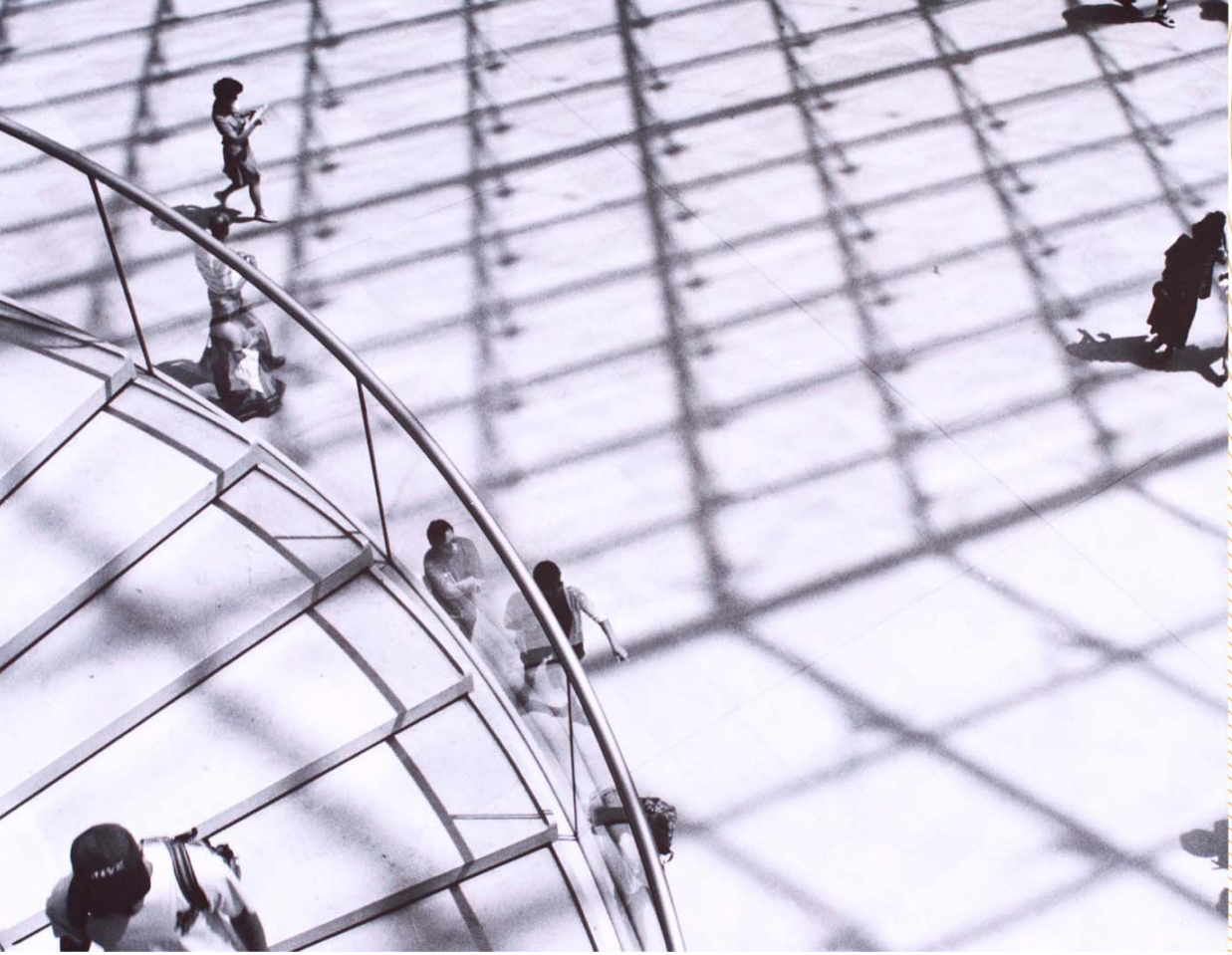


Enlighten Your Research

A contest for scientists using lightpaths

Erik-Jan Bos – SURFnet

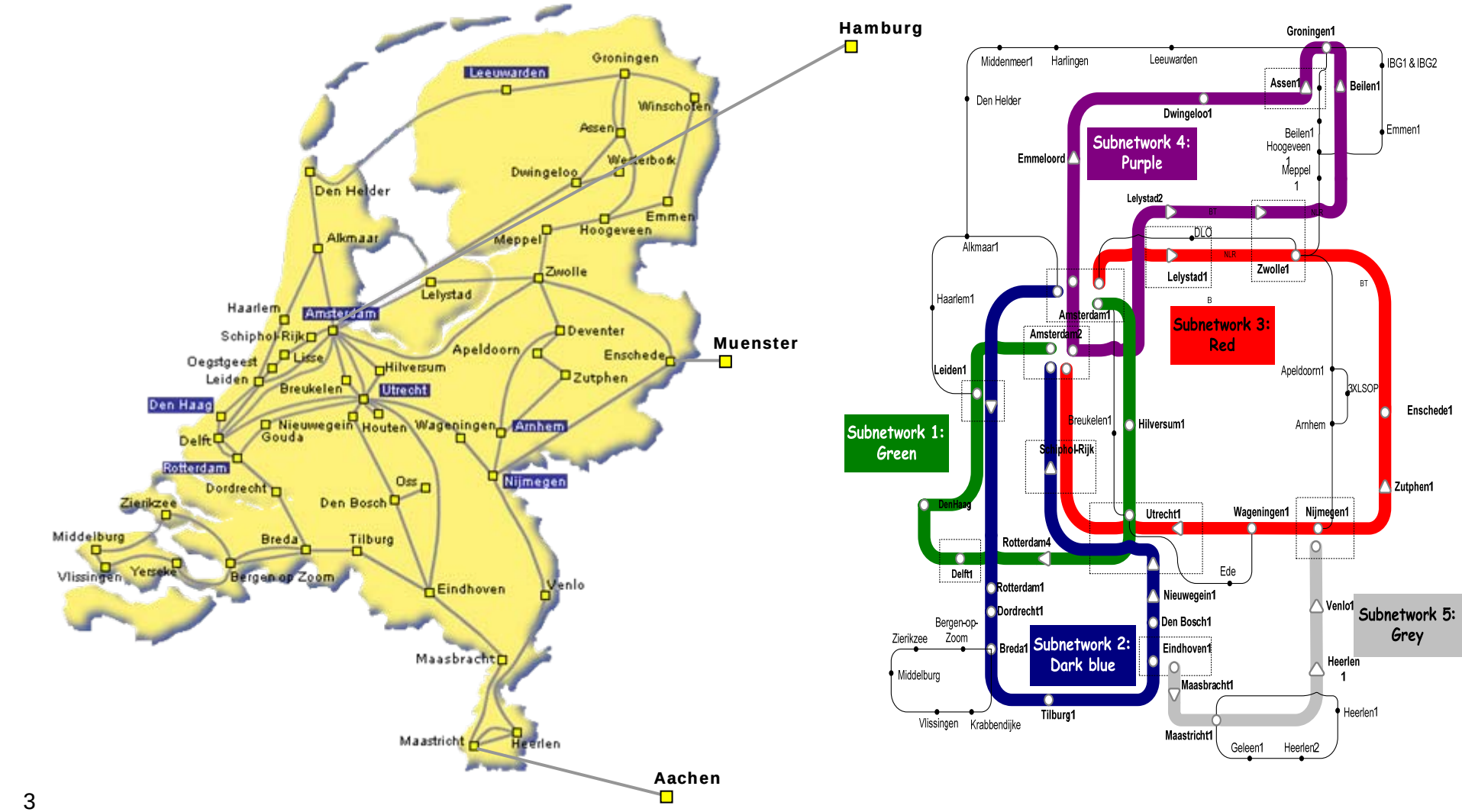
Praha, CZ – September 2007

NREN Challenge

- How to accommodate needs of big and demanding scientific users for higher speed, higher quality networking, e.g.:
  - Astronomy: eVLBI and LOFAR
  - Particle Physics: Large Hadron Collider
  - Medical imaging & research
  - Media streaming, such as HDTV and 4K

- While protecting the performance of the network for current users
- In an economically sound way
- And keeping the successful end-to-end model of the internet

SURFnet6 DWDM on dark fiber



Lightpaths on SURFnet6

- 2005: photonic layer of SURFnet6 becomes operational

- Ligthpaths become available to first users:
  - Astronomers and particle physists
  - First 10G lightpath for LOFAR storage between Groningen and Amsterdam
  - ICT departments connecting remote locations using OPNs

- Lightpaths can and will create new possibilities to scientists by enabling efficient online collaboration

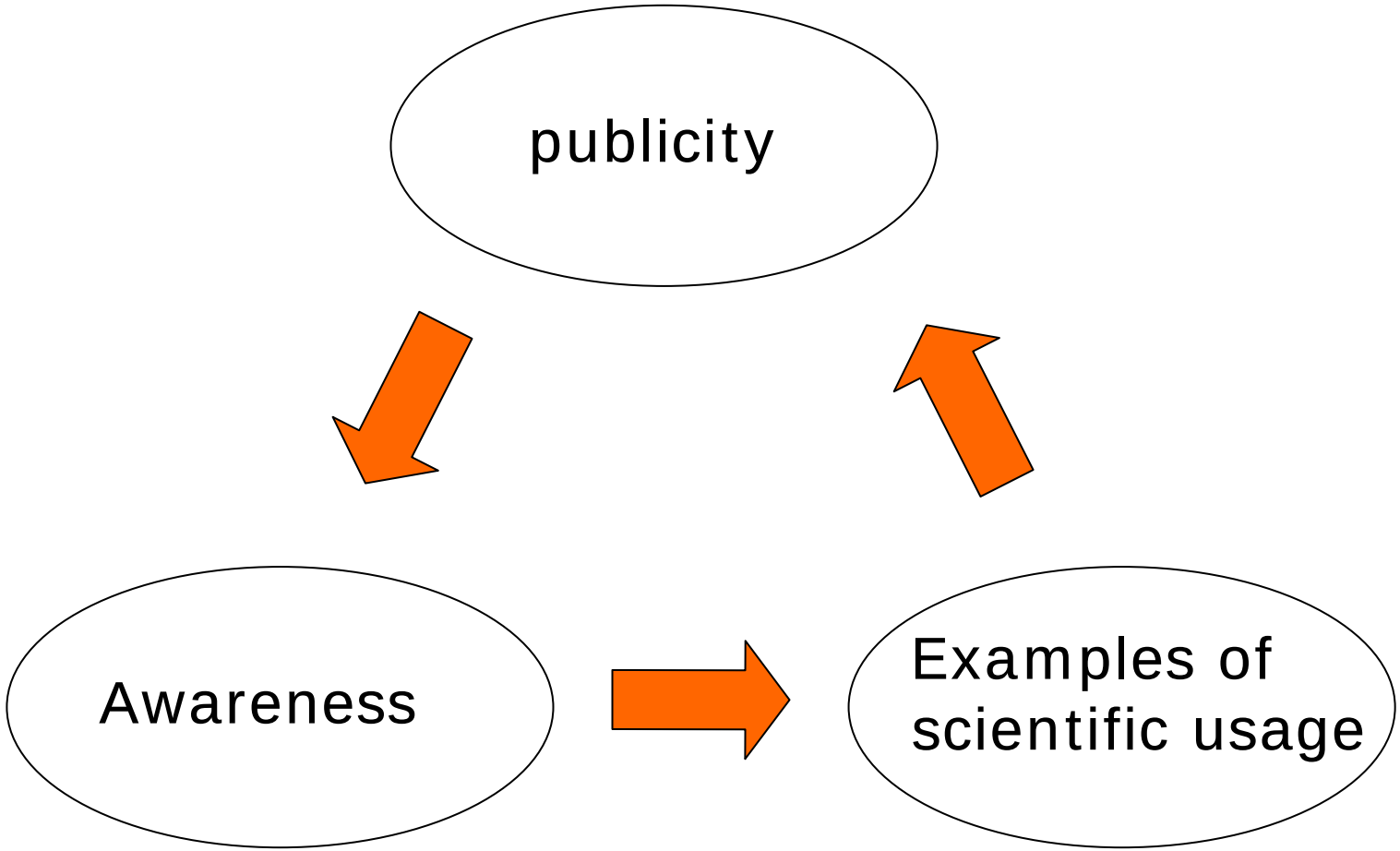
Where are scientific users?

- Most scientist were unaware of the existence of ligthpaths and the possibilities they offer

- Examples of lightpath usage are needed to further stimulate creativity among scientist

- How do you reach scientists?

Stimulate scientific use



A contest

- A contest appeals to scientists as it parallels with research grants
- SURFnet has experience with contests

ThinkQuest van Kennisnet

Build a website

EXPOSE YOUR TALENT

Create a movie

Make-a-Game.nl

Make a game

Cooperation with NWO

Nederlandse Organisatie voor Wetenschappelijk Onderzoek

- NWO is the Dutch National Science Foundation (and has a chair in SURFfoundation)

- Announcement of the contest to science community by NWO

- Contribution to the jury

The contest

- Two stages:
  1. draft proposals, selection process -> shortlist
  2. final proposals

- Terms and conditions
- Criteria
- Formation of a jury

Criteria and judging process

Jury

SURFnet – NWO

SURFnet

Technical aspects and feasibility

NWO

Scientific quality

Awarding the prizes

- 18 high-quality complete proposals received for the final stage

- Five main prizes, each:
  - Lightpath(s)
  - Grant (20 kEUR) to include lightpath in research

- Awarding ceremony with all contesters present

- Press release and radio interview

Enlighten Your Research: Winners

- The 5 winners are:
  - Distribution of radiology images in the NELSON lung cancer screening study – UMCG & UMCU
  - High-throughput genome-wide analyses in Amyotrophic Lateral Sclerosis (ALS) – UMCU & UCLA
  - Intelligent CCTV monitoring at Arke Stadium –TI e.a.
  - Electron microscopy using lightpaths – LUMC, TUE & SARA
  - Remote High-Resolution Visualisation of Climate Data using Pixel Streaming – UU & SARA

SURF NET

NWO
Nederlandse Organisatie voor Wetenschappelijk Onderzoek

WINNAARS 2007

NELSON longkanker screening onderzoek

Intelligent camera toezicht Arke Stadion

Elektronenmicroscopie via lichtpaden

Visualisatie van klimaatgegevens

Genoombrede analyse van ALS

enlighten your research

WINNAARS 20
NELSO
gkanker scree
onderzoek
Intellige
mera toe

Thank you. Questions?

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