Protect your passive infrastructure investment

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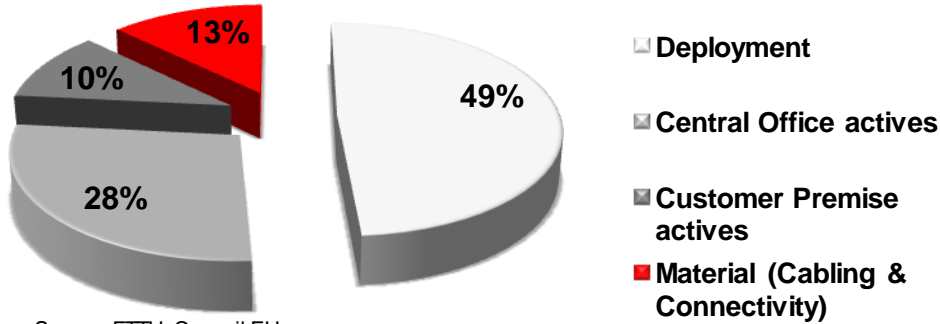
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Introduction

Biography

Tobias Münzer is Market Manager for Public Networks at R&M and has more than 10 years experience in Telecoms industry. Tobias is heading the Public Network Product management department and is globally responsible for the market and the entire portfolio. He joined R&M in 2007 as a Product Manager for Fiber Optics, the former years he worked in the Product management for a leading company in structured cabling. He has sound expertise in Layer 1 infrastructure for both technologies Copper and Fiber Optics.
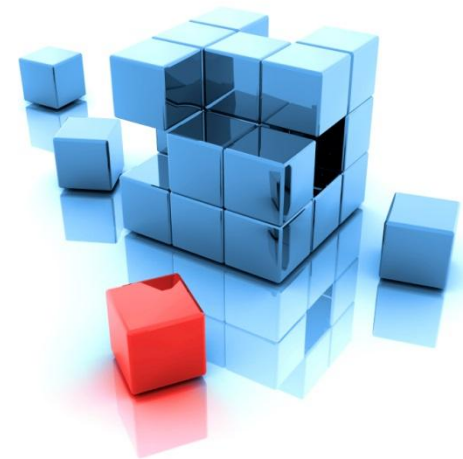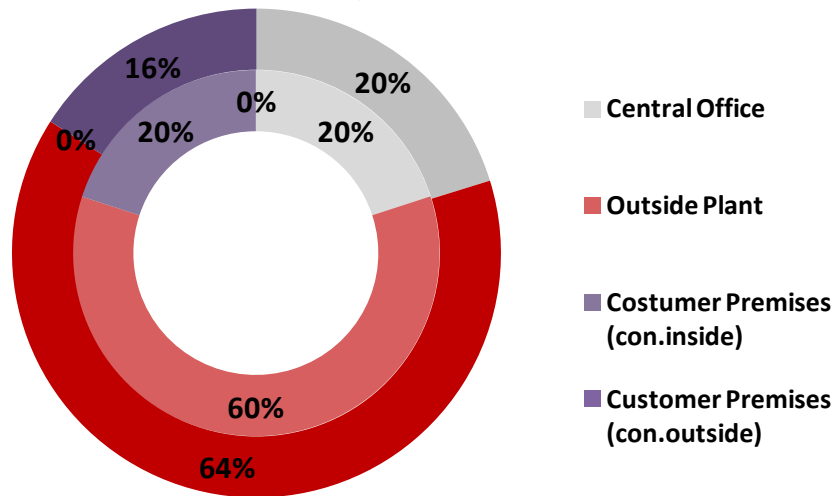
Typical Capex allocation
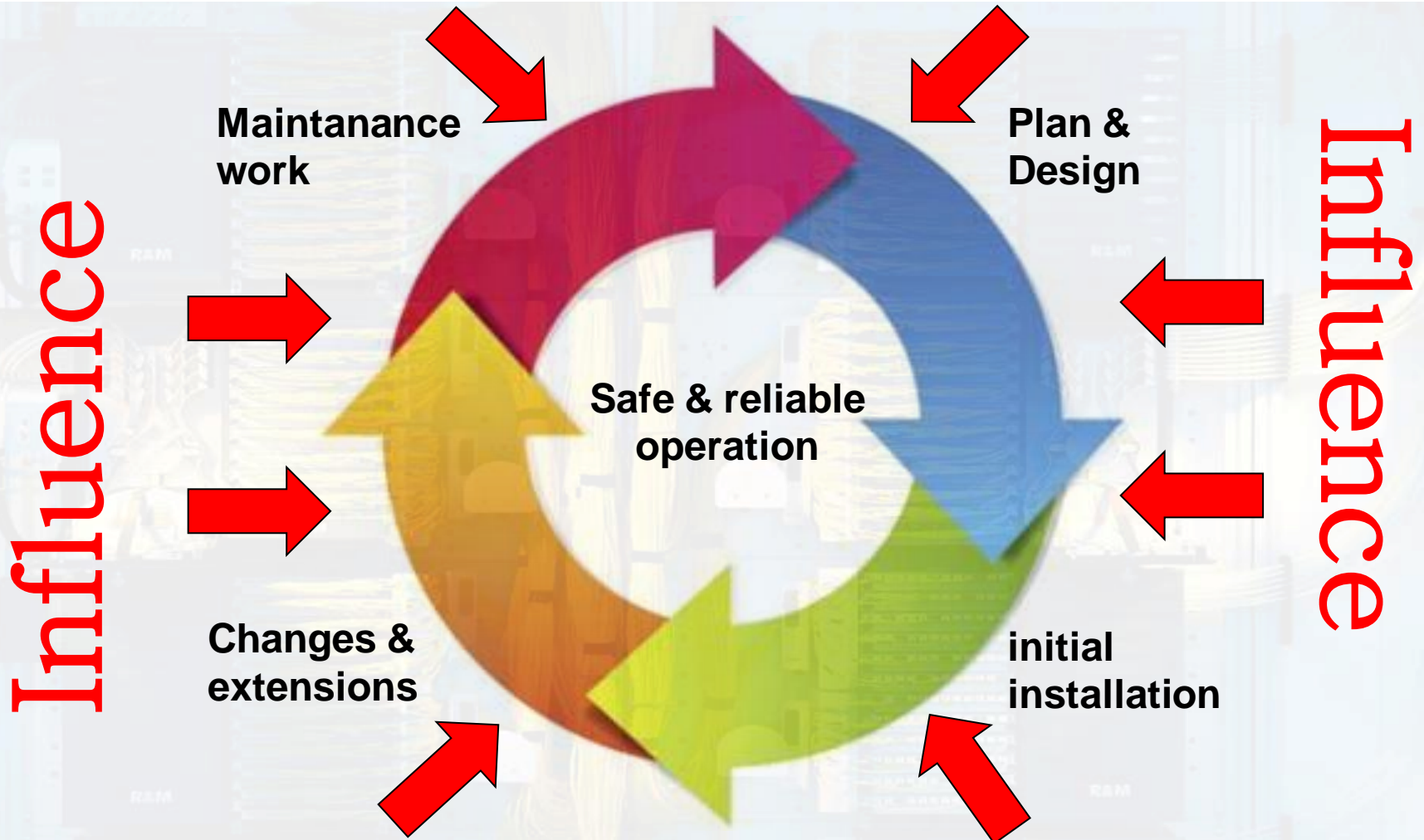
Capex allocation for a greenfield deployment

- 13%
- 10%
- 28%
- 49%

⬚ **Deployment**

⬚ **Central Office actives**

⬚ **Customer Premise actives**

🟥 **Material (Cabling & Connectivity)**

Source: FTTH Council EU

Capex allocation by solution area

- 16%
- 0%
- 20%
- 0%
- 20%
- 20%
- 60%
- 64%

⬚ **Central Office**

🟥 **Outside Plant**

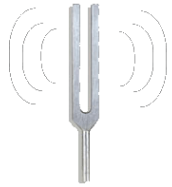🟪 **Costumer Premises (con.inside)**

🟪 **Customer Premises (con.outside)**

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Passive infrastructure – The rollout circle

Influence classes
(passive Infrastructure OSP)

Mechanical
- Vibration
- Weight/load
- …

Human
- Vandalism
- Installation failure
- Planning failure
- ….

Environmental
- Temperature
- Water
- Humidity
- UV rays
- chemicals

Accidental
- Digging
- Traffic accidents
- …

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How to protect / prevent ?

- **use reliable solutions/products with intuitive and easy handling**
    - to minimize installation mistakes & save installation time
    - to withstand against most influences

- **use flexible and modular solutions**
    - to expand and modify your network and enable planning flexibility
    - to upgrade your network to upcoming technologies

- **training of all stakeholders**
    - to ensure a proper planning
    - to ensure a proper installation

- **monitor business critical connections**
    - to identify failures very quickly
    - to minimize the downtime to a minimum

Examples of typical used OSP products

Underground   **Above ground**   **Aerial**
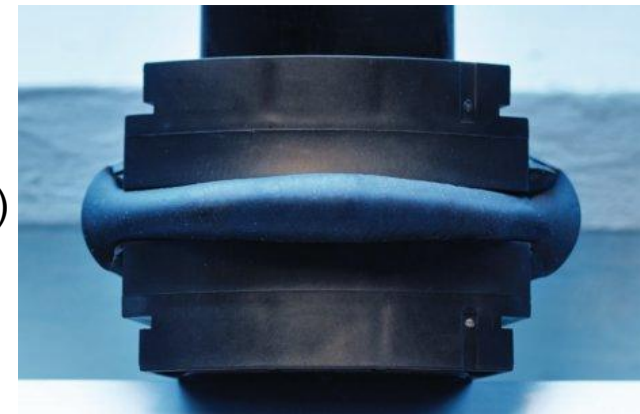
Reliability
Example with closure

Minimize installation mistakes

- SYNO Gel Sealing Technology requires no heat gun or open flame
- Simplifies the complete cable sealing & preparation process
- Dramatically reduces cable sealing process
- Re-usable sealing elements and cable strain relief parts

Withstands several environmental influences

- Above IP68 (Water depth of more than 5m)
- Fungus resistant
- Longterm UV resistant
- Chemical resistance (salt acid, acid sulphur, insulating oil, etc.)
- Shock & Impact resistant
- Temperature resistant (-40°C up to 70°C)
- Built for decades to come (more than 30 years)

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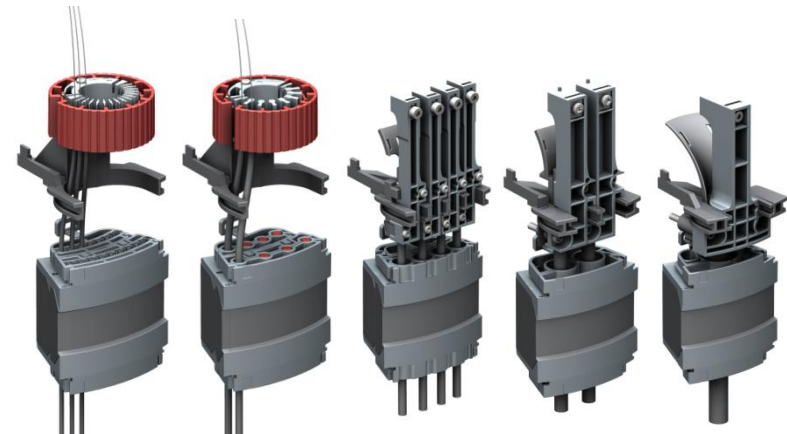
Flexibility & Modularity
Example with closure

Expand and modify

- Cable range from 2 – 28 mm

- 8 independet cable entry bays individually equipable

- Max cable capacity 8 – 128 cables

- Changeable gel & strain relief kits during operation without interrupting the operation

Upgrade

- Every cable type and microduct can be mounted and sealed

- Suitable for P2P, P2MP or combined applications

- Add cables or microducts per sealing element without interrupting cables & ducts installed nearby

Training
Certified Planner & Installers

- The best way to prevent human failures (instalation and planning mistakes) is training

- … but training is not training…

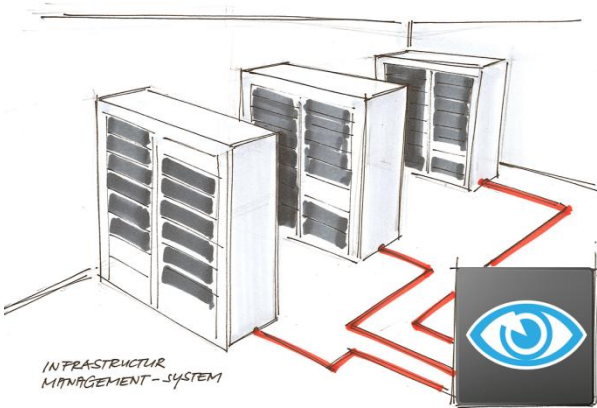- To ensure proper and reproducible trainings, several elements/modules are needed:

- ❑ consists always of a **theoretical** and **practical** part
- ❑ **tailor made** in close dialogue with the network operators since every network is unique
- ❑ **On-site training**/ assistant from certified instructors to ensure a proper execution
- ❑ All participants should receive a personalized certification card and is documented is a database for **traceability & requalifications**
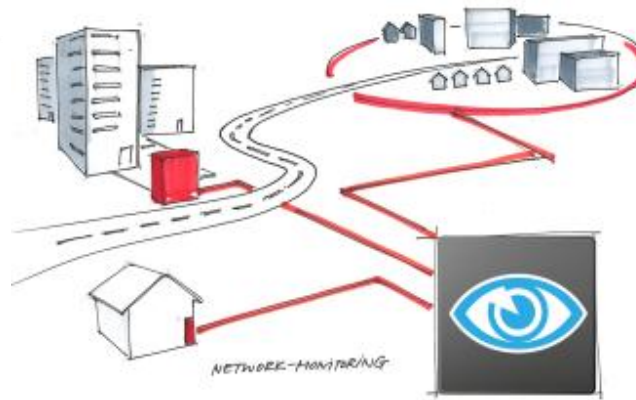

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Automated infrastructure management	Network/ Fiber monitoring	Infrastructure monitoring & authorisation

- Administration of physical layer infrastructure
- Automatic update of physical infrastructure documentation
- Alerts when unauthorized changes are made

- Tracing & monitoring of fibers
- Unique subscriber identification by integrated reflectors in the connectivity itself

- Monitoring of the different parameters influencing the passive infrastruture
- Access authorisation & monitoring

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Summary

- The highest invest of passive infrastructure goes to th area Outside Plant

- The passice infrastructure has to withstand several influences day by day and for decades to come

- Choose your infrastructure accordingly and not with a pure view to the CAPEX

  If you buy cheap you pay dearly !

- Minimize/eliminate influences by using upgradable, modular and verifiable, reliable solutions

- Training & Monitoring will help to avoid initial & consequentual damages
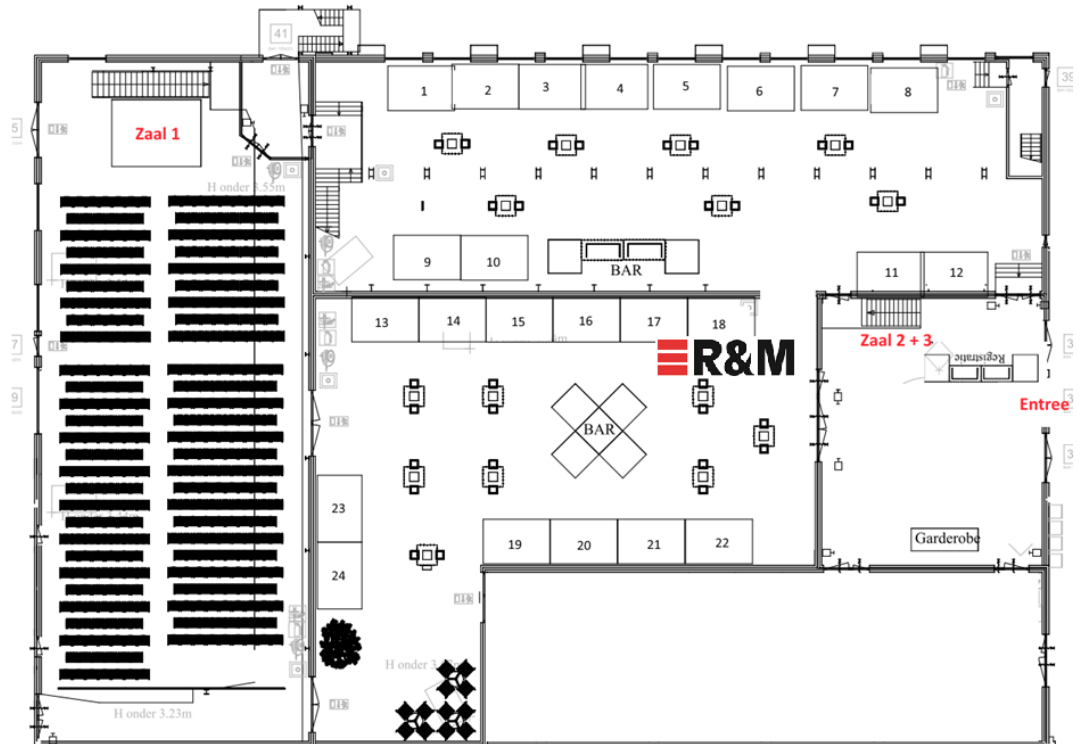

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Thank you!

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