

Welcome to NORDUnet

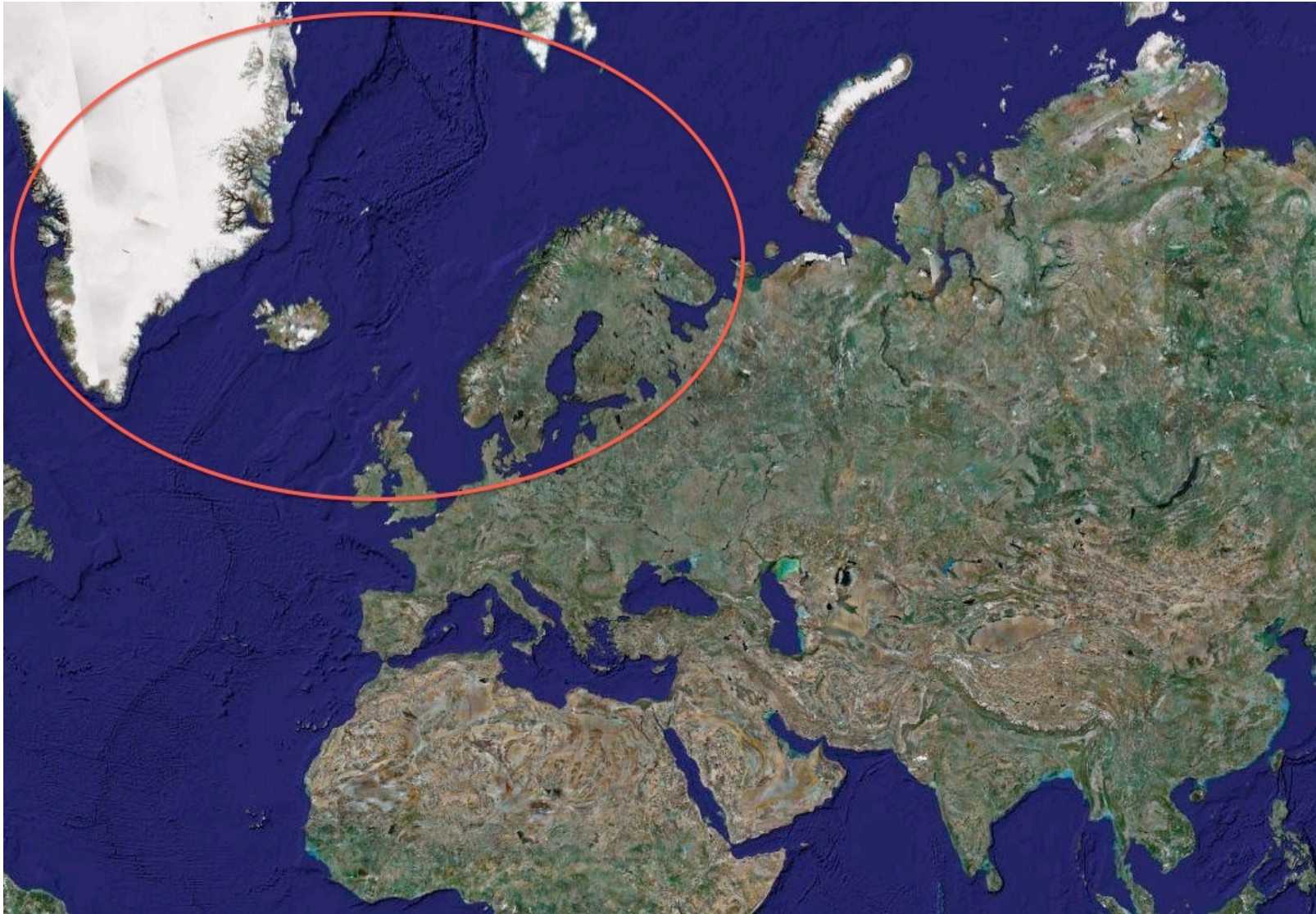
Lars Fischer

BoD Workshop

Copenhagen, 5 November 2013

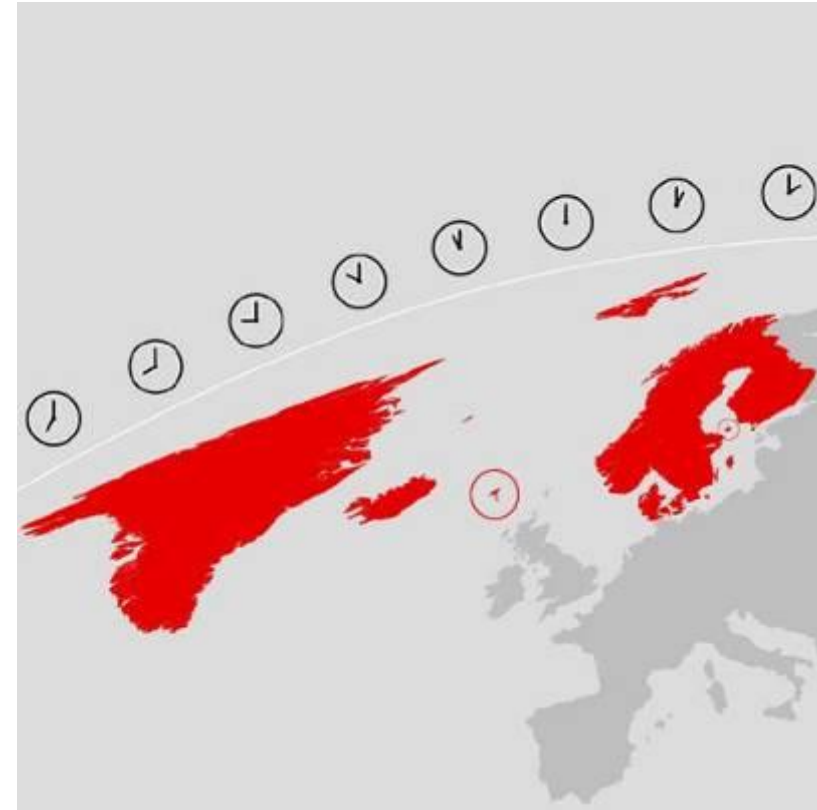




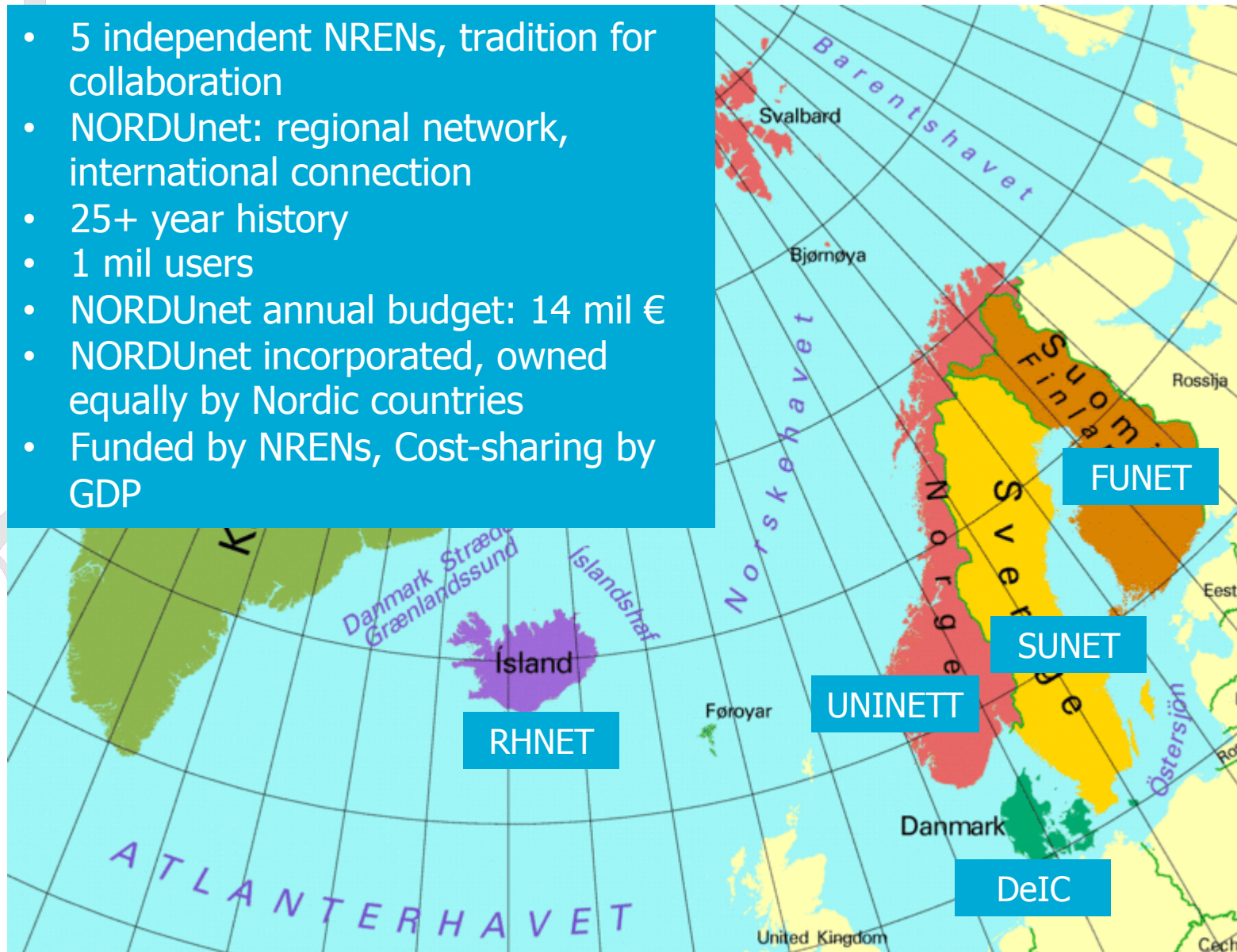


- Five small countries:
 - Denmark, Finland, Norway, Sweden, Iceland
- Three autonomous areas:
 - Faroe Islands, Greenland, Åland
- 8 time zones
- 25 mill people
- 9 official languages
- Shared history, culture

- Together, the worlds 7th largest economy

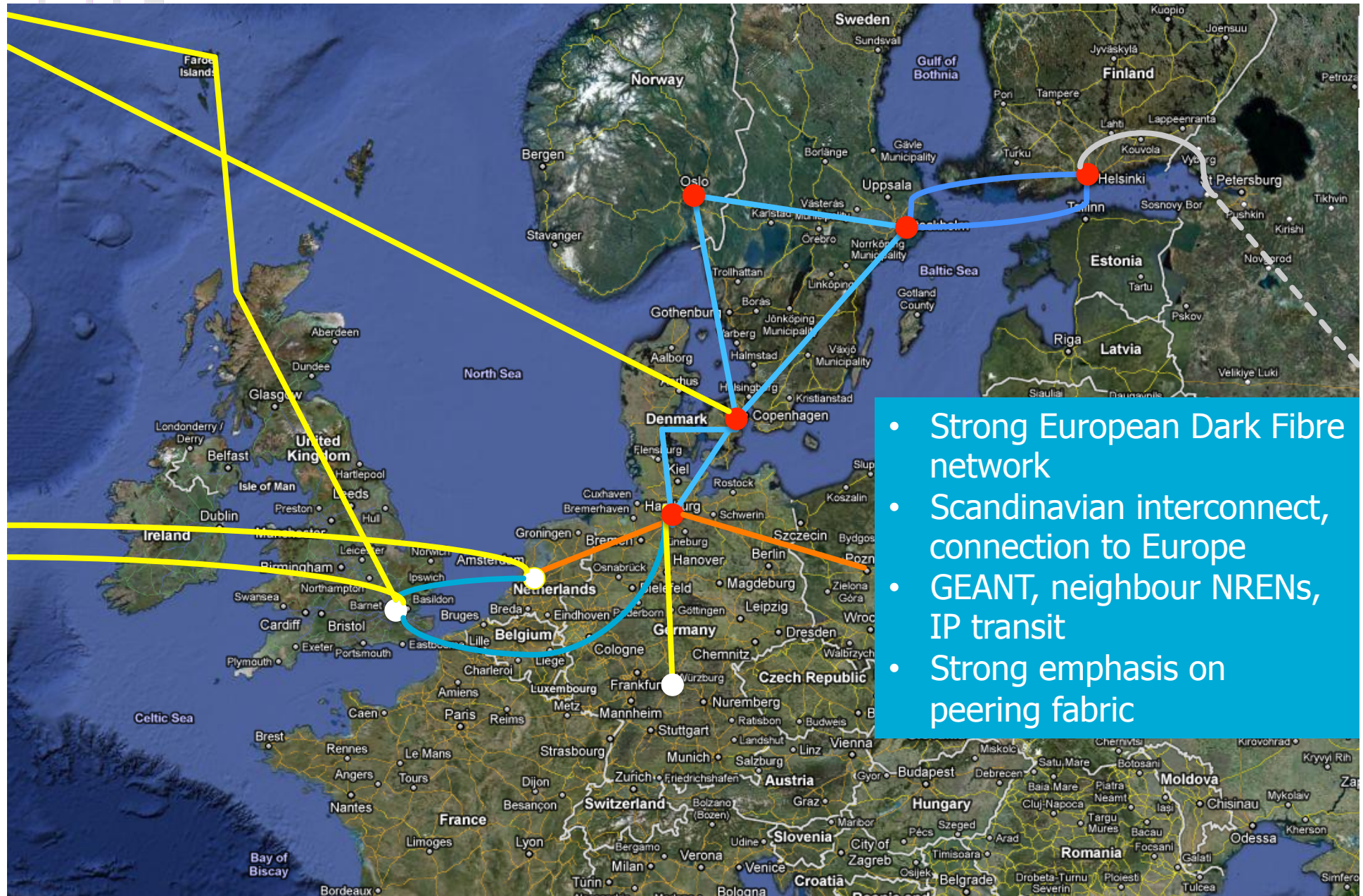


- 5 independent NRENs, tradition for collaboration
- NORDUnet: regional network, international connection
- 25+ year history
- 1 mil users
- NORDUnet annual budget: 14 mil €
- NORDUnet incorporated, owned equally by Nordic countries
- Funded by NRENs, Cost-sharing by GDP

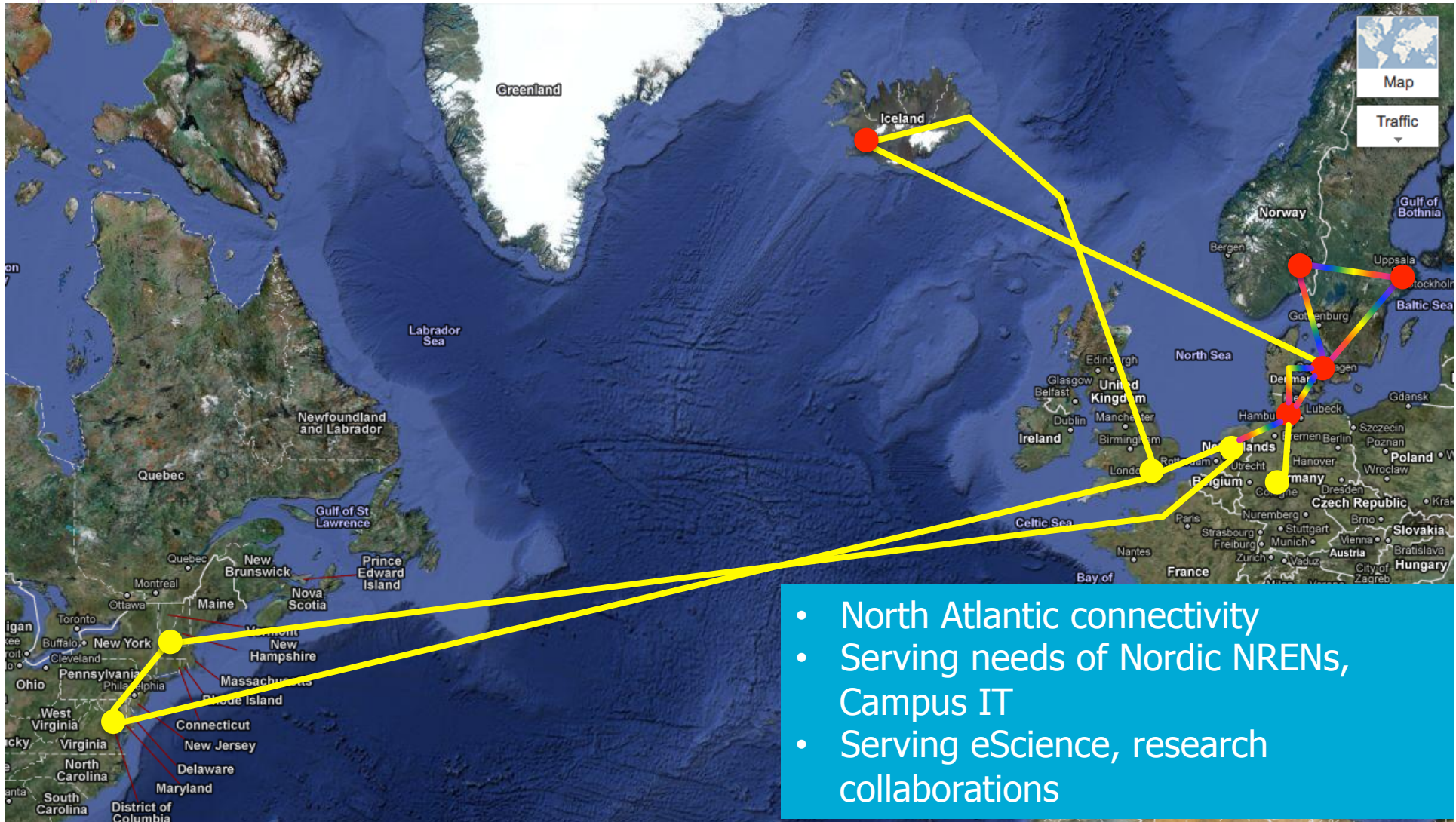




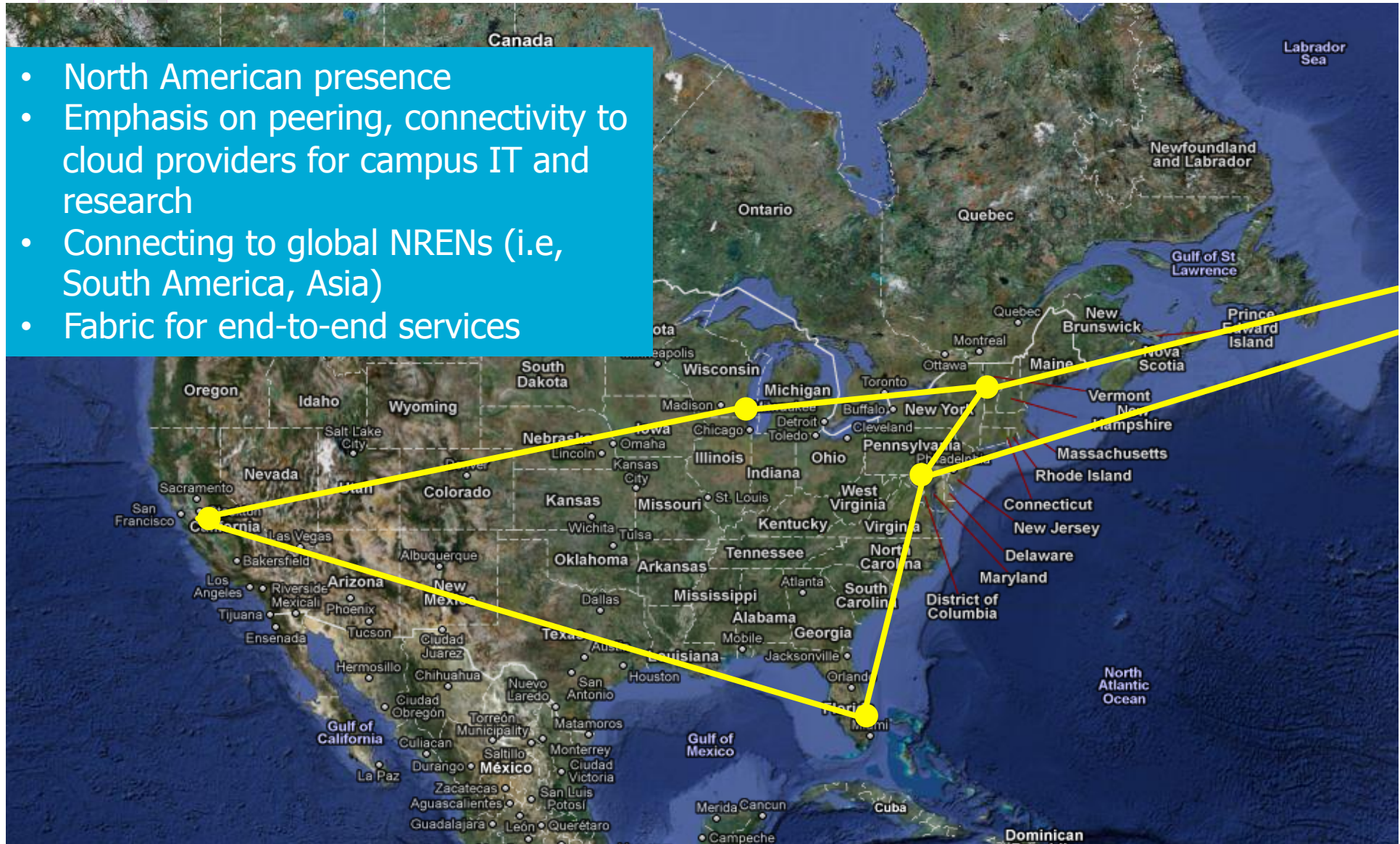
- NORDUnet & Nordic NRENs are
 - a strong global partner
 - a strong partner in European networking
 - a major contributor to GÉANT – 3rd largest contributor of man-hours in GN3 and GN3+
- NORDUnet firmly
 - believe in and support a strong European infrastructure
 - understand that world-class European networking is essential to Nordic R&E
 - believe that through regional collaboration we offer the best support for European networking – for the benefit of all



- Strong European Dark Fibre network
- Scandinavian interconnect, connection to Europe
- GEANT, neighbour NRENs, IP transit
- Strong emphasis on peering fabric

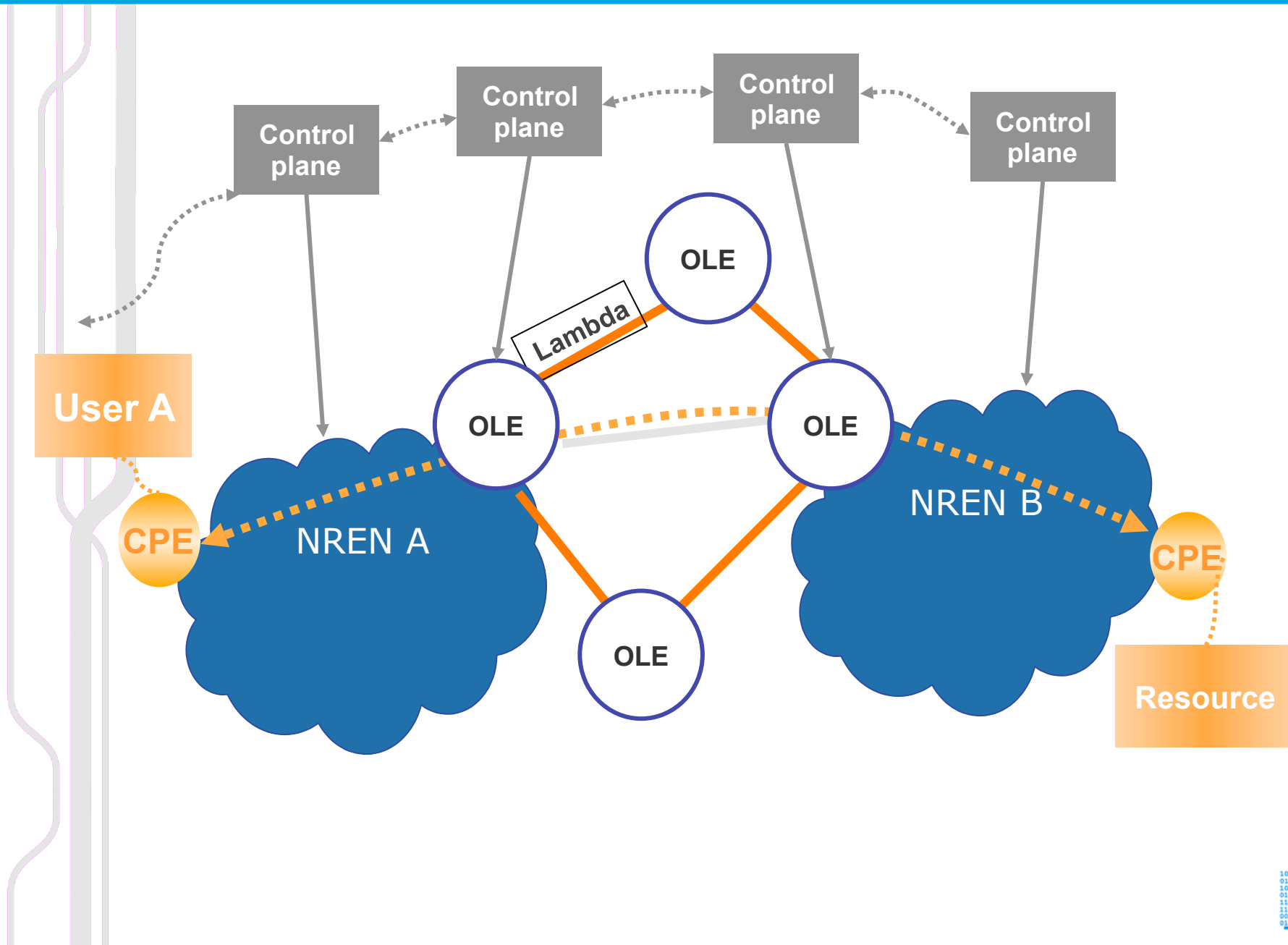


- North American presence
- Emphasis on peering, connectivity to cloud providers for campus IT and research
- Connecting to global NRENs (i.e, South America, Asia)
- Fabric for end-to-end services



- Optical networks
- OLE-by-OLE circuit routing
- Global networking for global science



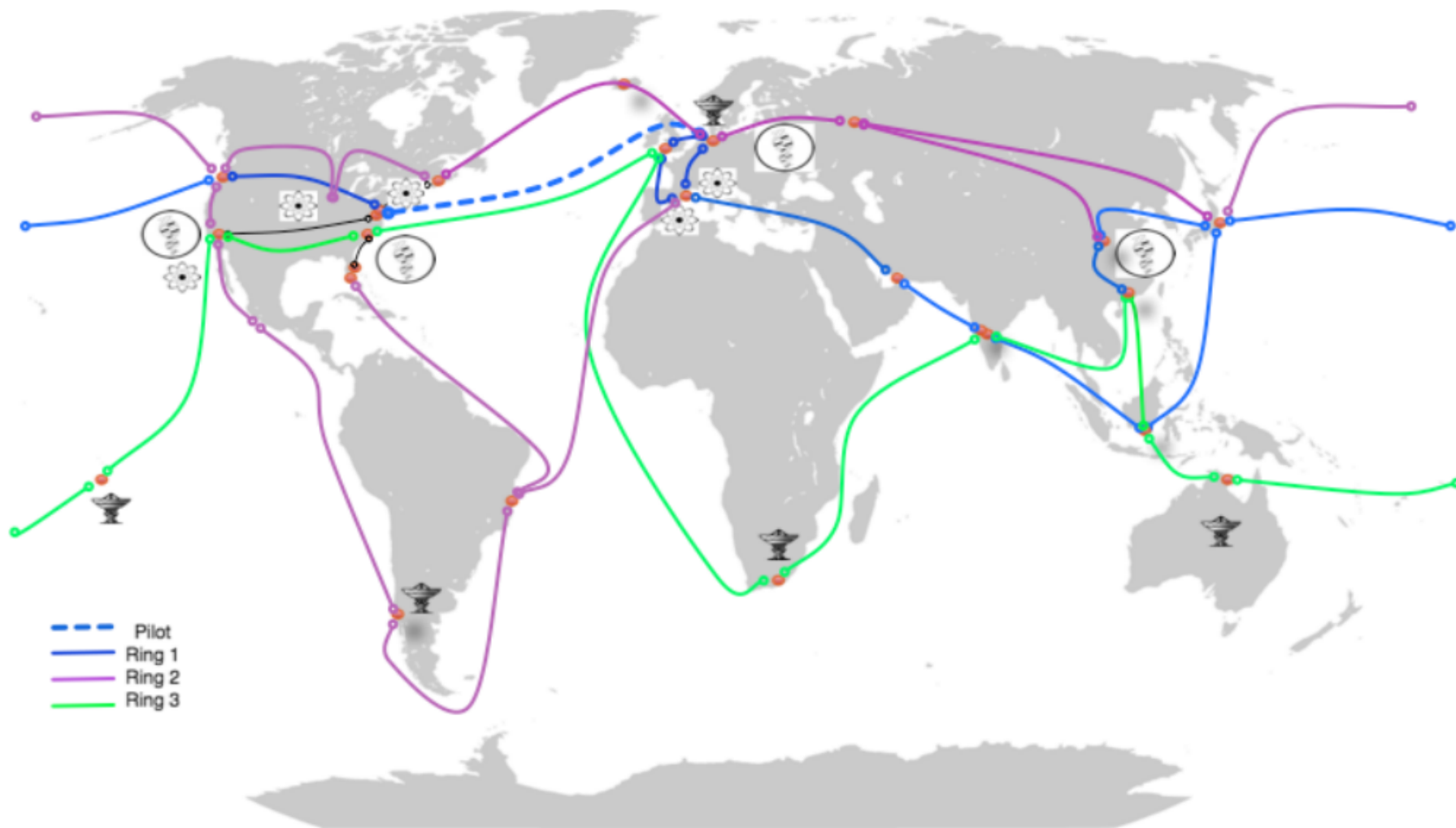


- Dynamic
- Standards
- Inter-op



- Changing the game!
 - ... like hybrid networking 10 years ago
- New opportunities
 - Technology
 - ... and services
- Demand
 - New ways to organize collaborations
 - New partnerships
 - New business models





- Consider
 - Transport ✓
 - Cross-connect ✓
 - Topology Exchange
 - Performance Verification for end-to-end
 - Service Level management
 - Link Policy management
 - Identity Management
 - Virtualization
 - OLE service architecture
 - Security
- So, no – much to do

- NORDUnet is committed to
 - BoD service over production facility
 - NSI v2.0
 - OpenNSA
 - European, global inter-operation
- Putting the pieces together
 - BoD service architect
 - Resource commitment 2013-2018
 - Deployment
 - Develop and maintain OpenNSA
 - Developing missing pieces
- Targeting first half 2014 for initial deployment

Thank You

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