



**International
Networks**
at Indiana University

What We Talk About When We Talk About the GREN

NDN26

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RENs at Scale

- Campus Networks (University or Research Institution)
- State or Provincial RENs (REN Organization)
- National RENs (NREN Organization)
- Regional RENs (RREN Organization)
- Global REN (?)



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A Global Research and Education Network?

- **Global Systems**

- ANA
- APOnet
- AER
- Amlight
- Others

- **Coordination and Community**

- GNA-G
- LHCONe
- GRP
- CEO/Leadership Forums



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ANA

4+ Tbps in support of Research and Education



KREONET

SURF/
NORDUnet/
CANARIE

SINET

NEA3R

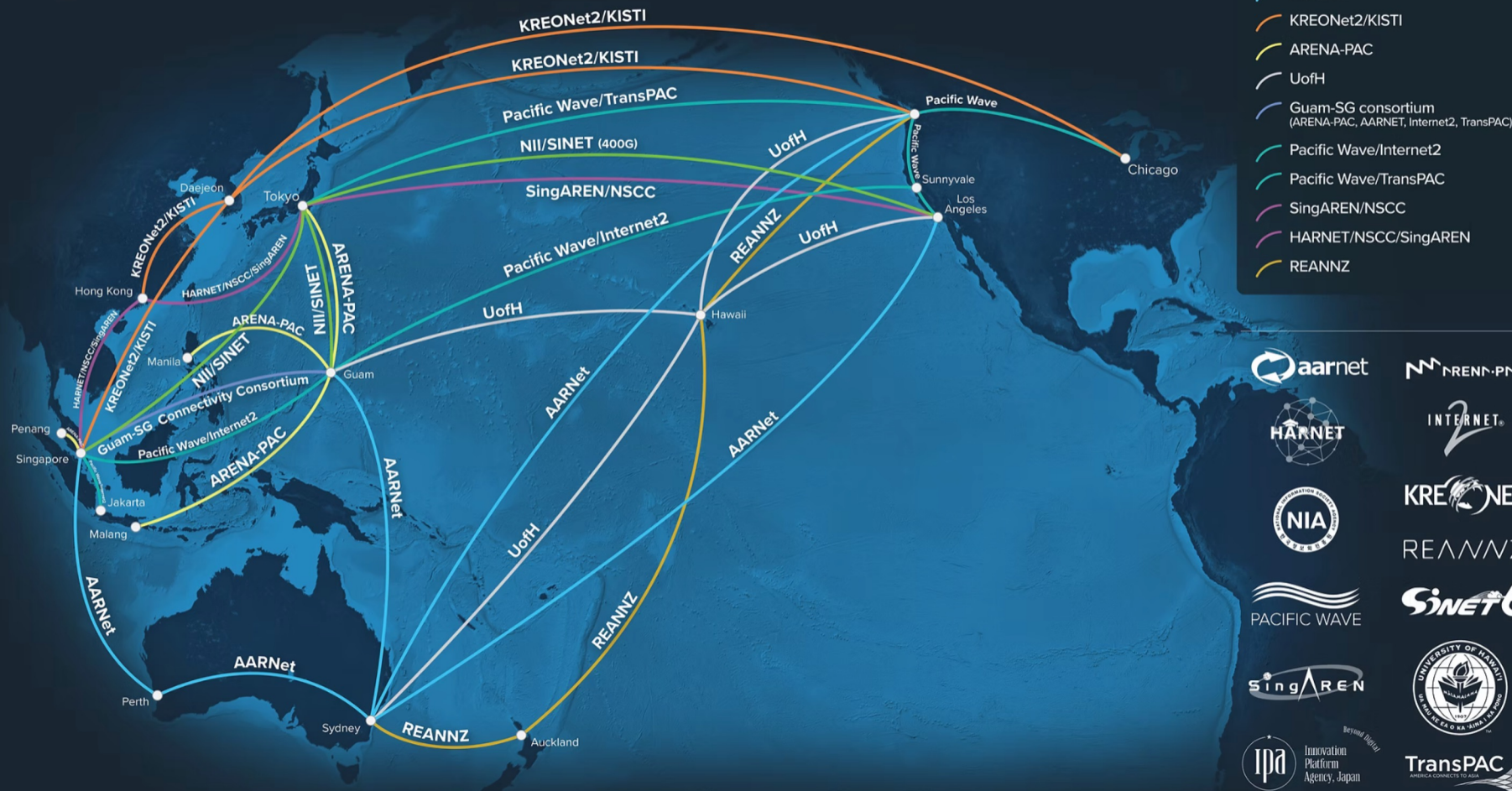
ESnet

Internet2/
CANARIE

GÉANT

400Gbps 100Gbps

aponet ASIA PACIFIC OCEANIA NETWORK (APOnet)



Feature or Limitation?

- **Features**

- Distributed ownership and investment
- Organizational autonomy
- Decentralized by design
- Flexible and adaptable
- Built on trust
- Pragmatic, non-binding cooperation

- **Limitations**

- Long-term strategy and continuity
- Global coordination and logistics
- Consensus and decision-making
- Execution and accountability
- Diverging priorities, incentives, and policies
- Duplication and repeated discussion
- Representation and sustained participation

Global Needs, National Realities



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- **Science and education demands are global**
 - More distributed
 - More data intensive
 - More dependent on shared infrastructure
 - More reliant on cross-border collaboration
- **Current realities demand more national control**
 - Geopolitics
 - Security
 - Digital sovereignty
 - Strategic autonomy

GREN Futures?



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- Enough openness to remain global
- Enough structure to drive progress
- Enough leadership to sustain long-term strategy and accountability
- Enough continuity to build on decisions rather than revisit them
- Enough flexibility to preserve autonomy and trust
- Enough representation to reflect the whole community
- ?