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Financing FTTH networks

*Study conducted on behalf of
FTTH Council Europe*



Webinar, 19th June 2012

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Understanding
the
Digital World

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- ▶ **FTTH Projects selection**
- ▶ **Theoretical framework for assessing financing models**
 - Three drivers of FTTH project success
 - Project context drives financing model
 - Investment model drives financing model
- ▶ **Most suited FTTH Financing Models**
 - Municipal models
 - Public Private Partnerships models
 - Incumbent Financing Models
 - Operator funded combined with public policy stimuli
- ▶ **Most Appropriate Financing Models**
- ▶ **Consider Pooled Financing**
- ▶ **Practices Mitigating FTTH Financial Risk**
- ▶ **Recommendations**



FTTH Projects selection

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Taxonomy and sample of projects studied

- ▶ Formalization of **taxonomy** of financing approaches: two dimensions
- ▶ **Geographic** dimension: Urban, Suburban and Rural
- ▶ **Financing strategies** dimension: principal project sponsor and funding models

Sampling matrix

		Geographic Mix		
		Urban	Sub-urban	Rural
Financing Strategies	Municipal			
	Government Funding			
	PPP			
	Operator-funded			
	Operator-funded and public policy stimuli			

Source: IDATE and TAS LLC

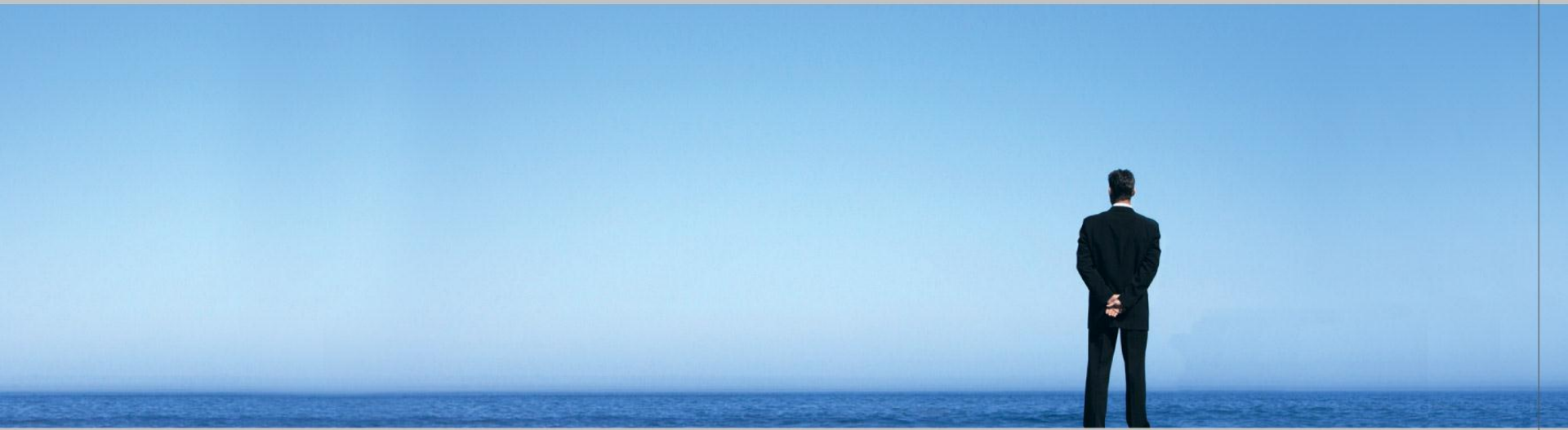
Positioning of projects studied

- ▶ A **dozen of project** interviewed and positioned in the Matrix
- ▶ Projects selected in: Sweden, Finland, France, U.K, Germany, Spain, Switzerland, Latvia, Andorra, Lithuania and Netherlands

Final Sampling matrix

		Geographic Mix			
		Urban	Sub-urban	Rural	
Financing Strategies	Municipal	• Project A		• Project B • Project C • Project D	
	Government Funding	• French National Very High Speed Plan • BB Delivery UK			
	PPP		• Project E	• Project F	
	Operator-funded	• Project G	• Project H	• Project I • Project J	
	Operator-funded and public policy stimuli		• Project K		

Source: IDATE and TAS LLC



Theoretical framework for assessing financing models

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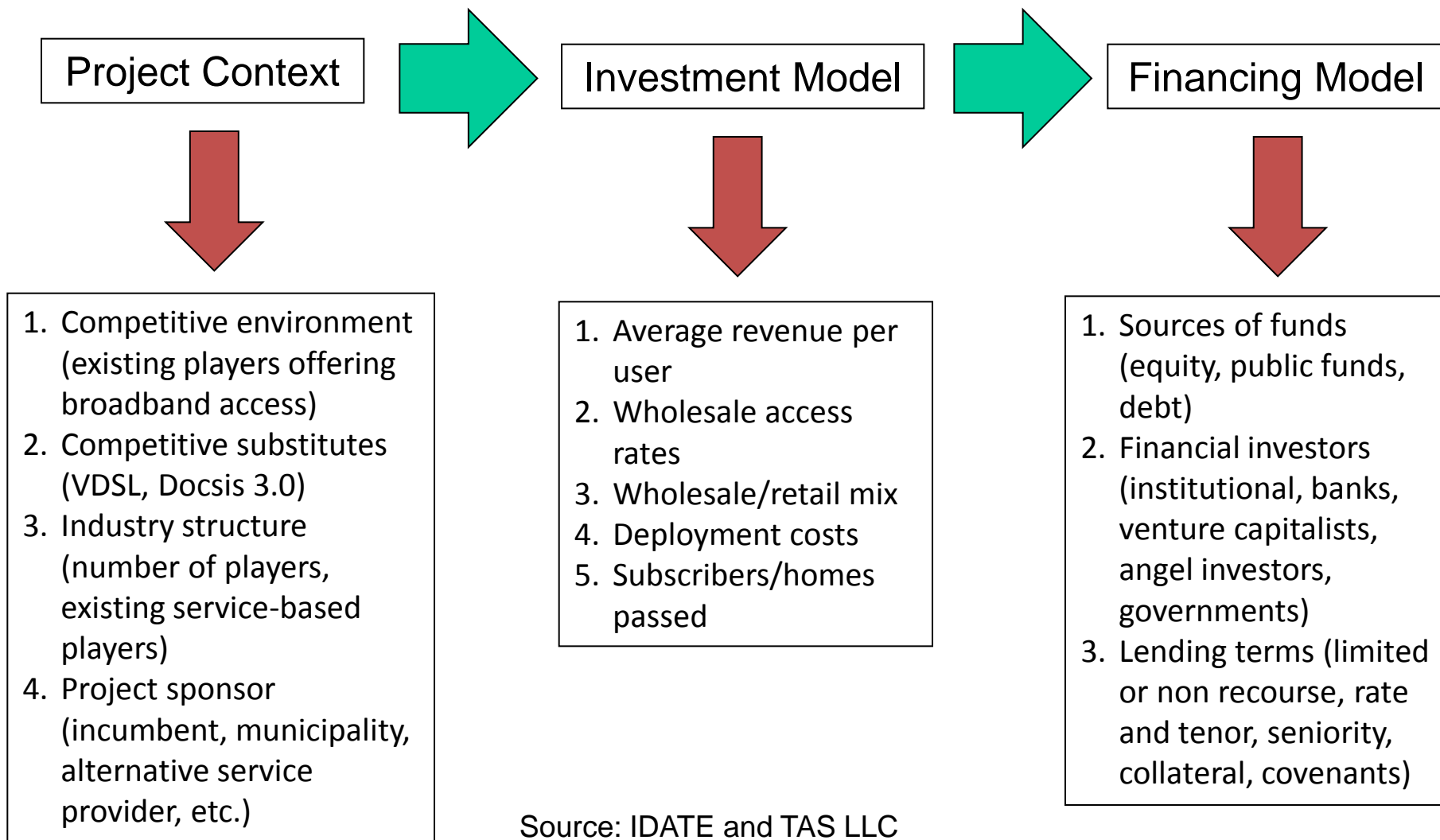


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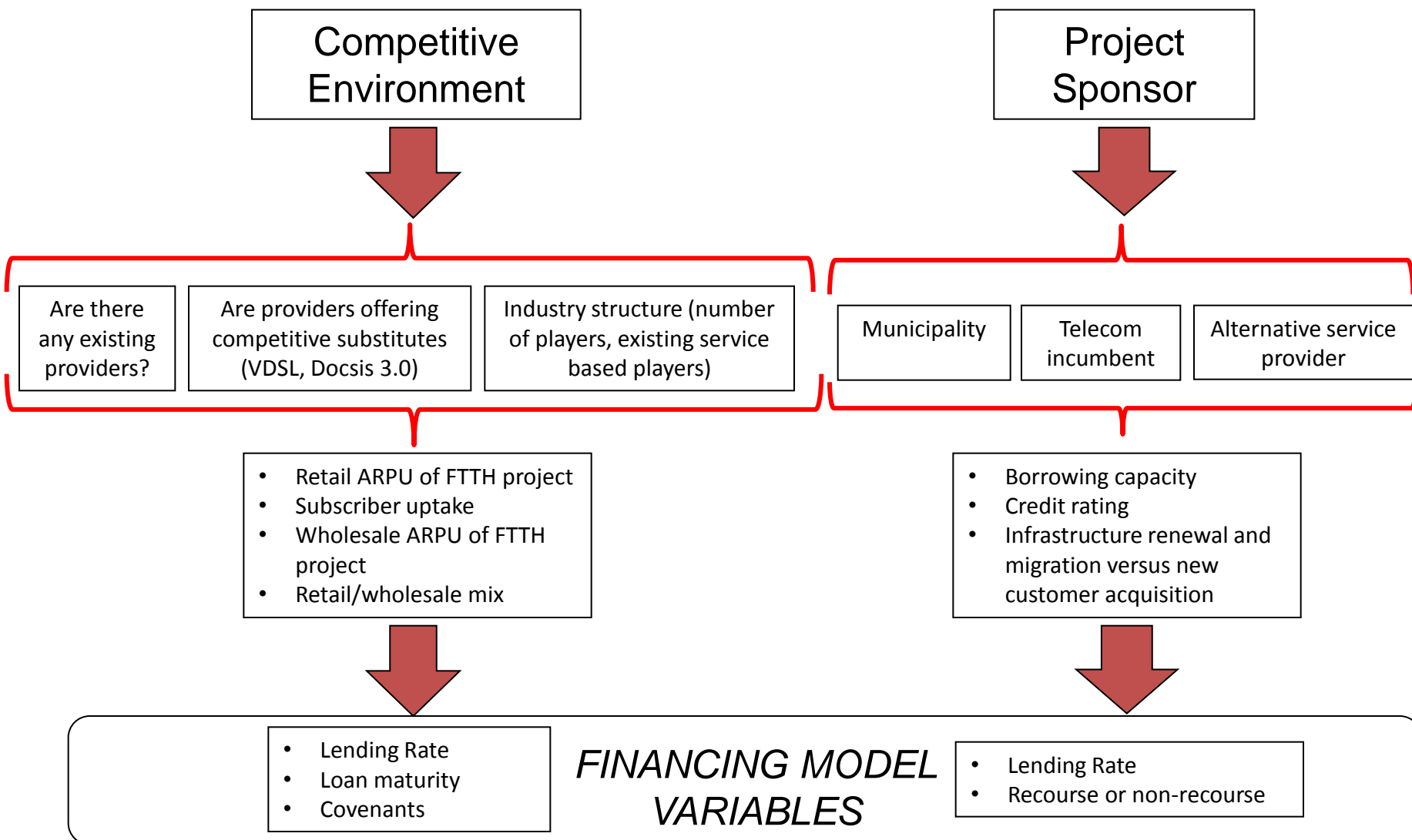
Framework for assessing Financing models

Three drivers of FTTH project success



Source: IDATE and TAS LLC

Project context drives financing model






Source: IDATE and TAS LLC

Study conducted on behalf of FTTH Council Europe

Projects positioning in two dimensional context matrix

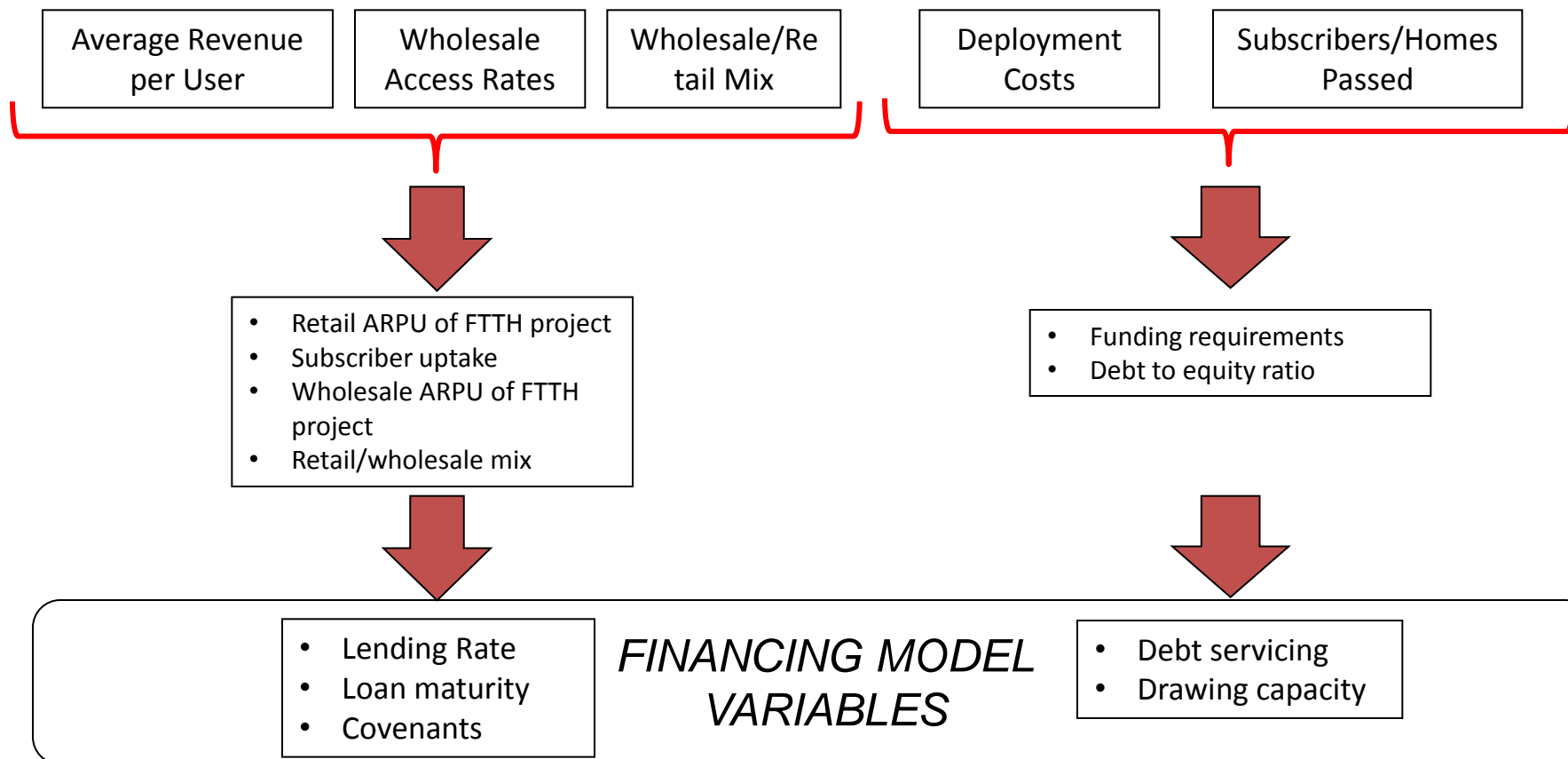
FTTH Projects Contextual Matrix

	No competition	Existing ADSL, Cable or 3G service	Existing VDSL and/or Docsis 3.0
Municipality or local government	<ul style="list-style-type: none"> • Project D • Project A 	<ul style="list-style-type: none"> • Project F 	<ul style="list-style-type: none"> • Project B • Project C • Project E
Alternative operator			
Incumbent	<ul style="list-style-type: none"> • Project I 		<ul style="list-style-type: none"> • Project J • Project K • Project G • Project H

-  Low contextual Risk
-  Medium Contextual Risk
-  High Contextual Risk

Source: IDATE and TAS LLC

Investment model drives financing model



Source: IDATE and TAS LLC



FTTH Financing Models Structure

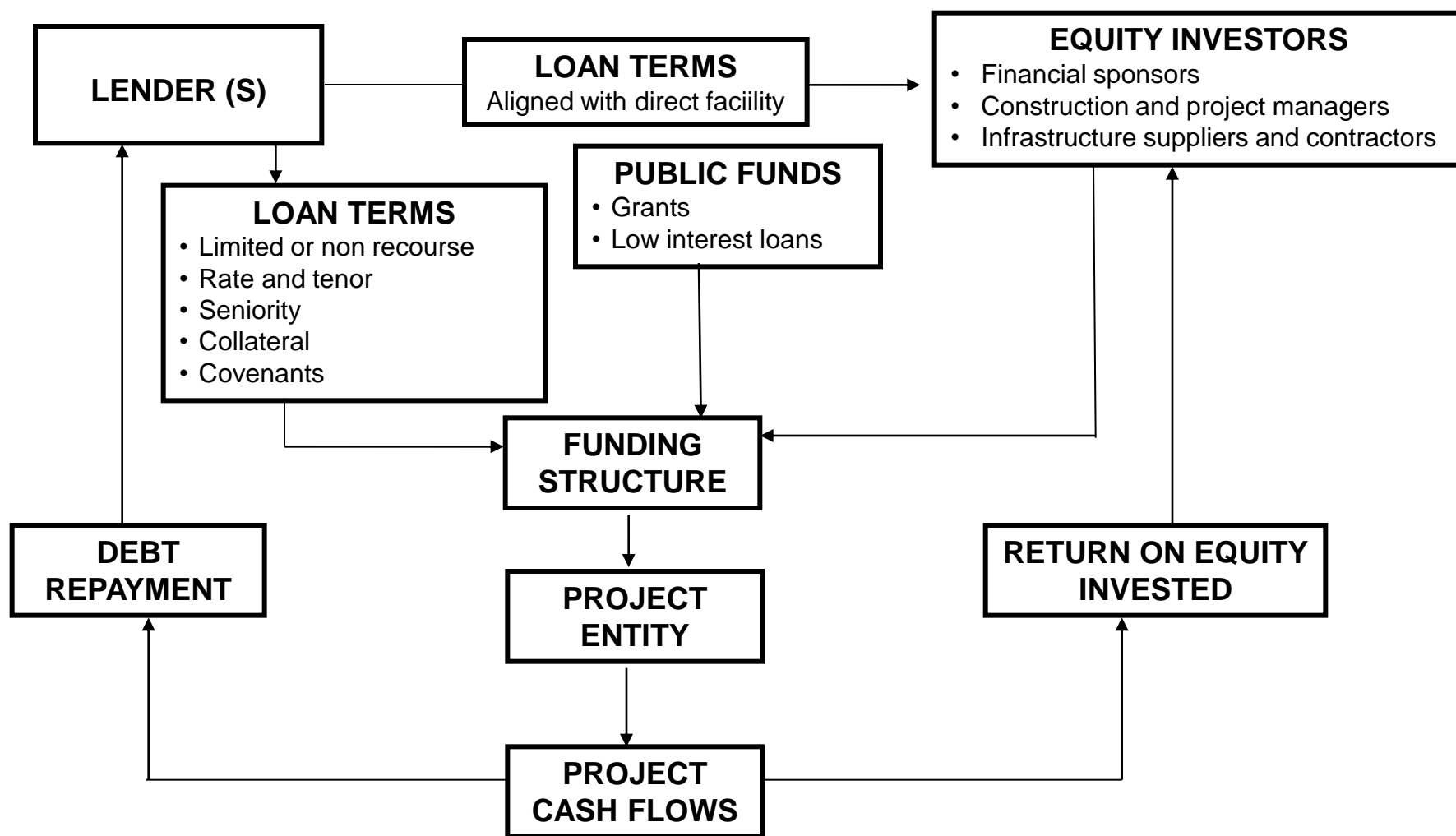
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Typical financing model structure





Most suited FTTH Financing Models



Pros and Cons of Municipal Models

Model	Description	Advantages	Disadvantages
1. Direct Subsidy	<ul style="list-style-type: none"> Public funds pay for FTTH project for an open access business model 	<ul style="list-style-type: none"> Local government retains ownership of infrastructure Local government can ensure own needs are covered 	<ul style="list-style-type: none"> Ongoing financing required Continued reliance on state aid Public sector assumes market risk Competitive encroachment could erode project viability
2. Local Investment	<ul style="list-style-type: none"> Local government invests as would a private player in a private venture deploying the infrastructure 	<ul style="list-style-type: none"> No state aid Local government bears the failure risk alone More lenient credit terms (rates, maturity) based on municipal profile 	<ul style="list-style-type: none"> Need to rely on public funds to invest Risk of impacting local taxes Potential competitive retaliation Highly dependent on income and density/distribution of population
3. Private credit financing	<ul style="list-style-type: none"> Same as above, but funds borrowed from private sources Service revenues are earmarked to service debt 	<ul style="list-style-type: none"> No impact on taxes Does not need to reach critical mass in order to qualify for EIB support 	<ul style="list-style-type: none"> Potentially, but not necessarily, worse credit terms than from public sources Forces a period of full service ran by local government Risk of bankruptcy unless favorable covenants are negotiated
4. Public /Private credit financing	<ul style="list-style-type: none"> Similar as above, but funds borrowed from public and private sources 	<ul style="list-style-type: none"> Private lenders tend to follow the more lenient credit terms of public sources, sometimes enabled by partial risk guarantees No impact on local taxes 	<ul style="list-style-type: none"> Borrowing from private sources could be affected by restricted access to capital

Pros and Cons of Public Private Partnerships Models

Model	Description	Advantages	Disadvantages
1. Debt-facilitation model	<ul style="list-style-type: none"> • Public entity facilitates access to tax-exempt financing • No commitment to use public funds 	<ul style="list-style-type: none"> • No public funds are placed at risk 	<ul style="list-style-type: none"> • Potential misalignment of objectives between parties • Limited leverage of public party capabilities (ROW, facilities)
2. Debt-guarantee model	<ul style="list-style-type: none"> • Government guarantees debt, secured by private party 	<ul style="list-style-type: none"> • Access to better financial terms of debt 	<ul style="list-style-type: none"> • Public funds are placed at risk
3. Public service delegation	<ul style="list-style-type: none"> • Private player deploys FTTH network with or without partial public subsidy • Player has a concession to resell the passive or active layers to service providers 	<ul style="list-style-type: none"> • Risk is assumed by outside player 	<ul style="list-style-type: none"> • Subsidy is needed to attract the concession holder • Lack of commitment of project sponsor might result in service failure

Source: IDATE and TAS LLC

Pros and Cons of Incumbent Financing Models

Model	Description	Advantages	Disadvantages
1. Incumbent funded model	<ul style="list-style-type: none"> FTTH financing follows classical CAPEX rules of carrier, subject to conventional stand-alone capital planning rules and processes 	<ul style="list-style-type: none"> Flexibility to manage deployment according to stand-alone internal processes 	<ul style="list-style-type: none"> Competitive retaliation could potentially affect rate of return by forcing price reductions Regulatory risk driven by wholesale access obligations
2. Competitive partnering model I (joint venture)	<ul style="list-style-type: none"> Partnering between incumbent and construction, or real estate company 	<ul style="list-style-type: none"> Complementarity of capabilities Market risk mitigated by competitive co-optation Ability to ring fence credit facilities, which lowers investment risk and provides capital flexibility 	<ul style="list-style-type: none"> Need for regulatory endorsement Obligation to provide open access
3. Competitive partnering model II (Multi-fibre model)	<ul style="list-style-type: none"> Incumbent assumes deployment responsibility Costs are shared with competitors purchasing access to fibre pairs 	<ul style="list-style-type: none"> Market risk mitigated by competitive co-optation 	<ul style="list-style-type: none"> Regulatory risk prompted by alternative carriers Potential limited positive response on the part of envisioned partners
4. Competitive partnering model III (Cost-sharing model)	<ul style="list-style-type: none"> Partnering between incumbent telco and alternative providers Agreement to deploy independently and grant bit-stream access to each other 	<ul style="list-style-type: none"> Reduction in capital investment in low density areas 	<ul style="list-style-type: none"> Need to gain regulatory endorsement Technology choice can be complicated by divergent partner strategies

Source: IDATE and TAS LLC

Operator funded combined with public policy stimuli

- ▶ Under this approach, **national governments** decide to intervene, through **grants** or **low interest loans**, directly in the deployment and management of a national FTTH network.
- ▶ In this case the Government is acting more as a **lever** by dedicating a **special fund** to help financing **neutral open access model**, most of the time being at a **regional** or **municipality** level.
- ▶ Under this model, the **operator assumes primary funding responsibility** but is influenced by several initiatives aimed at improving a potentially unattractive business case (e.g. demand aggregation, reduced property taxes, grants to cover capital expenditures, etc.).

Most Appropriate Financing Models

		Geographic Mix		
		Urban	Sub-urban	Rural
Financing Strategies	Municipal/Regional	<ul style="list-style-type: none"> Municipality as an investor 		<ul style="list-style-type: none"> Public/private credit financing
	Public Private Partnerships			<ul style="list-style-type: none"> Public service delegation
	Operator-funded	<ul style="list-style-type: none"> Incumbent funded Joint venture Multi-fibre 		<ul style="list-style-type: none"> Cost sharing model
	Operator-funded and public policy stimuli		<ul style="list-style-type: none"> Public funding program 	

Source: IDATE and TAS LLC



Consider Pooled Financing

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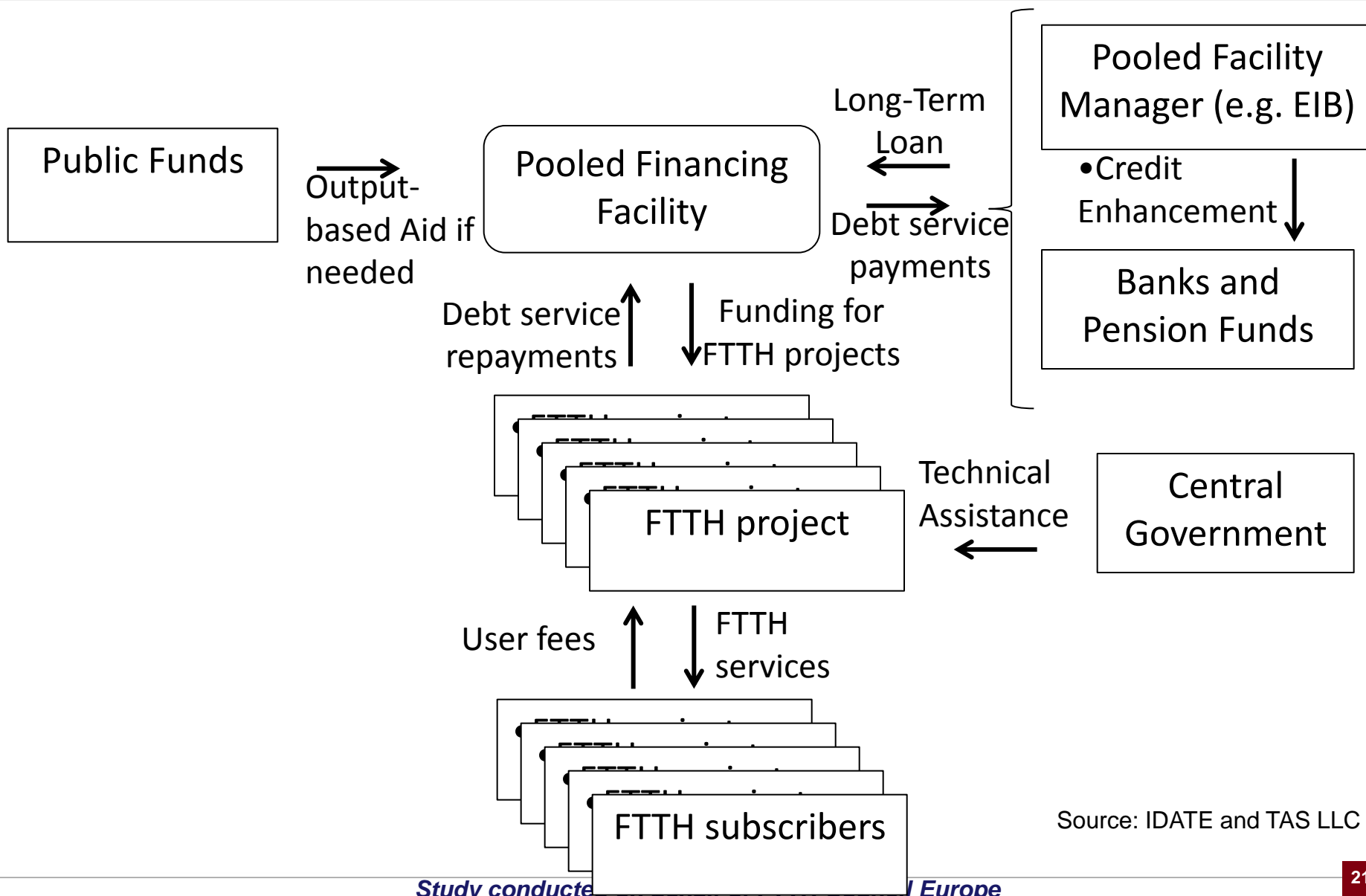
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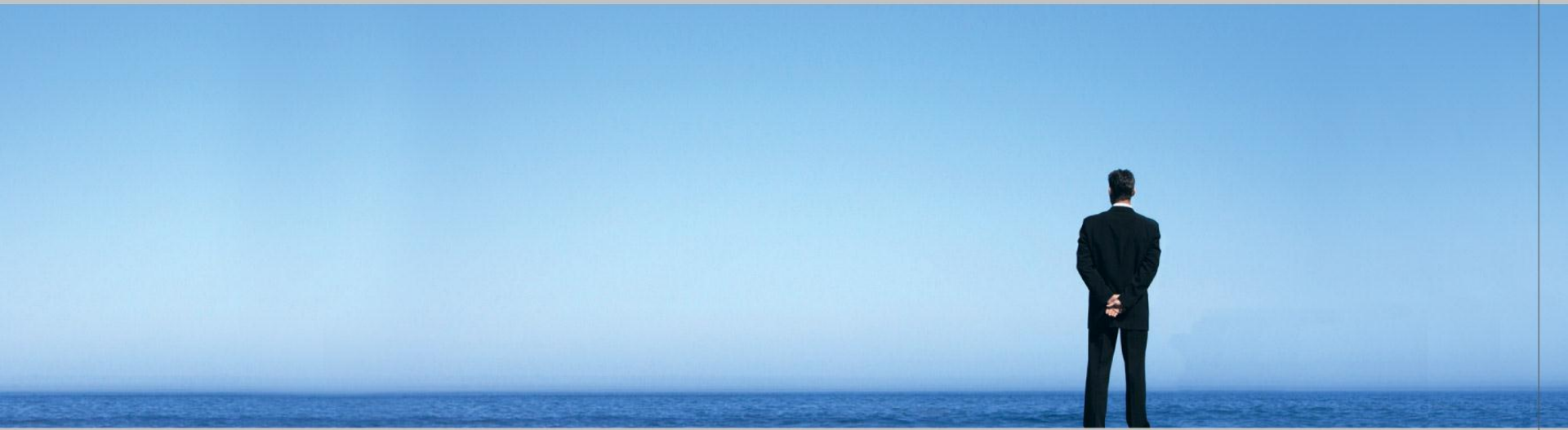
Consider Pooled Financing Approaches for small FTTH Projects

- ▶ **Pooled facility to finance multiple small projects, with several lenders taking their pro rata exposure to each of the projects**
- ▶ **Target size of each facility: US\$ 20 million, sufficient to handle 5-6 small FTTH projects**
- ▶ **Projects would be majority-owned by public sector sponsors, although the private sector could have an ownership stake**
- ▶ **Facility will have the support from a public lender, which would provide credit enhancements, such as loan guarantees equal to 50% of the total amount**
- ▶ **The pooled facility will be ring fenced**
- ▶ **Projects could apply, through the pooled facility, to receive output-based aid from public funds**
- ▶ **Each project will be structured using a project finance approach**
- ▶ **Project sponsors will develop the FTTH projects with technical and operational assistance provided by government entities**

Structure of Pooled Financing Facility



Source: IDATE and TAS LLC



Practices Mitigating FTTH Financial Risk

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Variables Explaining Success or Failure

Project Success	Project Failure
<ul style="list-style-type: none"> • Demand aggregation across neighboring areas in order to achieve critical mass 	<ul style="list-style-type: none"> • Limited support obtained to negotiate financial terms with lender syndicate
<ul style="list-style-type: none"> • Sharing of deployment costs by competitors or value-chain players 	<ul style="list-style-type: none"> • Since project was treated as an infrastructure subsidy by central government, little attention was paid to the robustness of the business plan
<ul style="list-style-type: none"> • Focused FTTH deployment on the part of the incumbent 	<ul style="list-style-type: none"> • Competitive retaliation eroded the viability of original business plan
<ul style="list-style-type: none"> • Financing of FTTH from capex 	<ul style="list-style-type: none"> • Over-optimism in assessment of customer acquisition
<ul style="list-style-type: none"> • Careful development of business plan (demand assessment, technology decisions, commercial strategy, capital plan, etc.) 	<ul style="list-style-type: none"> • Competitive retaliation of the incumbent could raise the issue that indiscriminate public intervention could pre-empt market forces
<ul style="list-style-type: none"> • Open access business model utilized to rapidly gain critical mass of demand 	<ul style="list-style-type: none"> • Lack of initial commitment of project sponsor
<ul style="list-style-type: none"> • Due diligence of credit facility conducted by an outside party on behalf of lenders 	

Recommendations

- ▶ **Careful development of business plan**
- ▶ **Careful assessment of project risks**
- ▶ **Demand aggregation to achieve critical mass**
- ▶ **Search for agreements to share deployment costs**
- ▶ **Secure a third party in search and negotiation of appropriate funding**
- ▶ **Local governments should avoid the “Build it and they will come” syndrome**

Thank you!

Research

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World FTTx Market

5th edition

Ref. M12302 January-December 2012

Understanding the FTTx challenges & opportunities

- **Database**
 - 70 countries & 5 zones covered
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World FTTx Market - Watch Service Calendar 2012

		January	February	March	April	May	June	July	August	September	October	November	December
Database	Markets, Operators & Vendors market shares, FTTx projects, forecasts up to 2016					DB-1						DB-2	
Insights	Monthly		I-1	I-2	I-3	I-4	I-5	I-6		I-7	I-8	I-9	I-10
Consulting Hours		5 hours - on demand											
Analyst Brief		30 min. Conference Call - on demand											
On-Site Presentation		Optional presentation											