Improving efficiency in FTTx Networks

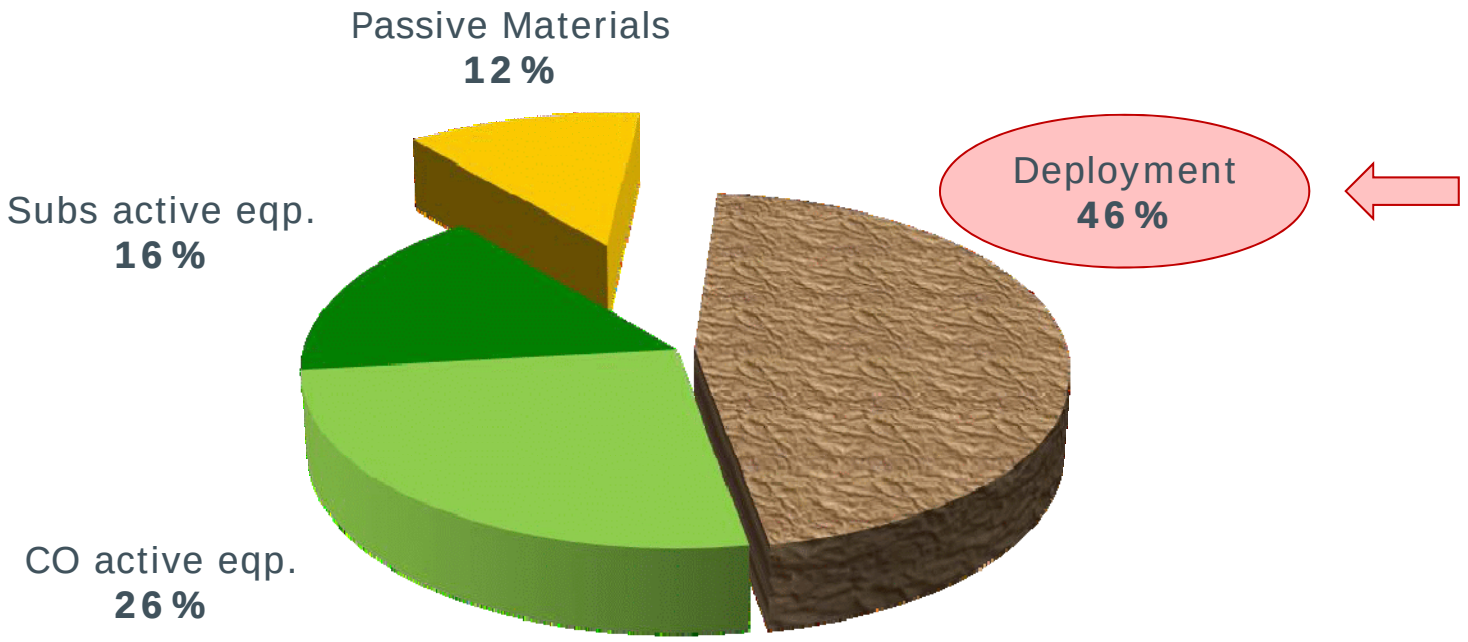
March 2016, Bucharest

Prysmian Group

PRYSMIAN

Draka

THE DEPLOYMENT CHALLENGES



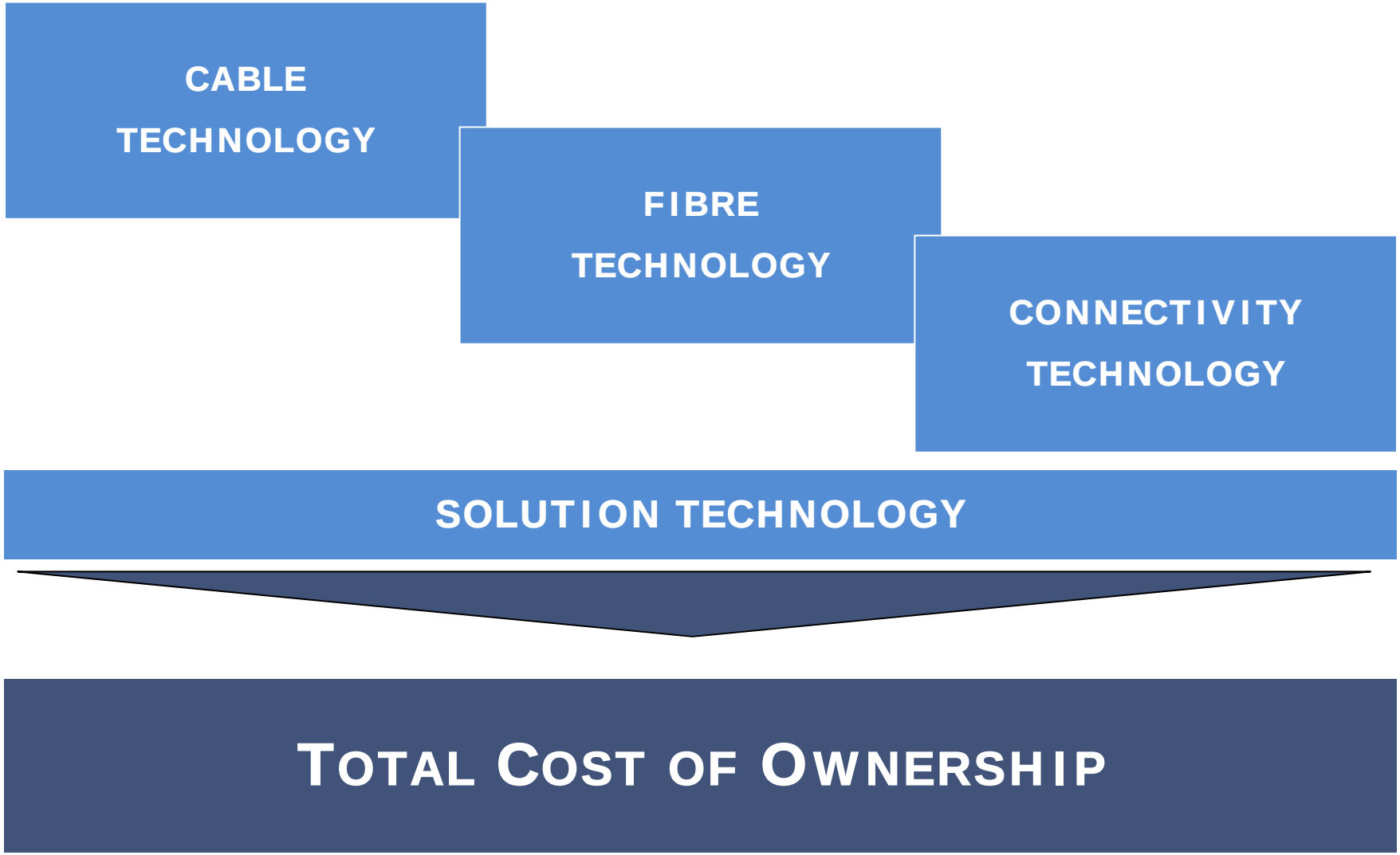
Source: FTTH Business Guide (FTTH Council Europe)

Significant weight of

CIVIL WORKS and INSTALLATION

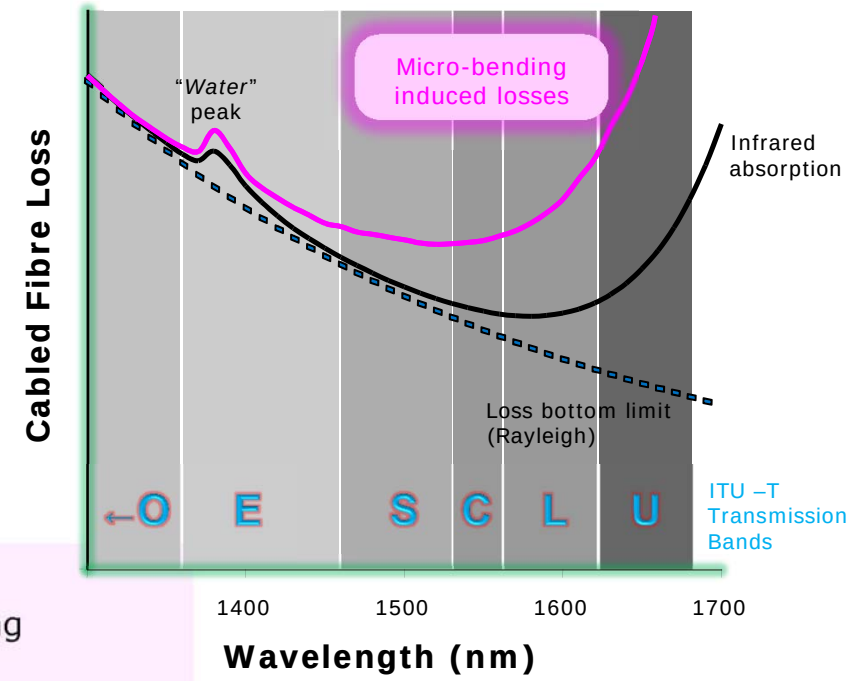
in Deployment Cost

THE SIMPLE ROUTE TO A RELIABLE BASE INFRASTRUCTURE

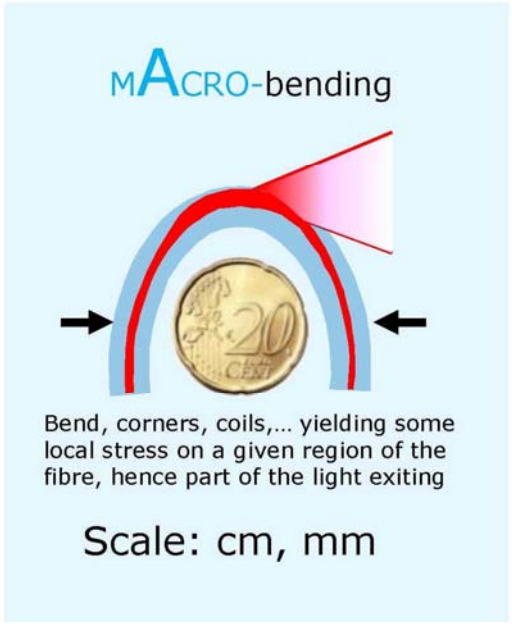


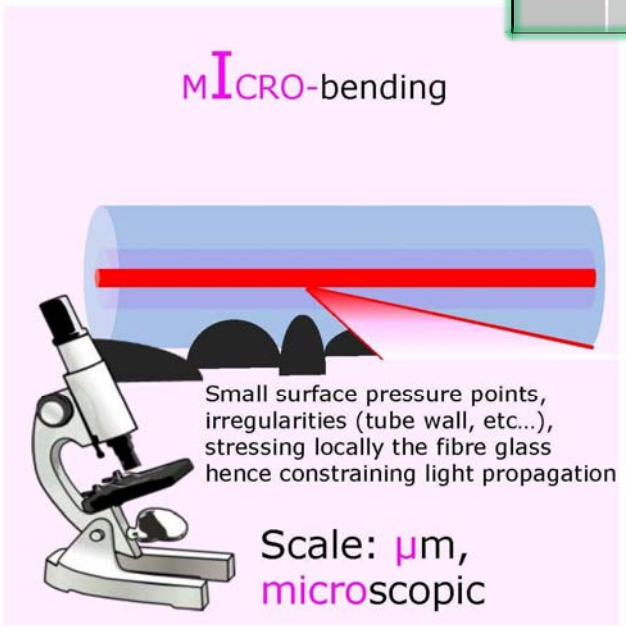
A PASSIVE INFRASTRUCTURE THAT SECURES OPTICAL BUDGETS IS KEY!

⇨All transmission bands must be usable and secured in attenuation

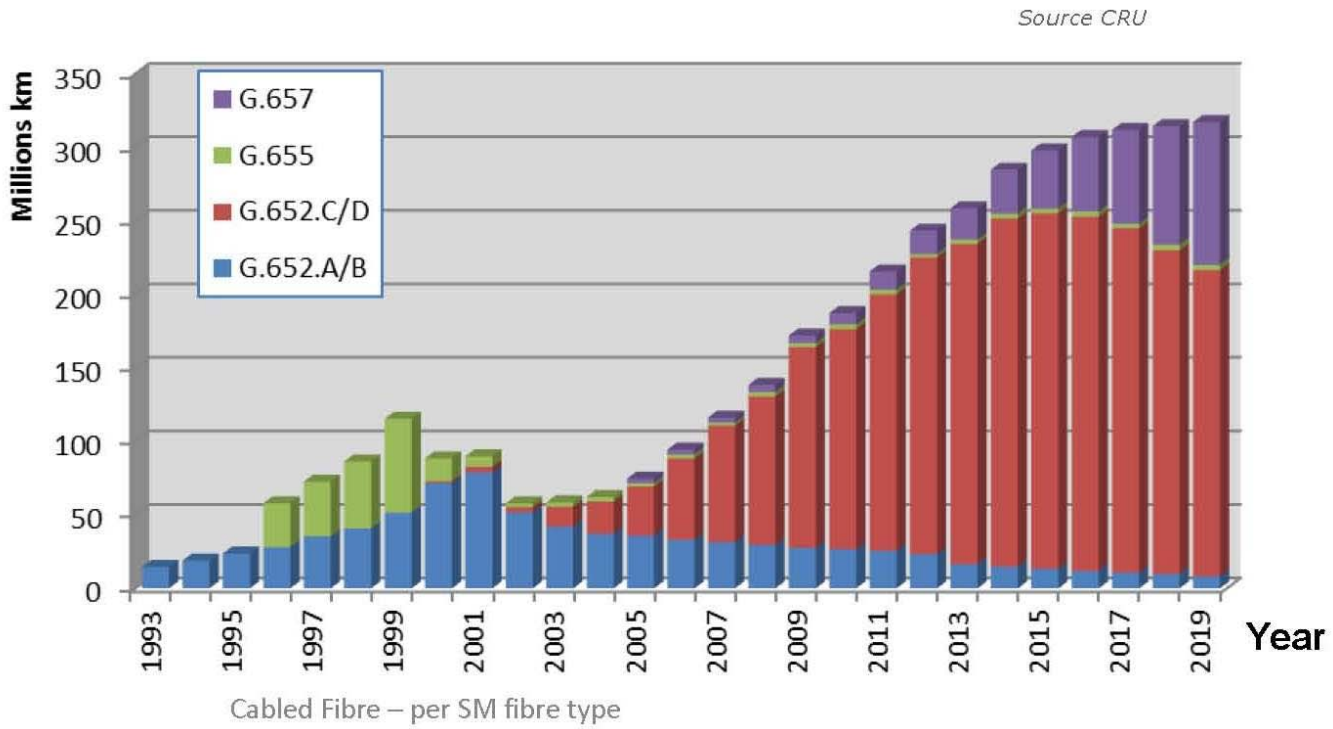


MACRO-bending and MICRO-bending





THE BEND-INSENSITIVE FIBRES ERA



Reference

G.652.D – 11dB

G.657.A2 – 0.2dB

Introduced by end of 2006, G.657 fibers, especialy premium G.657.A2, are now used in a variety solutions

- Fully compliant and compatible with legacy installed base
- Adding on top flexibility, durability and secured transmission bands
- Yielding innovative cable design not achievable before
- Solving Operators' challenges in Indoor, Outdoor, Central Office and Mobile environments

THE BEND-INSENSITIVE FIBRES ERA

Going Further – Increased Capacity with 200µm Fibre!

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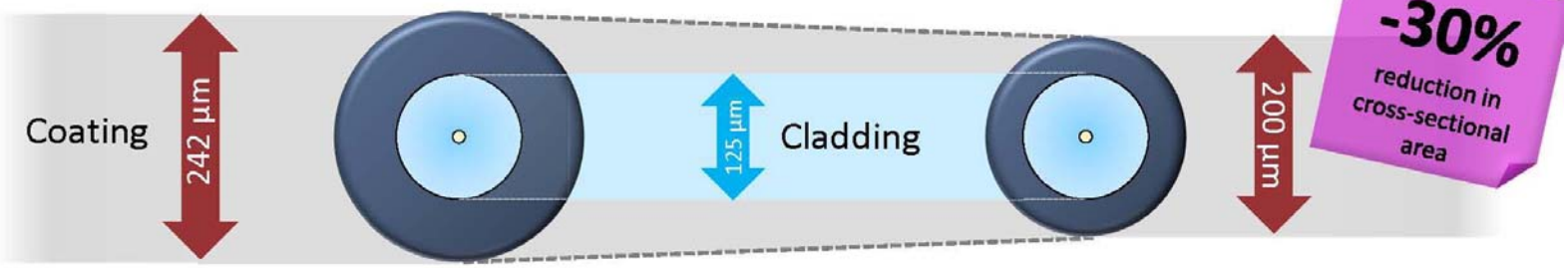
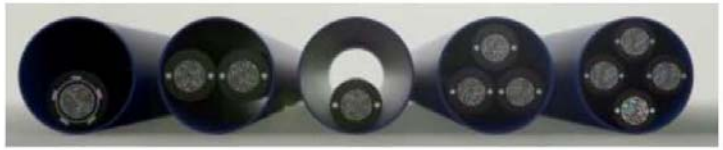


1. ROW monetization: FlexTube high(er) fiber count



200µm & FlexTube → highest fibre count, densest cables *(e.g. 1728f/23mm, 4.2f/mm²)*

2. Microduct overlay: high(er) count micro-LT

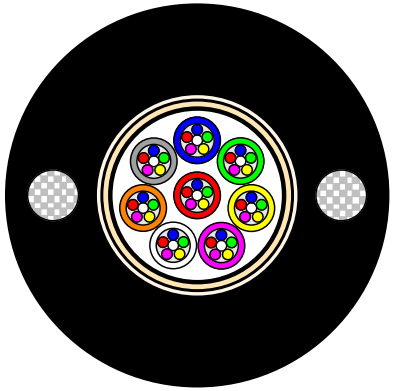
Micro duct dimensions [mm]				Cable diam. developed leveraging 200µm fiber [mm]		
Thin OD	*Thick OD*	*ID*	***Max dia. Allowed***	OD achieved w/ 200µm	Fibre count	*Density f/mm²*
7		**5.5**	**4.4**	4.2	60	*4.3*
8		**6**	**4.9**	4.9	96	*5.2*
10	12	**8**	**6.5**	6.6	144	*4.2*
12		**9.6**	**8**	7.3	192	*4.6*
12	14	**10**	**8.4**	8.1	288	*5.7*

200µm → more fibres in available µducts

FLEXTUBE®

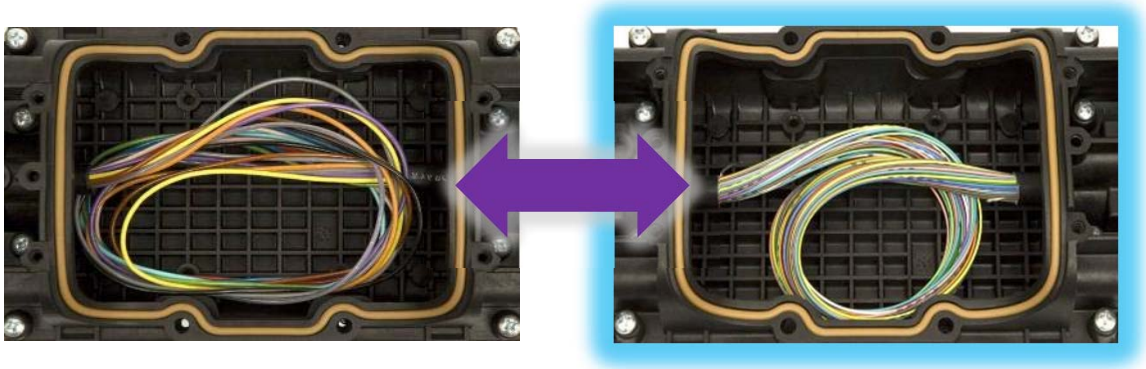
Construction

- All-dielectric
- Fiber type: G652D, G657A1 or G.657A2
- Round shape UV resistant black HDPE sheath
- Two glass reinforced plastic (GRP) strength members longitudinally applied on opposite sides (180 degrees one from the other)
- Dry water-blocking materials
- 2, 4, 8 or 12FO micromodules



Flextube Cable Cross-Section

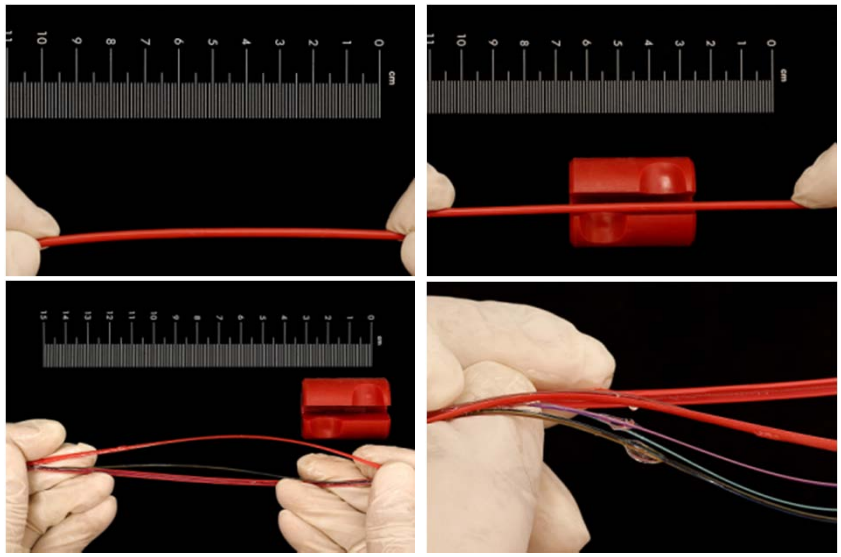
Loose tube
144 FO…



FlexTube®
720 FO !

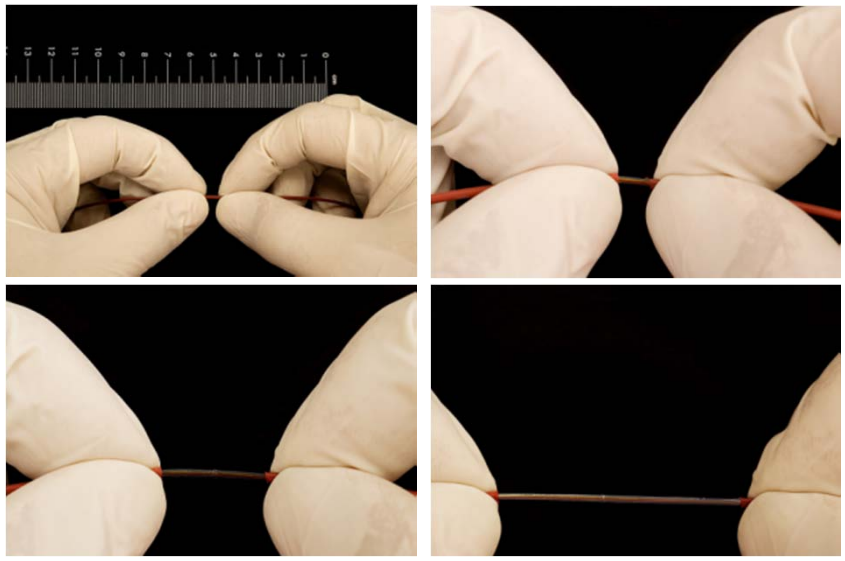
HANDLING

Loose Tube

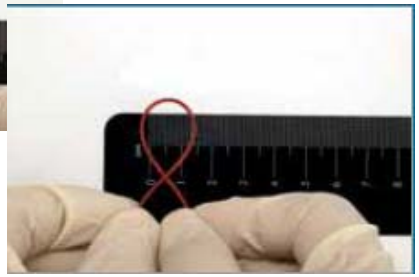


- Dedicated tool needed to open
- Large volume of jelly inside the tube

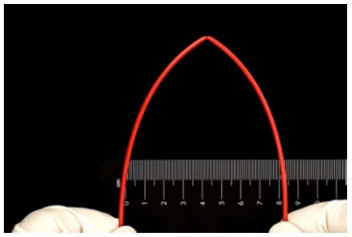
FLEXTUBE®



- Quick and neat finger access
- Very limited quantity of gel
- Very fast to access the fibres over a long length



Bend radius and coiling improved without kinking!



Loose tube ***- kink…***

Flexibility of the micromodules

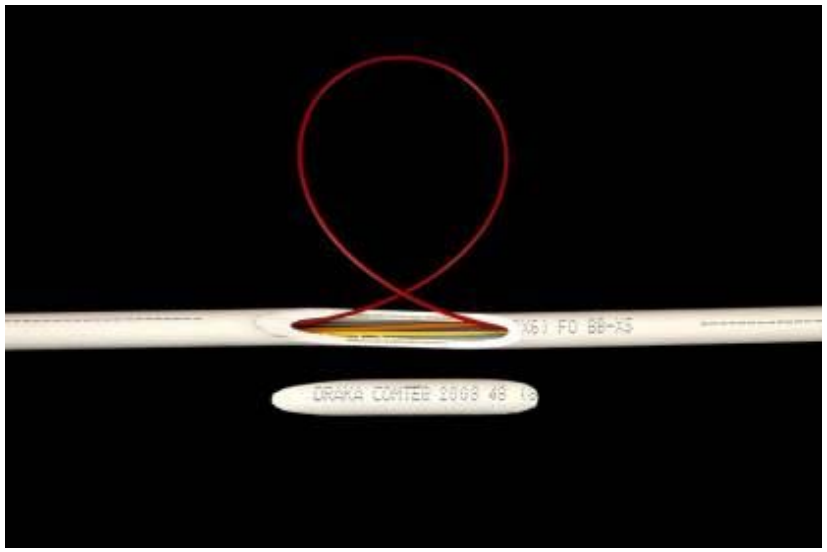
- Easy handling in joint boxes

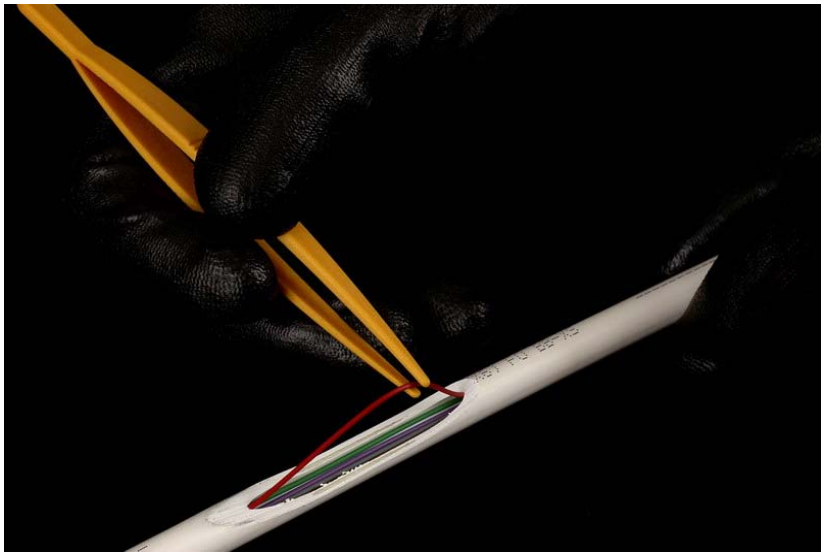
Outstanding thermal stability

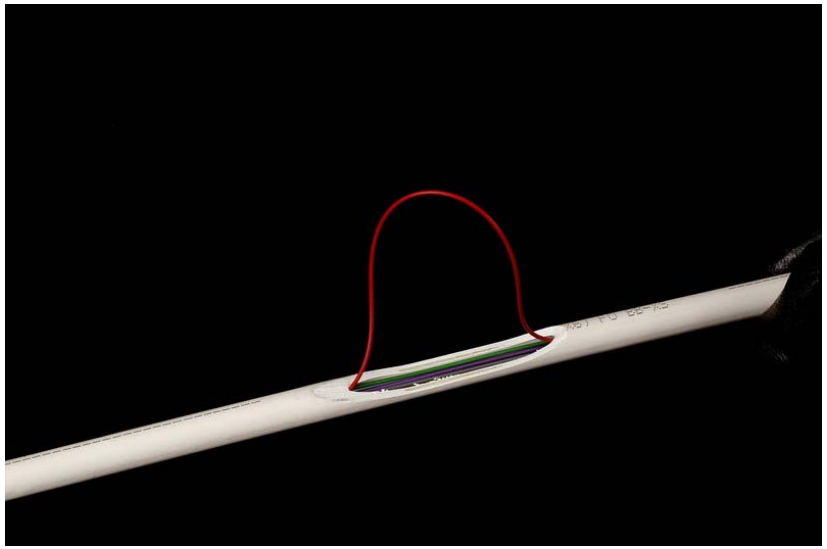
- Excellent performance of FlexTube® material
- Great usability for areas with large thermal variations *(street cabinets, aerial joint boxes, mid-span access…)*

EXTRACTABILITY

FLEXTUBE®

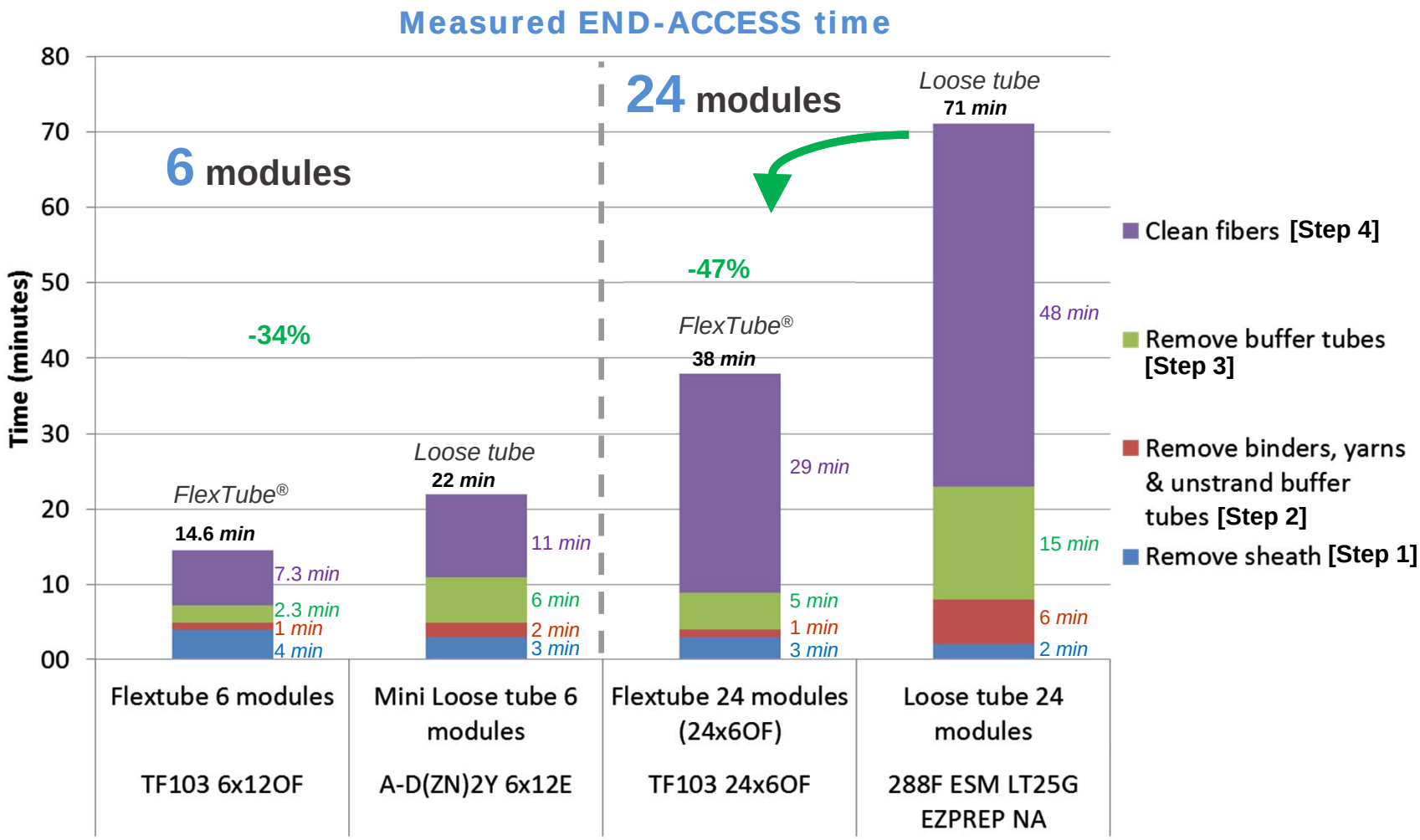






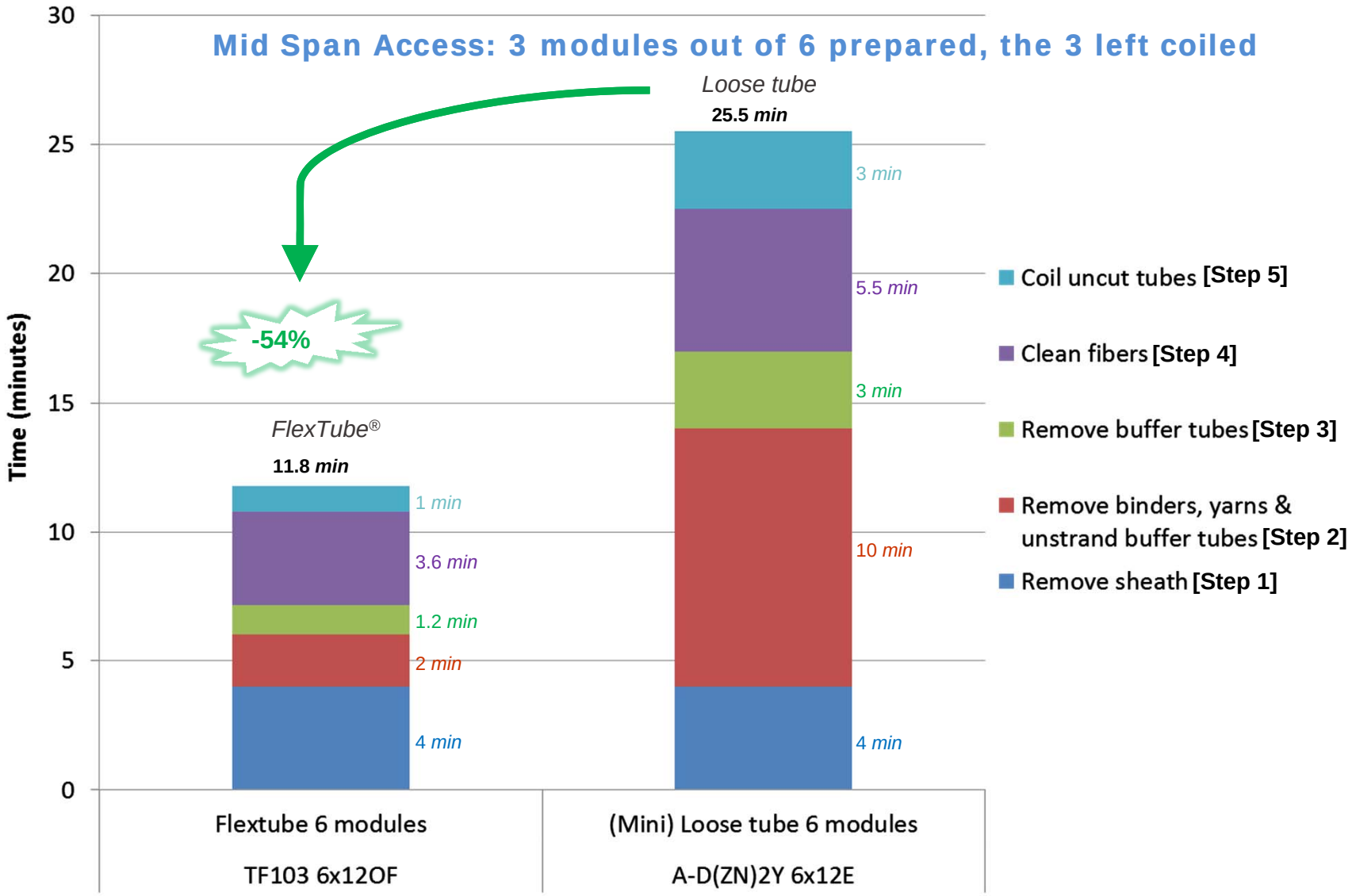
WHEN TIME IS MONEY …

FLEXTUBE®



When Time is Money ...

FLEXTUBE®

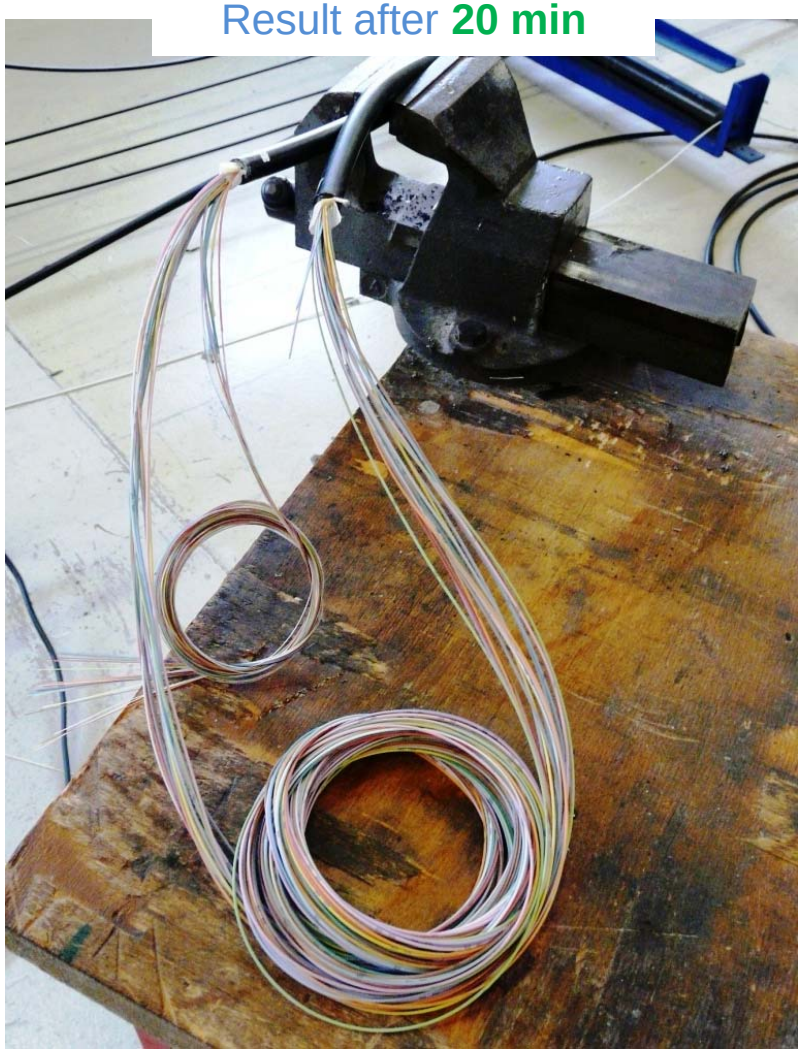


AND SPACE IS A COST…

FLEXTUBE®

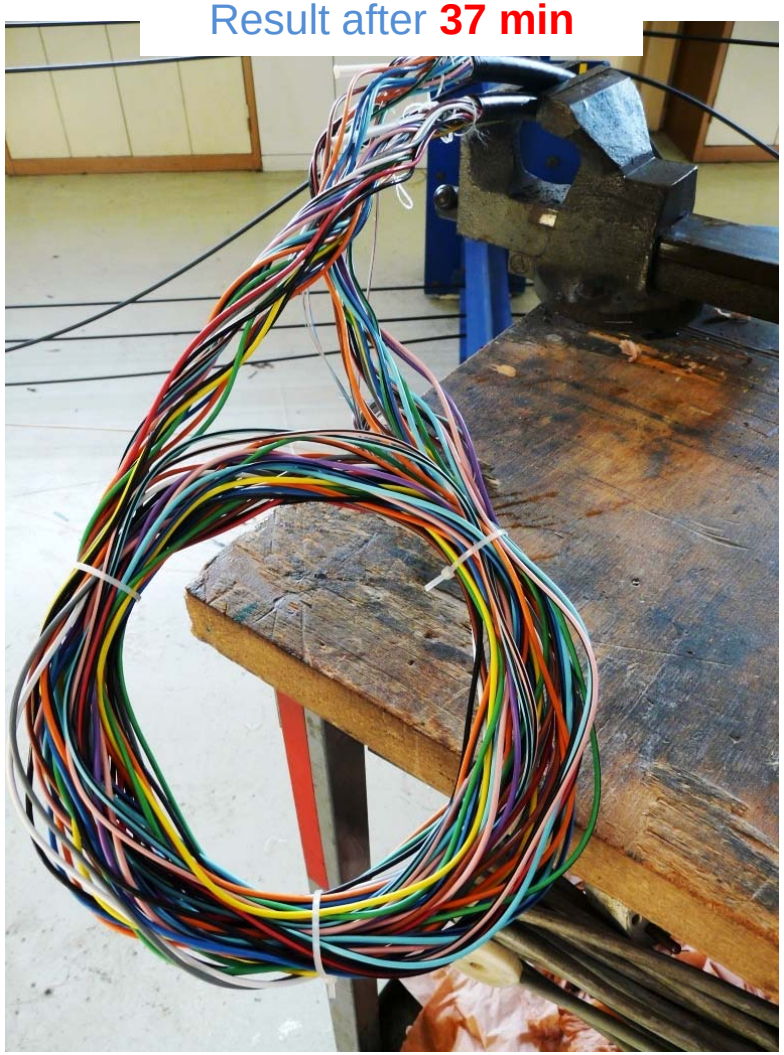
FlexTube®

Result after **20 min**



Loose Tube

Result after **37 min**



ALLOWING SMALLER CONNECTIVITY

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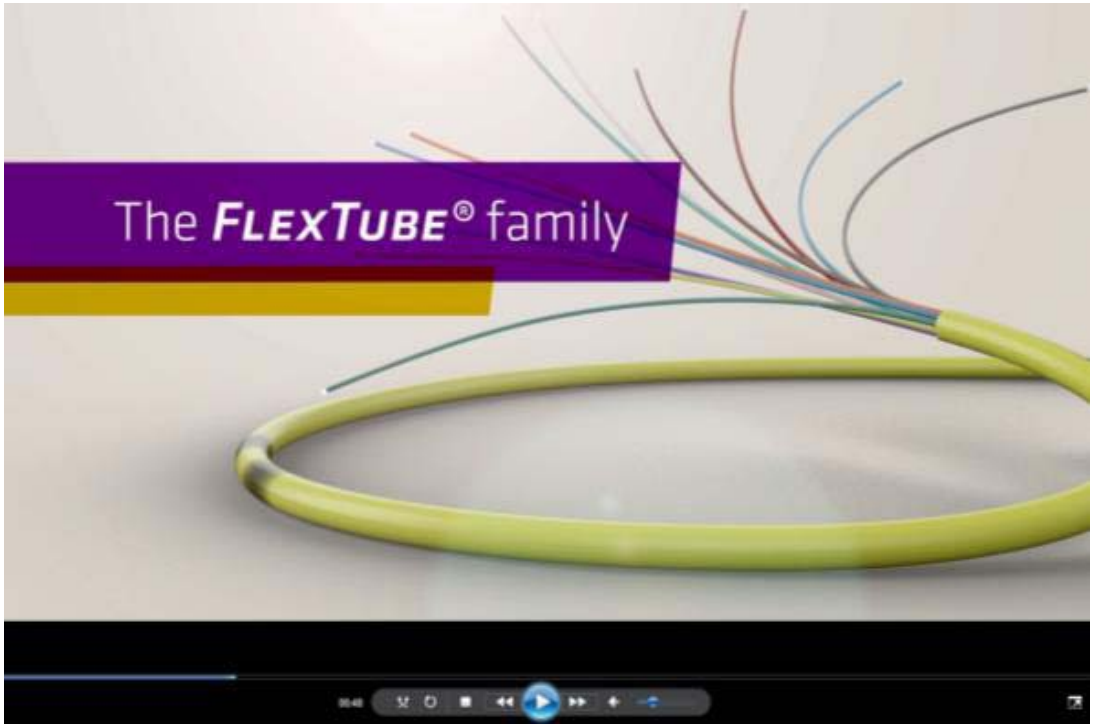

Preconnectorized Risers and Boxes

- Factory Controlled Quality
- Higher Reliability
- Lower Skilled Labor in the field

LOWERING the Total Cost of Ownership

by

AGGREGATING VALUE within the components

Prysmian Group is a proud member of:

FTTH FIBER TO THE HOME COUNCIL

FTTH COUNCIL ASIA PACIFIC

Member of Fibre to the Home Council Europe

Fibre to the Home Council Middle East & North Africa

Founding member

FTTH FIBER TO THE HOME COUNCIL

LATAM chapter

THANK YOU FOR YOUR ATTENTION!

Dorin Coman

Prysmian Group

PRYSMIAN

Draka