



Global Network Advancement: Today and Tomorrow

David Wilde

(GNA-G Leadership Team Chair)



What is the GNA-G?

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Global Lambda Integrated Facility



global network architecture

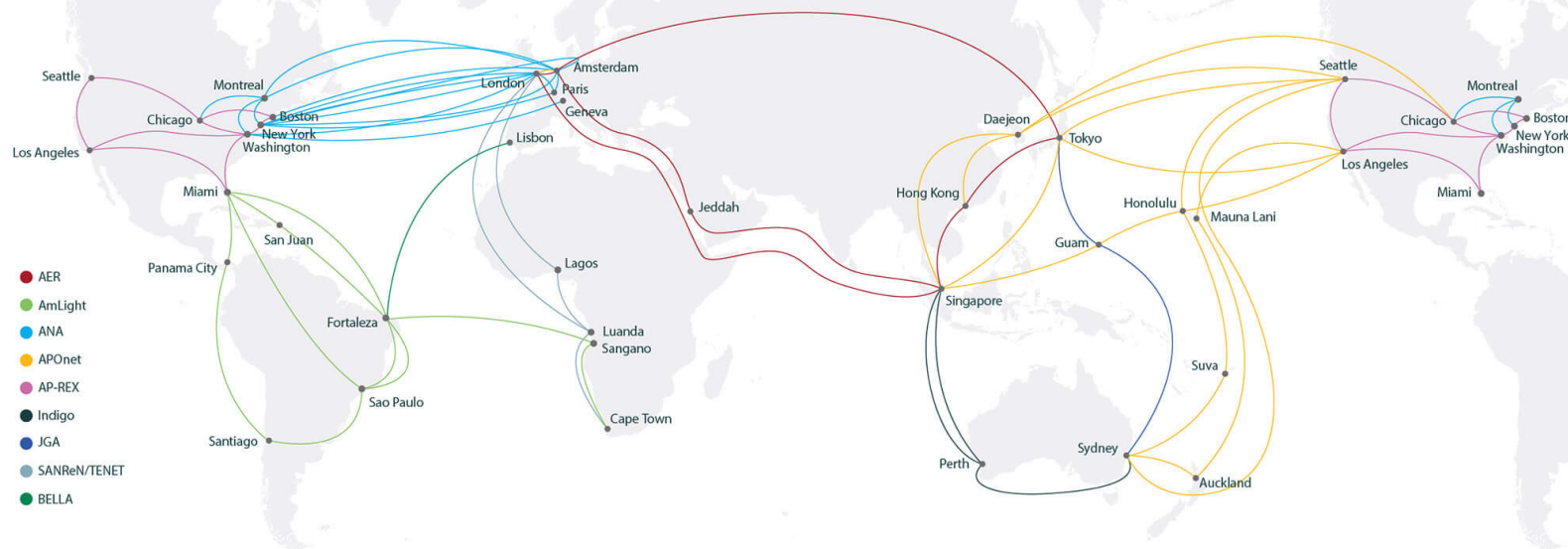


Our vision



A unified, collaborative, global advanced network infrastructure

uniquely supporting the needs of research and education.



Our mission



The GNA-G:

- embodies a vision for international collaboration of the global research and education (R&E) networks

The Global R&E network:

- a large and diverse set of networks with differences in speed, accessibility, and capacity

GNA-G's purpose:

- to build on the work of GNA and GLIF to make interconnection of networks more effective for data-intensive research and education

Goals:

- Provide a **forum** which brings together researchers, National Research and Education Networks (NRENs), Global eXchange Point (GXP) operators, regional and other R&E providers;
- **Develop innovative architectures, services, and models** for more effective use of GREN resources;
- Provide **testbed resources** for the demonstration of future capabilities;
- Agree on a blueprint for aligning **equitable spending** on intercontinental bandwidth for greatest value;
- Advance **data movement** capabilities, **end-to-end experience** and **visibility**;
- **Promote awareness** of the capability, reach and connectedness of the Global R&E Network.

Some questions we seek to answer



Can we clearly articulate the unique value of the GREN?

- How is it better than the commercial internet?
- How much is appropriate for each participating org to invest in it? What happens if we don't invest?
- How can we assist less well resourced regions?
- Conversely, how can we ensure we're supporting key "big science" projects?

Communicate, Contribute, Collaborate



Motivation

- Gather experts worldwide around topics of their interest
- Provide a platform to:
 - **Communicate:** share information, experience, knowledge
 - **Contribute:** establish working groups around immediate opportunities
 - **Collaborate:** establish peer-liaison around common goals and initiatives
- Organise periodic community meetings
- Create knowledge-base of (document, code...) repositories

GNA-G: What is it?



A forum for discussion
between operators,
researchers and key users
of the GREN

Action-oriented
Working-Groups

A global network
providing a testbed for
innovation

GNA-G - strategic pillars



A forum for discussion.
Support for global big science & data intensive projects.
Engagement with international R&E network consortia.

GNA-G - strategic pillars



GREN operations

- Global network architecture & services
- Coordinated operations
- Automation, orchestration
- Monitoring, reporting, GREN map
- Secure GREN; MANRS

**A forum for discussion.
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GNA-G - strategic pillars



GREN innovations

- Global test facility
 - *eg SC demos; P4 testbed*
- Innovative network services
- Data movement

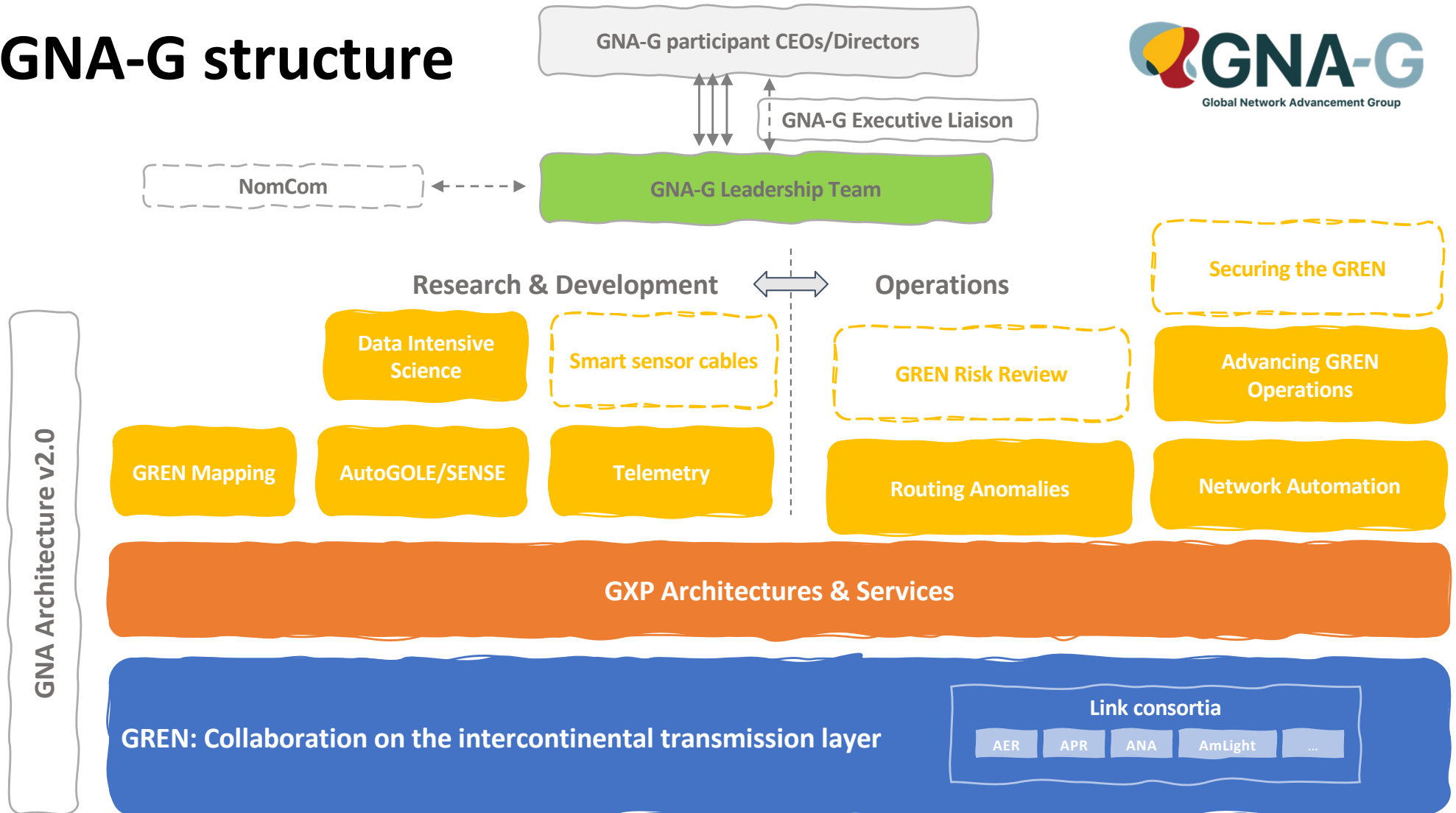
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GNA-G structure



Strategic objectives



“To advance the Global R&E Network”

1. Bring together network operators, exchange-point operators & researchers
2. Improve operational maturity of the GREN globally
3. Deliver innovative capabilities, services and testbeds to maximise usage of the network
4. Provide focused support for big science projects & data intensive research
5. *Increase security maturity (planned)*
6. *Increase awareness of GNA-G (planned)*

How can you get involved?



Join a working-group

<https://www.gna-g.net/working-groups/>

Contribute your thoughts & ideas at the next meeting/VC:

<https://www.gna-g.net/meeting/>

Reach out to the Leadership Team

Web: <https://www.gna-g.net/contact-us/>

Email: leadershipteam@lists.gna-g.net

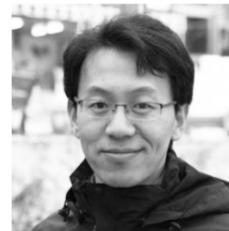
Come and say hi



Ⓞ **David Wilde, Chair**
AARNet (Australia)



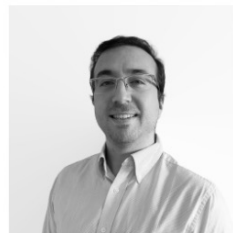
Ⓞ **Harvey Newman**
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Ⓞ **Buseung Cho**
KISTI (South Korea)



Ⓞ **Ivana Golub**
PSNC (Croatia/Poland)



Ⓞ **Marco Teixeira**
RedCLARA (Latin America)



Ⓞ **Alex Moura**
KAUST (Saudi Arabia)



Thank you