technetix

Case study

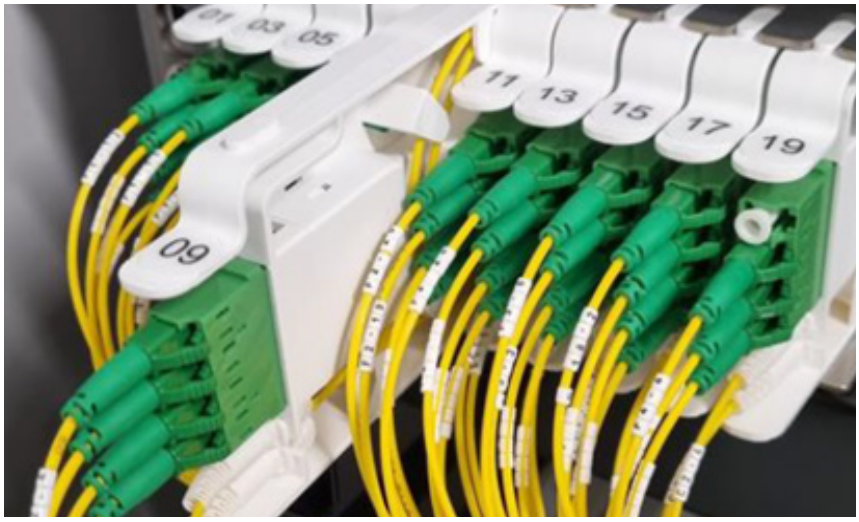
HDOSS: The development and implementation of an XGS-PON overbuild in just 8 weeks

VIRGIN MEDIA IRELAND

Size: 800 employees

Industry: Telecommunications operator

Location: Dublin, Ireland



Virgin Media Ireland (VM Ireland) is the country's largest digital cable TV provider. Part of the Liberty Global family, the company services over a million customers with digital TV and telephony, and broadband internet. Technetix has enjoyed a long-standing, 25-year partnership with Virgin Media Ireland.

Virgin Media's challenge

Like many cable operators serving large customer groups through analog fiber optic nodes around the headend, Virgin Media were up against an increasing need for complex and high-density splitter systems. However, with immensely limited cabinet space conflicting with non-negotiable scalability pressures, they needed a compact yet dense solution to mete out inevitable network growth.

Futhermore, our client expressed an appetite for two additional criteria to the solution: to explore better OLT port utilization during the initial roll out of FTTH, and lower insertion loss rates..

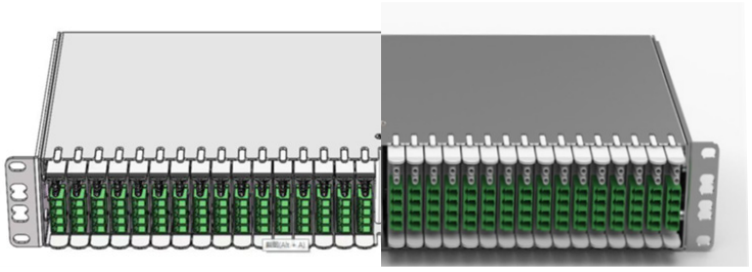
To solve this issue, they required a practical suite of splitter products that delivered density, scalability, and reliability, while aligning with the requisite standards of sustainability.

Virgin Media Ireland engaged with Technetix to develop a solution, recognizing the experience of our technology team for providing the telecommunications industry with practical innovations for over 30 years, our agility and responsiveness to need, and our operational track record for delivering on volume and scale.

Our solution process

Working closely with our client to develop the solution design guidelines, we determined that Virgin Media Ireland required the following considerations:

- A 2-way splitter optical installed adjacent to OLT port to enable efficient cascaded splitter deployment.
- Design that cascaded splitters in order to reduce ODN fiber count and the associated installation and splicing costs.
- A feature that supported optimal pigtail length to minimize insertion losses - ideally providing direct connection between the fiber and splitter.
- Efficient installation, commissioning and ongoing maintenance.
- To Re-use existing facilities or street cabinets to install XGS-PON OLT to lower CapEx investment.
- Any new cabinets necessary had to have a small footprint and minimal visual impact to achieve wayleaves or permissions.



Our timeline was tight, but we succeeded in delivering a prototype within two weeks from point of concept.

Our proposed solution included the following benefits:

- Modularity to support scalability and a pay-as-you-grow model
- Removable splitter to dedicate a PON port as needed
- 300mm ETSI rack mountable
- High-density: 64 splitters in 1.5 RU
- Include grade-B connectors to minimize insertion loss and maximize performance
- Cassettes with spooling function to provide ideal pigtail length to lower loss
- Include a selection of connector options for inputs and outputs
- Cassette housing made from recycled ABS plastic, and 100% recyclable packaging

Following prototype approval, we began work on developing the finalized product. Our sustainable solution was optimized for 32 to 256 OLT port builds, and carried up to 32 easy-to-use splitter cassettes per 1.5 U chassis and two 1:2 PLC splitters per cassette.

To simplify installation and maintenance, we devised front-facing-only unit to eliminate awkward rear access design, and an in-cassette pigtail management structure with onboard fiber spooling to minimize slack while supporting optimal fiber length (up to 2.5m).

Two pre-connectorized pigtails were positioned towards the OLT, and grade B connectors provided low insertion loss. The result was the Technetix HDOSS, a high density optical splitter shelf to accommodate growing needs according to penetration increase, providing the opportunity for operators to defer their CAPEX and OPEX.

Significantly, we exceeded expectations by delivering this high-performance solution **just eight weeks** from prototype approval.

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For more information or to learn more about Technetix sustainability initiatives, visit our website or contact

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