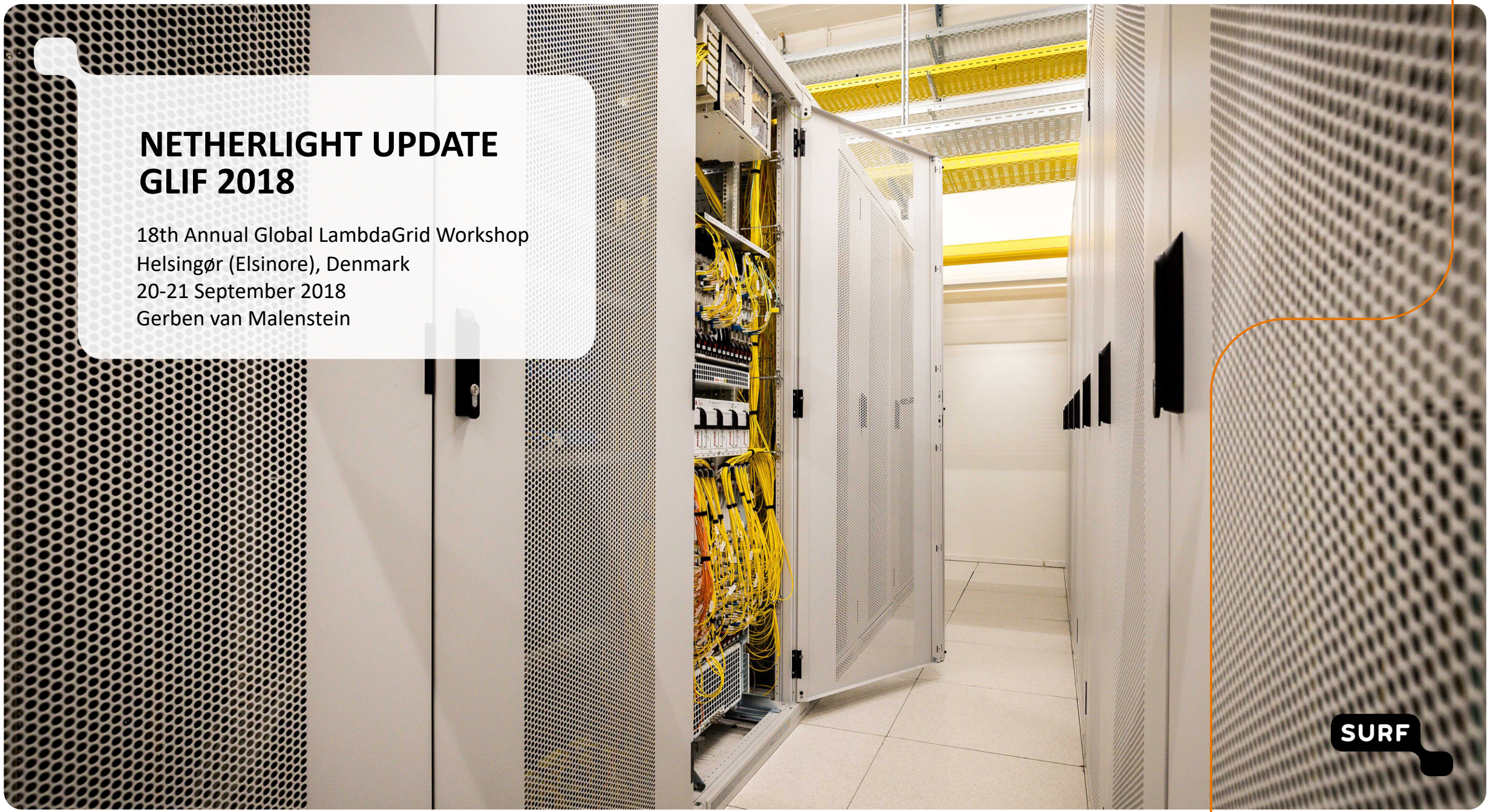


NETHERLIGHT UPDATE GLIF 2018

18th Annual Global LambdaGrid Workshop
Helsingør (Elsinore), Denmark
20-21 September 2018
Gerben van Malenstein

- **National Research & Education Network of the Netherlands**
  - Connecting around 200 institutions at 350+ locations
  - Serving more than 1 million end users on a daily basis
  - 11.000 kilometers of dark fiber, DWDM/CWDM

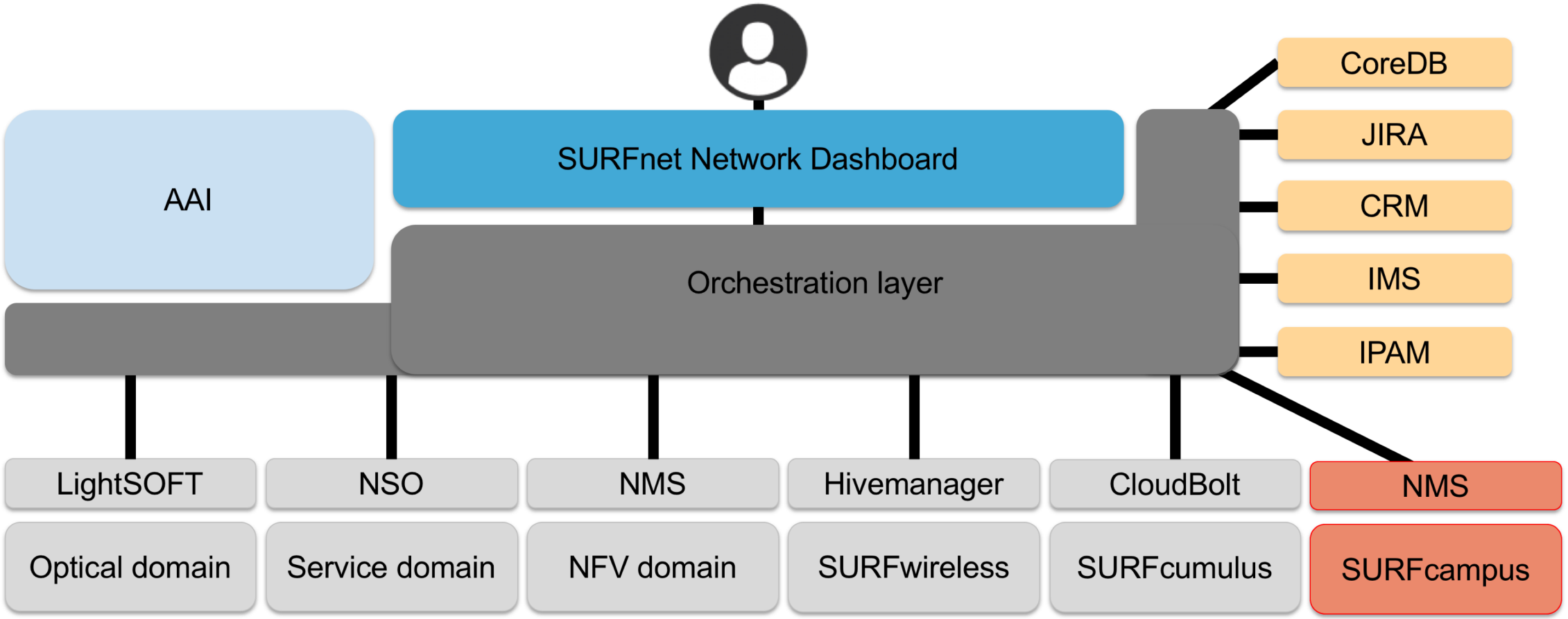
  - **Network in transition from SURFnet7 to SURFnet8**
    - Routing: IPv4 and IPv6
    - **Guaranteed bandwidth: Lightpaths**
    - **NetherLight**
      - **ANA, GNA, GÉANT, GLIF**
      - **Cloud services such as Microsoft Azure ExpressRoute with GÉANT**
      - **AutoGOLE**
    - **Cross Border Fibers**
    - **Network Function Virtualisation**
    - **Automation & Orchestration**
    - SURFwireless

  - **Collaboration**
    - SURFconext

Vision: SURFnet8, more than only a network ...

“With SURFnet8 we develop a **growth path**:
we offer students, lecturers and researchers
a **flexible platform**
for **integrated service delivery**
through which all connected institutions
are **future-proof**.”

Architectural vision on Automation & Orchestration



Cross Border Fiber / Optical upgrades

Lighting the long-distance fibers

- Ciena CPL
- ECI Apollo

Current international line systems

- Amsterdam-Geneva
  - new fiber pair to CERN B.773 (2018)
  - RAMAN amplification upgrades (2019)
- Amsterdam-Hamburg
- Amsterdam-London
- Maastricht-Aachen
- Maastricht-Hasselt

NetherLight core upgrades 2018-2020

Core Ethernet chassis

- Ciena 5410, Ciena 8700, Invectec
- Juniper MX2008, Juniper MX480; Cisco NSO

Service automation

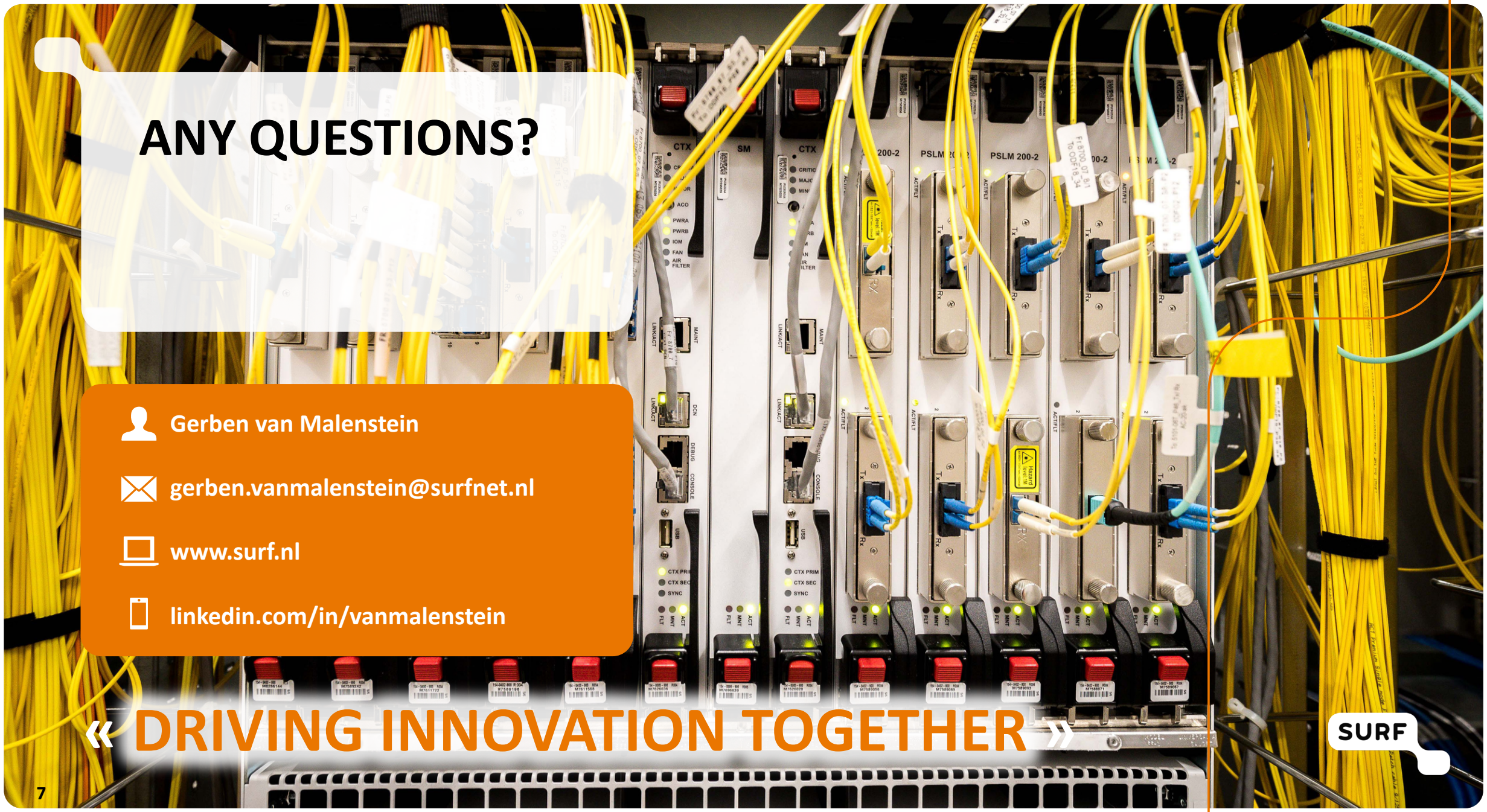
- according to our overall vision
- automation from the start
- automating ANA-300G

Researching new service: peering platform

- easing the setup of peerings

Researching new service: Data Transfer Nodes

- easing the transfer of data



ANY QUESTIONS?

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« DRIVING INNOVATION TOGETHER »

SURF