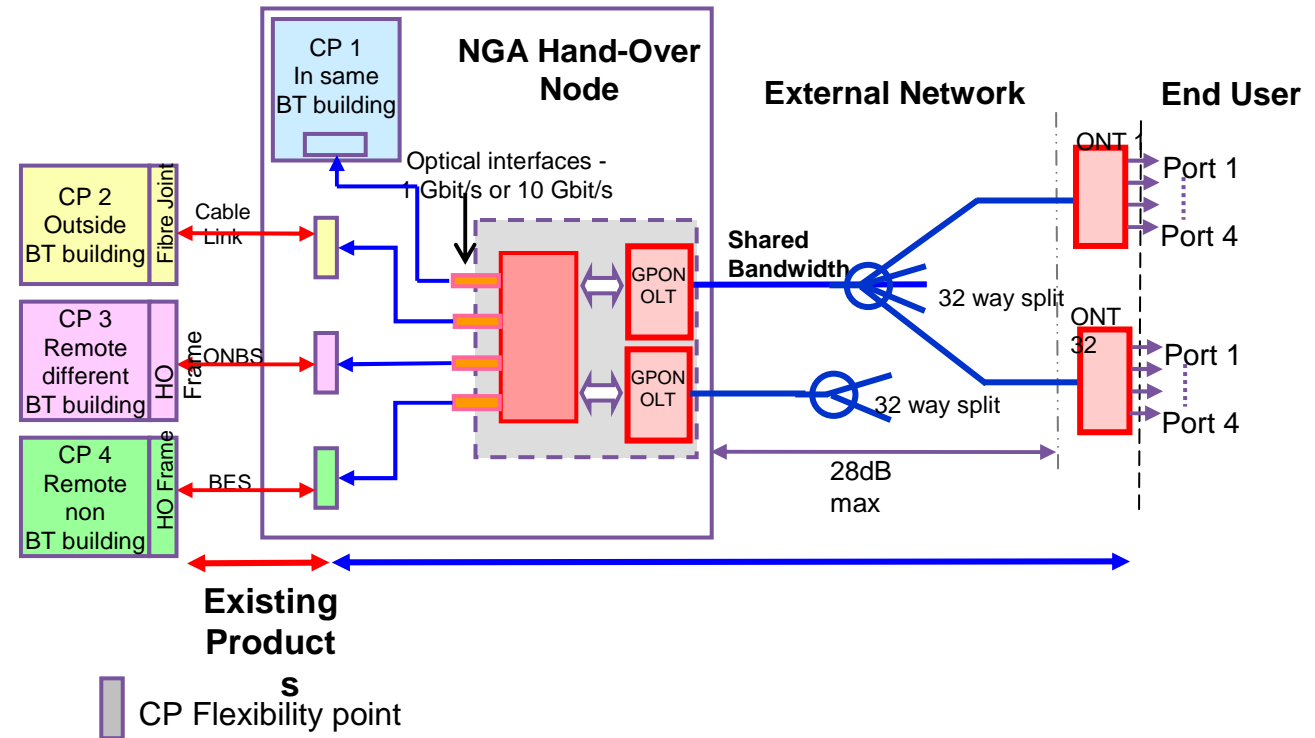
- Can set own speeds
- Line charge (rental), Connection fee
- Handover port and Throughput charge
- 2hr appointing
- Commitment offer

To be added/agreed

- Multicast
- “Self install” wires only
- More line control

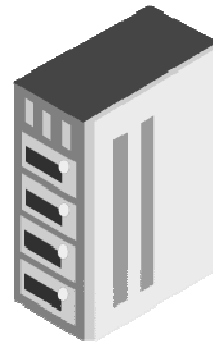
- Business services wrap
- Higher upstream 10mbps
- Bonded VDSL
- Lower downstream

Generic ethernet access –FTTP Network Overview



- Up to 100mbps down stream 1Gbps possible
- Upstream speeds to 40mbps or more....
- Multiple “vlans” and 4 ports = multiple services or service providers
- 2Gbps system moving to 10Gbps
- Pre build to DP likely full cabinet area build

Voice over Fibre.... A PATS/USO service



- Analogue phone
- ATA
- Battery back up
- ONT
- Hub router and phone



Summary

- £1.5bn investment
- 10million homes passed or 40% of the UK
- A mixed economy approach of FTTP and FTTC

Early market lifecycle: Take up and returns not yet known!