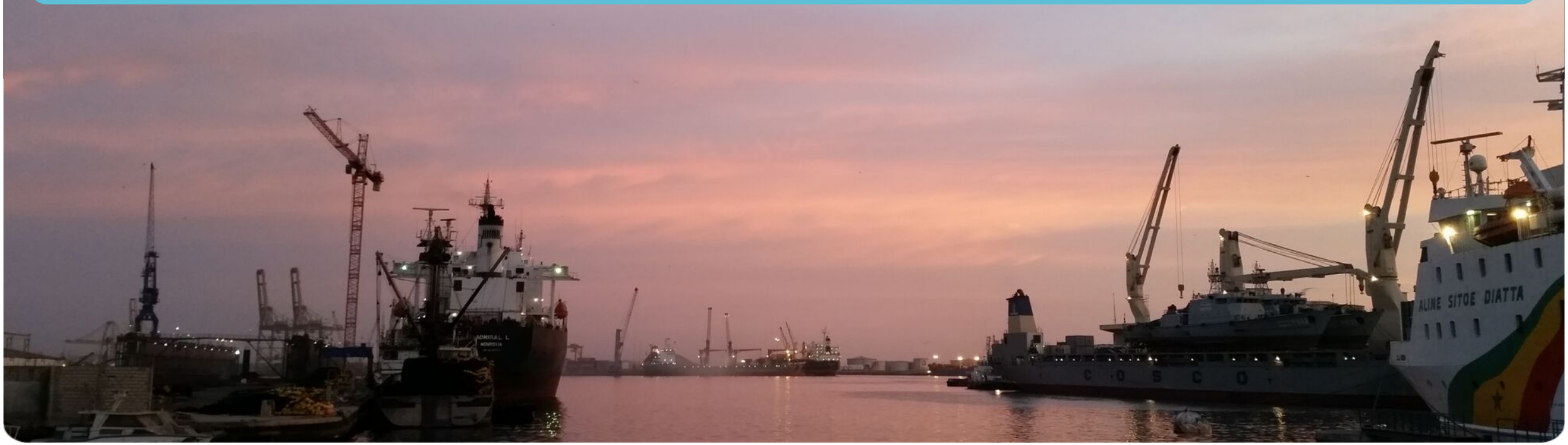
NRENs: value through collaboration

(Or… An NREN in a national and global environment: value creation at SURFnet)

WACREN 2016 - DAKAR



Bram Peeters - Head of Networks
SURFnet

A Logical Conclusion

1. More unique, more desirable products make any enterprise relevant

2. NRENs can collaborate in unique ways

3. Therefore…. collaboration….
   is a brilliant way to make NRENs relevant!

Where can the value in collaboration be found?

Scale

- No need to explain this one?
- Sharing of one-of/fixed costs, Purchasing power / demand aggregation
- Expertise

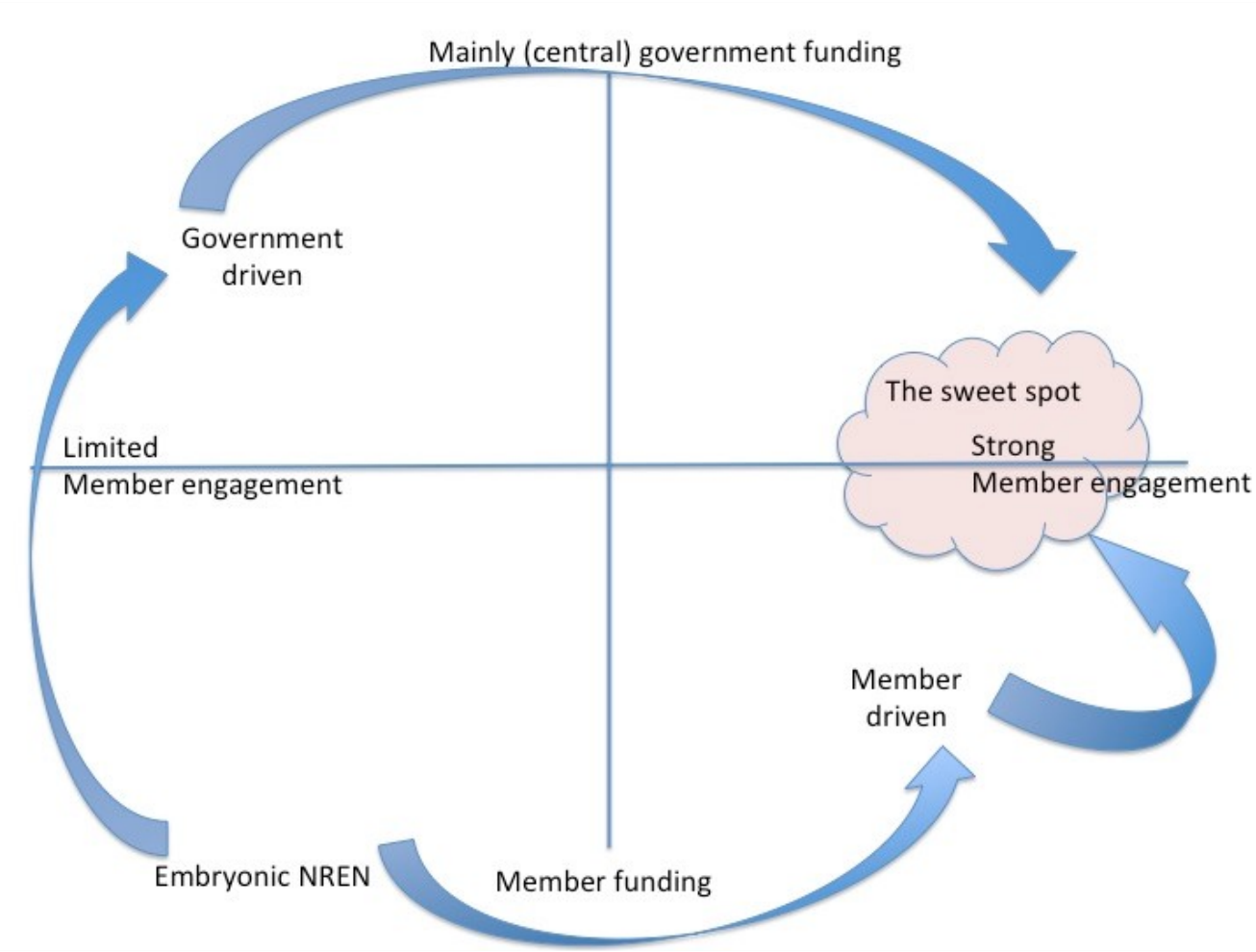
Network effects

- Some services become more valuable when more parties participate

Trusted partner

- Transparent, non-commercial, shared (long term) targets
- Not supplier/customer/competitor => room for shared, open innovation

How to Collaborate: the “NREN sweet spot”

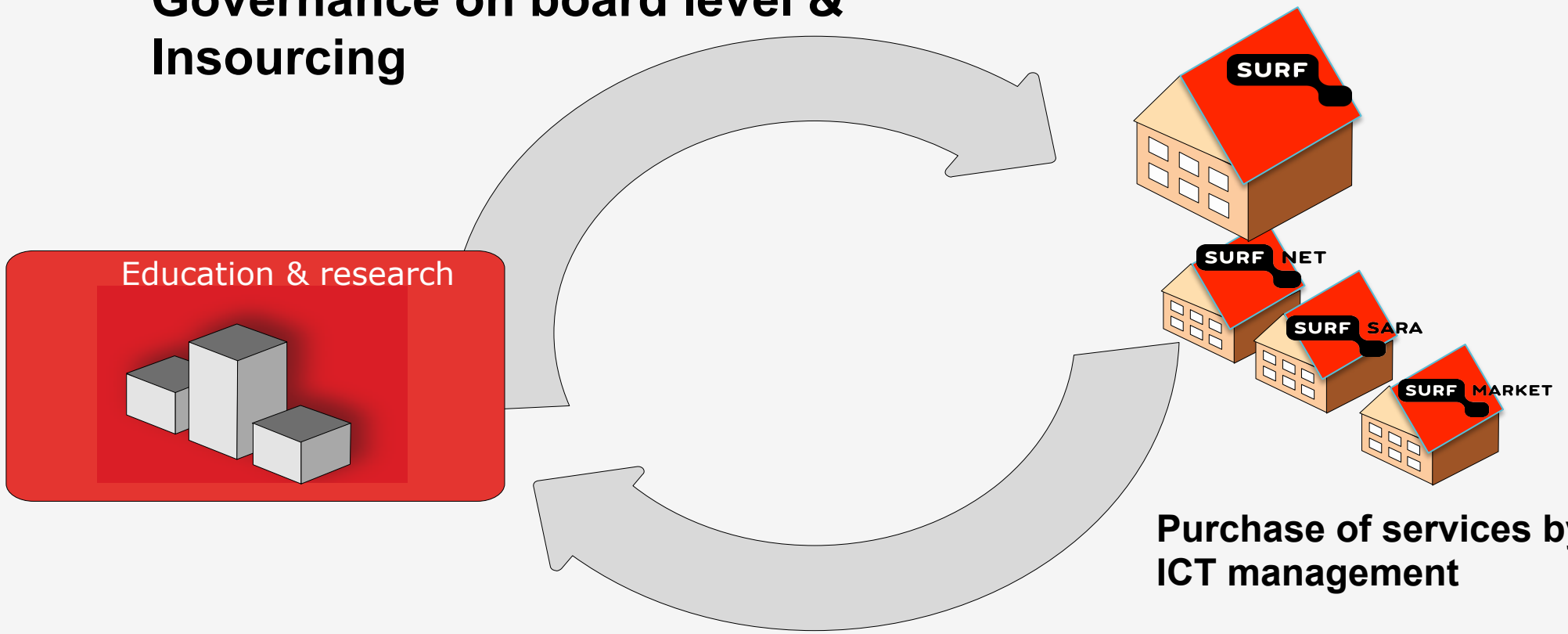


From “The Case for NRENs” (2009): https://www.terena.org/publications/files/20090127-case-for-nrens.pdf

SURFnet situation: A Cooperative

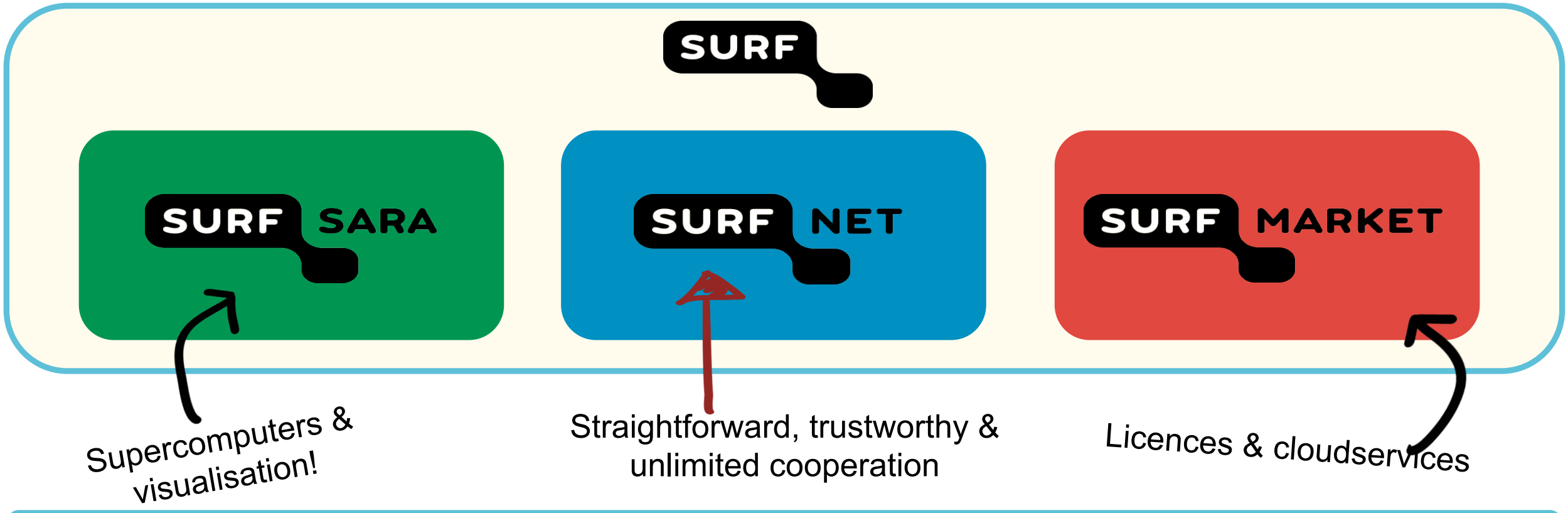
Governance on board level & Insourcing

SURF Cooperative



Purchase of services by ICT management

Three SURF daughters



How does it work: Setting SURFnet tariffs 2013 – 2016

1. Distinction in services

- Basic Set of Services: obligatory (infrastructure, every institution should use)
- Optional Service

2. Cost for Basic Set shared by all connected institutions

- Lump sum based on a cost-sharing model discussed with(in) every sector

Actual level of the connection fee determined yearly, based on cost developments

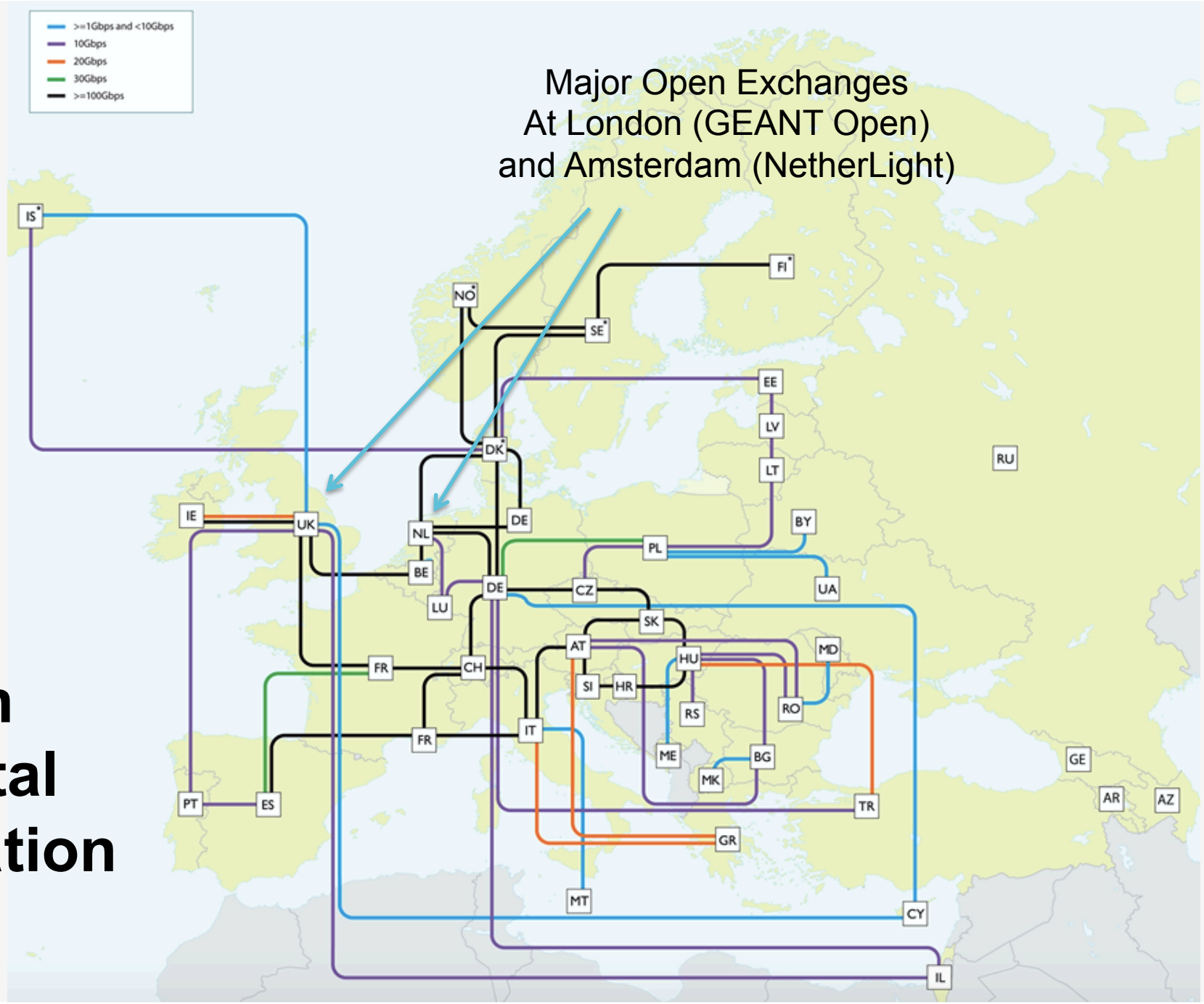
- Transparency is key
- Long term view

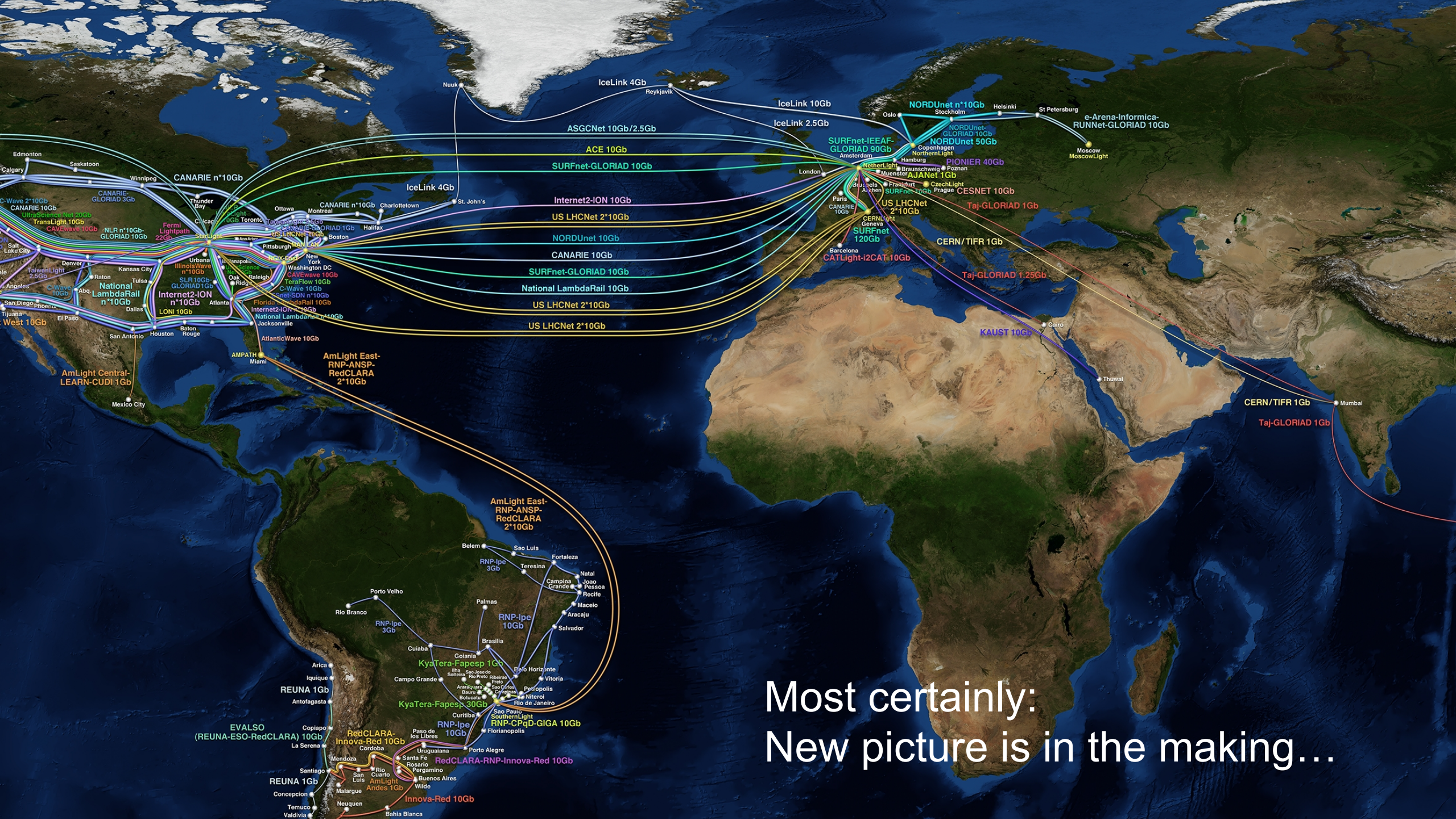
EXAMPLE SERVICES

Example 1: The Network:
Connecting to each other and the world

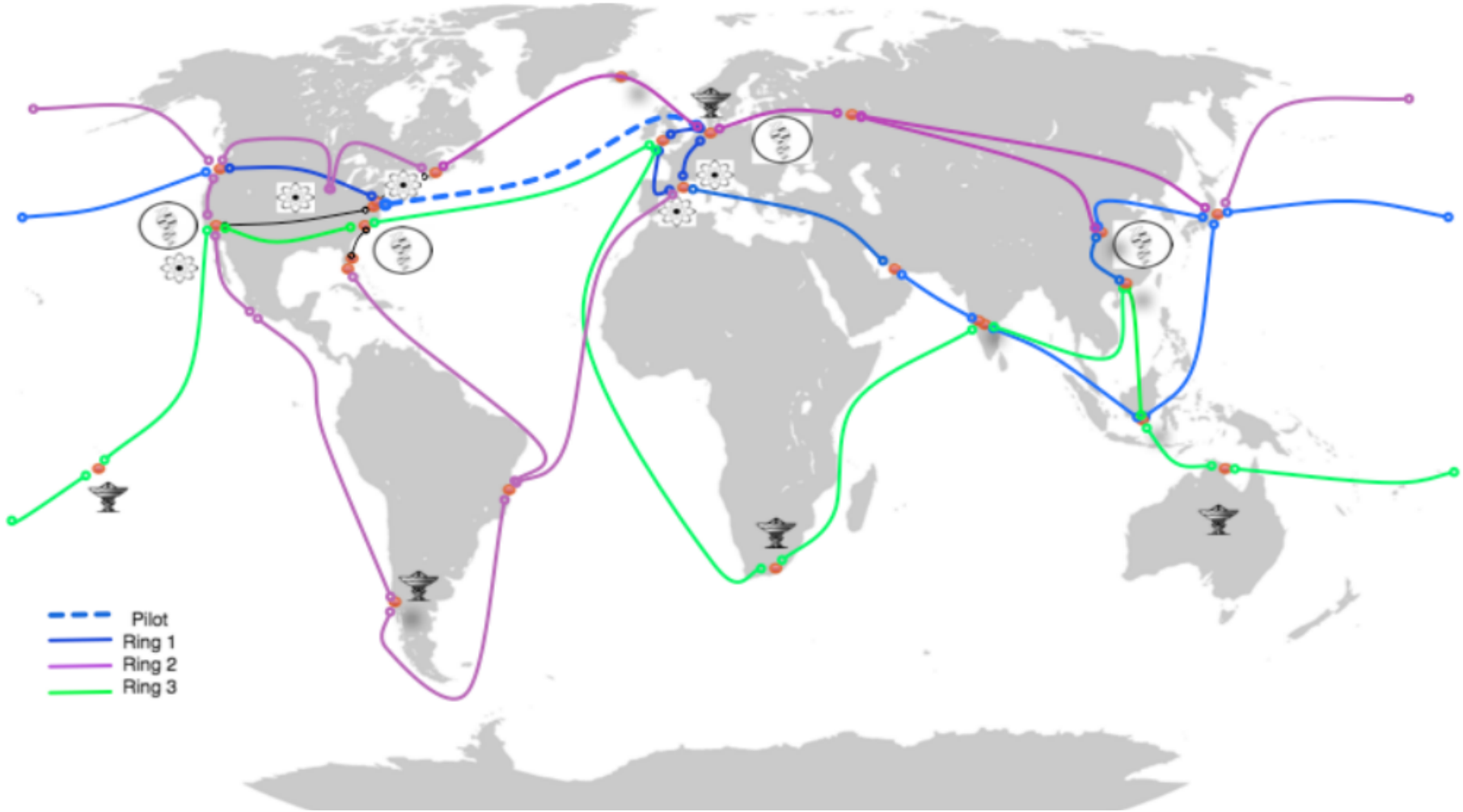
14.000 km dark fiber
IPv6 & IPv6
Lightpaths (p-to-p)
1 Gbit/s - 100 Gbit/s
NETHERLANDS
The Netherlands:
shared infrastructure
As the basis for service delivery

GÉANT: European continental collaboration

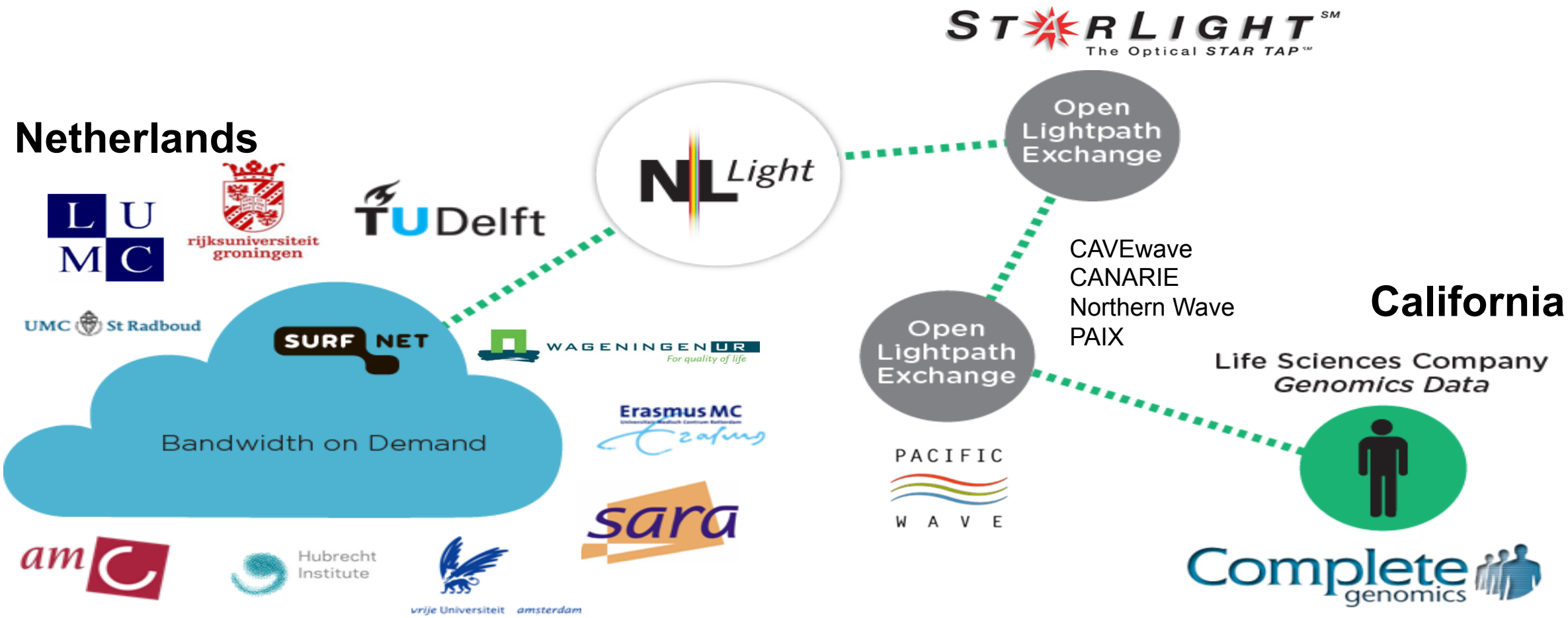



Most certainly:
New picture is in the making…

Global network collaboration: GNA



Connecting NL to Genomics Data in California



Winner of Enlighten Your Research 3 – Jan Bot

The Network: does collaboration bring value?

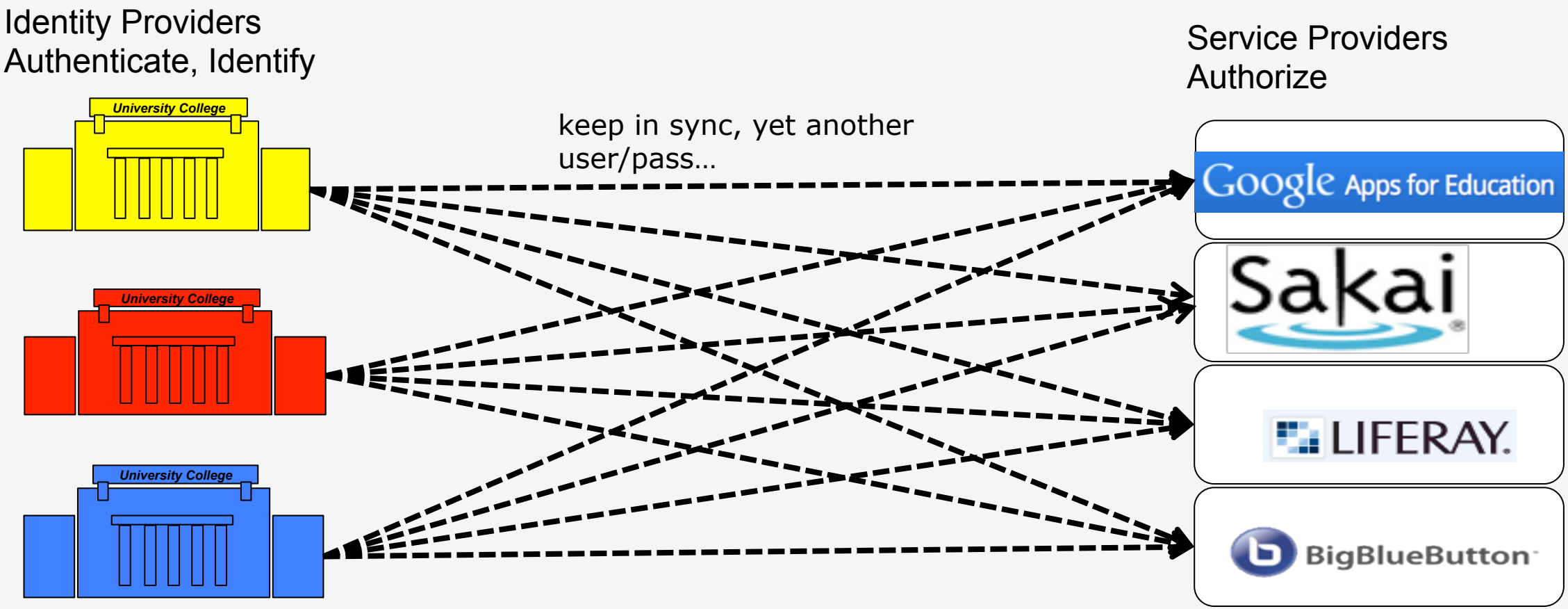
Scale

Network Effect

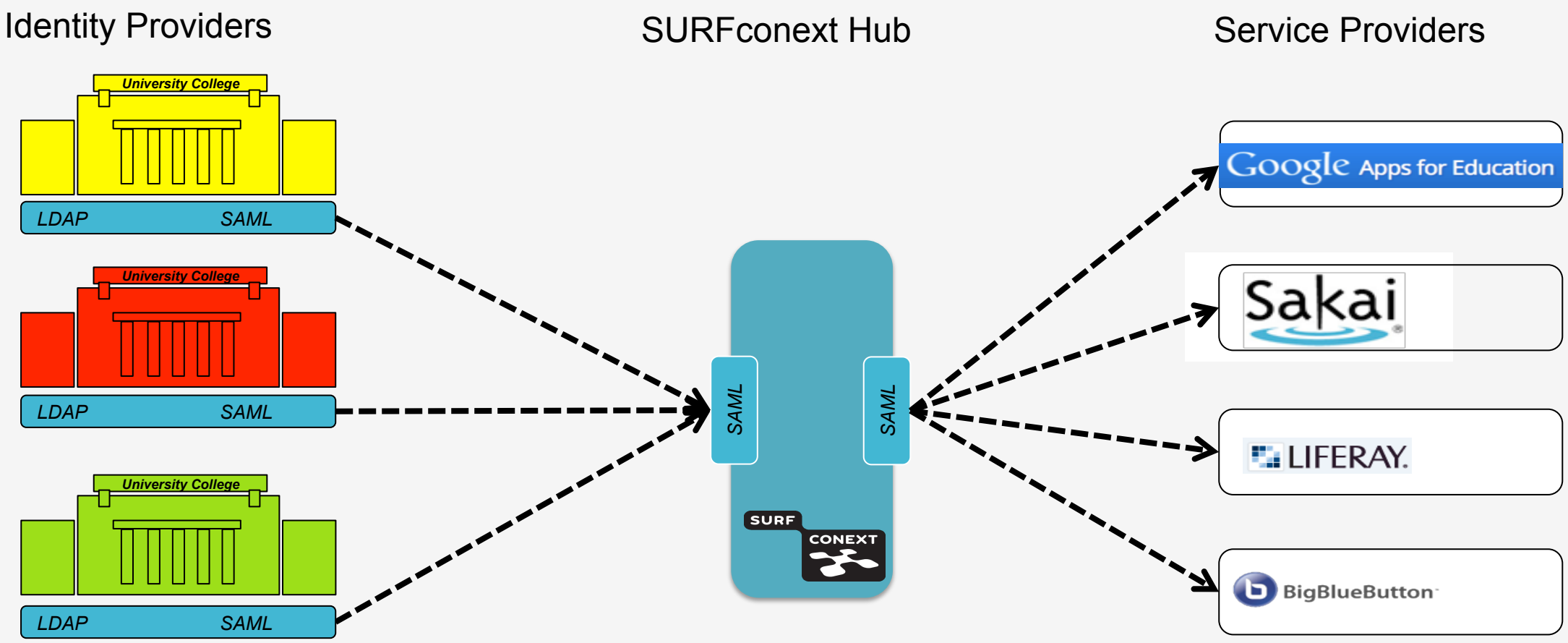
Trust

Example 2: Conext: Simplifying AAI

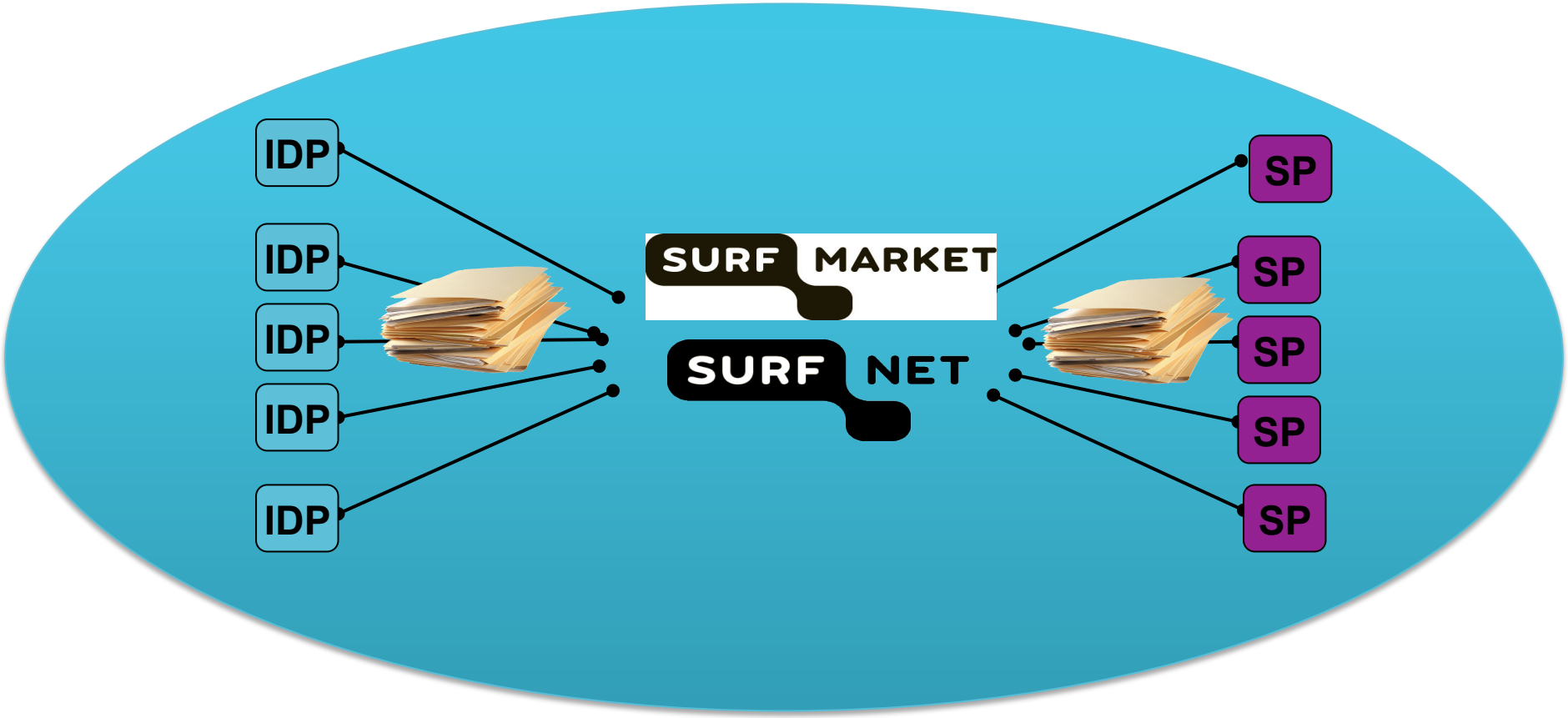
Conext: Connecting to Service Providers
A complicated mesh AAI



SURFconext: centralize, and reduce complexity



Conext: Not just technical: Contracts matter too - “Circle of Trust”



Conext: does collaboration bring value?

Scale

Network Effect

Trust

Example 3: SURFmarket: Combine Purchasing Power

IMPORTANT NOTE: SURFmarket is not a service, it is a SURF entity

SURFmarket: Licensing for Whole Education Sector

Higher Education & Research
(as of 2015 also Vocational - MBO)

450 institutions

Market penetration 98%

790,000 students & staff

Secondary & Vocational Education

835 institutions

Market penetration 98%

1,500,000 students & staff

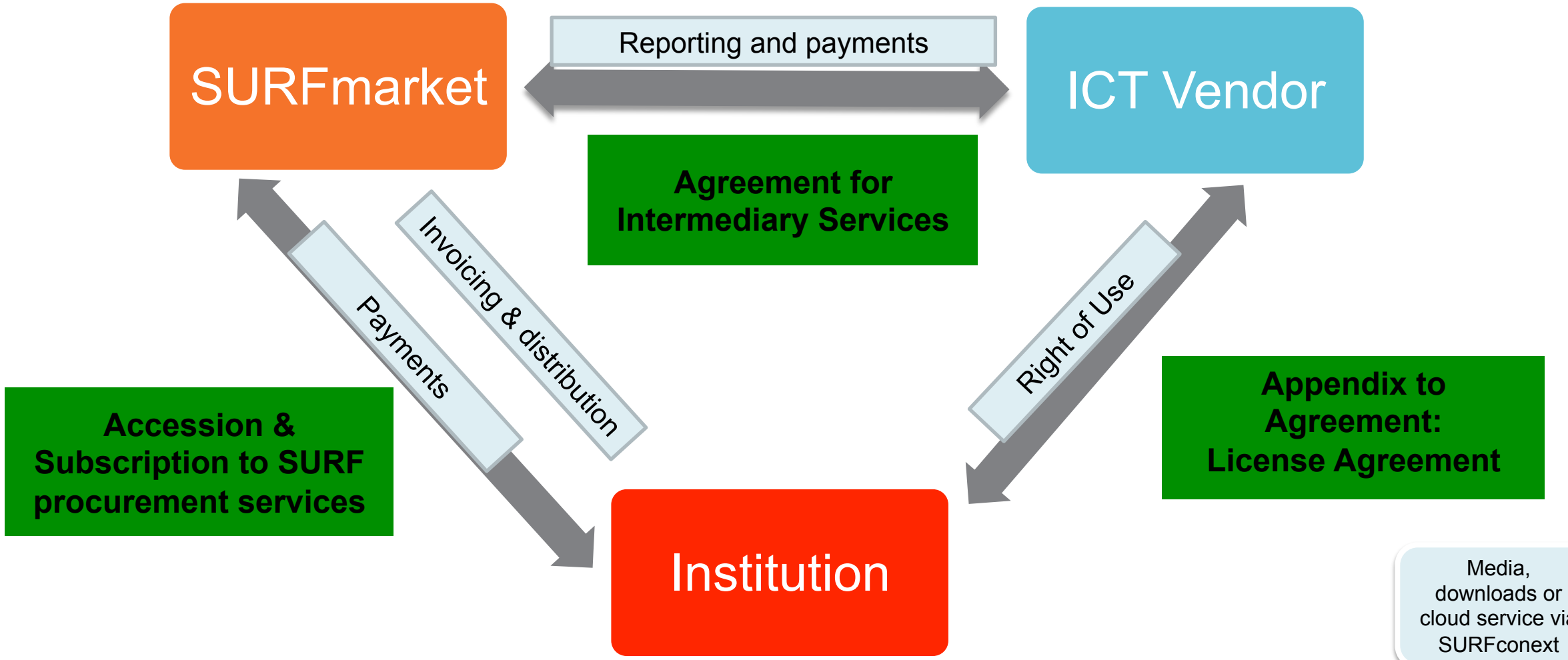
Primary & Special Education

7,800 institutions

Market penetration 98%

1,750,000 students & staff

SURFmarket: Relationships & Transactions & Agreements



SURFmarket: Portfolio: > 170 Agreements

Agreements with more than 170 different IT vendors and publishers

SURFmarket: does collaboration bring value?

Scale

Network Effect

Trust

Example 4: eduroam:
(guest) Wi-Fi everywhere

Universiteit Utrecht

eduroam

SURF NET

Universiteit van Amsterdam

University of Applied Sciences Utrecht

Harvard University

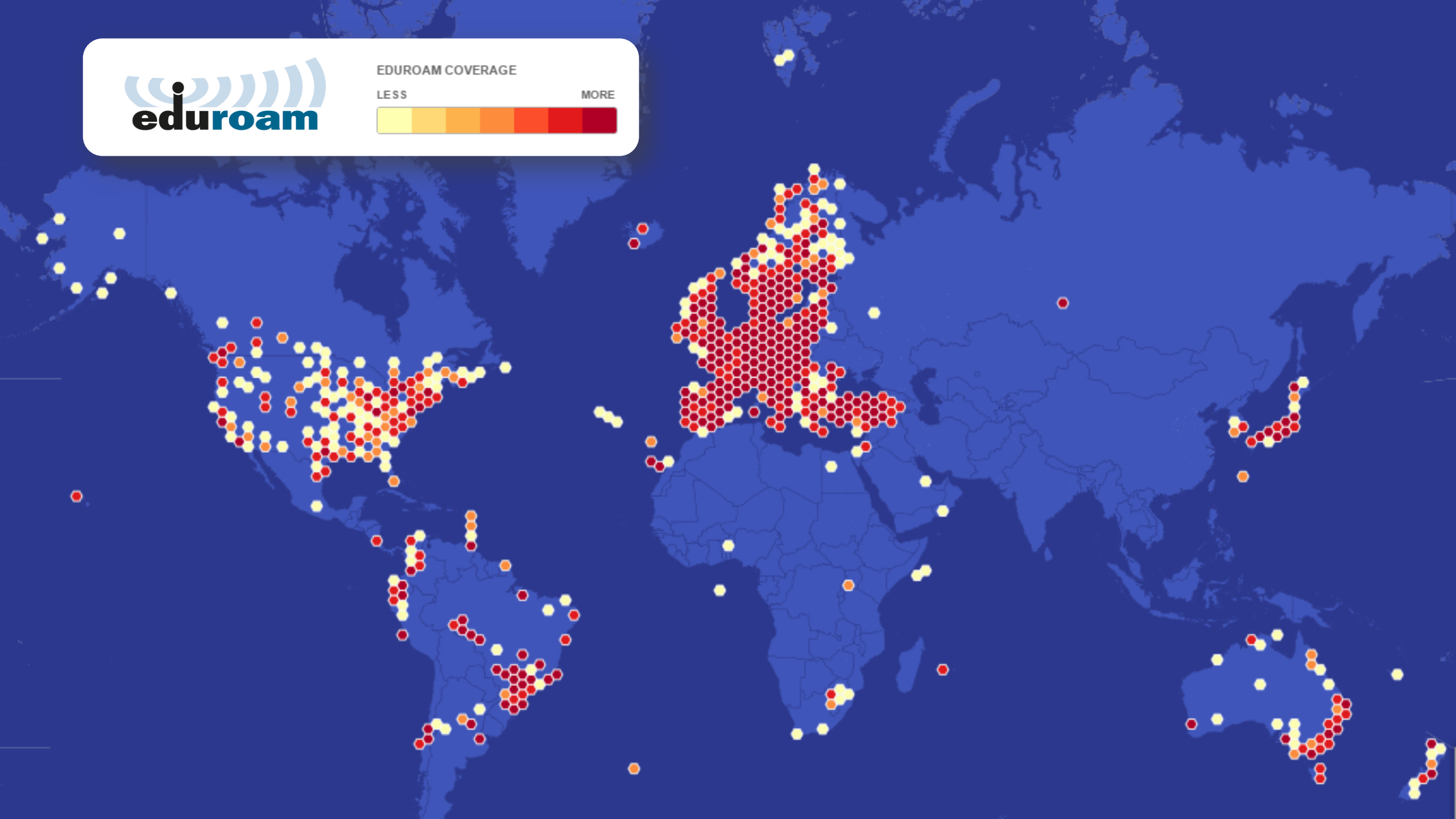
Internet ✓

Local systems X

Printers ✓

Local data X

01 sep 2015
- 750 locations in NL
- 75 countries world wide
- 12.000 locations in total


eduroam
EDUROAM COVERAGE
LESS
MORE

eduroam: does collaboration bring value?

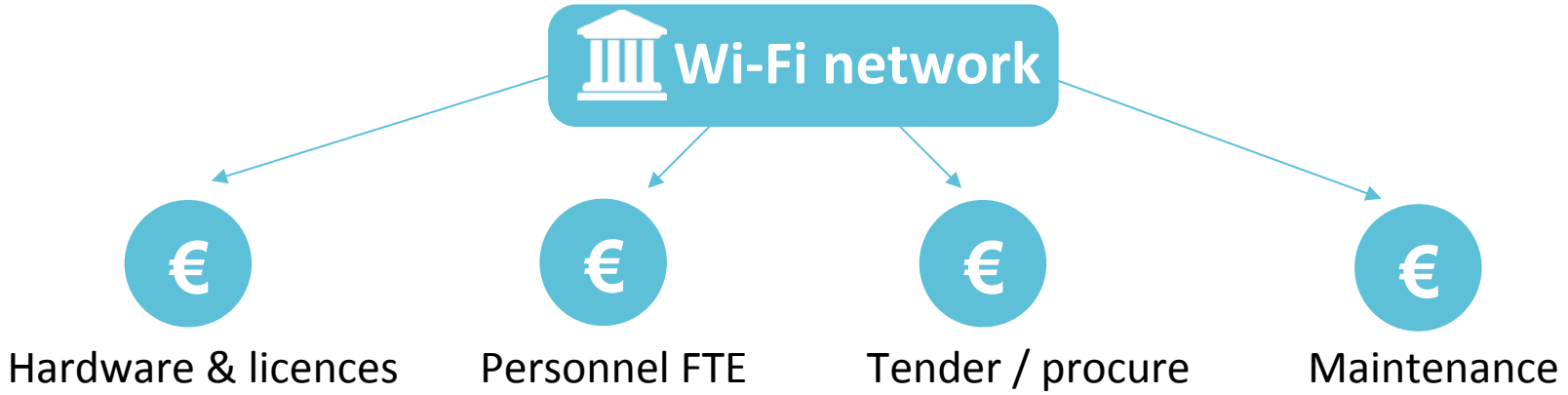
Scale

Network Effect

Trust

Example 5: SURFwireless:
Campus Wi-Fi as a (central) service

Wi-Fi at an institution



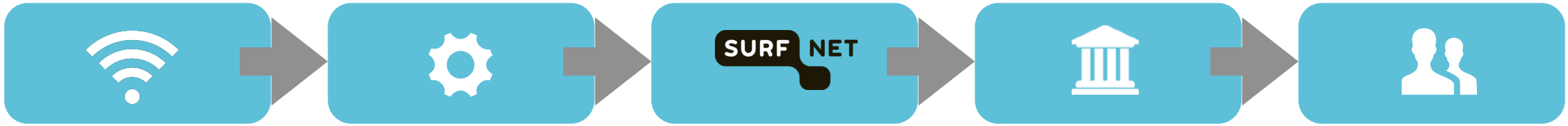
Don’t underestimate complexity and expertise involved in running Wi-FI network…

SURFwireless: a SURFnet service

Wi-Fi “hardware” supplier

SURFnet
Product Management
Procurement
Specials
Strategy

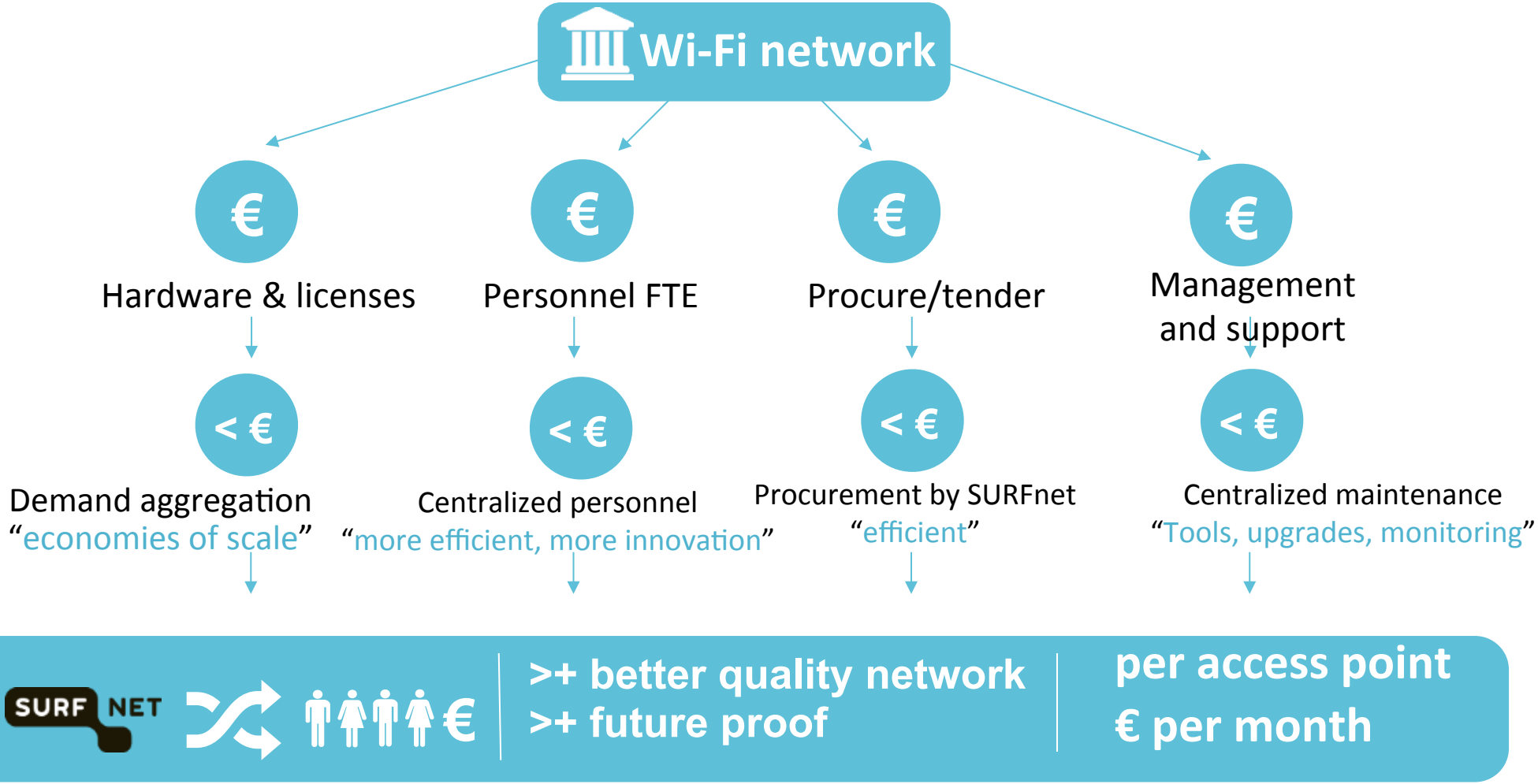
Users



Innovation and service partner
Expert
24x7 support

Institute
LAN, local helpdesk

Collaboration benefits SURFwireless: $, €, CFA – and expertise!



SURFwireless: does collaboration bring value?

Scale

Network Effect

Trust

The End of the Examples

Revisiting “A Logical Conclusion”

1. More unique, more desirable products make any enterprise relevant

2. NRENs <u>can collaborate</u> in unique ways

3. Therefore…. collaboration….
   is a brilliant way to make NRENs relevant!

And don’t forget… governance makes all the difference