

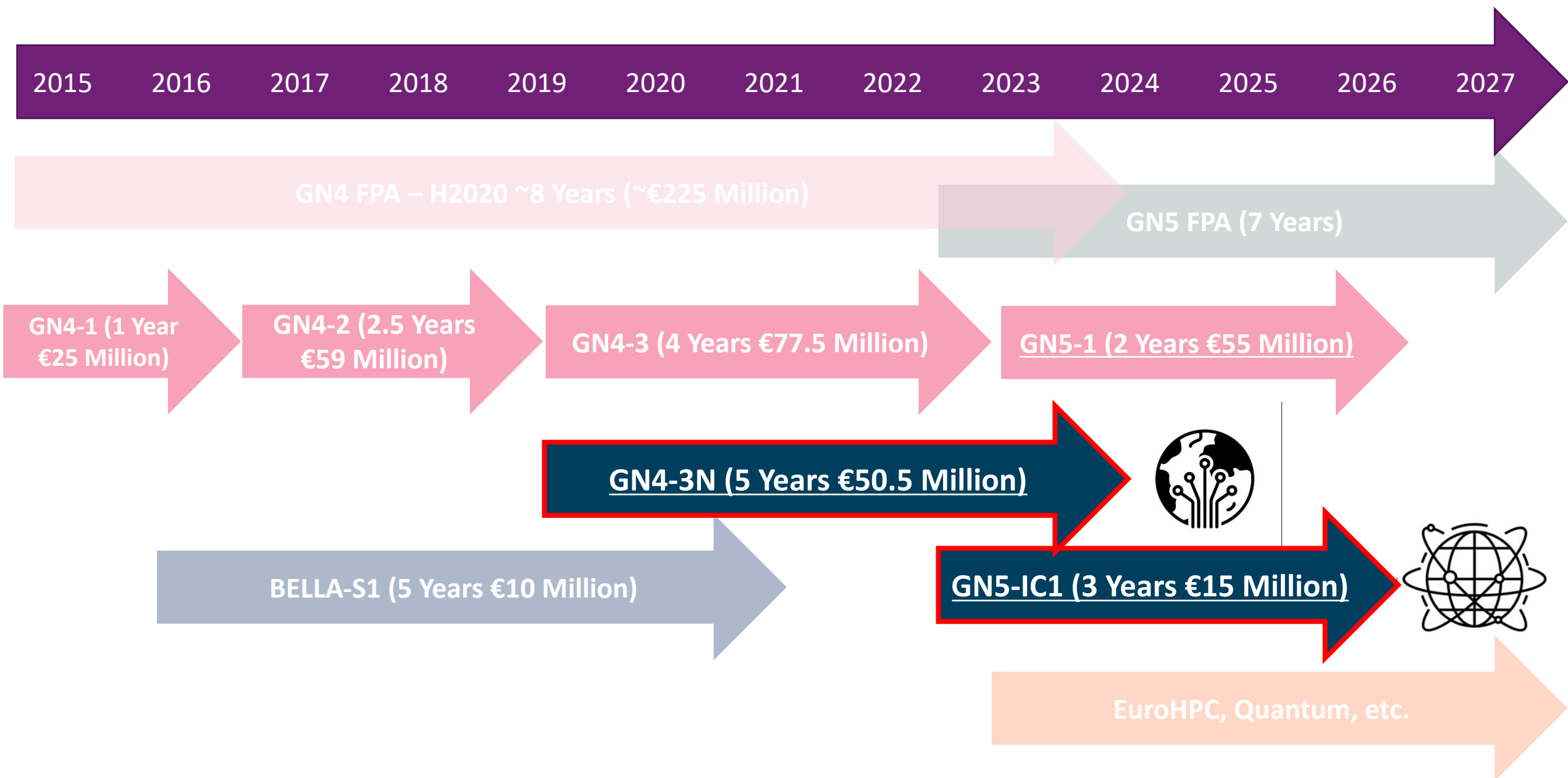


GN5-IC1 Intercontinental connectivity project overview

SIG-NGN – Prague

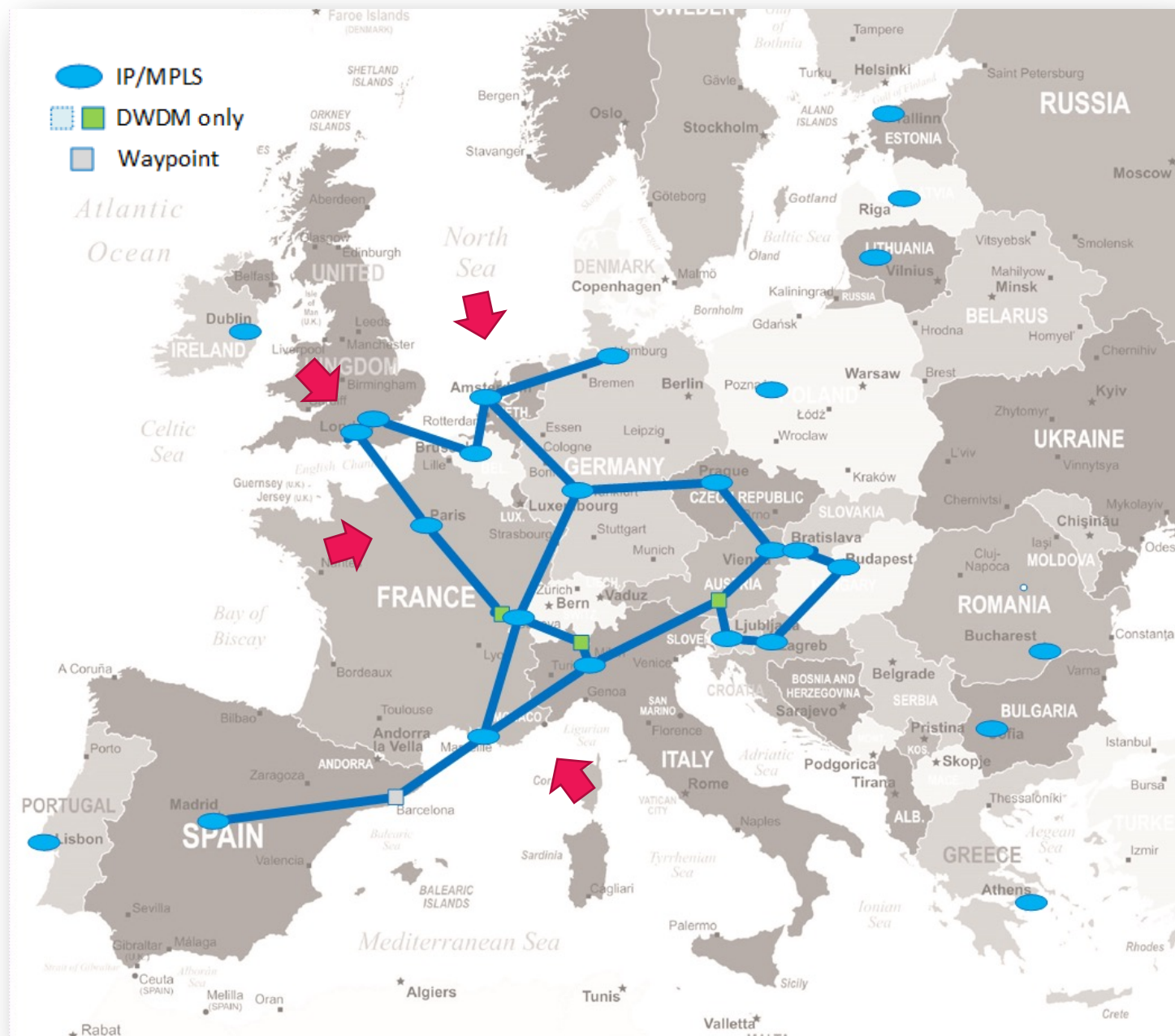
Sebastiano Buscaglione, Senior Network Architect @ GÉANT

20th April 2023



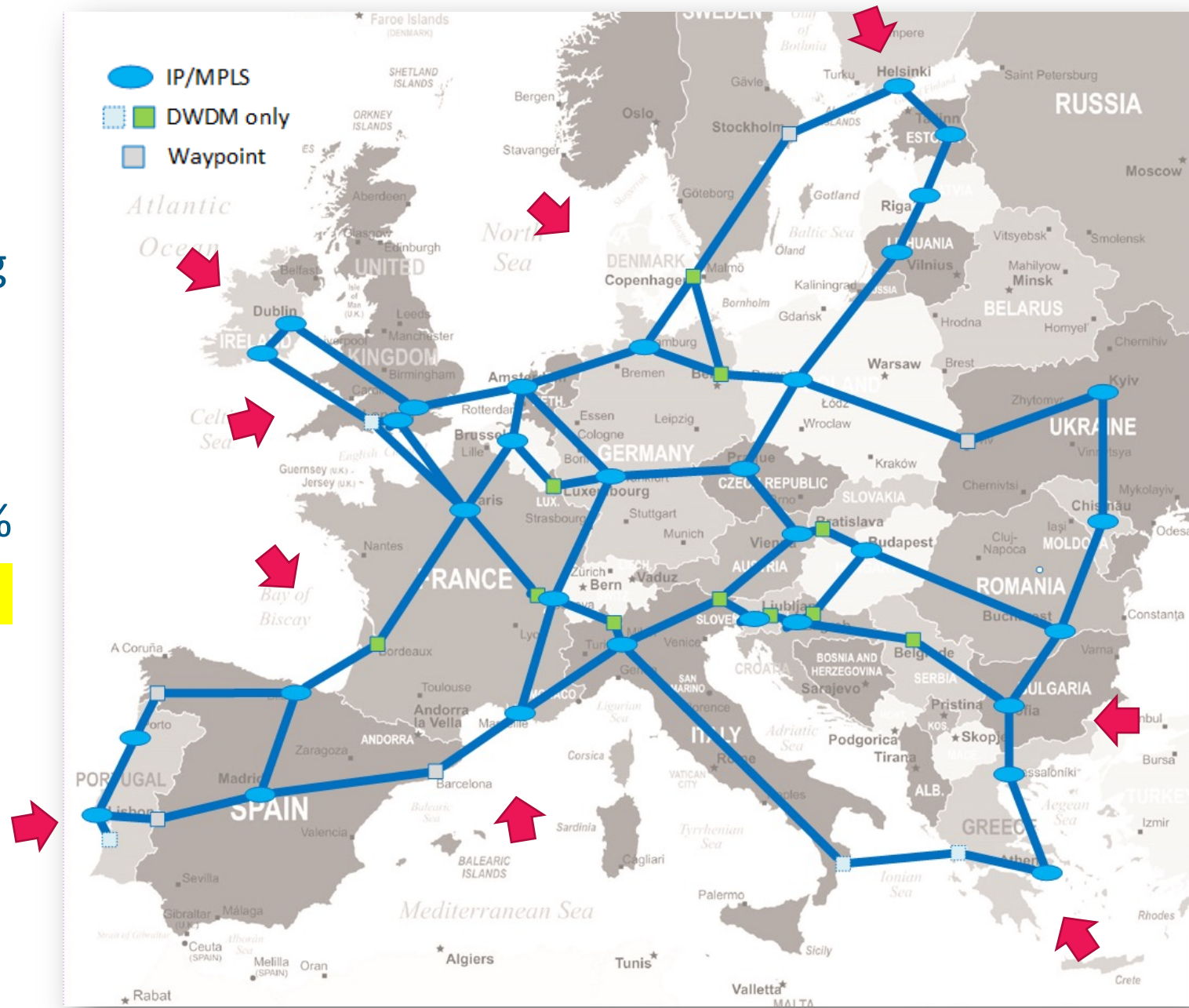
GÉANT Topology 2018

- Fibre/Spectrum footprint covering 14 countries
- Fibre/Spectrum lease contracts of 7 years
- Rest connected by leased capacity
- **Links to other world regions landing at Fibre connected nodes only**



GÉANT Topology 2023

- Fibre/Spectrum footprint covering 30 countries (2 as EAP)
- Fibre/Spectrum IRU contracts of 15+ years
- OPEX cost reduction vs 2018 >40%
- **High-capacity at low cost to most main intercontinental connectivity gateways**



GN5 - Intercontinental Connectivity 1

Starting 1st December 2022 - **3 years project - €15M CAPEX funding (~13M Connectivity)**

Main Objectives:

Procurement of long-term connectivity (IRU) to at least 2 world regions

Produce a long-term Intercontinental connectivity investment plan

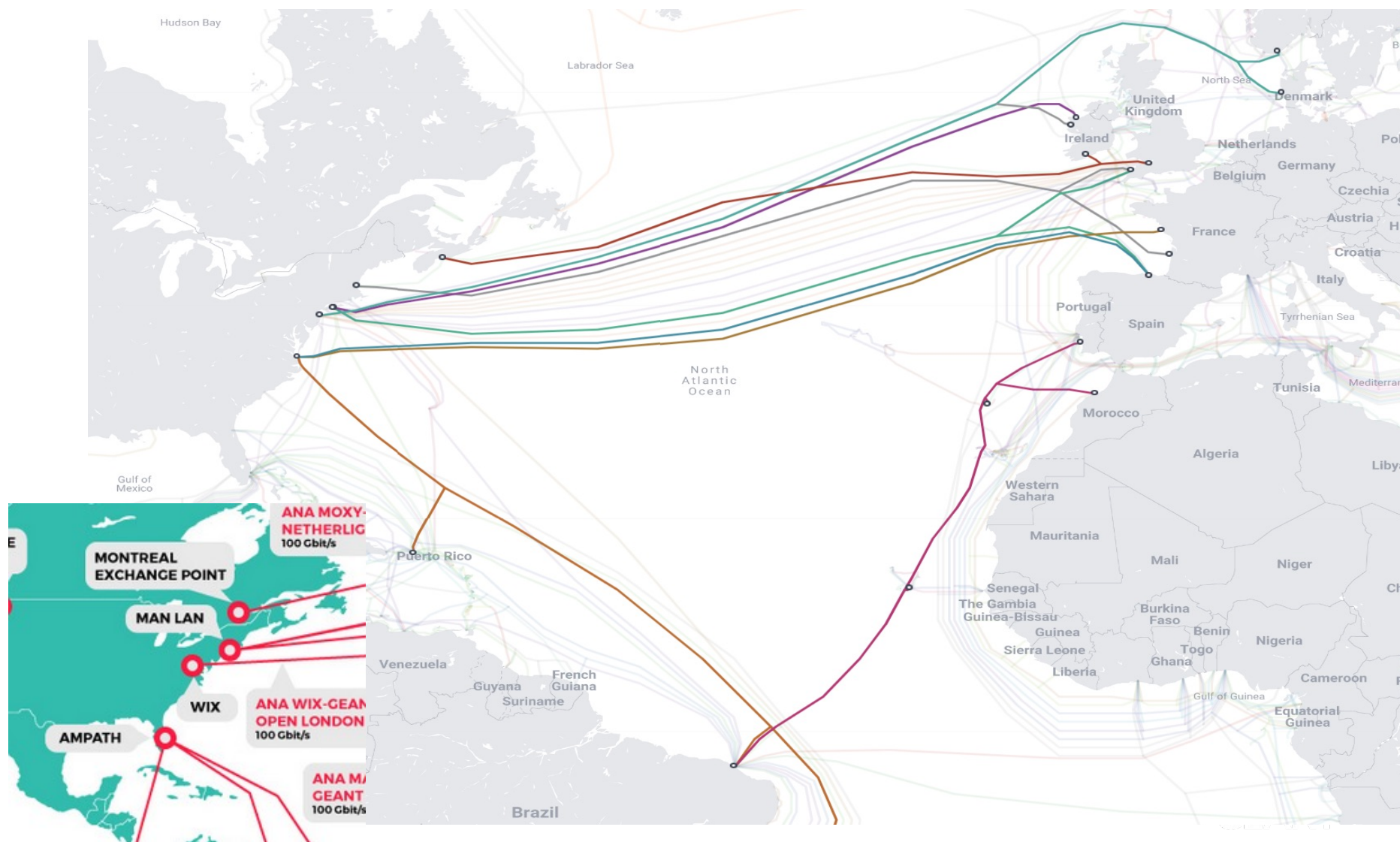
GN5-IC1 – Connectivity

- World regions selected as **(South-East) Asia and North America**
 - Between the two **covering over 95% of GEANT intercontinental traffic**
- Investment to be at **7 years IRU capacity as minimum preferably Spectrum**
 - **South East Asia – 7y 100G IRU to Singapore** via AAE-1 (Singaren Open Exchange) /COMPLETED
 - Resilient and increased connectivity to main South East Asian Hub where we can meet main regional players
 - **North America – up to 30% share of a Fibre pair (~6Tbps) 15y IRU on 1 or 2 cable systems** /WORK IN PROGRESS – Market engagement stage, next step ITW in May
 - Significant capacity increase and step toward goal of **4x terabit scale links to NA by 2027** (with partners)
 - Coordinating with regional R&E partners

North America – systems and landing points

Less than 10y old:

- AEC-1
- AEC-2 / Havfrue
- AEC-3 / Amitie
- BRUSA
- Dunant
- EXA Express
- Grace Hopper
- MAREA
-
- Monet



GN5-IC1 – Long term intercontinental capacity and investment plan

- **Work with Stakeholders (NRENs, NIAC, EC, Users...) and partners to define a plan to drive intercontinental connectivity infrastructure investment**
 - Define and agree with stakeholders on **principles for investment**
 - **Coordinate infrastructure investment activities** from various GEANT led projects
 - Engage and **coordinate with all working groups already dealing with global REN** connectivity (ANA, GNA...) and international partners to ensure optimized deployment and utilisation of resources
 - **Engage with market and funding bodies for awareness of opportunities and ability to leverage them**



Thank You

Any questions?

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