



Openreach – an open network for all. Dream or reality?

**Joanna Taylor
BT Global Services
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Agenda

- Introduction
- Background to TSR
- Main elements of BT's Undertakings
- Implementation – one year in
- BT's 21st Century network
- Openreach
- The view from an internal customer - Global Services
- Concluding comments

UK Telecommunications market

- Liberalisation began over 20 years ago
 - Oftel formed in 1984; Ofcom took over in 2003
 - Tradition of independent, powerful regulatory authority
 - Extensive use of public consultation, and transparent decision-making
- A highly competitive market
 - Major fixed operators e.g. Cable & Wireless, COLT, Easynet Ltd, Global Crossing UK, Gamma Telecommunications, Geo, Kingston Communications, NTL-Telewest, Thus, Your Communications
 - 370 WLR operators
 - LLU operators : 12 major operators including Carphone Warehouse/ AOL UK, Pipex, Orange UK, Tiscali UK, Cable & Wireless, NTL-Telewest, Easynet .
 - 1 million lines in total
 - Retailers e.g. Argos, Sainsbury's, Tesco
 - CPS operators: 6.3m customers use CPS (25% of UK households).

BT

- BT snapshot

Annual turnover	*£19,514m	
Profit	*£2,040m	
EBITDA	*£5,517m	
Capital Expenditure	*£3,142m	* 2005/06
Total Retail lines in UK	*28.7m	** at 30 June 2006
Wholesale Broadband lines in UK	** 8m	
Employees	**100,000	
'New Wave' revenue	*32% of total	
Revenue by sector	*27% consumer, 35% corporates 12% business, 26% carrier	
Network IT service contract wins	*£5,400m in last year	
Growth	**17 consecutive quarters EPS	

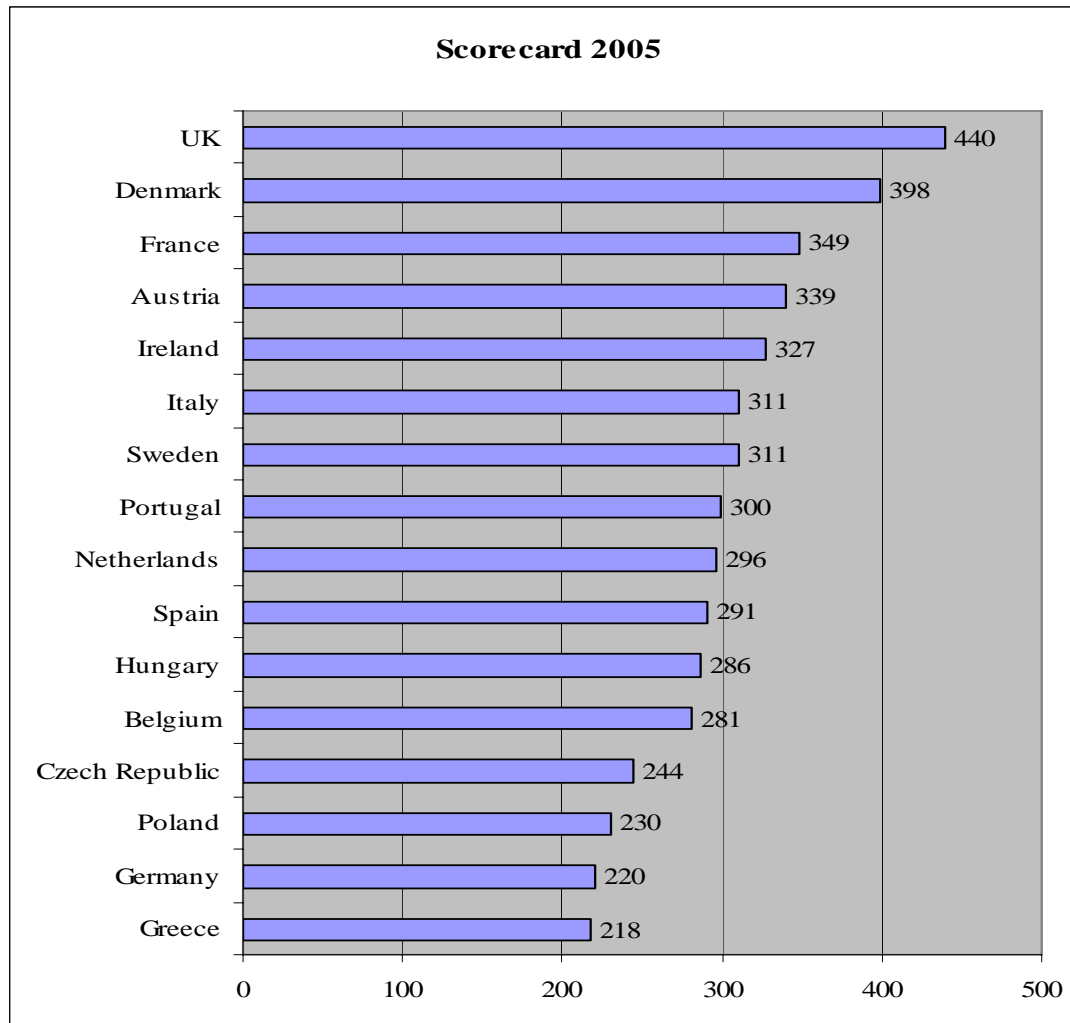
- GS is BT's major customer division

- National and international network centric IT propositions to multi-site organisations
- GS network reaches 71 countries now and is growing at the rate of 1 new city every 10 days until March 2007.
- And will reach 160 countries by the end of 2008
- GS already provides service in over 170 countries.



Regulation in the UK

- ECTA scorecard 2005



The access issue

- Access is the link to the customer:
 - vital for the provision of any service
 - expensive to recreate
 - differs for business and consumer services
 - typically already exists for the incumbent
 - SO should
 - it be made available to market entrants?
 - on what terms?
- European framework would suggest this is an SMP market susceptible to regulation
 - as is recognised in most countries in Europe
 - Significant variations in remedies however
 - and even market reviewed not 100% completed
 - NRA powers re Functional Separation being considered in 2006 review

Why should access be made available to entrants?

- **Competition for provision of services will reduce prices and drive up quality**
- **The solution needs to be forward looking**
 - monopolists will not innovate as there is no incentive to take risk
 - fibre to cabinet or premises should not be used as an excuse for re-monopolisation
 - BT is rolling out 21CN (NGN) knowing it will be regulated
 - reward for this investment is the key issue
- **On what terms should Access be made available?**
 - Non discriminatory
 - Transparent
 - Cost orientated
 - NRAs need to consider all markets as business needs are not the same as residential

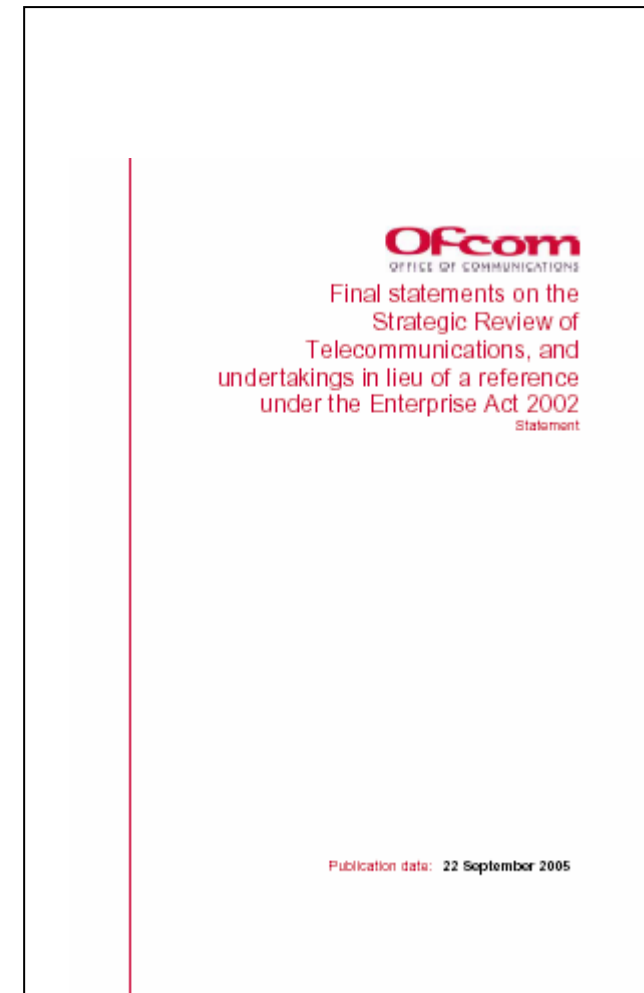
The issues, as seen by Ofcom

- Competition is restricted in wholesale markets for **access and backhaul services**
- BT has substantial wholesale market power and is a vertically integrated provider with a presence in the directly related retail markets

Ofcom believes this combination gives BT the **ability** and the **incentive** to **discriminate** against its downstream competitors who are also wholesale customers

Ofcom's Telecommunications Strategic Review (TSR)

- Ofcom commenced TSR in Jan 2004
 - Phase 1 Assessment and prospects
 - Phase 2: Options
 - Phase 3: Strategic review framework
- TSR concluded by agreement of BT's Undertakings to Ofcom 22 Sept 2005
 - In lieu of Enterprise Act reference
 - contain a series of commitments made voluntarily by BT
 - legally binding
 - in addition to existing regulation/competition law



Key elements of BT's Undertakings

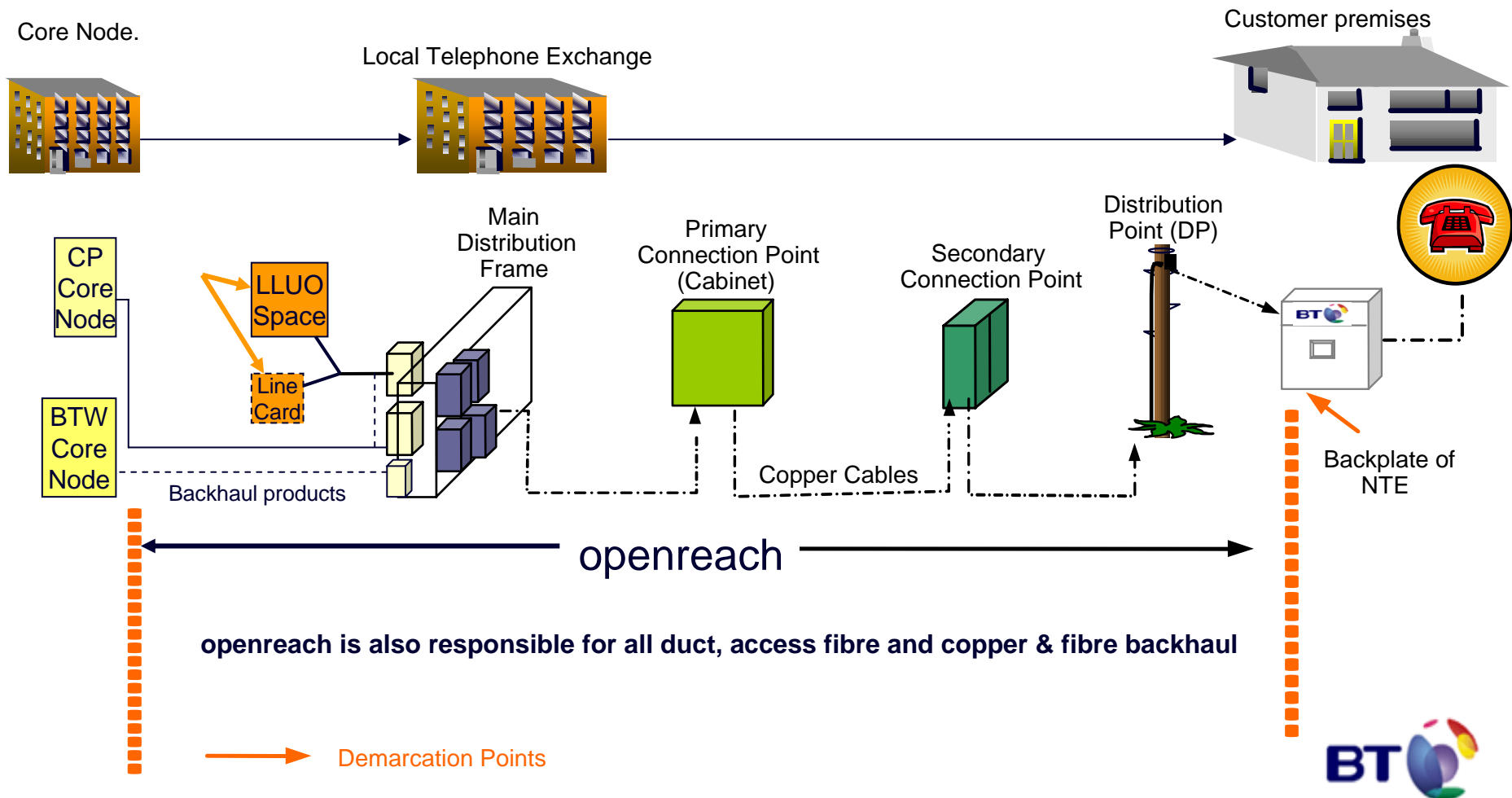
- Focused on key access bottlenecks
- Establishment of Openreach
- Provision on an equivalence of inputs (EoI) basis
- Operational separation, transparency and systems separation
- Independent oversight
- Enforcement

How must access services be delivered?

- In order to allow real and effective competition to emerge, all anti-competitive obstacles must be removed:
- This means:
 - Equivalence of input to access bottlenecks; same services available to all and equally used by incumbent in downstream markets
 - Forceful, and transparent, non-discrimination obligations
 - Equality of access to information and product development
 - Clear boundaries between upstream and downstream divisions
 - Effective, transparent and public accounting separation obligation.
 - Effective regulation/control to ensure compliance

Openreach - assets

PSTN & ADSL Service



Openreach

- Openreach has had its own headquarters, distinct brand and around 30,000 people, from January 2006
- It controls and operates the duct, fibre, copper and other non-electronic assets in BT's access and backhaul networks (the 'access bottleneck')
- It provides product management, sales and service management for significant market power (SMP) products delivered over BT's access and/or backhaul networks - bottleneck products
- Any performance-related pay for Openreach staff is based only on Openreach own objectives and performance; not BT Group's
- BT will publish separate financial accounts for Openreach

Openreach: a snapshot of the business

Around **30,000** people – all BT's field operations

3.6 million customer visits per year

14 million jobs a year

30 million customer lines

120 million km copper access

Each day Openreach visits **11,000 homes and offices** and climbs the **height of Everest** up our poles

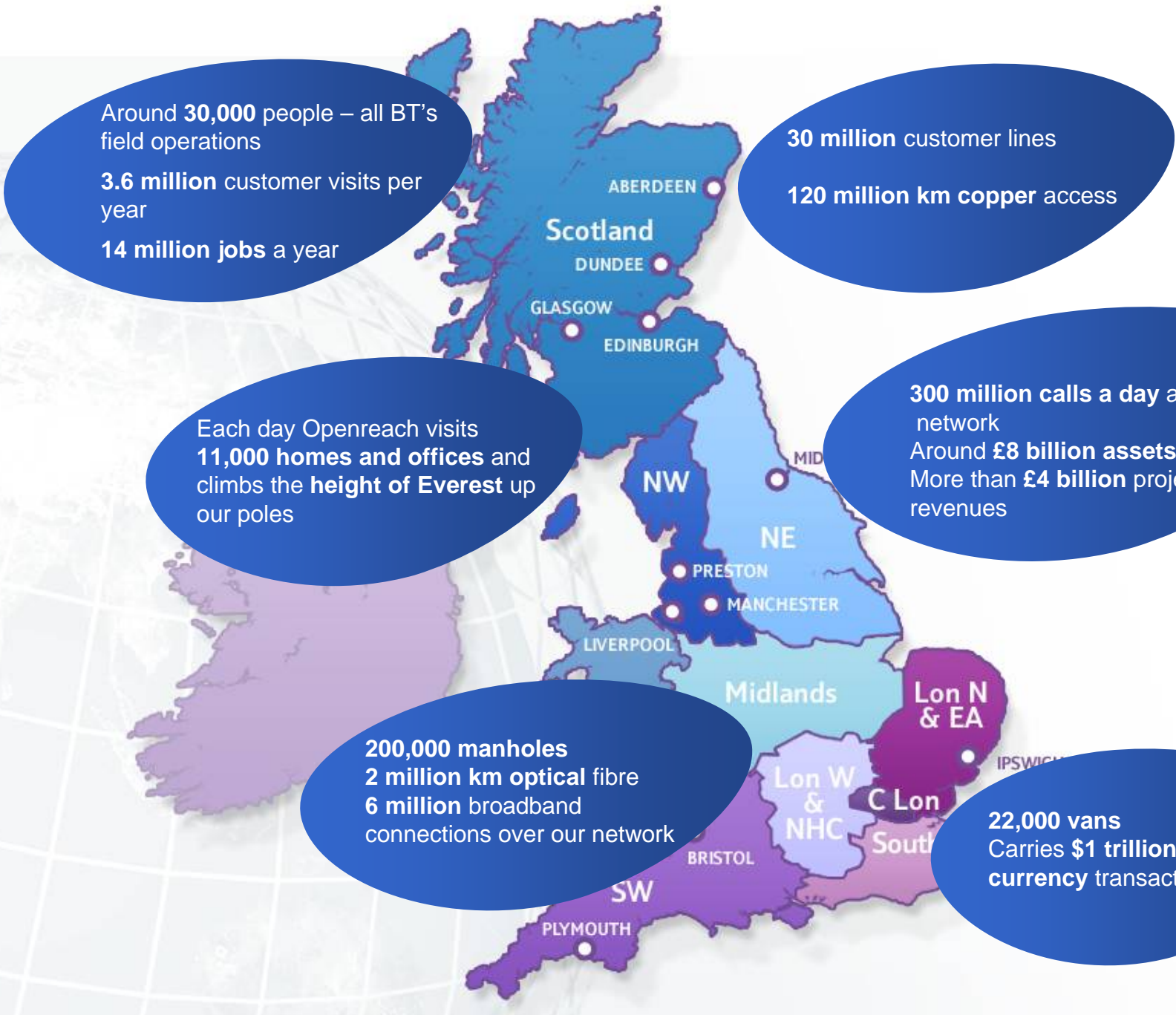
300 million calls a day across our network

Around **£8 billion** assets

More than **£4 billion** projected revenues

200,000 manholes
2 million km optical fibre
6 million broadband connections over our network

22,000 vans
Carries **\$1 trillion** of foreign currency transactions



BT Wholesale

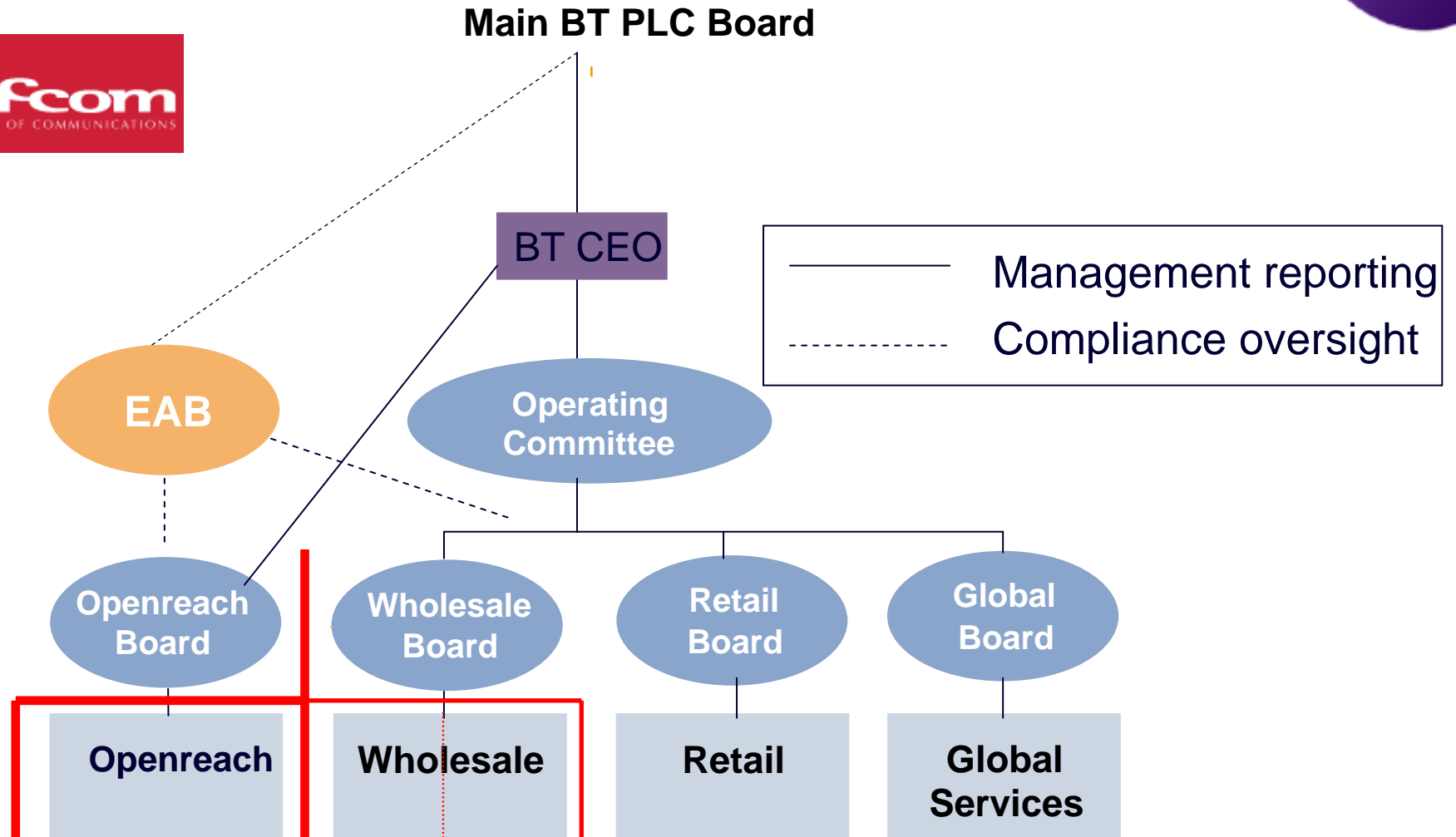


BT Wholesale		
BTW Core Network Services <i>("BTWS" in the Undertakings)</i>	BTW Value-added Network Services <i>("BTS" in the Undertakings)</i>	BTW Unregulated & New Services
<p>Product management, product development, product specification and product related procurement processes of the main BT Wholesale SMP products. This includes:</p> <ul style="list-style-type: none"> • DataStream • Carrier Pre-selection • Partial Private Circuits • network charge control services. 	<p>Product management, product development, product specification and product related procurement processes of products considered by Ofcom to be "significant to other Communications Providers", initially:</p> <ul style="list-style-type: none"> • Wholesale Calls • IPStream • leased lines for Communications Providers. 	<p>Product management, product development, product specification and product related procurement processes of the main BTW "unregulated products". This includes:</p> <ul style="list-style-type: none"> • new products based around 21CN capabilities.

Independent monitoring and oversight

- Equality of Access Board
 - Monitors, reports and advises on BT's compliance with the Undertakings;
 - Chaired by BT Group non-exec director, with three independent members plus one senior BT manager
 - reports directly to BT Group plc Board
 - reports annually to Ofcom and publishes a summary report as part of BT's annual compliance report
- Ofcom
 - Publishes quarterly Undertakings implementation reports
 - Will publish Annual Report on impact of TSR
 - Track measures on delivering letter and spirit of Undertakings, product KPIs, etc

Oversight and monitoring



Enforcement

Breaches of the Undertakings can lead to:

- Directions from Ofcom and/or court enforcement
- Reference to the Competition Commission
- Third party action for damages

NGN – BT's 21 Century Network

- BT has announced a major NGN investment programme
 - Improve customer experience, speed to market and reduce costs
 - Replaces 16 legacy networks by a single NGN
 - with emphasis on services not infrastructure
 - Established technology but not to this scale
 - First customer change over 28 November 2006
 - Aim to complete by 2010.
- CPs involved through Consult 21 and NGNuk
 - NGNuk as an independent NGN industry body, with a view to creating an improved framework for industry engagement.
 - NGNuk's mission is to act as a co-ordination forum in which key investors in NGN infrastructure and services will discuss, research, consider and, where possible, agree the direction for NGNs in the UK and communicate such direction to other players in the telecommunications industry and the general public.
- Future-proofing in Undertakings:
 - Openreach must offer equivalent NG service on an EOI basis to its current services

Equality of Input (EoI).

EoI is the key concept of the Undertakings

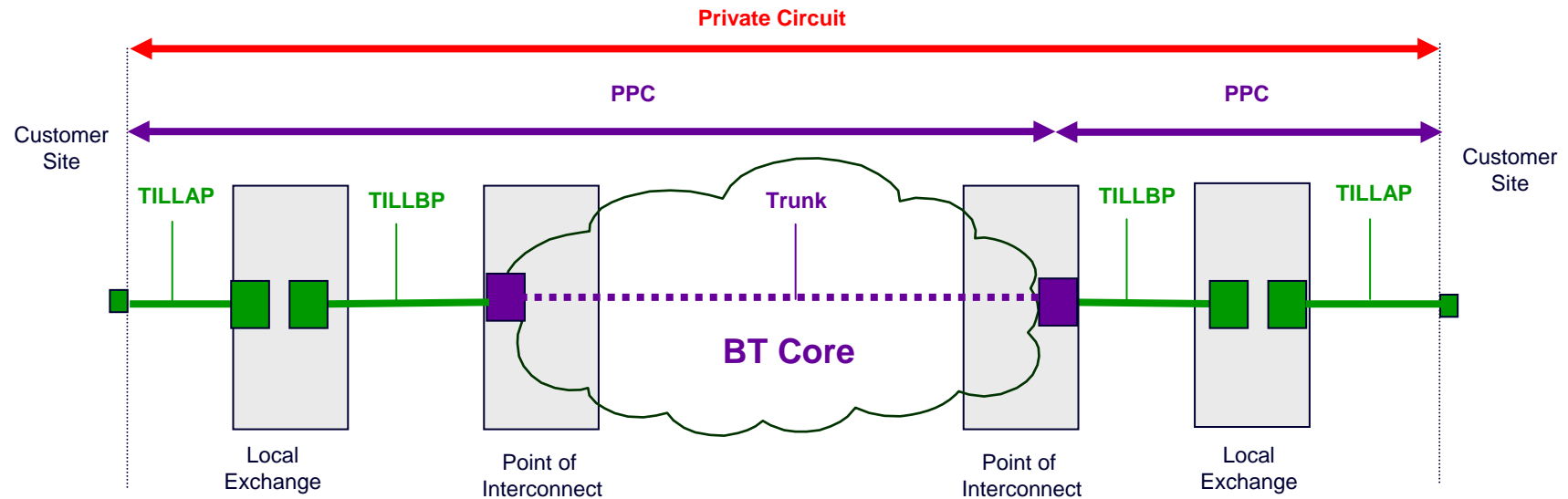
- EoI is more than *non discrimination*.
- EoI means: *same* ordering system, *same* ability to influence, *same* prices, terms & conditions, *same* services and same access to commercial information.
- It guarantees *equal* access to the ‘economic bottleneck’ and drive further downstream competition in the UK.
 - Key Performance Indicators are published quarterly
- It focuses the regulation where it is needed
- It requires systems and process changes as wholesale processes were developed and scaled for external sales only.
- Application is gradual over time to allow for system development, but to a challenging timetable.

Openreach- product set

- Wholesale Analogue Line Rental
 - customer access for analogue voice services
- Wholesale ISDN2 and ISDN 30 Line Rental
 - customer access for digital voice services
- Local Loop Unbundling (full and shared)
 - copper pairs
- Wholesale Extension Service
 - Ethernet partial private circuits from customer to first exchange
- Backhaul Extension Service
 - Ethernet partial private circuits from first exchange to POP or second exchange
- and facility to co-locate specified equipment at exchanges
 - aggregation equipment, video servers, access network termination
- Plus specified future access and backhaul services if requested by a CP

GS needs Access and Backhaul in the UK as in Sweden

Private Circuit (Leased Line)



- Retail PC Product
- Wholesale Provide
 - PPC Partial Private Circuit
- Openreach Provide
 - TILLAP and TILLBP

Changes in Systems

- Management Information Systems, Ordering, Fault reporting
- Downstream services consume wholesale products/interconnect
- In the past
 - Supporting systems for ordering etc not designed with internal customers in mind, not scalable
 - Hence need for change
- Can not all be switched at once so timetable set with
 - RFS – for new orders
 - IBMC – for all customers
- EoI obligations have also driven other changes in systems
 - Customer Information /Customer Confidential Information can not be shared

Progress: one year on

- Key deliveries to date include:

- Publish exchange space availability by 1/11/05
- Publish product transparency by 22/12/05
- Launch address matching service by 31/12/05
- IP Stream RFS date of 31/12/05 met and on target for IBMC date of 31/12/06
- Establish Openreach by 22/1/06
- Publish Code of Practice by 22/1/06
- Establish Chinese Walls and restrictions on information use within BT by 22/1/06
- Establish EAB by 22/3/06
- Separately secured Openreach HQ by 22/3/06
- RFS for S/MPF by 30/6/06
- Access to engineering appointment books by 30/06/06
- EOI for WES/BES achieved 30/9/06
- MIS Partitioning achieved 30/9/06, over 1,000 systems reviewed
- EOI for new WLR on target for 31/12/06, six months ahead of RFS date

Management information systems (MIS).

- The Undertakings required that we logically partition the management information systems between Openreach and the rest of the company by 22 September 2006.
- We agreed with Ofcom that this deadline should be extended to 22 October to allow time for
 - BT and Ofcom to consult on the detail of exactly what would be achieved and,
 - following consultation, to vary the Undertakings accordingly.
- We have now implemented changes to our MIS systems.
- The scale of what we have achieved should not be underestimated.
- **Over 1000 systems have been assessed which required engagement from all lines of business.**
 - Where changes were required to meet the Undertakings, they were implemented and processes for ongoing compliance introduced.
- Delivery will be audited by both the Equality of Access Office and external auditors.

Example: LLU Equivalence of Input available on 30 June 2006

- Openreach hit a major milestone on 30 June with the delivery of LLU Equivalence of Input (EoI) via the Equivalence Management Platform (EMP)
 - All CPs' ordering, fault repair and dialogue services capability is conducted through a single interface
 - BT Wholesale new orders now use the same LLU products (SMPF & MPF) on the same terms as the rest of industry
- Openreach are fully committed to making LLU a success.
 - The number of unbundled lines reached 1m in November 2006
 - Openreach is currently processing 30,000 LLU orders per week.
 - Nearly 20 LLU Communications players provide unbundled services from almost 1,000 local exchanges across the UK today.
 - The EMP will be able to handle greater volumes and improve automation of business critical processes for all LLU users

Progress: Ofcom's view

Evaluating the impact of the TSR, 18 Oct 2006

“BT committed to delivery of the undertakings and...has expended considerable effort and resource in implementing them”

- Achievements include
 - Formation of Openreach and the basis of operational separation
 - A new equivalence management platform (EMP)
 - Improvements that have seen LLU grow to over 1 million
 - Improved transparency, new codes of practice, EAB
- Further progress required includes
 - Service performance for some wholesale products
 - Continued and rapid improvement in EMP
 - More customer focused approach to migrations, new products and other developments

New era of regulation

- Increased clarity
- Regulation focused on bottlenecks
- Reduced retail regulation
- Incentive to invest in next generation networks and innovate
- Infrastructure-based competition
- Benefits the consumer and UK economy
- BT GS can compete fairly
- Relationship with BT GS is placed on proper commercial footing
 - Quality of Service
 - Key Performance Indicators

Creating confidence for infrastructure competition, investment and innovation

Has the dream come true?

- **For other UK CPs?**

- Communications providers are in general positive about Openreach's management and acknowledge that it is still early days, but they have concerns regarding poor service delivery in some areas, and there is a feeling that the focus on delivering equivalence of inputs sometimes distracts from issues they feel are important in the short term. (Ofcom: Evaluating the Impact of the TSR)

- **For the regulator?**

- The prospect, for the first time, of access to BT's local access infrastructure on terms identical to those previously only offered to BT's own retail activities has stimulated broad interest in the potential for new services over the local loop. (Ofcom Annual Report 2005/6)

- **For the customer?**

- UK customers for fixed telecoms services continue to see better services, more choice and reducing prices (Ofcom: Evaluating the Impact of the TSR)
- The cost of a 'basket' of residential communications services has fallen; from £113.40 in 2001 to £76.20 four years later. Overall customer satisfaction remains high, between 88% and 93%, and in line with banking and energy markets. Consumers also enjoy more choice than ever before. (Ofcom: The consumer experience of telecoms, internet and broadcasting services)



Summary of Openreach in the UK

- Openreach provides full functional and operational separation within the same legal entity.
- Whilst it is owned by BT, BT Group only has one member on its board.
- Openreach sets its own objectives and is self governing.
- Breaches can lead to:
 - Directions from Ofcom &/or court enforcement
 - Reference to the Competition Commission
 - Third party actions for damages
- Openreach's real purpose is to guarantee a fully competitive downstream environment for incumbent and CPs alike.
- Openreach's regulatory remedies are in addition to those Ofcom have mandated following market reviews.

Openreach in other countries?

- Openreach is the UK's answer to the access bottleneck
- The same regulatory, competition law and economic issues concerning creating a competitive environment for CPs need to be resolved everywhere.
- 2006 Review – Functional Separation as a potential remedy?
 - Based in market reviews
 - Where there is enduring SMP
- The following may be considered as a minimum:
 - Equality of outcome for access and other SMP services:
 - same services, prices, terms and conditions, treatment
 - Strong and effective non discrimination
 - Published transparency between upstream & downstream
 - Comprehensive and published separated accounts
 - Published Key Performance Indicators
 - Upstream prices set at non margin squeeze level
 - Chinese walls in a vertically integrated company
 - Consider business and residential customer needs separately.

For more information

- About BT's 21 CN

<http://www.btplc.com/21CN>

- About BT's Undertakings to Ofcom

<http://www.undertakingsbulletin.com>

- Ofcom

<http://www.ofcom.org.uk/telecoms/btundertakings/>



Thank you