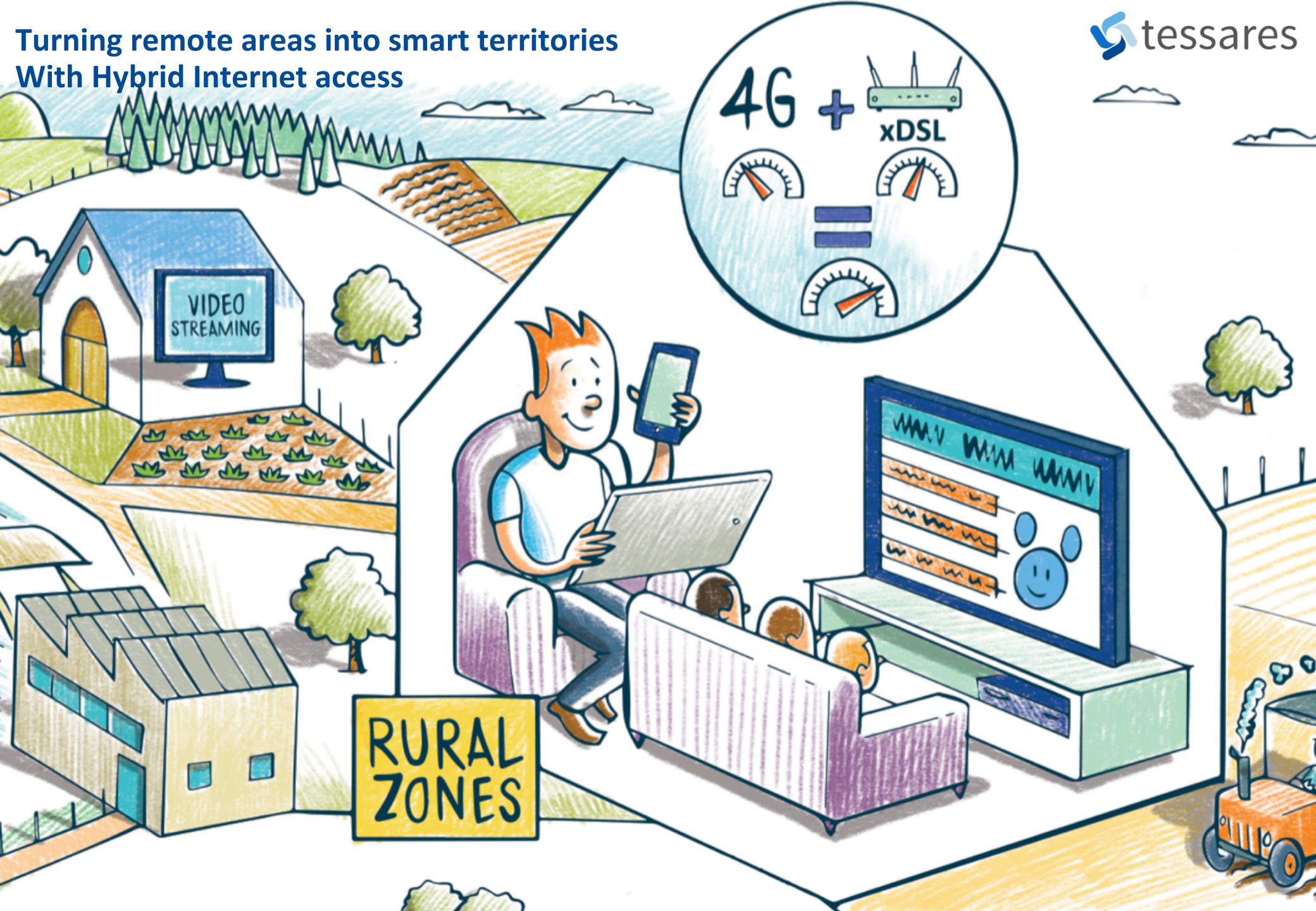


Turning remote areas into smart territories With Hybrid Internet access



Tessares: company profile

Software company based in Louvain-la-Neuve in Belgium

History



Founded in March 2015



70th spin-off of UCL



Coming from academic research

Activities

- Company that develops and commercialises software to improve Internet performances & experience for consumer & enterprise markets



Multipath TCP (MPTCP)
Worldwide Experts



Ongoing research
& standardization

Highlights



2 awards



2016 Applied Networking
Research Prize



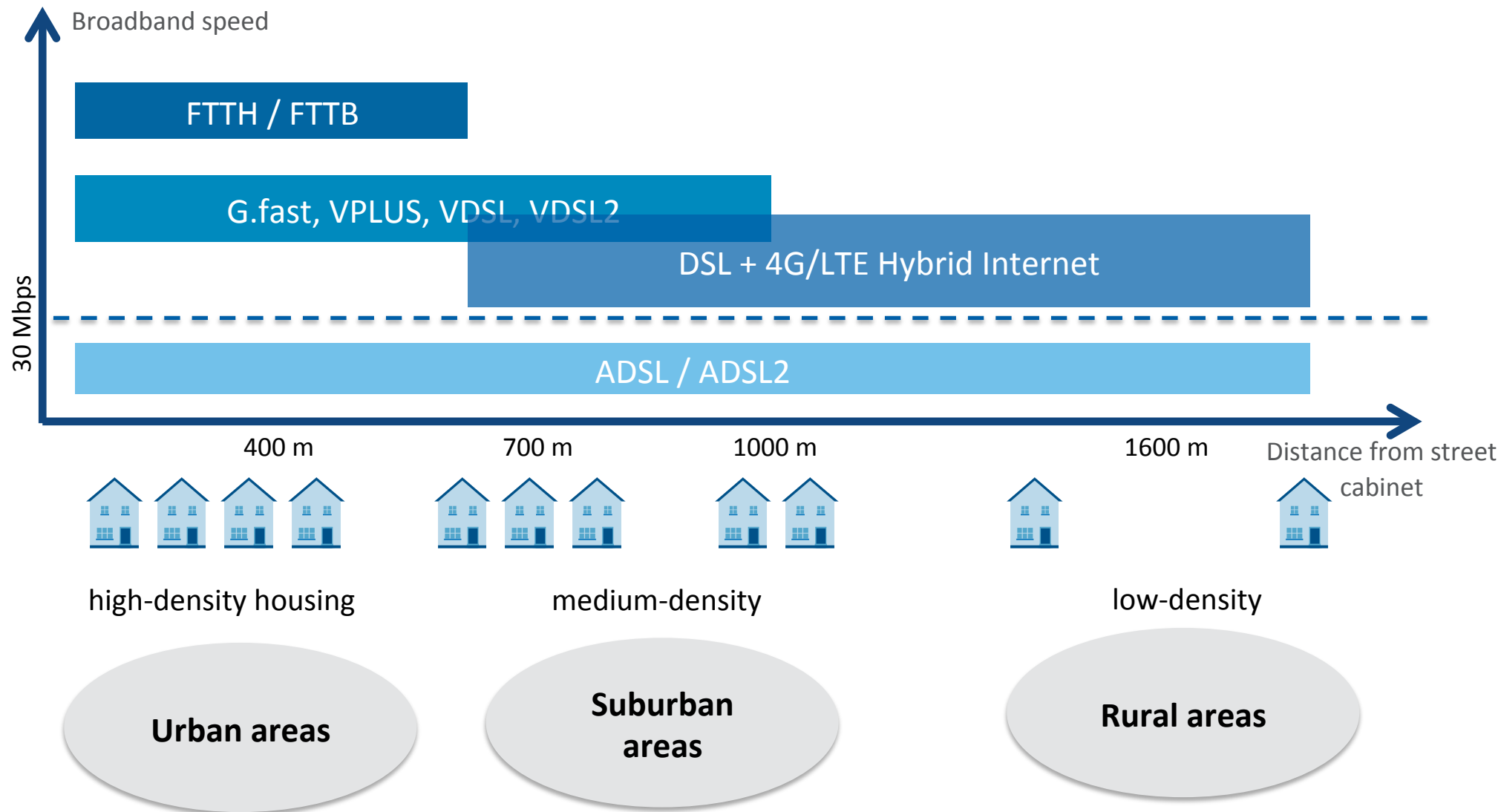
5 customers
(Numerous PoC)



Publication by GSMA
« Hybrid broadband offers fibre
alternative for rural Europe »

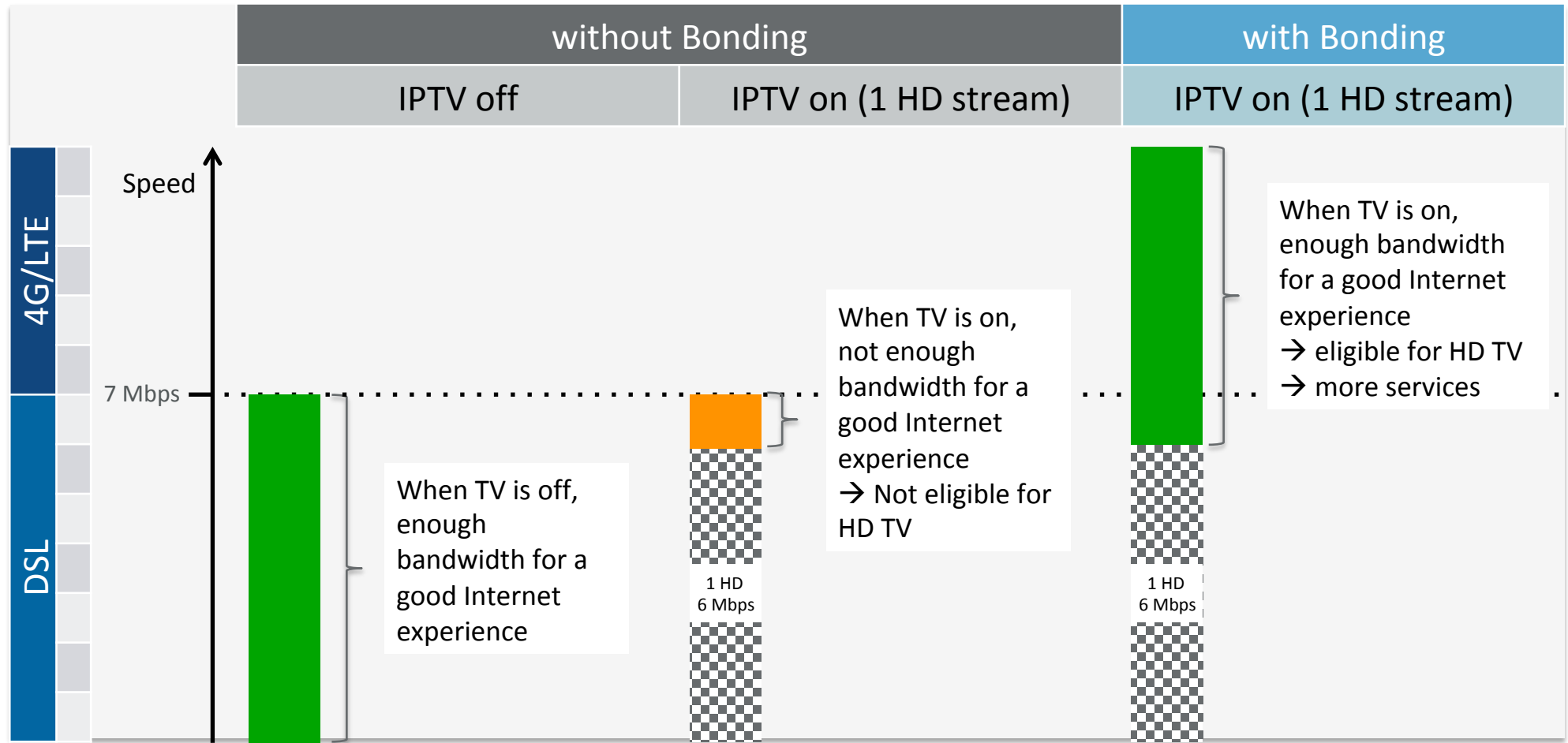
Complementary technologies

FTTH in rural areas: no business case



Example: 7 Mbps DSL line

More internet speed thanks to Hybrid Internet Bonding

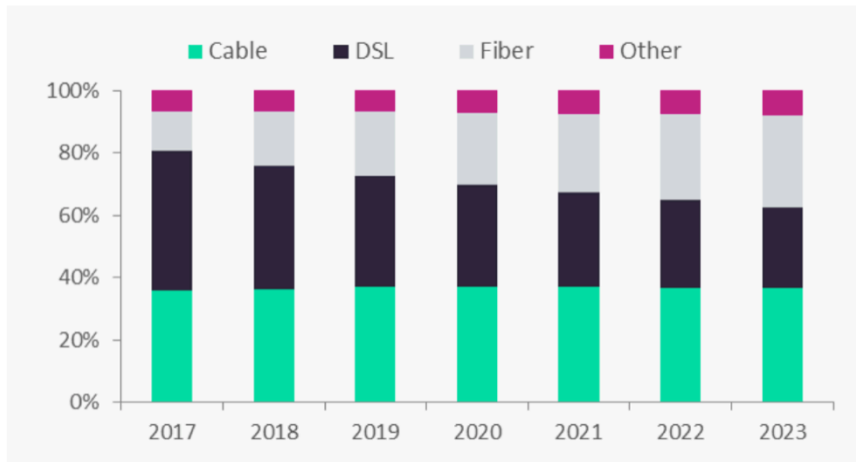


DSL to remain a major access - Continuous growth of 4G

In 2023: DSL=20% => ~37m HH

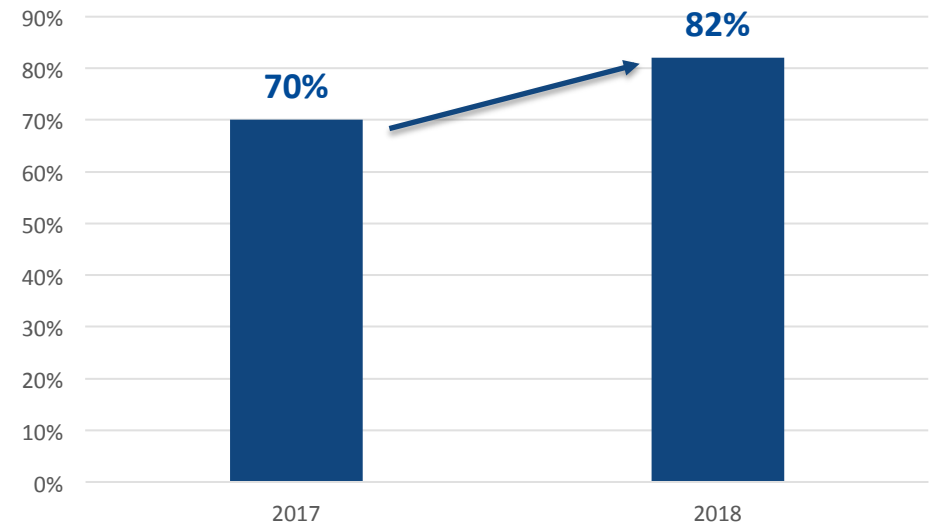
Broadband access in Latam

Broadband lines by technology, 2017-2023
(percentage of broadband lines)



Source : <https://tech.newstatesman.com/business/latin-america-broadband>

4G coverage in Latam



Source : <https://www.idgconnect.com/idgconnect/opinion/1020747/look-mobile-ecosystem-latin-america>

<https://www.businesswire.com/news/home/20181204005077/en/4G-Dominant-Mobile-Technology-Latin-America-Year>

Broadband Metrics – 2018 Brazil Market

#1 BB access in Latin America with huge potential

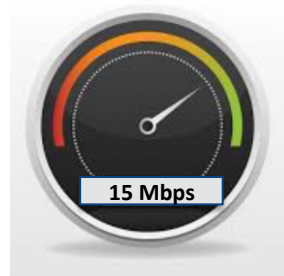
Fixed broadband penetration



**Around 30 Million homes
have a fixed BB access**

Q2 2018: 43% penetration

Download speed challenge



**75% of fixed BB access offers
less than 15 Mbps**

Average download speed: 3 Mbps

Low FTTH penetration



FTTH home passed: 15%
FTTH subscriptions: <3%

Source: Wikipedia, Brazil Broadband Market, Idate LATAM presentation April 2018, Telecom paper, cable.co.uk

Broadband Metrics – 2018 Chilean Market

Digital Leader in Latin America

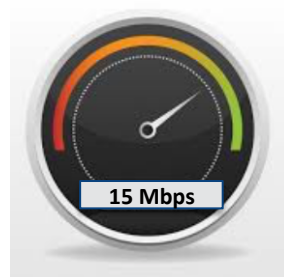
Fixed broadband penetration



**~3 Million homes
have a fixed access**

Around 50% penetration

Download speed challenge



**85% of fixed access offers
less than 15 Mbps**

Average download speed: 5 Mbps

Low FTTH penetration



FTTH home passed: 15%
FTTH subscriptions: 6.5%

Source: [Telegeography](#), [Euromonitor](#), [trading economics](#), [Akamai](#) p25 Q1 2017, [FTTH Panorama LATAM IDATE](#), [IDATE FTTH ranking](#), [OECD](#), [cable.co.uk](#)

Broadband Metrics – 2018 Colombian Market

Huge potential in Colombia

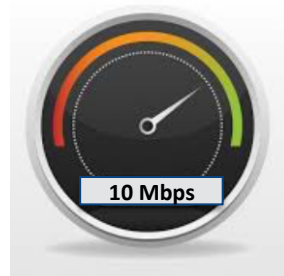
DSL penetration



**Around ~2 Million homes
have a DSL access**

DSL is 28% of FBB connections

Download speed challenge



**40% of FBB users have
less than 10 Mbps**

Average download speed: 3 Mbps

Moderate FTTH penetration



**Around 840k HH have a fiber
connections**

Fiber is 12% of FBB connections

Source: [Regulator](#), [Broadband speed checker](#), [el tiempo](#), cable.co.uk

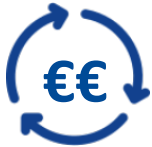
More value from existing assets

Grow revenue while minimising CAPEX investments

Hybrid Internet benefits



Faster Internet services



Asset utilisation
“Sweat the assets”



Shorter deployment
(~6 months)

Business impacts



HD stream eligibility
ARPU increase



Higher customer satisfaction
Less churn



Reuse of existing networks
Improved asset ROI



Reuse of existing CPEs
Reduced TCO



Faster TTM

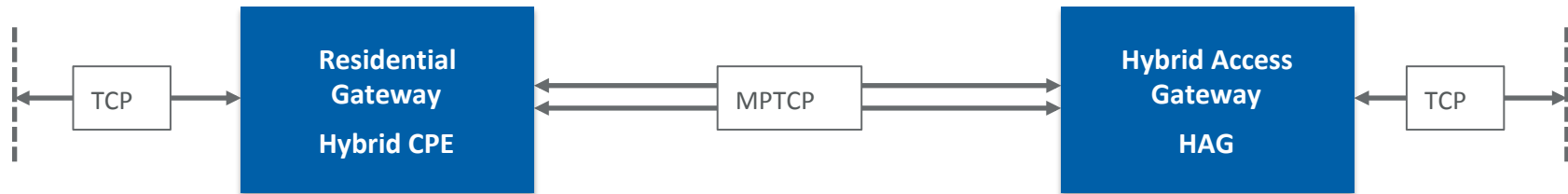
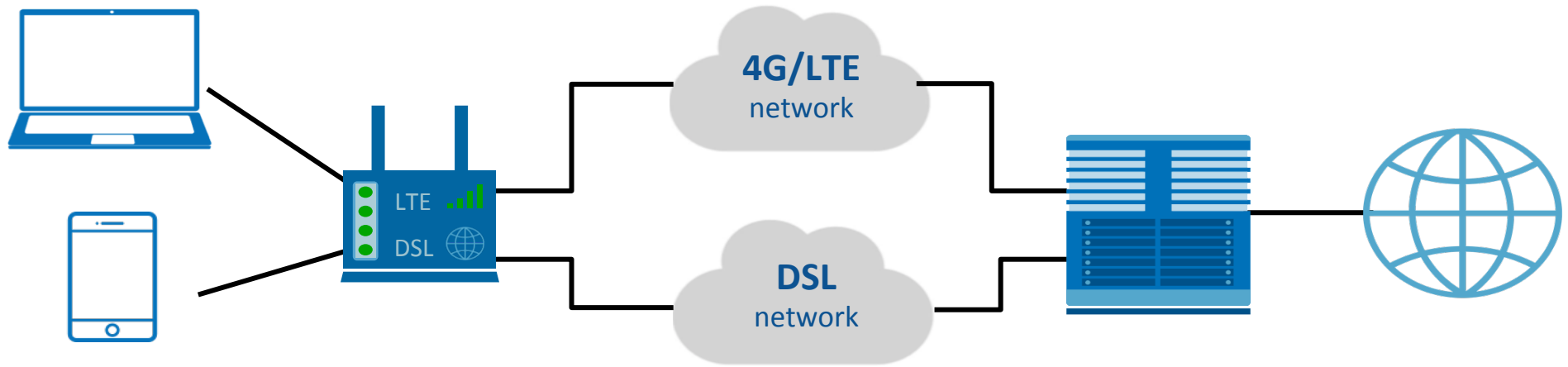
Quicker revenue generation



Fast provisioning thanks
DSL & 4G existing networks
Quicker UBB uptake

Tessares: Hybrid Access solution overview

Software to be deployed in end-user device & in carrier side

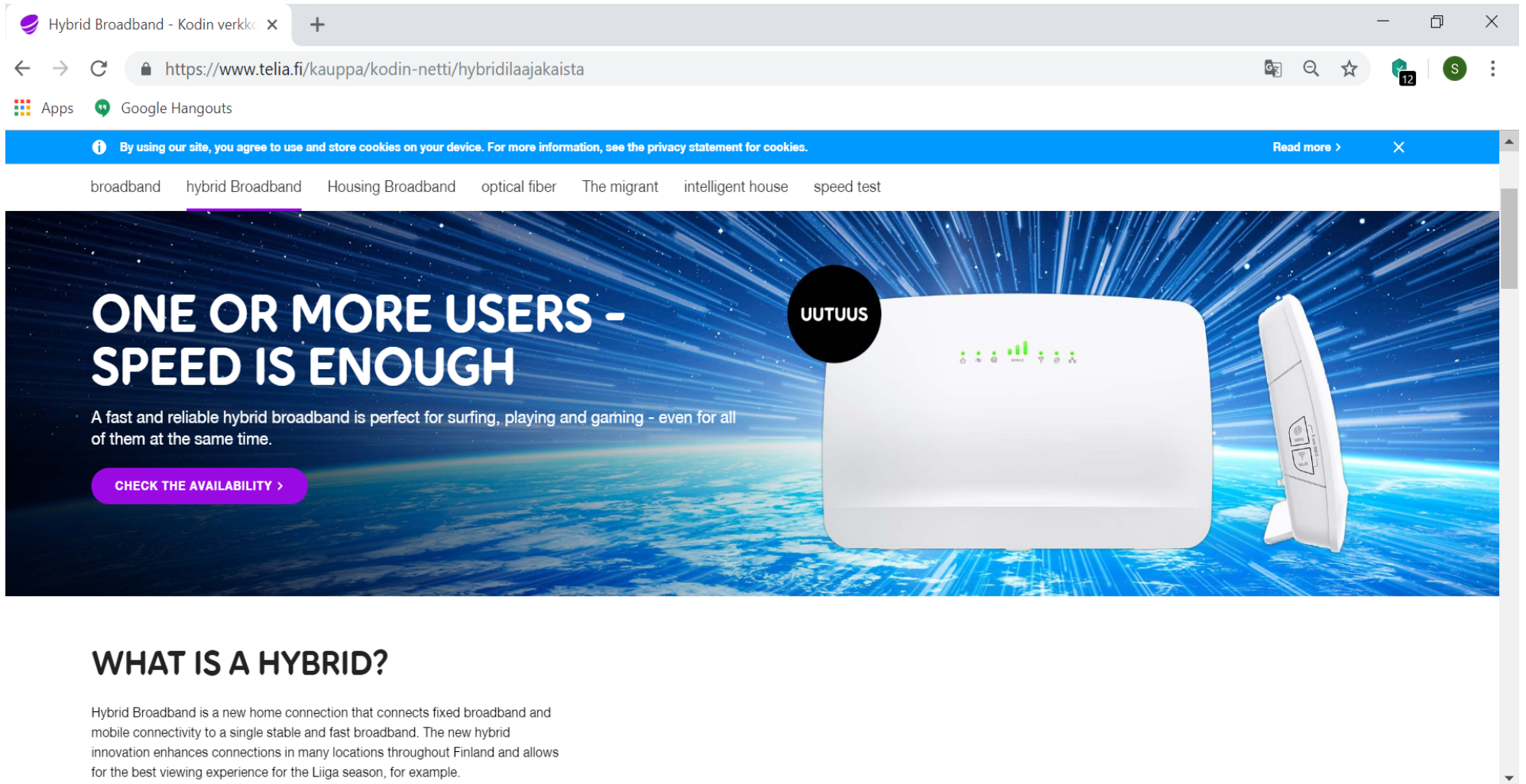


The Tessares **bonding** agent (**software**) is deployed either on DSL or 4G/LTE or Hybrid residential gateway / CPE

The Tessares Hybrid Gateway (HAG) comprises **software** running on a **generic server** or **NFV** environment in a data centre

Telia Finland (1/2)

More speed for households unable to connect to fibre networks



The screenshot shows a web browser window with the URL <https://www.telia.fi/kauppa/kodin-netti/hybridilaajakaista>. The page features a navigation bar with links: broadband, hybrid Broadband, Housing Broadband, optical fiber, The migrant, intelligent house, and speed test. The main content area has a blue background with a starry space theme. On the left, the text reads "ONE OR MORE USERS - SPEED IS ENOUGH" followed by "A fast and reliable hybrid broadband is perfect for surfing, playing and gaming - even for all of them at the same time." and a purple button labeled "CHECK THE AVAILABILITY >". On the right, there is a white UUTUUS hybrid broadband router with a black circular logo on top. The background of the main content area shows a blue planet horizon with white light streaks radiating from the right.

Hybrid Broadband - Kodin verkk... x +

← → ↺ 🔒 <https://www.telia.fi/kauppa/kodin-netti/hybridilaajakaista> 📄 🔍 ☆ 🌐 12 S ⋮

Apps Google Hangouts

By using our site, you agree to use and store cookies on your device. For more information, see the privacy statement for cookies. Read more > X

broadband hybrid Broadband Housing Broadband optical fiber The migrant intelligent house speed test

ONE OR MORE USERS - SPEED IS ENOUGH

A fast and reliable hybrid broadband is perfect for surfing, playing and gaming - even for all of them at the same time.

[CHECK THE AVAILABILITY >](#)

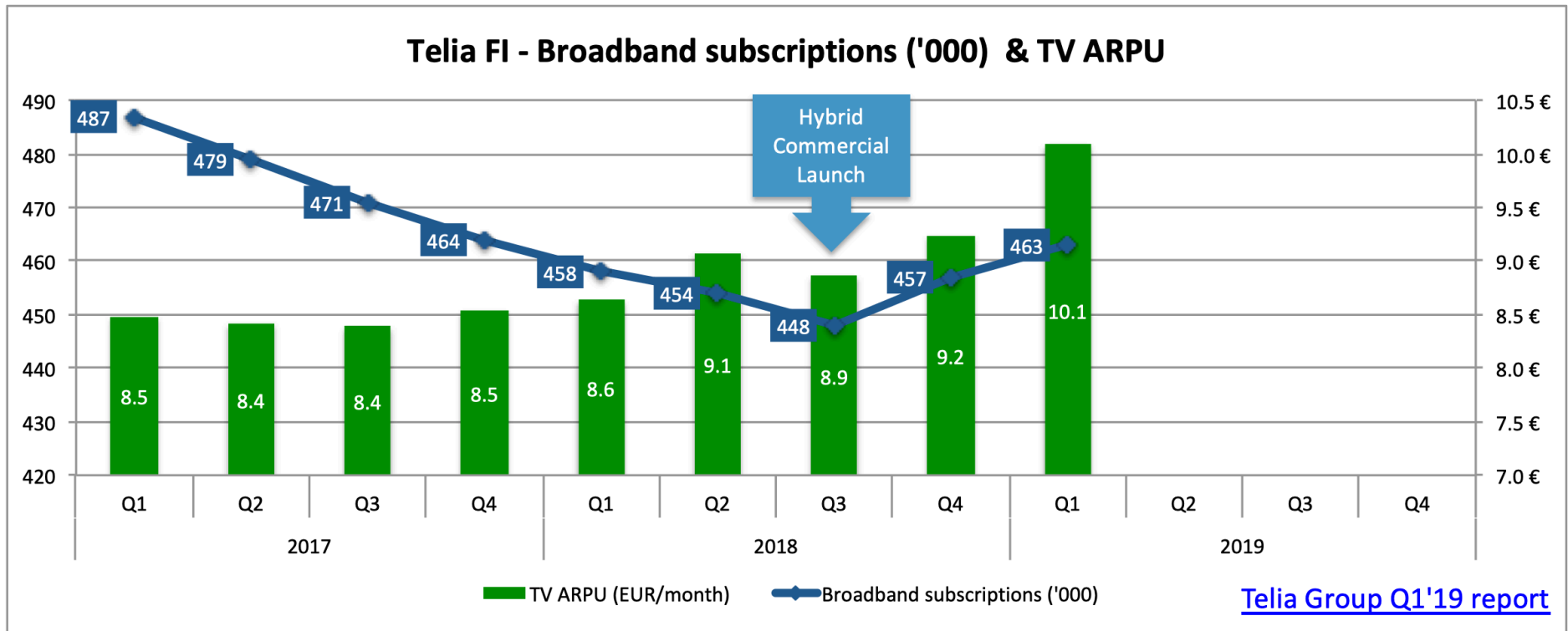
WHAT IS A HYBRID?

Hybrid Broadband is a new home connection that connects fixed broadband and mobile connectivity to a single stable and fast broadband. The new hybrid innovation enhances connections in many locations throughout Finland and allows for the best viewing experience for the Liiga season, for example.

Source: Telia Finland – website – translated in English

Telia Finland (2/2)

Launched at Telia in calendar Q3 2018



Telia's objectives w/ hybrid

Achievement

Stop the decline in fixed BB subscriptions (blue line)


✓ Q1'19 vs Q3'18: +15k (+3%)

Boost sales of valuable TV content (green columns) by increasing the subscriber eligibility footprint

✓ Q1'19 vs Q3'18: +1€ (+10%)


KPN (1/2)

Speed boost of slow copper lines

Information & OrderingService & ContactExperience KPNMyKPNZoeken...


The solution for slow internet

Do you live in an outside area? And do you have slow internet? Then Faster Internet Buitengebied can be the solution! This allows you to use the Internet faster and more stable, because the fixed network is combined with KPN's mobile 4G network.



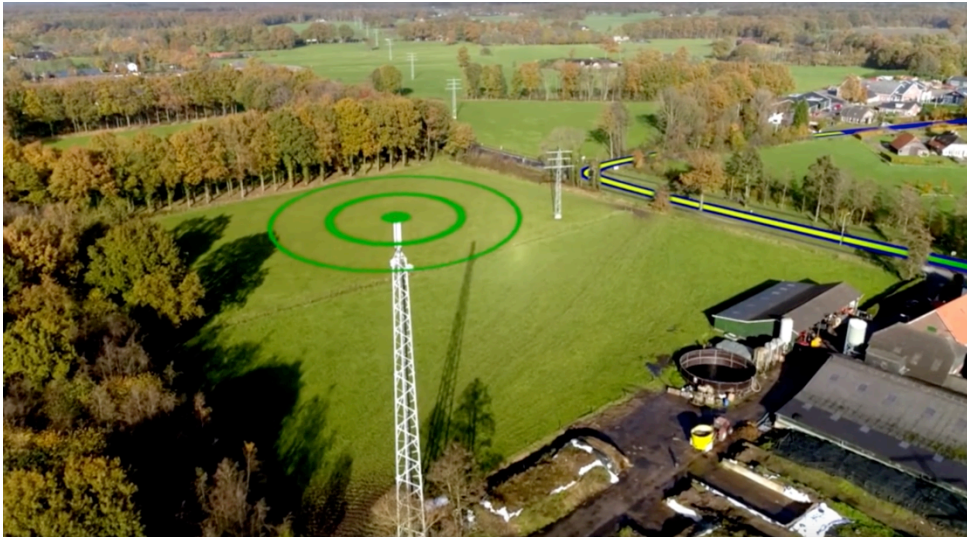
Unlimited internet with Faster Internet Buitengebied

- ✓ At home simultaneously worry-free Facebook, Netflix, and music streaming
- ✓ Up to 30 Mbit / s extra than your current speed
- ✓ You get an extra 4G modem for free that you place at the window
- ✓ In combination with the latest Internet subscriptions from KPN



Source: [KPN website](#) – Translated in English

Testimonial video



**Learn how fast Internet services are delivered by KPN
with our solution (available in spanish)**

Recent press release

KPN expands hybrid DSL/4G to 440,000 premises

8 May 2019

 Netherlands

The Netherlands' KPN has announced that its hybrid DSL/4G fixed internet speed boosting technology is now available to 440,000 residential addresses in outlying areas of the country where existing xDSL-only download rates are limited to below 30Mbps. The 'Sneller Internet Buitengebied' ('Faster Internet Outskirts') coverage footprint reaches 'almost the entire outer area of the Netherlands', enabling download speed to be accelerated by up to 30Mbps, according to KPN's press release. Hybrid LTE/DSL technology aggregates internet bandwidth from fixed and mobile networks to increase user speeds via a single integrated customer premises device, and KPN says its customers currently receiving up-to 8Mbps xDSL downlink can upgrade this rate to 38Mbps using the hybrid service, whilst those with xDSL-only downstream peaks of 28Mbps can now enjoy maximum 58Mbps performance.

The Sneller Internet Buitengebied service has been extensively tested and expanded over the past two years, and is available as a free supplement to KPN's internet subscription range for customers with existing sub-30Mbps fixed connections. KPN currently has more than 30,000 users of the hybrid technology.

Netherlands , KPN , Broadband, LTE

Source: [TeleGeography](#)

Our activities in Latam

Quick opportunity seizing accelerated with your support

	Description	Support needed from AWEX
Market analysis	<ul style="list-style-type: none">• Telecom market + country analysis to size the opportunity (BR, CH, MEX, ARG & COL = targets)• Identification of C-Level people within the telco• Identification of key people in NRA	<ul style="list-style-type: none">• N/A
Marketing & PR activities	<ul style="list-style-type: none">• Marketing materials in Spanish: two-pager, Youtube videos, emailing• Identification & participation to events: Smart cities• Connect with the tech journalists in Latam	<ul style="list-style-type: none">• Identification of key telco events• Support for futurecom (20-31 Oct. 19 – Brazil)• Contact with more local tech journalists
Business Development	<ul style="list-style-type: none">• 1 Explort intern in Argentina (till 22nd of June)• 1 Latam business dev partner onboard• Commercial discussions ongoing with America Movil• Several first discussions with some operators	<ul style="list-style-type: none">• Other Explort resource• Contact with local NRA• Contact with some people in the telco operators• List of next AWEX mission in Latam



Thank you!



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Business Dev & Marketing Manager

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