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Nordic Gateway for Research & Education

The World of R&E Networking

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Global R&E Networks

- Since the 1980's, countries and regions around the world have created R&E networks
- In general, each country has a single *NREN*, with national funding and governance, serving all institutions located in that country
- NRENs jointly fund and connect to regional and global transit networks, thus forming a single, global R&E network infrastructure

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Benefits of R&E Networks

- R&E networks offer global connectivity, for anyone, anywhere, any time
- R&E networks connect all users, at universities and research institutions
- R&E networks connect scientific instruments, everywhere
- Once a user or instrument is connected locally, global access is ensured

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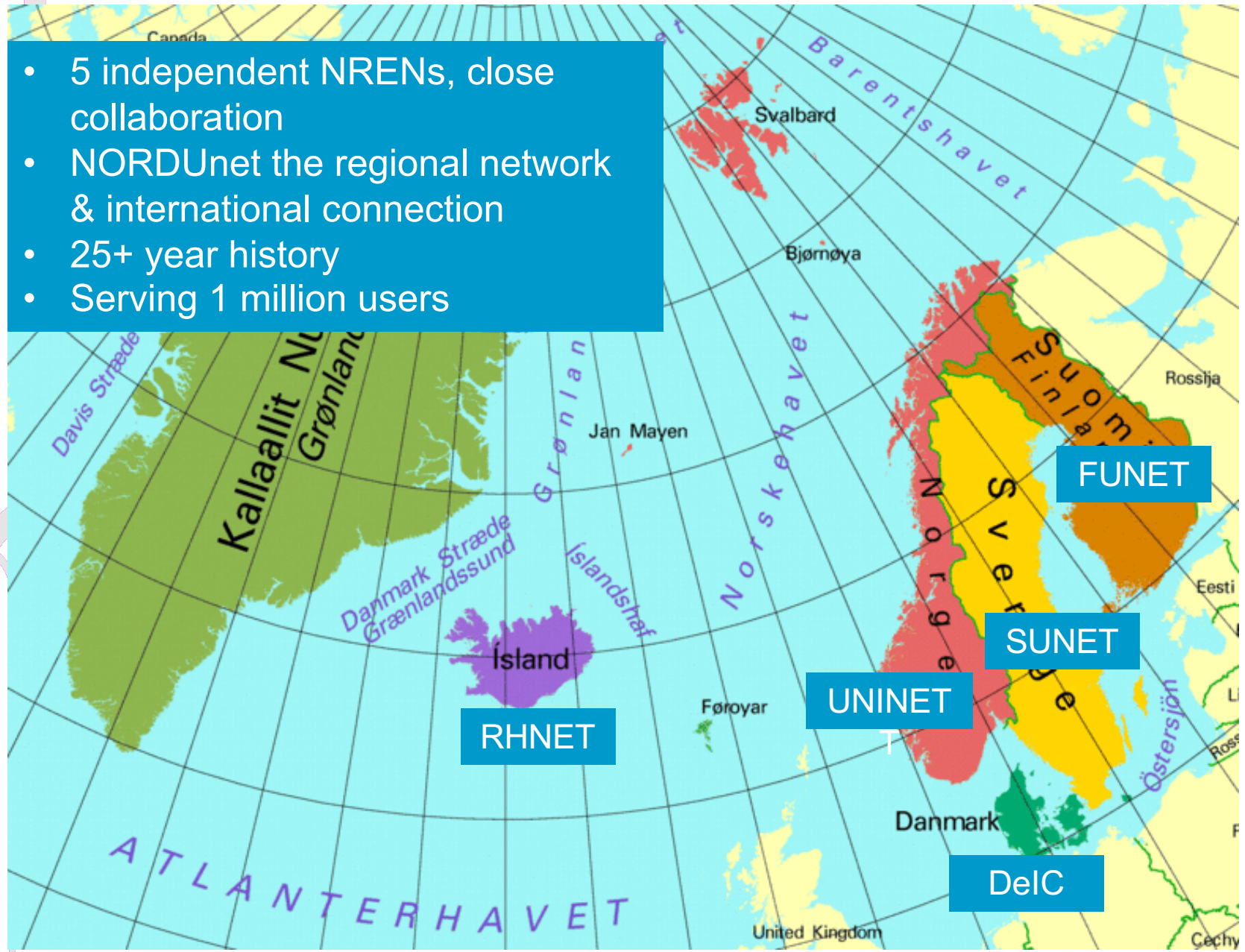
Nordic NRENs

- 5 independent NRENs, close collaboration
- NORDUnet the regional network & international connection
- 25+ year history
- Serving 1 million users



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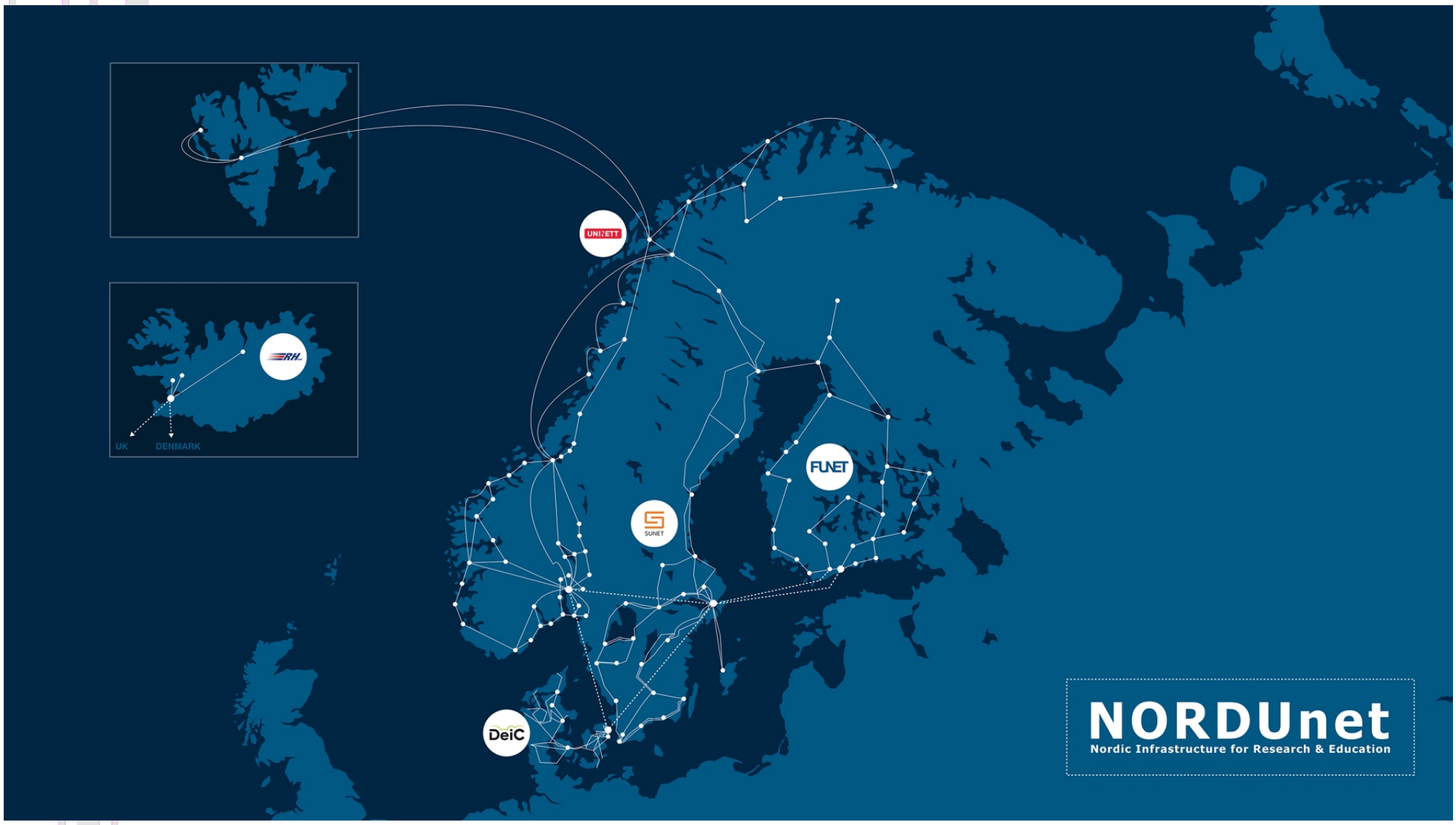
Nordic R&E Networks



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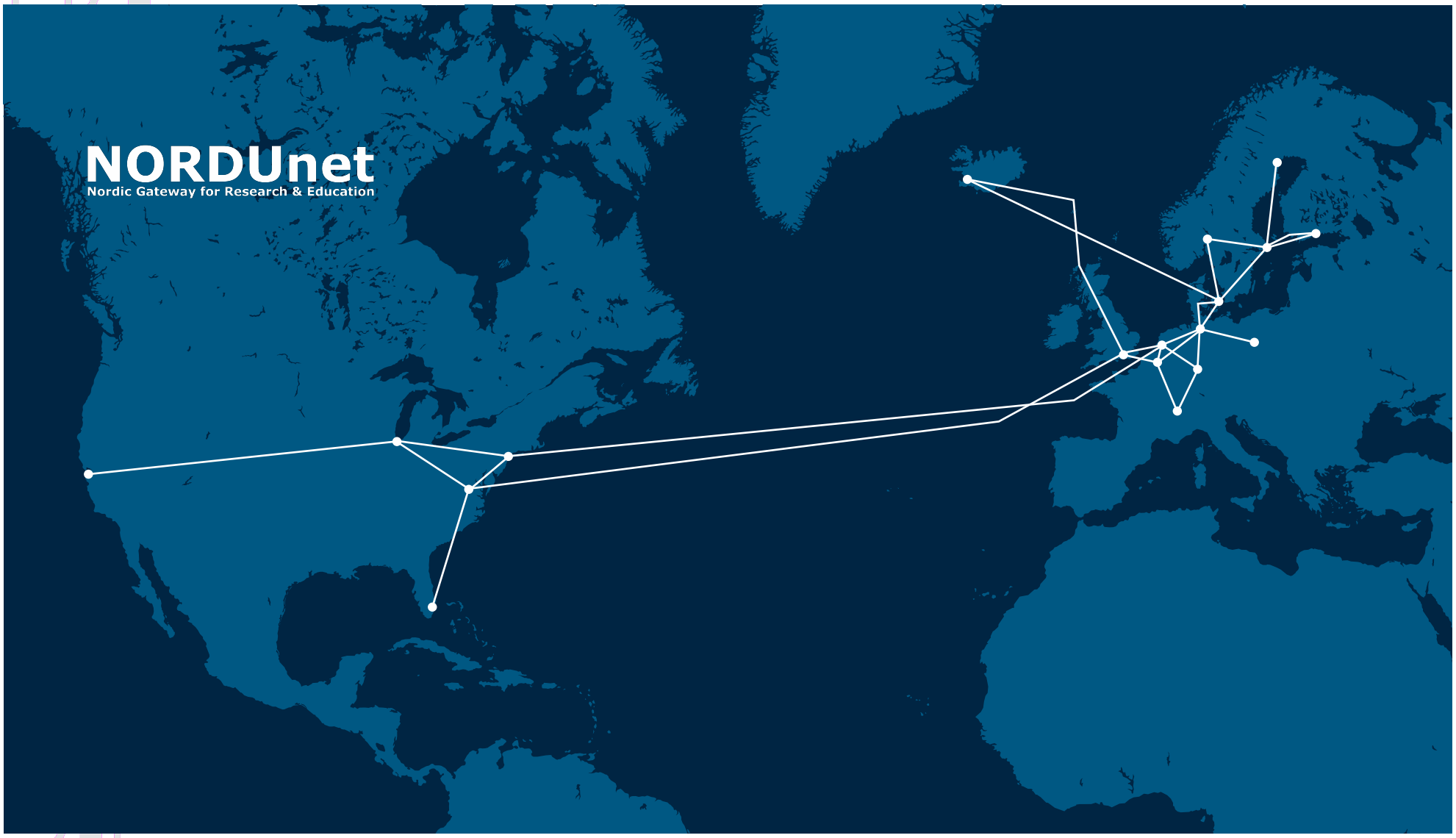
NORDUnet transit network



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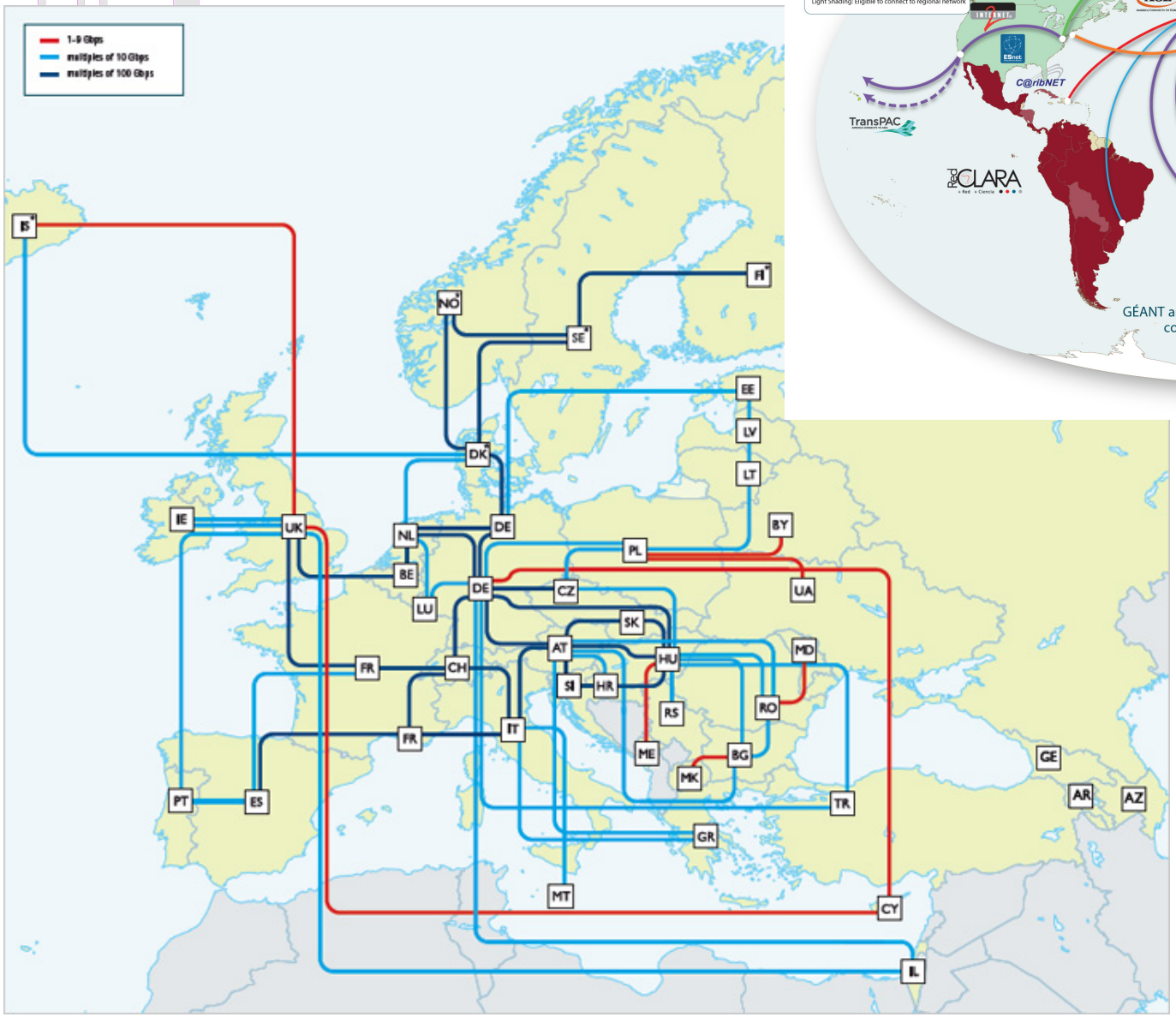
GÉANT – European Transit



Connecting to R&E Networks

- If you're connected to an NREN, you're connected to the global R&E network infrastructure
- In the Nordic countries, SUNET, DeIC, FUNET, UNINETT, RHnet serve all institutions in their respective countries
- They in turn ensure connections to NORDUnet, GÉANT, and all other R&E networks globally

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Øresund Region

- Resilient optical systems
- Fibre-based local tails in DK and SE
- ESS end-2-end based on 50 GHz spectrum or 100 Gbps optical
- 10 Gbps or 100 Gbps uplinks

SUNET optical
NORDUnet optical
Local tail fibre