Next Generation Access
Regulatory Approaches across Europe

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Table 1. NGA plans – Incumbent Telcos

The table below presents deployments of own NGA infrastructure by incumbent telcos.

It does NOT cover the scenario where the incumbent telco acts as a service provider over NGA infrastructure deployed in a specific local area by a company owned by a local/municipal authority or housing association. This model is present in both Netherlands and Sweden to some degree.

Country	Operator	NGA	NGA retail service availability today (see Table 3 for details)	NGA roll-out plans announced	Total households
Belgium	Belgacom	FTTC+VDSL2	Q3 2008: 64% households	Broadway project (see Quarterly Report Q3 2008 p. 6). Sept. 2008: 64% population coverage. Mid 2011: 80% population coverage.	4.5m
Denmark	TDC	FTTC+VDSL2 HFC (FTTN+Coax) + DOCSIS 3.0	100 cities (approx. 50% households passed)	End 2008: 1.5m homes passed	2.5m
France	France Telecom	FTTH GPON	Parts of Paris and 9 other cities	End 2008: 1m homes passed. 200K customers	27.4m
Germany	Deutsche Telekom	FTTC+VDSL2	50 cities (approx. 25% households passed)	End 2008: 50 cities (approx. 25% households passed)	39.2m
Italy	Telecom Italia	FTTB (GPON) +VDSL2 FTTH green field	Not available	2010: 52,600 FTTx cabinets passing 2m customers	23.9m
Netherlands	KPN	FTTC+VDSL2 FTTH P2P	FTTC: Not launched FTTH P2P: Very small scale so far	FTTC: No public information FTTH: “Glashart” JV between KPN and Reggefiber announced in Nov. 2008 aims to deploy FTTH P2P nationwide within 7 years.	7.2m

Country	Operator	NGA	NGA retail service availability today (see Table 3 for details)	NGA roll-out plans announced	Total households
Spain	Telefonica	FTTH GPON for most deployments FTTC+VDSL2 on smaller scale	Parts of 12 main cities	End 2013: 3m FTTH lines	15.4m
Sweden	TeliaSonera	FTTB+VDSL2	No published figures on service coverage/availability	2012: Between 1.5m - 2m households passed	4.4m
UK	BT	FTTC+VDSL2 FTTH GPON green field	Not available Pilot of FTTH GPON in Ebbsfleet new-build housing development	2012: 7m-10m homes passed (up to 40% households). Of which, 6m-7m FTTC plus FTTH deployments including new build areas.	26.3m

Table 2. NGA plans – Other Telcos, Cable

The table below presents deployments of own NGA infrastructure by players other than incumbent telcos which have a significant geographic coverage.

It does not cover NGA infrastructure deployed in a specific local area by a company owned by a local/municipal authority or a housing association. This model is present in both Netherlands and Sweden to some degree.

Most cable operators in Europe have plans to reconfigure their HFC networks by deploying fibre closer to end-users and to upgrade to DOCSIS 3.0. The table only shows cable operators where these plans are well advanced.

Country	Operator	Type: Telco, Cable, Utility company	NGA	NGA retail service availability today (see Table 3 for details)	NGA roll-out plans announced
Belgium	Telenet	Cable (in Flemish Region and parts of Brussels)	HFC (FTTN+Coax) DOCSIS 3.0	Not yet	'Mach 3' project upgrading full network to DOCSIS 3.0 in 2008. See Annual Report 2007 p. 29
Denmark	22 energy companies with joint initiative 'Dansk Fibernet'. The largest are: Dong Energy Energi Midt	Electricity utility	FTTH P2P	Oct. 2008: Dong Energy: 11,700 customers Energi Midt: 10,800 customers Total energy companies: 86,000 customers	Up to 2m households and businesses passed by 2013-2015 (see Dansk Fibernet press release)
France	Numericable	Cable	HFC (FTTN+Coax) DOCSIS 3.0	100/5 Mbps service available today to 2.7m homes passed. 100K customers end Aug. 2008. Source: Numericable (CATV network covers 37% of French households – 9.4m)	No details available
	Free	Telco	FTTH P2P	Parts of Paris and Montpelier	End 2012: 4m homes passed

Country	Operator	Type: Telco, Cable, Utility company	NGA	NGA retail service availability today (see Table 3 for details)	NGA roll-out plans announced
	SFR	Telco	FTTH P2P in Paris FTTH GPON in smaller cities?	Parts of Paris and Pau	End 2009: 1m homes passed. 250K customers
Germany	NetCologne	Telco owned by city of Cologne	FTTB+VDSL2	13,000 multi-family houses in Cologne already connected	2011: 55,000 multi-family houses in Cologne connected
Italy	Fastweb	Telco	FTTH	AGCOM 2008 annual report refers to 277K fibre connections in Italy. CI assumes most of these to be Fastweb's. New residential connections currently mainly based on xDSL (LLU from Telecom Italia).	No details available
Netherlands	Number of cases of local/municipal FTTH projects. Most of these initiatives are being integrated into the joint venture "Glashart" with KPN	Other	FTTH (mainly P2P)	Limited to particular town or city	No details available
	UPC	Cable	HFC (FTTN+Coax) DOCSIS 3.0	2m homes passed, approx. 660K broadband subscribers. 120/10 Mbps service available in part of service area (undisclosed but growing)	No details available
	Ziggo	Cable	HFC (FTTN+Coax) DOCSIS 3.0	3m homes passed, 1.4m broadband subscribers. 30/3 Mbps service	No details available

Country	Operator	Type: Telco, Cable, Utility company	NGA	NGA retail service availability today (see Table 3 for details)	NGA roll-out plans announced
				available as from Dec. 2008 in part of service area (undisclosed)	
Spain	ONO	Cable	HFC (FTTN+Coax) DOCSIS 3.0	End 2008: 50/3 Mbps service target 700K homes passed (for comparison, ONO has approx. 1.4m broadband subscribers at present out of 7m homes passed)	No details available
Sweden	Bredbandsbolaget (Telenor)	Telco	FTTB+VDSL2 FTTH	460K households connected Around 2m homes passed	No details available
UK	Virgin	Cable	HFC (FTTN+Coax) DOCSIS 3.0	Before end 2008: 50 Mbps service available to 9m homes passed (70% of the 12.5m homes passed by Virgin). Not launched yet.	In 2009: 50 Mbps service available to 12m homes passed (95% of the 12.5m homes passed by Virgin)

Table 3. NGA-based retail offers today

The table below presents retail offers for residential customers based on deployments of own NGA infrastructure.

Operator	Product name	Price per month Incl. VAT Excl. promotions	Top speed down/up	Services incl. in bundle: Broadband	IPTV	Telephony	Number of subscribers	Incumbent service launch conditional on effective wholesale service?
Belgacom	Pack Internet with Internet Go + TV (service offered over both ADSL2+ and VDSL2 depending on location)	€50.00	12 Mbps / 400 Kbps (same speed for both ADSL2+ and VDSL2 – but VDSL allows streaming multiple SD/HDTV channels)	✓	✓ (incl. HDTV where VDSL2 is available)		-	No
	Pack Internet with Internet Go + TV+ Telephony (service offered over both ADSL2+ and VDSL2 depending on location)	€60.00	12 Mbps / 400 Kbps (same speed for both ADSL2+ and VDSL2 – but VDSL allows streaming multiple SD/HDTV channels)	✓	✓ (incl. HDTV where VDSL2 is available)	✓	-	
TDC	TDC Bredbånd	€74.00	50/ 2 Mbps	✓			-	No
Energi Midt (Denmark)	FiberBredbånd	€161.00 €86.00	60/60 Mbps 30/30 Mbps	✓				Not applicable

Operator	Product name	Price per month Incl. VAT Excl. promotions	Top speed down/up	Services incl. in bundle: Broadband	IPTV	Telephony	Number of subscribers	Incumbent service launch conditional on effective wholesale service?
France Telecom	La fibre	€44.90 + €3.00/month for Livebox	100 / 10 Mbps (minimum download speed: 10 Mbps)	✓	✓ (incl. HD channels)	✓ (unlimited calls to fixed numbers in France)	-	No
Numericable	Pack Net up to 100Mbps+Tel+ TV Prima	€31.90 + €5.00/month for set-top box	100 / 5 Mbps	✓	✓ (incl. HD channels)	✓ (unlimited calls to fixed numbers in France + 45 countries)	-	Not applicable
Free	Fibre optique	€29.99	100 / 50 Mbps	✓	✓ (incl. HD channels)	✓ (unlimited calls to fixed numbers in France + 70 countries)	-	Not applicable
SFR	NeufBox fibre optique	€29.90 (Paris) €34.90 (Pau)	100 / 50 Mbps	✓	✓ (incl. HD channels)	✓ (unlimited calls to fixed numbers in France + 60 countries)	-	Not applicable
Deutsche Telekom	T-Home Entertain	€59.95 €64.95	25 / 5 Mbps 50 / 10 Mbps	✓	✓	✓	-	No
NetCologne	CityNetCologne	€29.90 €34.90	25 / 2.5 Mbps 100/10 Mbps	✓		✓	-	Not applicable

Operator	Product name	Price per month Incl. VAT Excl. promotions	Top speed down/up	Services incl. in bundle:			Number of subscribers	Incumbent service launch conditional on effective wholesale service?
				Broadband	IPTV	Telephony		
Fastweb	NavigaCasa	€39.90	10 Mbps symmetric	✓	Pay extra (IPTV subscription, includes HD channels)	✓	-	Not applicable
KPN	Glasnet (based on KPN own FTTH P2P – very small scale)	€35.00	12 / 3 Mbps	✓	Pay extra	Pay extra	-	No
UPC (Netherlands)	UPC Fibre Power	€60.00 €80.00	60 / 6 Mbps 120 / 10 Mbps	✓	Pay extra	Pay extra	-	Not applicable
Ziggo (Netherlands)	Internet Z3i	€69.95	30 / 3 Mbps	✓	Pay extra	Pay extra	-	Not applicable
Telefonica	Futura (Range of options, only two shown here)	€50.90 (basic)	10 Mbps / 320 Kbps	✓	✓ (Basic TV package, excl. HDTV and DVR)	✓ (unlimited calls to national fixed numbers)	-	Yes Retail service launch conditional on effective access to ducts. CMT approval granted on 13 Nov. 2008. See Table 6.
		€85.90	30 / 1 Mbps	✓	✓ (incl. HDTV and DVR)	✓ (unlimited calls to national fixed numbers)		
ONO	Combinado	€65.00 + €3.00/month for Internet equipment	50 / 3 Mbps	✓	✓	✓	-	Not applicable

Operator	Product name	Price per month Incl. VAT Excl. promotions	Top speed down/up	Services incl. in bundle: Broadband	IPTV	Telephony	Number of subscribers	Incumbent service launch conditional on effective wholesale service?
TeliaSonera*	Telia Bredband FTTB+VDSL2	€33.00 (plus €3.00 charge if ANO is used for fixed telephony)	12-24/2.5 Mbps	✓			-	No
	Telia Bredband FiberLan/ Stadsnät FTTH P2P or GPON (see note below table)	€10.00 - €75.00 (varies depending on speed and location)	From 10/10 Mbps up to 100/100 Mbps	✓			-	
Bredbandsbolaget (Sweden)	TurboDSL FTTB+VDSL2	€45.00	20-40/3-10 Mbps	✓		✓	-	Not applicable
	Bredband 100 FTTH	€32.00	60-100/60-100 Mbps	✓		✓	-	
Virgin	Virgin Broadband XL	GBP 29.99 (first 12 months) GBP 36.00 after	20 Mbps/ 768 Kbps (50 Mbps service not yet launched)	✓			-	Not applicable

*TeliaSonera: Telia Bredband FiberLan/Stadsnät services are only available to subscribers connected either to a network owned by a housing association or a municipal network that has concluded a service agreement with TeliaSonera. Currently some 30 municipal networks have a service provision agreement with TeliaSonera.

Table 4. Regulation – Main area of NRA's focus / strategy

The position of the regulators in Denmark and Italy is not clear at this stage. For both countries, the table shows the remedies imposed in the first round of market analysis. There was no in-depth NGA analysis undertaken at that time.

In Denmark, NITA is carrying out its second round analysis of M4+5/2007 now.

In Italy, NGA regulation is stalled while AGCOM works on Telecom Italia's proposed undertakings for equal access (functional separation) (see Big Five Update 97). The second round analysis of M4+5 will not go forward until this has been concluded, expected by the end of 2008.

	Main area of NRA's focus / strategy

Country	Incumbent NGA	Passive				Active	
		In-building fibre	**Duct access**	**Dark fibre**	**SLU**	**Wavelength**	**Ethernet-based bitstream access over NGA**
Belgium	FTTC+VDSL2		✓ (Proposal -MDF to cabinet)	✓ (Proposal - MDF to cabinet)	✓		✓
Denmark	FTTC+VDSL2 HFC+DOCSIS 3.0		✓ (Industry agreement)	✓ (Commercial offer - MDF to cabinet)	✓		
France	FTTH GPON	✓ (symmetric obligation for first operator to building)	✓				
Germany	FTTC+VDSL2		✓ (MDF to cabinet)	✓ (MDF to cabinet)	✓		
Italy	FTTB+VDSL2 FTTH green field				✓		✓

Country	Incumbent NGA	Passive				Active	
		In-building fibre	**Duct access**	**Dark fibre**	**SLU**	**Wavelength**	**Ethernet-based bitstream access over NGA**
Netherlands	FTTC+VDSL2 FTTH P2P		✓	✓ (ODF access for P2P)	✓ (but Analysys study for OPTA concludes no business case)		FTTC: ✓ FTTH: ✓ ("High quality" market only)
Spain	FTTH GPON for most deployments FTTC+VDSL2 on smaller scale	✓ (proposal - symmetric obligation for first operator to building)	✓ (available on interim basis. Proposed in M4/2007 analysis, final decision not yet adopted)	✓ (proposal – only if duct access not feasible)	✓ (available in RUO, but complete offer not developed and not priority for CMT)		✓ (proposal - up to 30 Mbps, cost-based prices only in less competitive "Area 2" - challenged by European Commission)
Sweden	FTTB+VDSL2			✓ (regulation overturned on appeal)	✓		✓ (technology neutral access obligation on M12/2003-applies to copper and fibre network)
UK	FTTC+VDSL2 FTTH GPON green field		? (under consideration by Ofcom – is there demand from industry?)		? (under consideration by Ofcom – is it economically viable?)		✓ (Ofcom supports industry-led development of Ethernet-based active line access products)

Table 5. Bitstream access over NGA

Country	NGA included in Market 5/2007	Obligation to provide bitstream access over NGA	Pricing rule	Reference offer published by incumbent for Ethernet-based bitstream access over NGA	Offered/used in practice
Belgium	Yes	Yes See EU Telecom Flash 11/2008	Cost orientation based on "reasonable costs of an efficient operator including a reasonable return on investment". Costing method to be decided later by BIPT.	Yes First version of Belgacom Wholesale Broadband Access VDSL2 Public consultation closed on 18 Oct. 2008. Draft offer only deals with qualitative terms of the offer. No proposal on quantitative terms of the offer so far.	No
Denmark	No, NGA was not included in market definition by NITA in first round analysis of M12/2003 in 2005. NITA is now working on second round analysis of M5/2007 but remedies have not yet been discussed in the draft decision.	No	No	No	No
France	Yes	No ACREP considers access to FT's ducts plus rules on sharing of in-building fibre should enable infrastructure-based	Not applicable	No	Not applicable

Country	NGA included in Market 5/2007	Obligation to provide bitstream access over NGA	Pricing rule	Reference offer published by incumbent for Ethernet-based bitstream access over NGA	Offered/used in practice
		competition. See Big Five Update 88).			
Germany	Yes, but only to extent that VDSL-based services are a substitute to ADSL, which BNetzA says it not yet the case See EU Telecom Flash 03/2006	Not yet	Regulated bitstream services must be priced based on costs of efficient service provision (LRIC)	No	No
Italy	Yes Fibre included in definition of M 12/2003	Yes (in principle) SMP obligation for TI in M 12/2003 applies to fibre, although no detailed analysis of different NGA infrastructures, etc. at time of last market analysis. No (in practice) since TI's end-user access connections still based on ADSL/ADSL2+. Bitstream access obligation covers handover with both ATM and Gigabit Ethernet technologies Three handover points: DSLAM, parent/distant node.	Cost orientation (but for DSLAM and parent node bitstream services only)	No (but Ethernet-based bitstream access over ADSL/ADSL2+ offered)	Research under way

Country	NGA included in Market 5/2007	Obligation to provide bitstream access over NGA	Pricing rule	Reference offer published by incumbent for Ethernet-based bitstream access over NGA	Offered/used in practice
Netherlands	Yes Second round market analysis proposals notified to Commission on 5 Nov. 2008 WBA proposals modified following results of national consultation (see next column)	FTTC: Yes FTTH: Yes ("High quality" market only) OPTA proposes to impose WBA obligation on FTTC/VDSL because KPN will phase-out some MDF locations. OPTA proposes to impose ODF access for FTTH P2P, therefore it originally considered that it would not be proportionate to also require WBA on FTTH (in order to stimulate infrastructure investment). Following the national consultation, OPTA now proposes to require WBA on FTTH limited to the "high quality" market aimed at providing business services (but no WBA obligation proposed in "low quality" market providing residential services).	Multi-year price cap based on Embedded Direct Costs (EDC)	Yes Although FTTC is not yet deployed, the Reference Offer already describes WBA for both FTTH and FTTC. RO available as from April 2008, together with the publication of the migration offer. This is aimed at concluding migration agreements with LLU operators ensuring service continuity via WBA in the event of the closure of a local exchange building.	Research under way

Country	NGA included in Market 5/2007	Obligation to provide bitstream access over NGA	Pricing rule	Reference offer published by incumbent for Ethernet-based bitstream access over NGA	Offered/used in practice
Spain	Yes (proposal) CMT second round analysis of M5/2007 notified to European Commission on 10 Oct. 2008. Commission Phase 2 investigation under way – see next column	Yes (proposal) New Ethernet-based bitstream access product for both xDSL and FTTx services (up to 30 Mbps) with cost-based prices only in “Area 2” where Telefonica faces less competition from infrastructure-based competitors. In “Area 1” Telefonica would have to “meet reasonable requests” for access (up to 30 Mbps) on commercial terms incl. reasonable prices. European Commission has opened Phase 2 investigation challenging both geographic variation of remedies and 30 Mbps limit. See EU Telecom Flash 107/2008	Cost orientation (multi standard FDC and current costs, transition towards LRIC foreseen).	Not yet	No

Country	NGA included in Market 5/2007	Obligation to provide bitstream access over NGA	Pricing rule	Reference offer published by incumbent for Ethernet-based bitstream access over NGA	Offered/used in practice
Sweden	Yes	Yes Access obligation for TeliaSonera to provide BSA on M12/2003 is technology neutral and applies to copper and fibre networks Explicit requirement for bitstream over NGA set in PTS decision of June 2008	Cost orientation LRIC is being implemented	No	Not yet Following an appeal, implementation deadline postponed by court until Feb. 2009
UK	No Since there were no wide scale commercial deployments of NGA in UK at the time of Ofcom's second round analysis of M5/2007 which was concluded in May 2008. See EU Telecom Flash 13/2008	No But Openreach commitment to build new NGA products such as Ethernet access on EOI (Equivalence of Input) basis	As part of its Sept. 2008 consultation "Delivering super-fast broadband in the UK" Ofcom proposes following wholesale pricing rules: • Active wholesale products (bitstream) – Pricing freedom for wholesale provider. Ofcom says this is suitable approach where there is indirect retail price constraints, from today's first generation broadband or services offered over other access	Trials only BT Openreach is developing Generic Ethernet Access (GEA) products for both: • FTTH GPON (pilot at Ebbsfleet starting end 2008) • FTTC+VDSL2 (pilots in summer 2009) Consultations with industry on-going See Big Five Update 99 In Sept. 2008 Ofcom published a draft of standardised technical requirements for wholesale Ethernet active line access products.	Trials only

Country	NGA included in Market 5/2007	Obligation to provide bitstream access over NGA	Pricing rule	Reference offer published by incumbent for Ethernet-based bitstream access over NGA	Offered/used in practice
			networks (cable) to limit the risk of excessive pricing. • Passive wholesale products – cost-based pricing with adjustments for risk incurred.		

Table 6. Duct sharing

Country	Duct survey ordered by NRA	Obligation to provide access to ducts Market 4/2007 or other basis?	Pricing rule	Reference offer published by incumbent	Offered/used in practice
Belgium	No	Yes (proposal) BIPT draft additional decision on M4 and 5 on NGA/N of Sept. 2008 proposed to require duct sharing and/or dark fibre between MDF and street cabinet	Cost orientation (but details not set in the draft decision)	No	No
Denmark	Yes Duct survey ordered by the Enterprise and Construction Authority for all industry sectors	No, not in first round analysis of M11/2003 by NITA in 2005. NITA is now working on second round analysis of M4/2007 but remedies have not yet been discussed in the draft decision.	Not applicable	Industry association (TI) standard agreement covering: • duct sharing • shared use of rights of way and coordination of civil works	Yes
France	Yes Audit of France Telecom's ducts in 10 cities in Nov. 2007 showed that civil engineering is available although not equal everywhere. (see slide 12 of ARCEP presentation)	Yes, market 4/2007 See Big Five Update 97	Cost orientation Details not yet published by ARCEP (expected Q4 2008)	Yes France Telecom published reference offer for access to its "civil engineering infrastructure for FTTx networks" on 15 Sept. 2008. The fee for laying fibre in FT's ducts is €1.2/meter/cm2 per year.	Free and SFR are not using FT's ducts so far

Country	Duct survey ordered by NRA	Obligation to provide access to ducts Market 4/2007 or other basis?	Pricing rule	Reference offer published by incumbent	Offered/used in practice
Germany	No	Yes, market 4/2007	Costs of efficient service provision (LRIC)	No	No
Italy	No AGCOM has recently assigned studies which *inter alia* assess the possibility for compiling a civil infrastructure database	Market analysis: No Merger undertakings (Seat Pagine Gialle/Cecchi Gori) under which TI was to provide duct access *"for the provision of interactive and multimedia services"* from 2001.	Merger undertakings: cost orientation	No	In Nov. 2001, e.Biscom (merged with Fastweb in 2004) signed an agreement to use TI's free duct capacity under the merger undertakings. In June 2008 TI and Fastweb announced that they have signed MOU *"aimed at the sharing of infrastructure necessary for the realisation of the New Generation Network, applying a model of cooperation open to all interested operators"*. This would entail joint study and planning, and reciprocal access.
Netherlands	No	Yes Proposed by OPTA in second round M4/2007 analysis proposals notified to Commission on 5 Nov. 2008. KPN to "meet all reasonable requests" for access to its ducts.	None	No	No

Country	Duct survey ordered by NRA	Obligation to provide access to ducts Market 4/2007 or other basis?	Pricing rule	Reference offer published by incumbent	Offered/used in practice
Spain	No	Yes Imposed as an interim obligation on Telefonica by CMT decision of 8 May 2008 pending the completion of analysis of M4/2007. Proposed obligation for Telefonica to share its passive infrastructure in the public domain (ducts, poles, etc.) in CMT´s second round analysis of M4/2007. See EU Telecom Flash 107/2008	Cost orientation (multi standard FDC and current costs, transition towards LRIC foreseen).	No Telefonica is not under obligation to publish a detailed reference offer, but it must submit a "minimum offer" including price proposal to CMT with two months of final M4/2007 decision. In practice, Telefonica already offers access to ducts on basis of interim decision of 8 May 2008.	Yes CMT announced on 13 Nov. 2008 that Telefónica was authorized to launch its retail broadband access services based on NGA, after CMT had verified that access to Telefónica's passive infrastructure was effectively available. A previous CMT decision of 8 May 2008 imposed an interim obligation on Telefónica to grant access to its passive infrastructure, pending the conclusion of the analysis of M 4/2007. Telefónica submitted its duct access offer to CMT in mid-Sept.
Sweden	No	No	Not applicable	No	No
UK	Yes Ofcom is keeping its options open regarding passive/active wholesale remedies at this stage. Ofcom announced a survey of BT's duct and	No As part of its Sept. 2008 consultation "Delivering super-fast broadband in the UK" Ofcom says it will: "consult on specific proposals for a	Not yet	No	No

Country	Duct survey ordered by NRA	Obligation to provide access to ducts Market 4/2007 or other basis?	Pricing rule	Reference offer published by incumbent	Offered/used in practice
	feasibility of duct access in April 2008. Results due end 2008.	wholesale duct access product, subject to the outputs of our initial duct survey and receiving clear declarations of interest to this consultation in duct access from communications providers.”			

Table 7. Sharing of in-building fibre

Country	Obligation to share in-building fibre (First operator to building)	Where is handover point?	Standard contract/reference offer	Offered/used in practice
Belgium	No	Not applicable	No	No
Denmark	No	Not applicable	No	No
France	Yes Based on new provisions in Code of Telecommunications amended in Aug. 2008. Obligation for all FTTH providers to meet reasonable requests for access to in-building fibre. ARCEP can set technical and financial conditions. Preliminary ARCEP recommendations on access to in-building wiring published on 10 Oct. 2008 See Big Five Update 97	Access point must be located outside the limit of private property, except otherwise stated by ARCEP. ARCEP considers that location of access point depends on population density and type of housing: • In basement of building for large buildings in densely populated areas • At street level for densely populated areas • At main street level for mid-densely populated areas.	Yes ARCEP model agreement between property owner and the operator deploying in-building fibre (the "building operator") ARCEP not published model agreement between "building operator" and third party operators.	Open agreement between FT and SFR for reciprocal access to in-building fibre signed in Sept. 2008.
Germany	No	Not applicable	No	No
Italy	No (but under law n. 133 of 6 Aug. 2008 installation of in-building fibre does not require property owner's prior permission).	Not applicable	No	No
Netherlands	No	Not applicable	No	No

Country	Obligation to share in-building fibre (First operator to building)	Where is handover point?	Standard contract/reference offer	Offered/used in practice
Spain	Yes (proposal) CMT launched public consultation on 31 Oct. 2008 proposing symmetric obligation (under article 12 Framework Directive) for first operator to deploy fibre within a building to share network elements and equipment on reasonable request.	Access to take place at in-building terminal boxes, incl. access to fibre cabling and end-user connections. In densely populated areas shared access may also take place in cabinets located in the street, hosting several buildings' terminal boxes. In FTTH GPON solutions, the access point is located at the latest division stage of the first-to-building operator's fibre network (at the point after which individual fibres start running to each client).	No	No Buildings dating after 1998 have by law a common telecoms infrastructure, but generally not an optical one. (Rules on common telecoms infrastructure established by Royal Decree401/2003 of April 4, 2003.) CMT´s proposal applies to the deployment of in-building optical cabling and associated equipment. The buildings concerned are those subject to the rules on common telecoms infrastructure unless they already have a shared optical telecoms infrastructure.
Sweden*	No	Not applicable	No	Yes (see note below table)
UK	No	Not applicable	No	No

*Sweden: No specific regulation, but access to shared in-building wiring is available where housing associations operate own fibre LAN broadband network and have concluded agreements with several service providers. See for example MKB broadband website, one of the major housing associations in Malmoe, with own 'operator-independent' network covering over 20,000 apartments and agreements with 8 alternative broadband providers.