



# GPONDOCTOR Solutions

High Quality Testing in Fiber Optic Communications

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# The Cost of **Low Quality** in Telecom Services

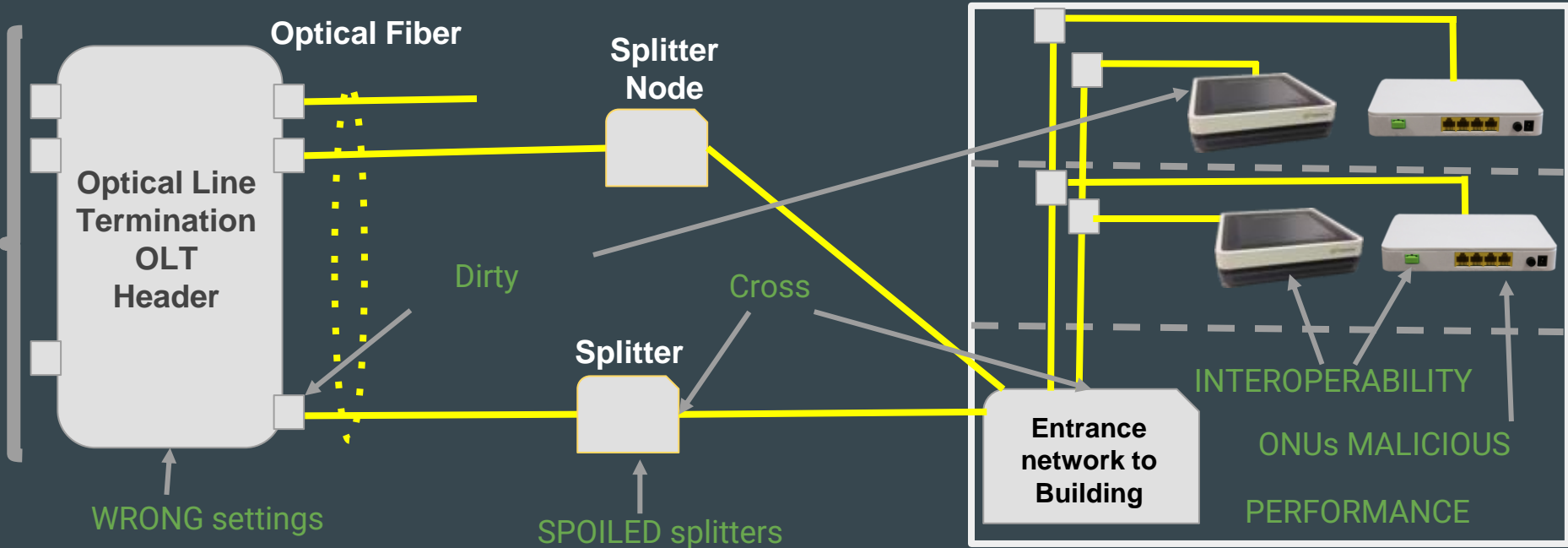


OPEX



A broad definition of **Low Quality** makes the hidden part of the iceberg more relevant

# Points of Vulnerability in an FTTH PON deployment





**THE SOLUTION:** Real-Time Resolution  
of problems in customer services

The road to  
**COMPLET**  
compatibility in  
FTTH



Validate  
Facility



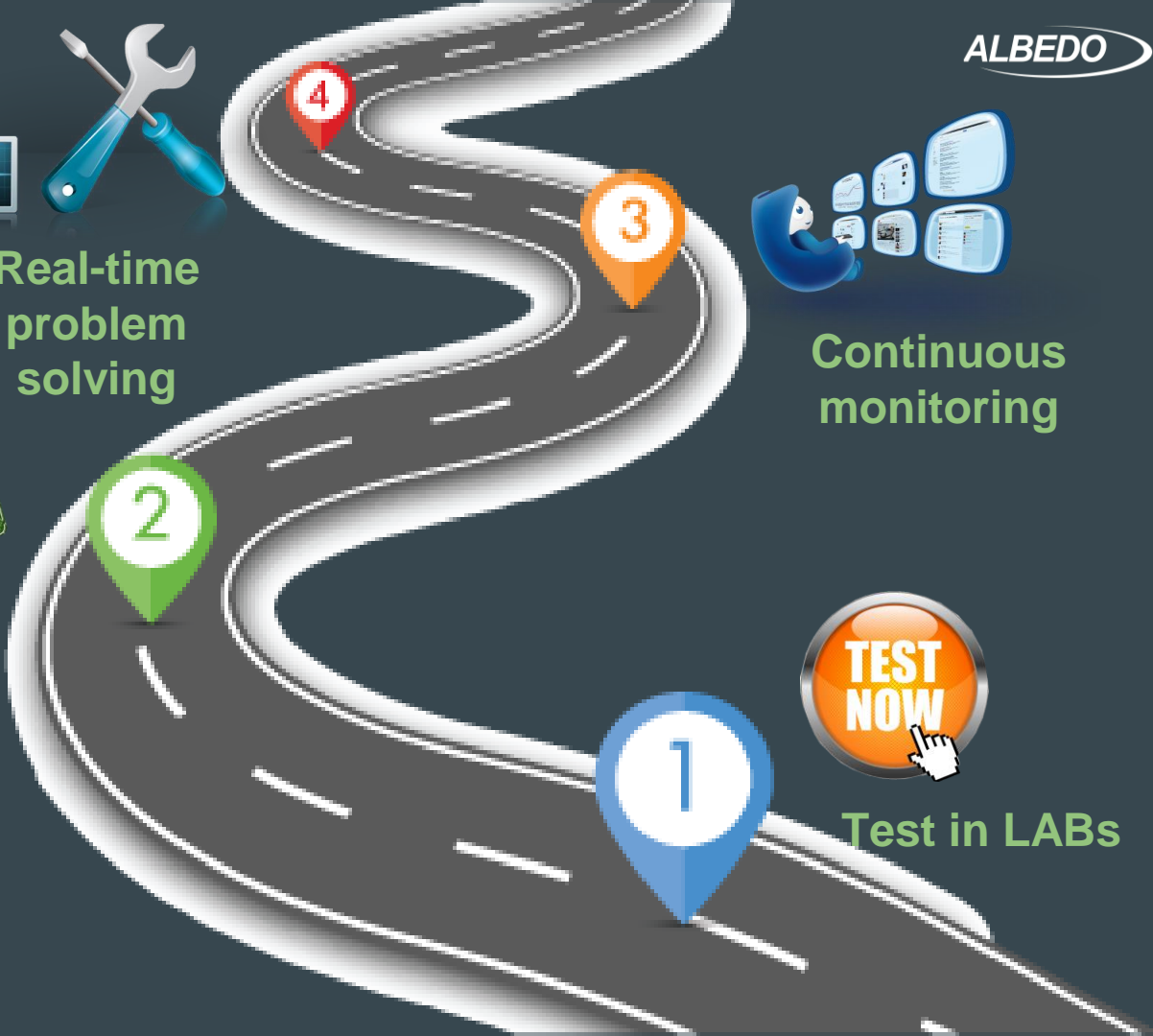
Real-time  
problem  
solving



Continuous  
monitoring



Test in LABs



# GPONDoctor portfolio



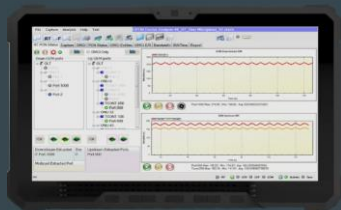
OLT Emulator



GPD 2500 (GPON)



GPD 4500 (GPON)



GPD 9500 (XGS-PON)

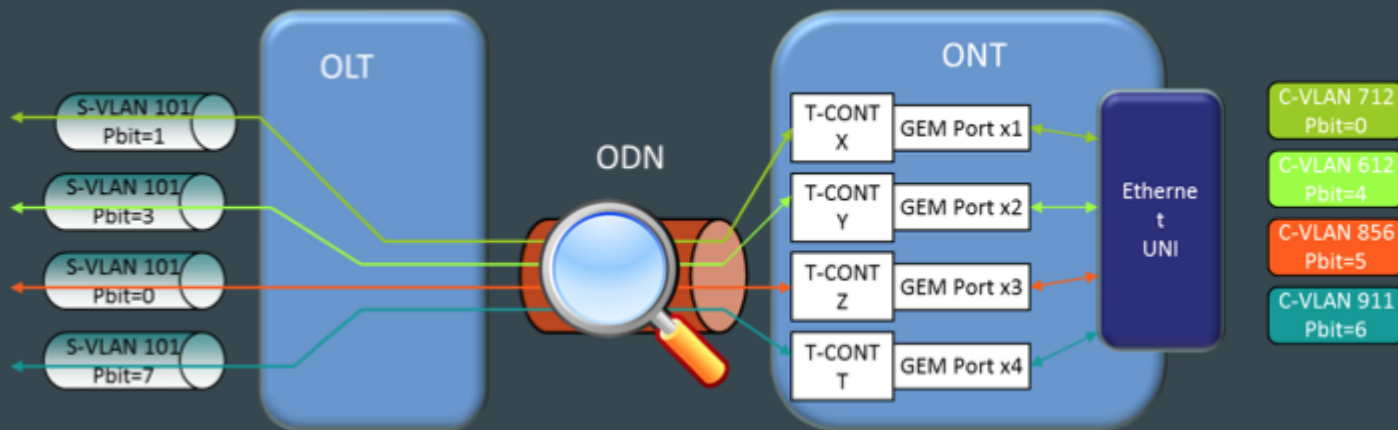


GPD 9700 (GPON & XGSPON)



GPD 10000 (GPON & XGSPON)

# What does an xGPON ANALYZER



- Captures all information exchanged between the OLT and all ONUs
- Captures of user traffic in Real Time to monitor and debug the IP services
- Emulation of malicious ONUs to validate the robustness of the PON
- Applies a powerful analysis for fast and efficient problem resolution

# ONU Conformity and Interoperability



OLT



OLT  
emulation



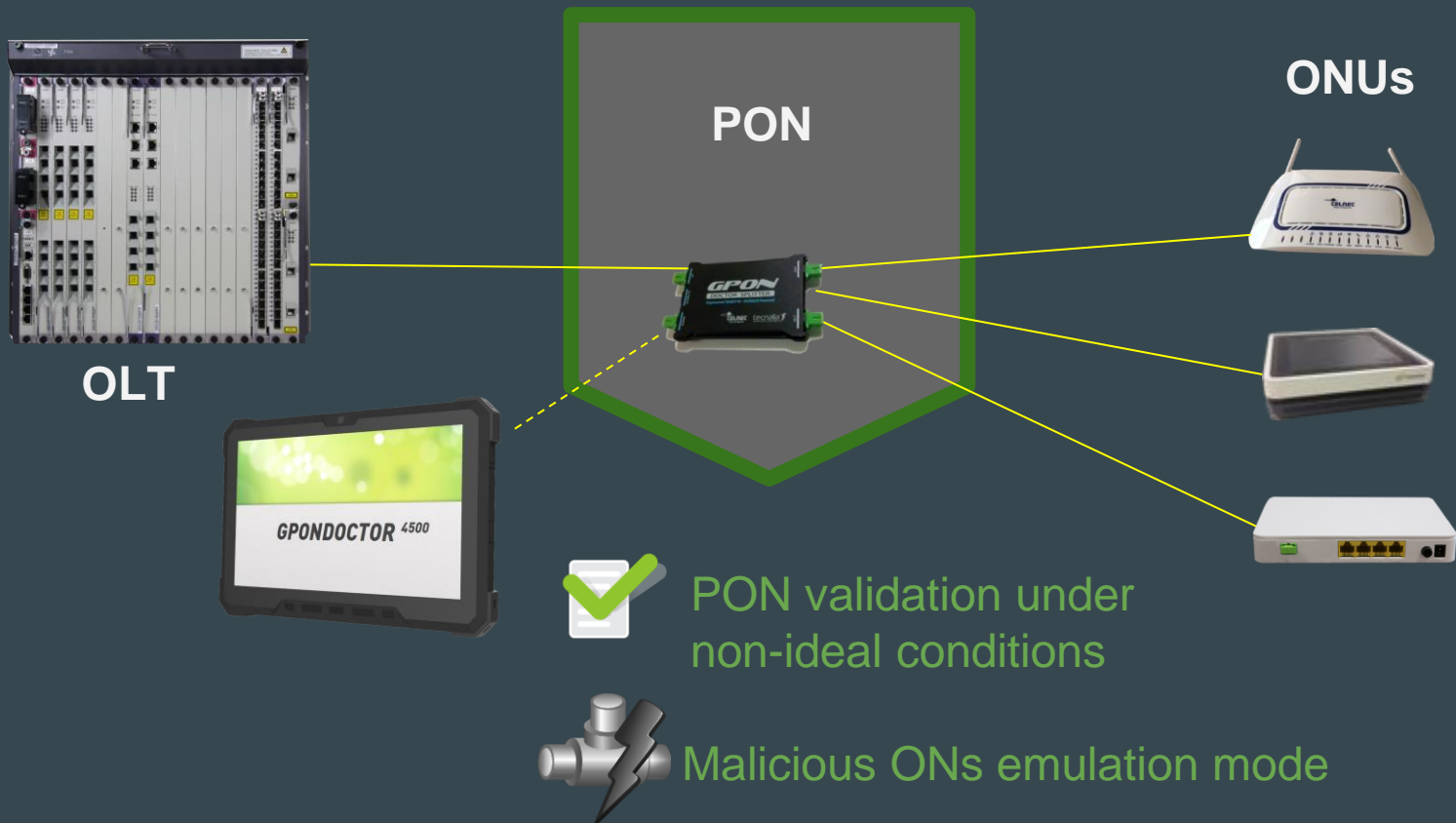
Procol  
analysis



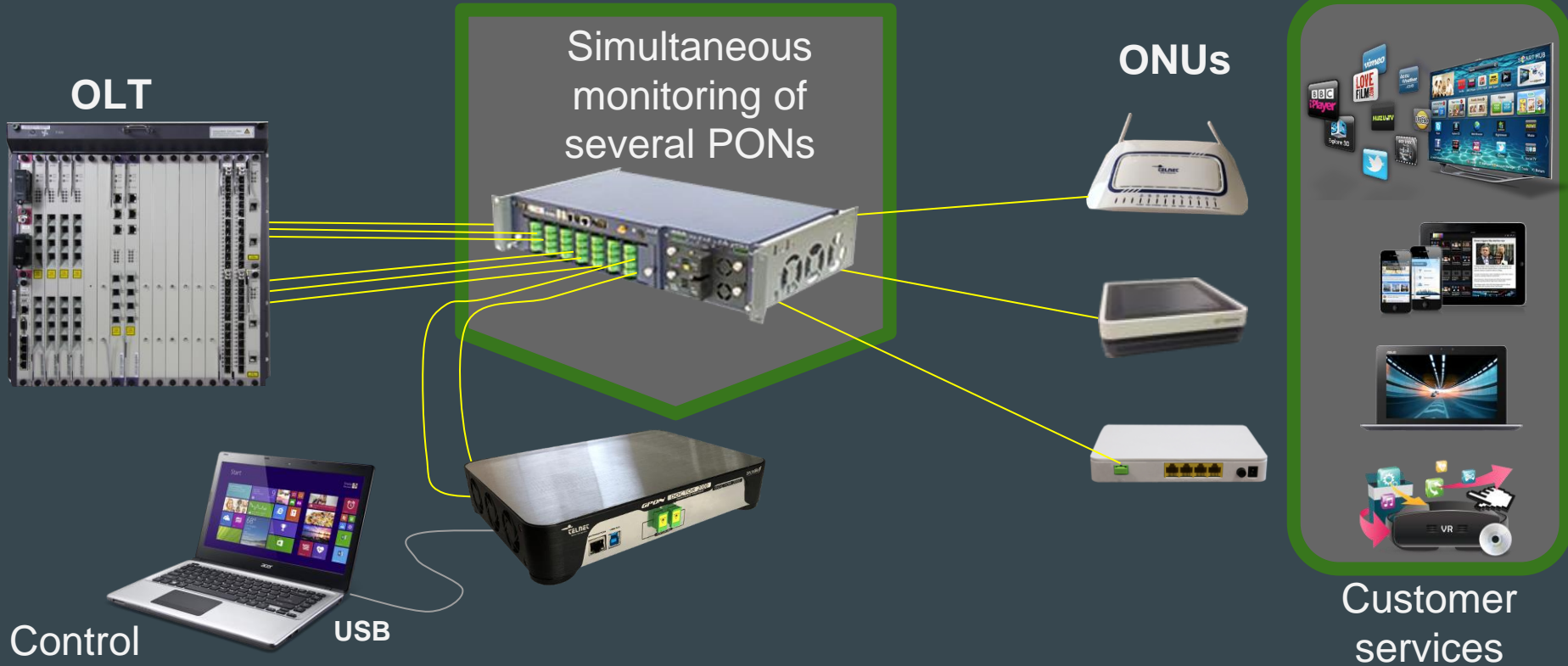
ONUs  
under test



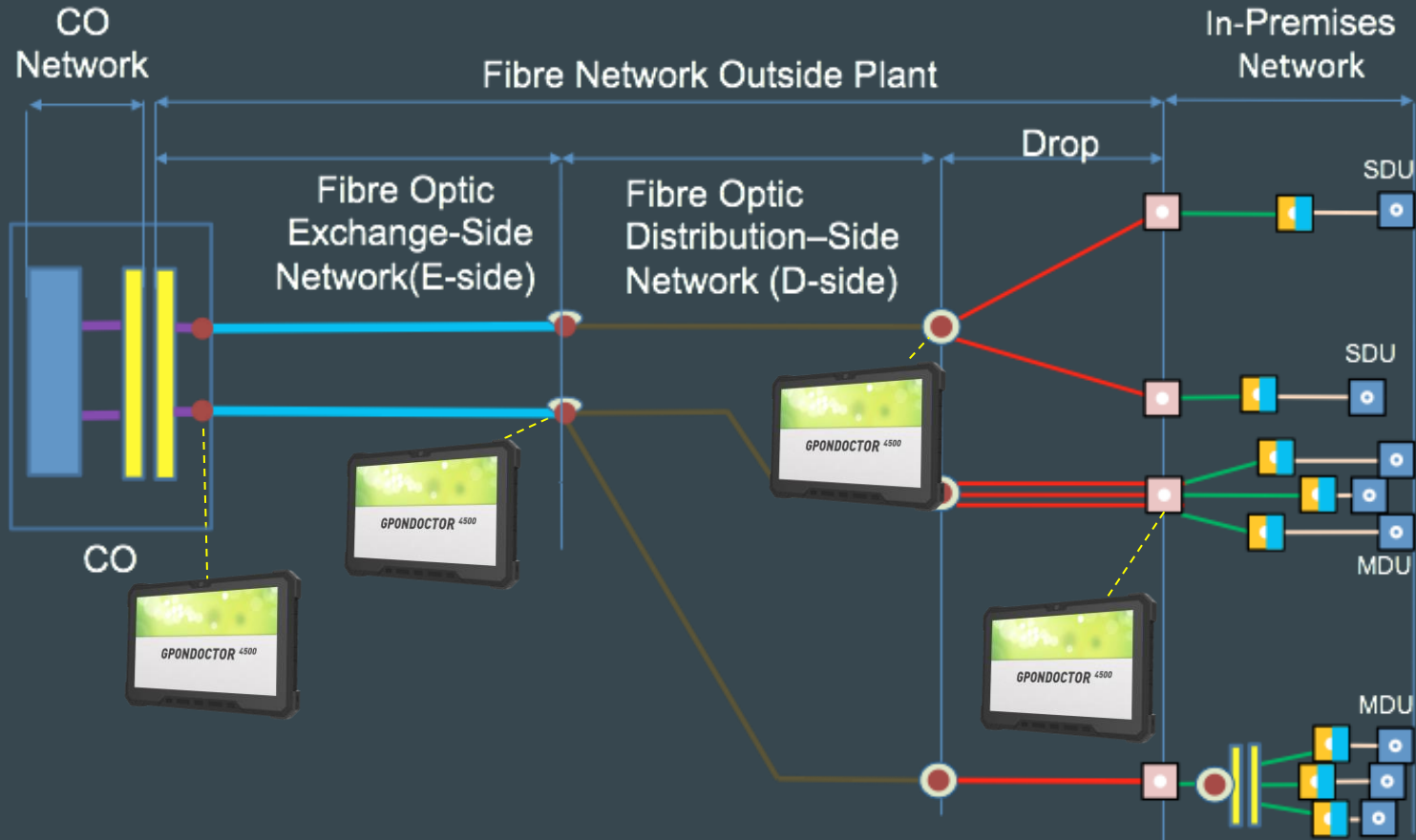
# Resilience in the presence of malicious ONUs



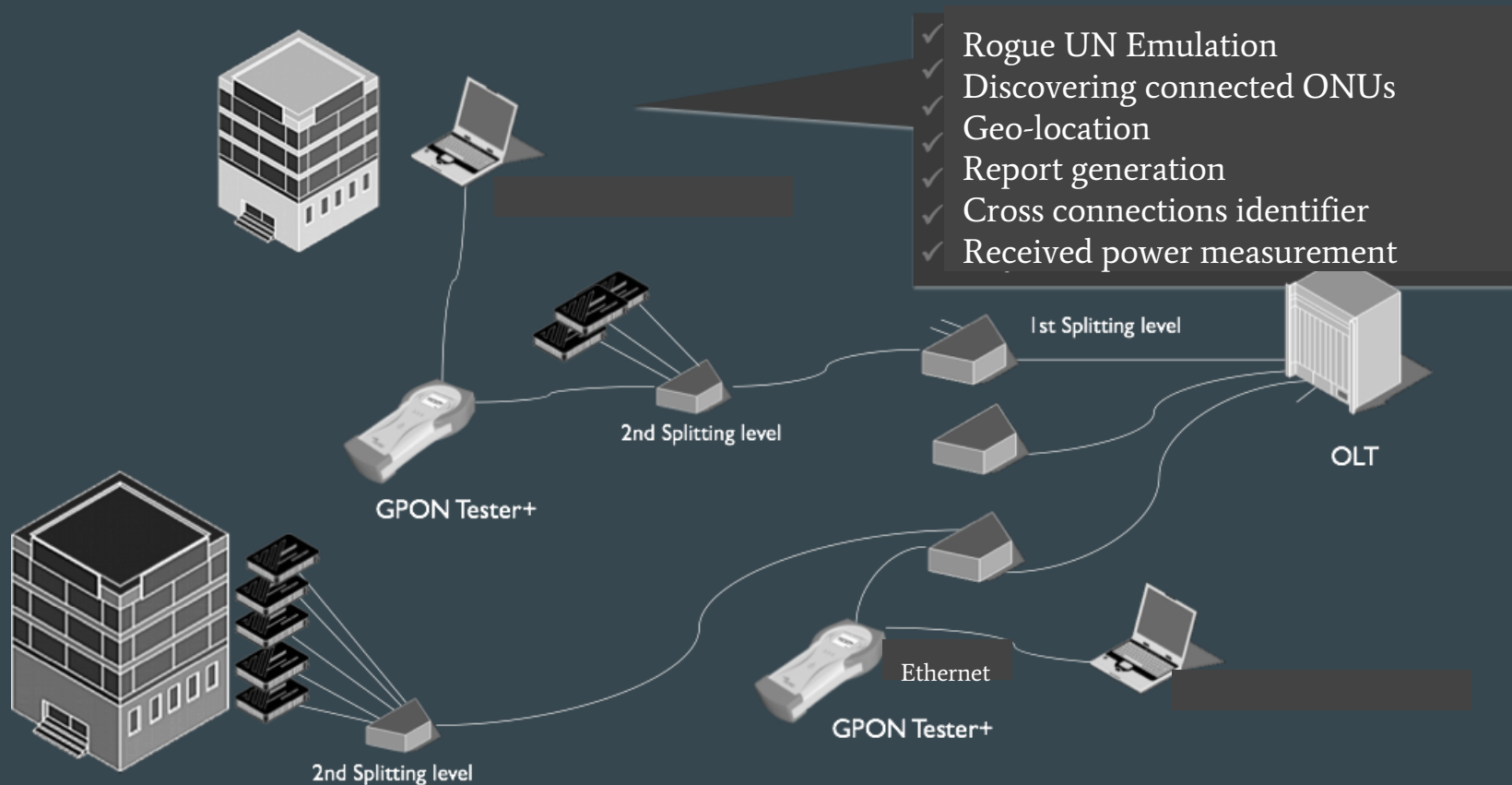
# Real-time voice quality Supervision



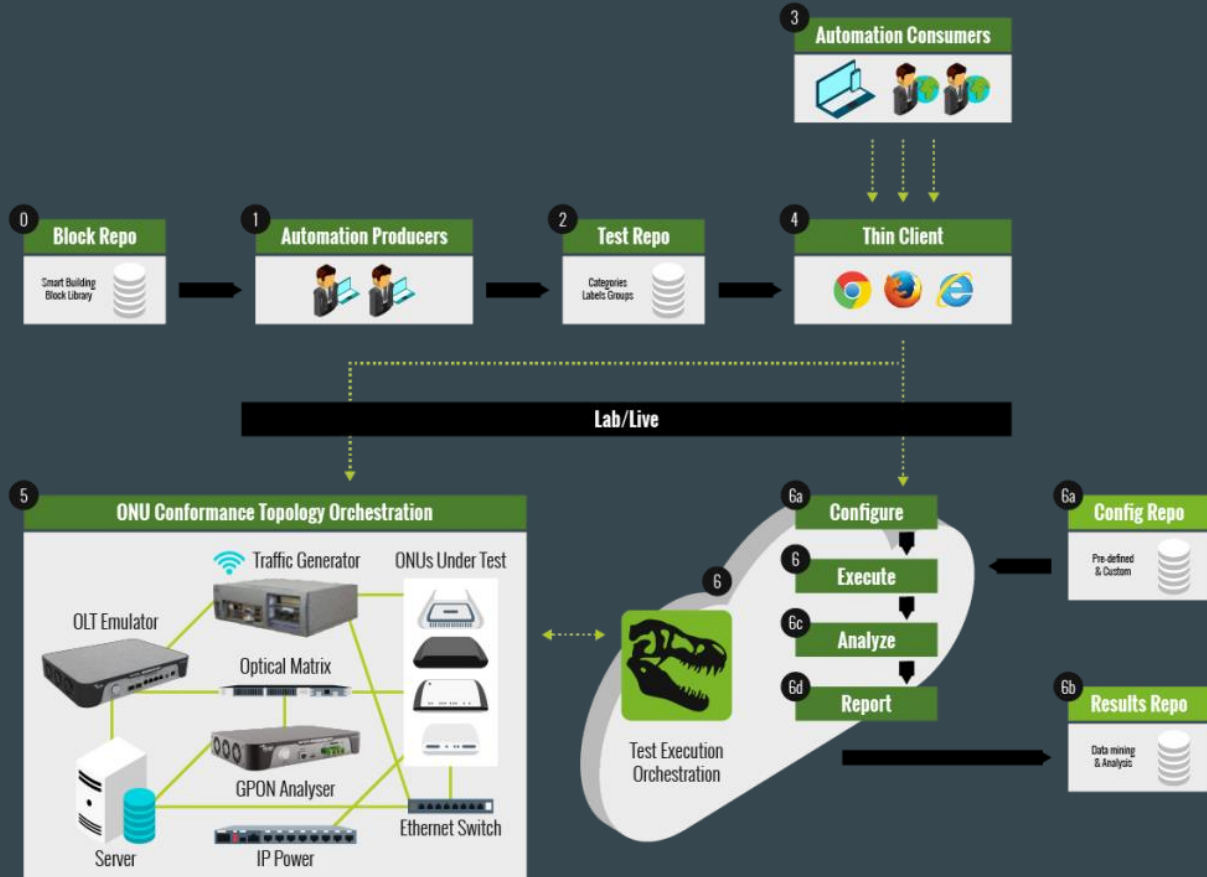
# Resolution of incidents in real time... Anywhere in the PON



# PON at customer premises... CERTIFIED



# Automation of FTTH test



# GPON Doctor portfolio

	capture + analysis	Tablet	OLT emulation	Error injection	Certification	GPON	XGSPON
 GPONDoctor OLT-e	✗	✗	✓	✗	✗	✓	✗
 GPONDoctor 2500	✓	✗	✗	✓	✗	✓	✗
 GPONDoctor 4500	✓	✓	✗	✓	✗	✓	✗
 GPONDoctor 9500	✗	✓	✗	✗	✗	✗	✓
 GPONDoctor 9700	✓	✗	✗	✗	✗	✓	✓
 GPONDoctor 10000	✓	✓	✗	✗	✗	✓	✓

# +85 MAIN CUSTOMERS in +40 COUNTRIES



Featured on:

verizon FIOS

Telefonica  
Movistar

中国电信  
CHINA TELECOM

TM

orange™

PT PORTUGAL  
TELECOM

frontier  
Communications

proximus

intelbras

China  
unicom 中国联通

VNPT

NOS

Sri Lanka Telecom

Telekom Slovenije

中華電信  
Chunghwa Telecom

HONDUTEL

Reliance Jio  
Infocomm Limited

NOKIA  
Alcatel-Lucent

HUAWEI


ERICSSON

- And many more... Northrop Grumman, Foxcom, Viavi-JDSU, VeEX, Sercomm, Alpha Networks, Mediatek-Econet, Cortina Systems, Adtran, CAT, FiberHome, Furukawa, Datacom, Skylane, Genexis, Prom-Syaz, Microtrol, Vestel, NBN, HD Telecom, FOBL, ICOTERA, AVM.



- Agreement with SPIRENT for TEST automation



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- **Fiber communications** offer us a QoE as never before
  - But a **poor compatibility** increases the operating cost (OPEX)
  - **Real Time Troubleshooting** improves QoE and reduces costs
  - **GPONDOCTOR** the best solution for real-time troubleshooting





[www.albedotelecom.com](http://www.albedotelecom.com)

That's all



**ALBEDO**  
*in Test we Trust*