



The ANZ SDN Testbed

eResearch NZ 2016

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Australian Wide-Area SDN Testbed

BACKGROUND

Software defined networking

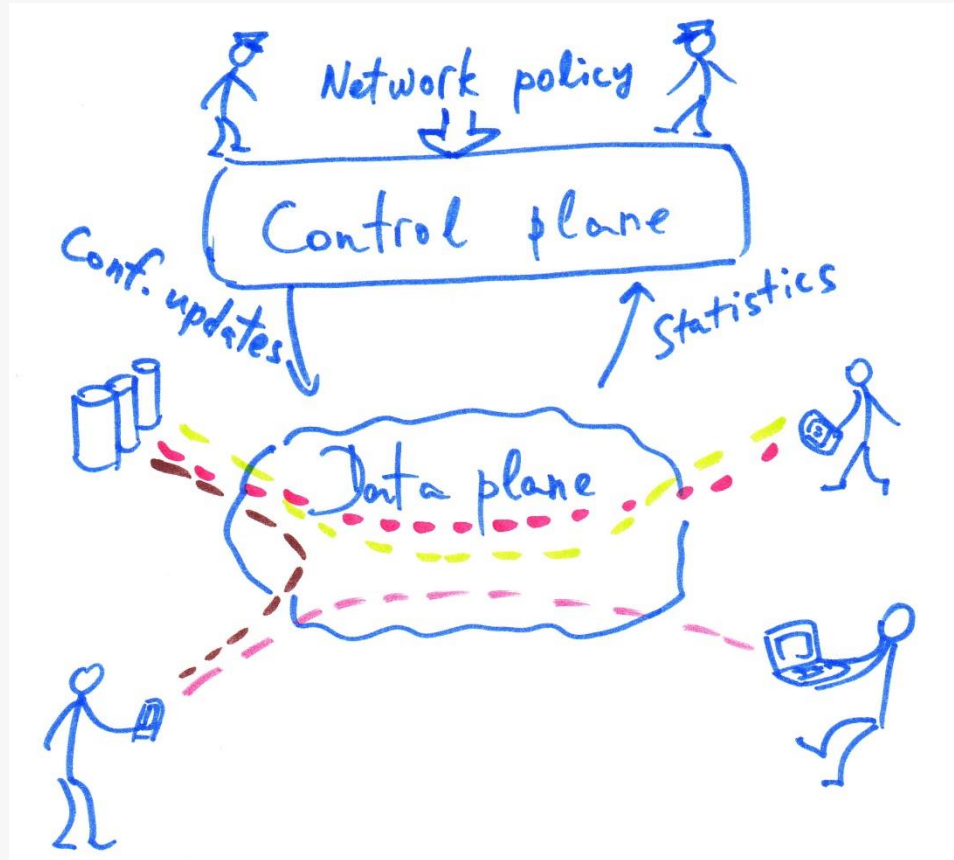
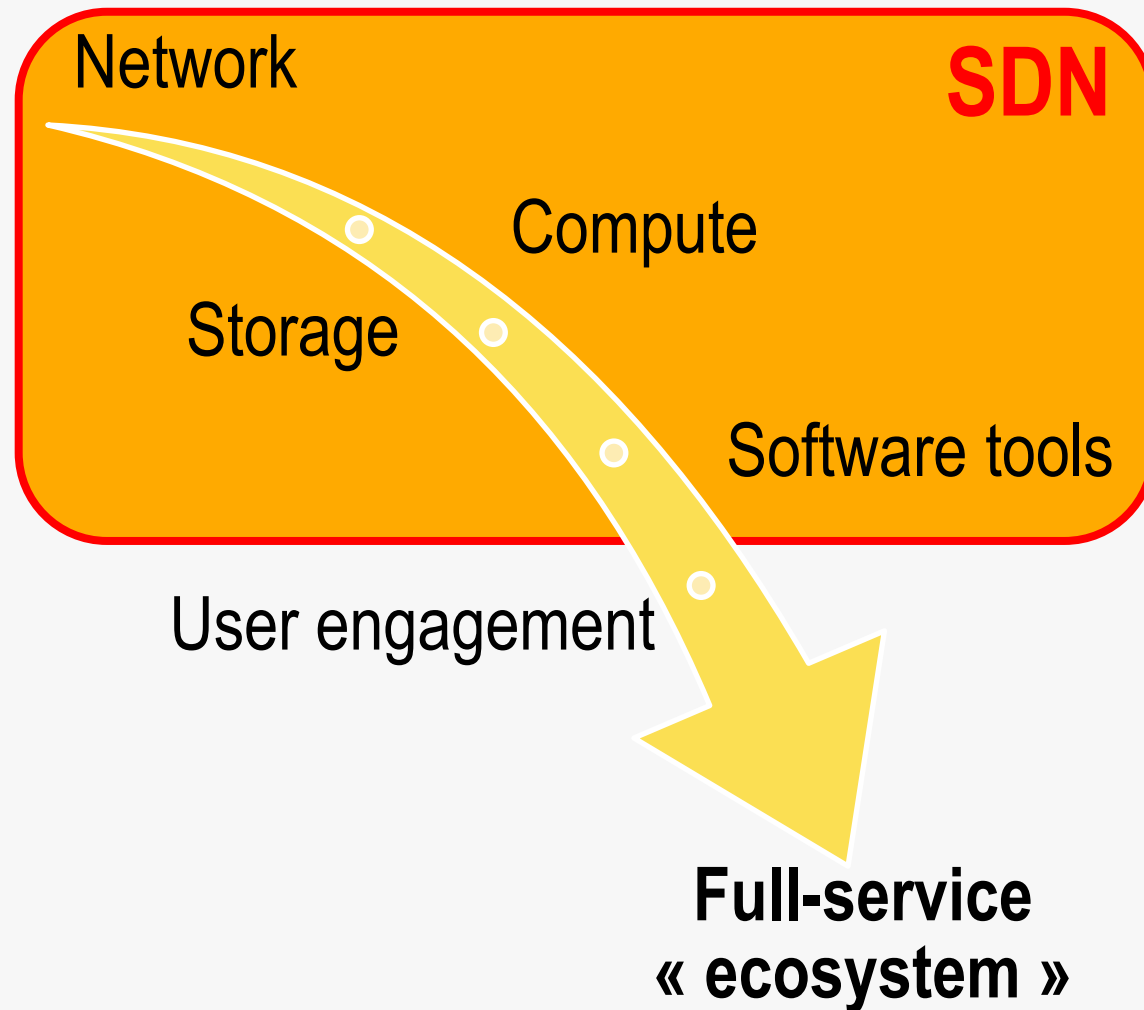


Image:

<http://perso.telecom-paristech.fr/~kuznetso/projects/SDN/cpc/>

SDN as enabler



LIEF grant: participating institutions



Australian Government

Australian Research Council

LIEF: Linkage Infrastructure, Equipment and Facilities

LIEF grant: participating institutions



Australian Government
Australian Research Council



LIEF: Linkage Infrastructure, Equipment and Facilities



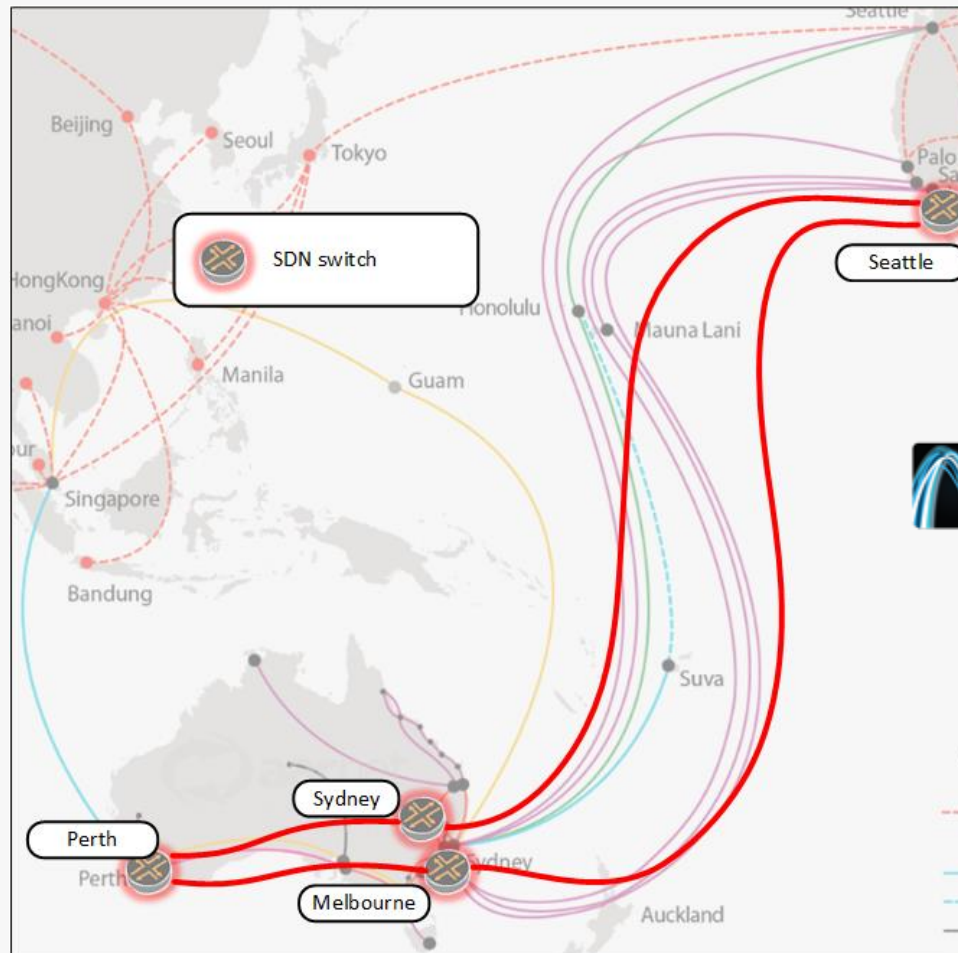


Australia Wide Area SDN Testbed

THE TESTBED

Towards an SDN testbed

Step 1: the AARNET SDN testbed



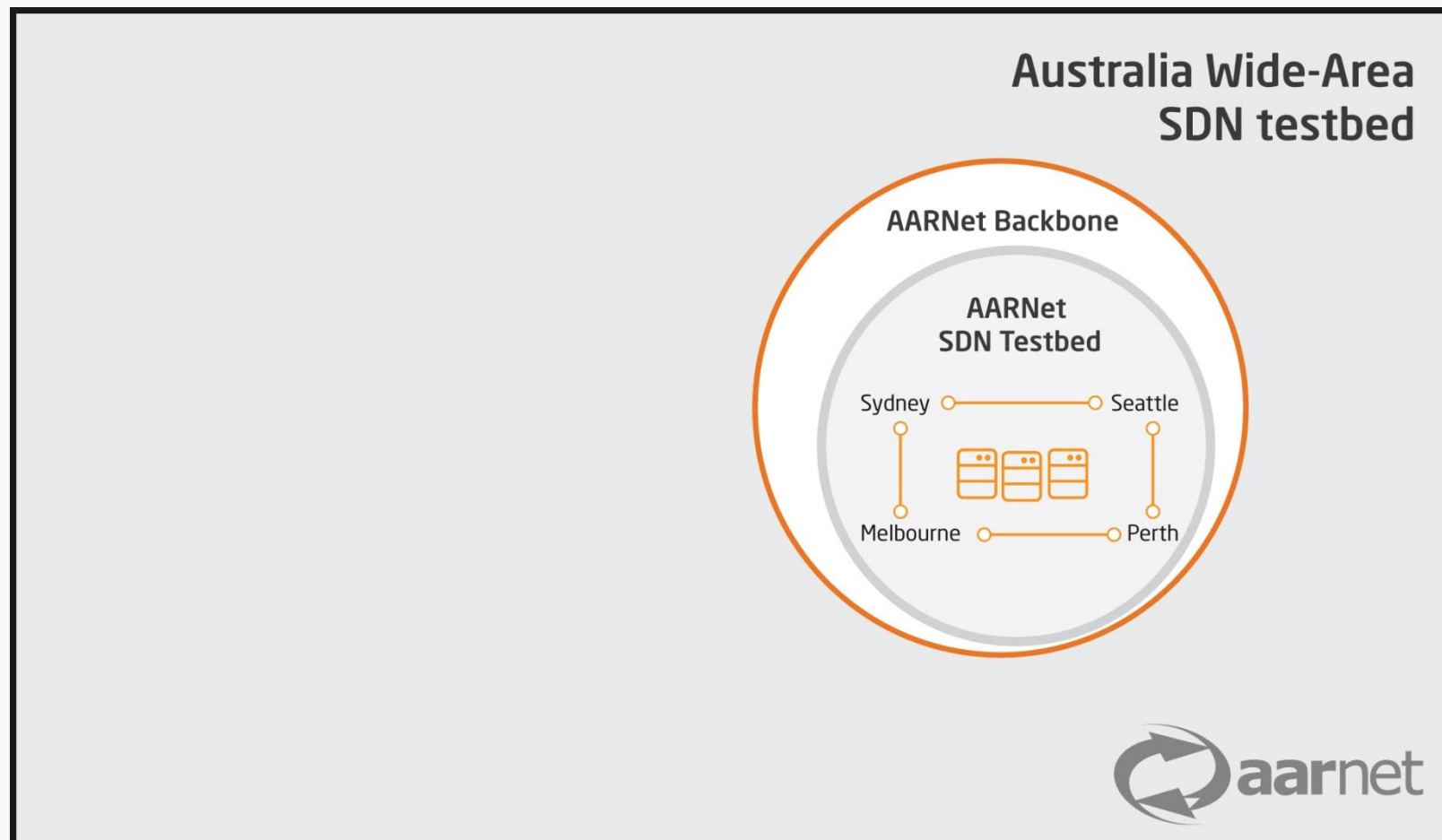
Australia: latency-as-a-service



Towards an SDN testbed

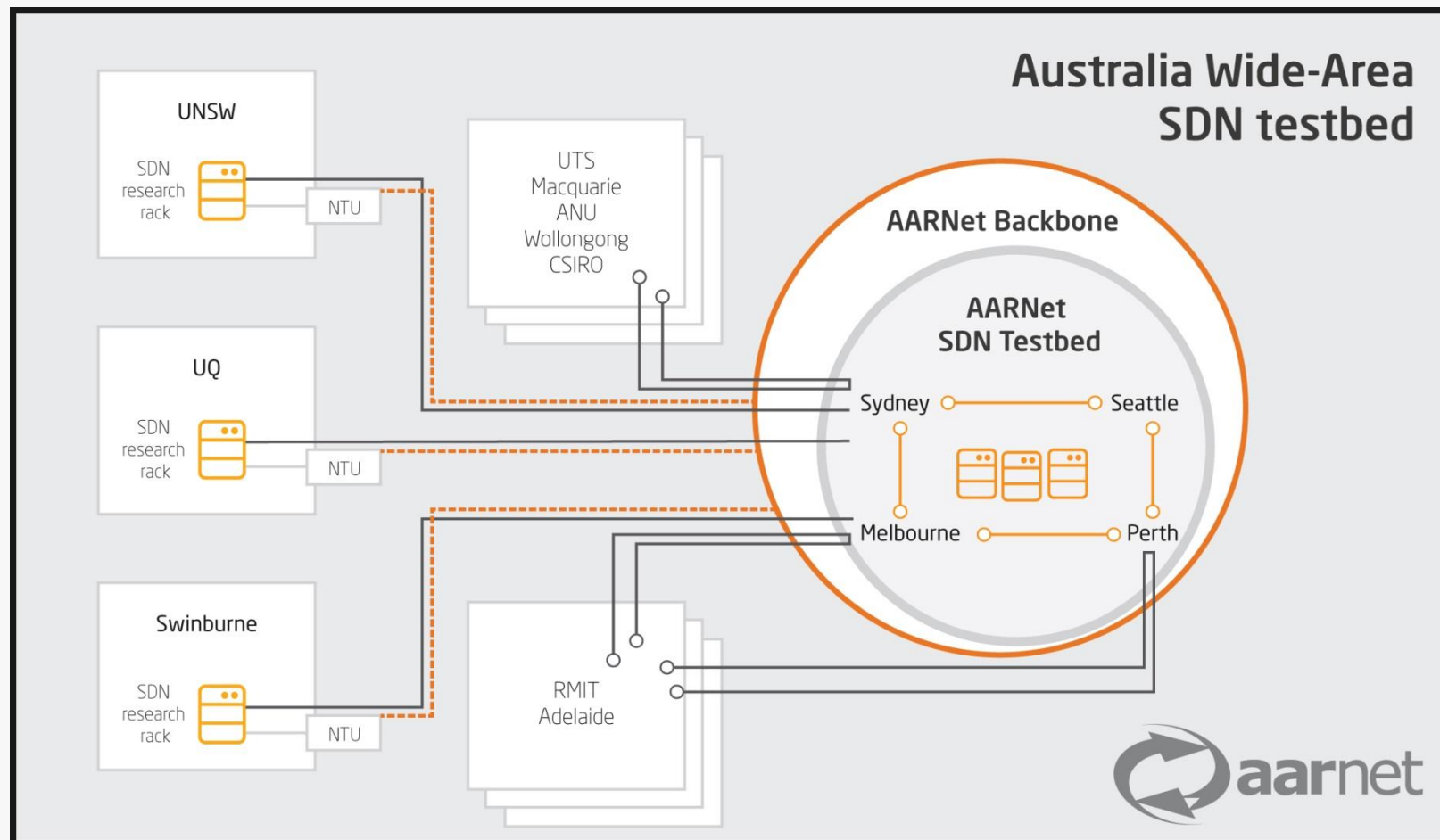


Step 2: *extend...*



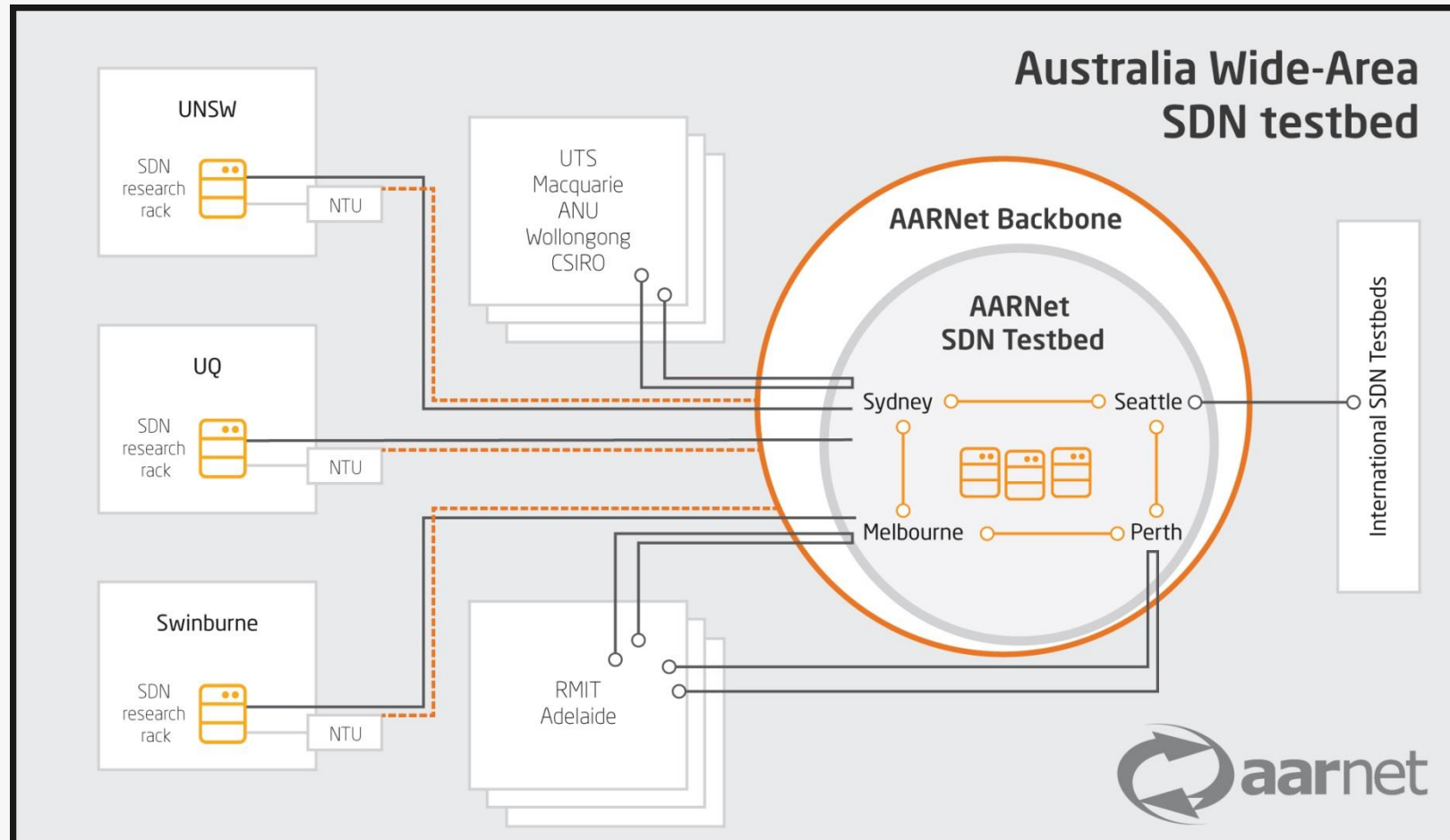
Towards an SDN testbed

Step 2: the Australia-wide SDN testbed ...



The SDN testbed

Step 3: ...and finally, international extension.

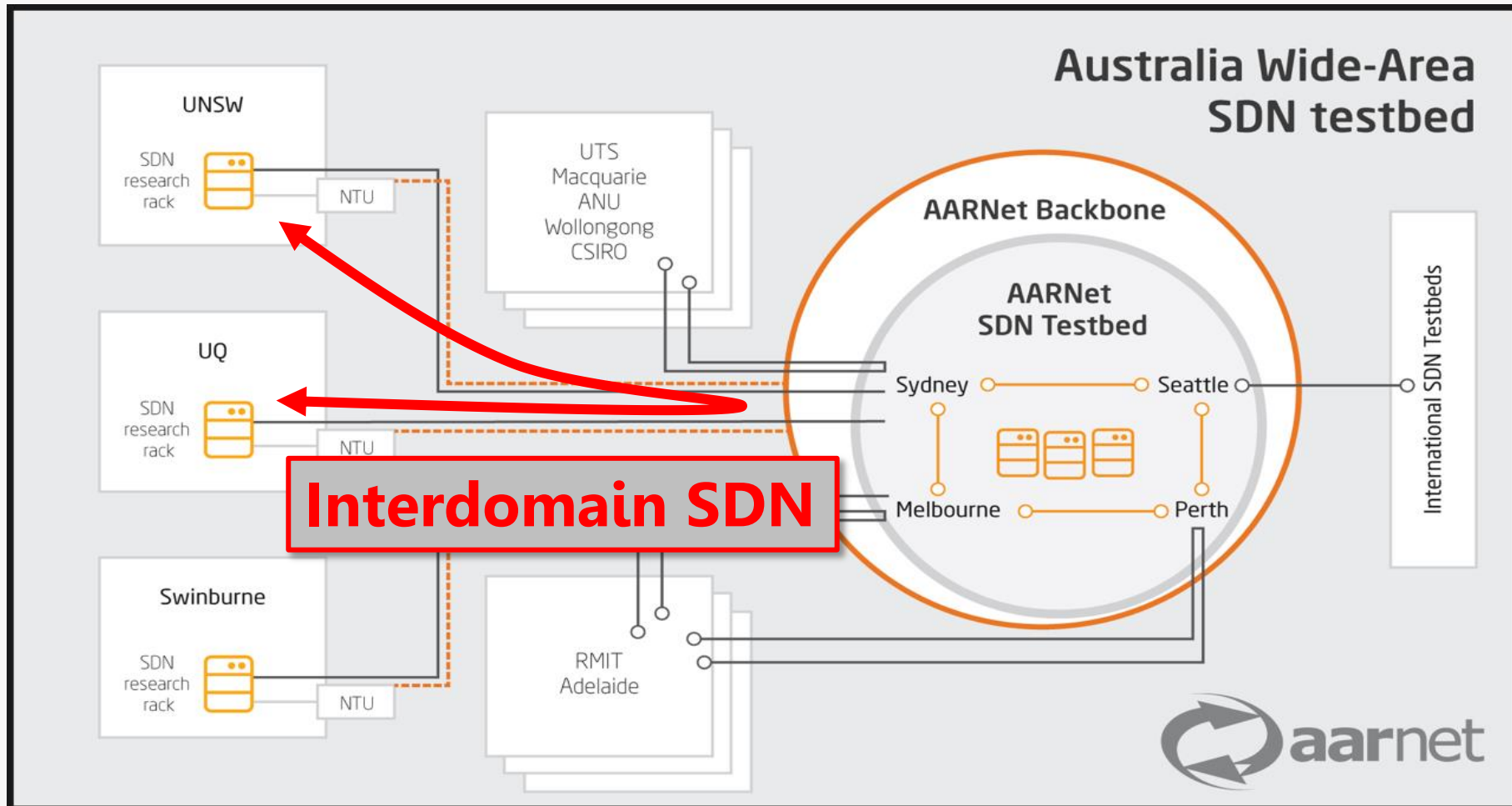




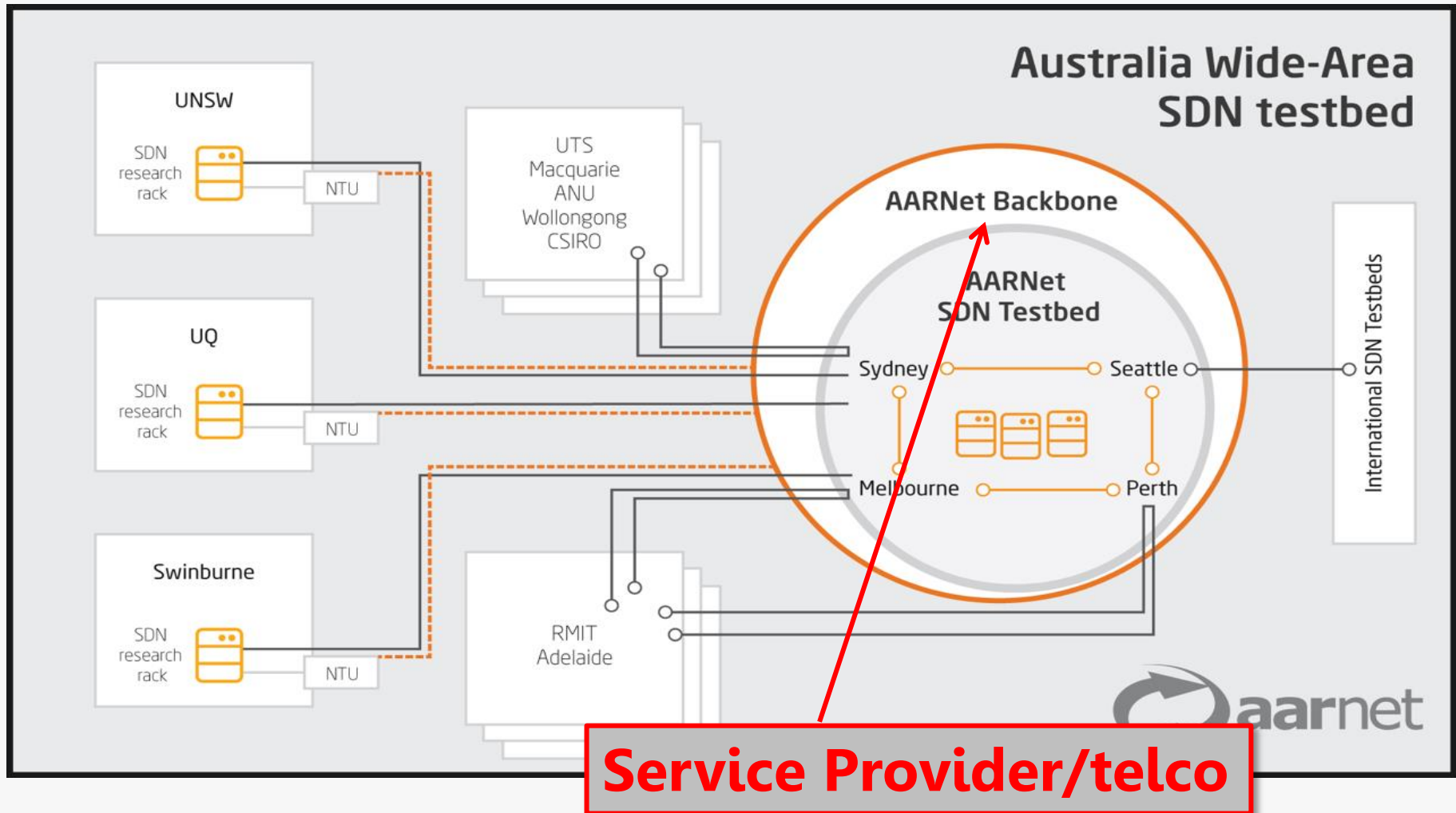
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WHY A TESTBED?

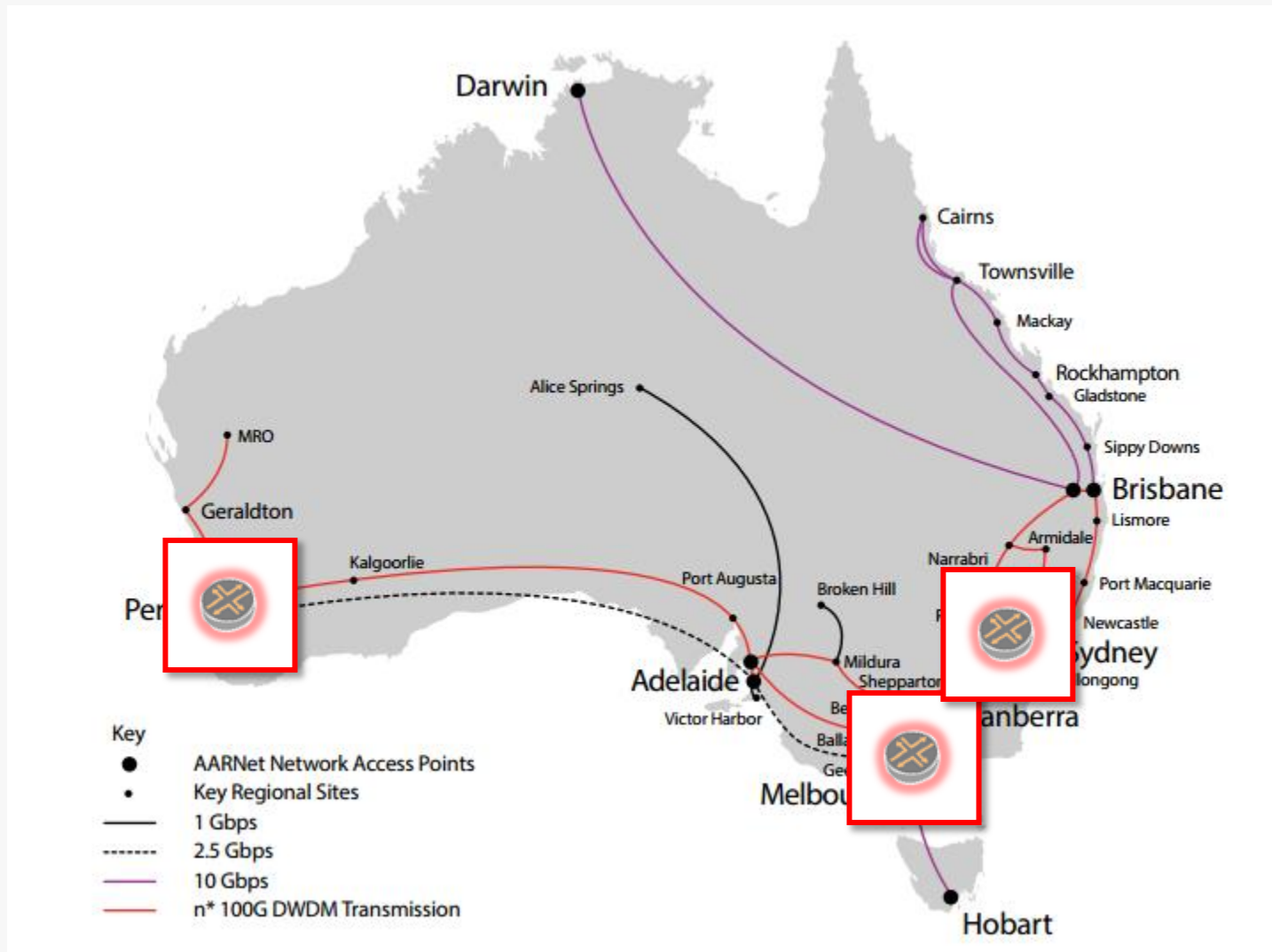
Focus: interdomain SDN



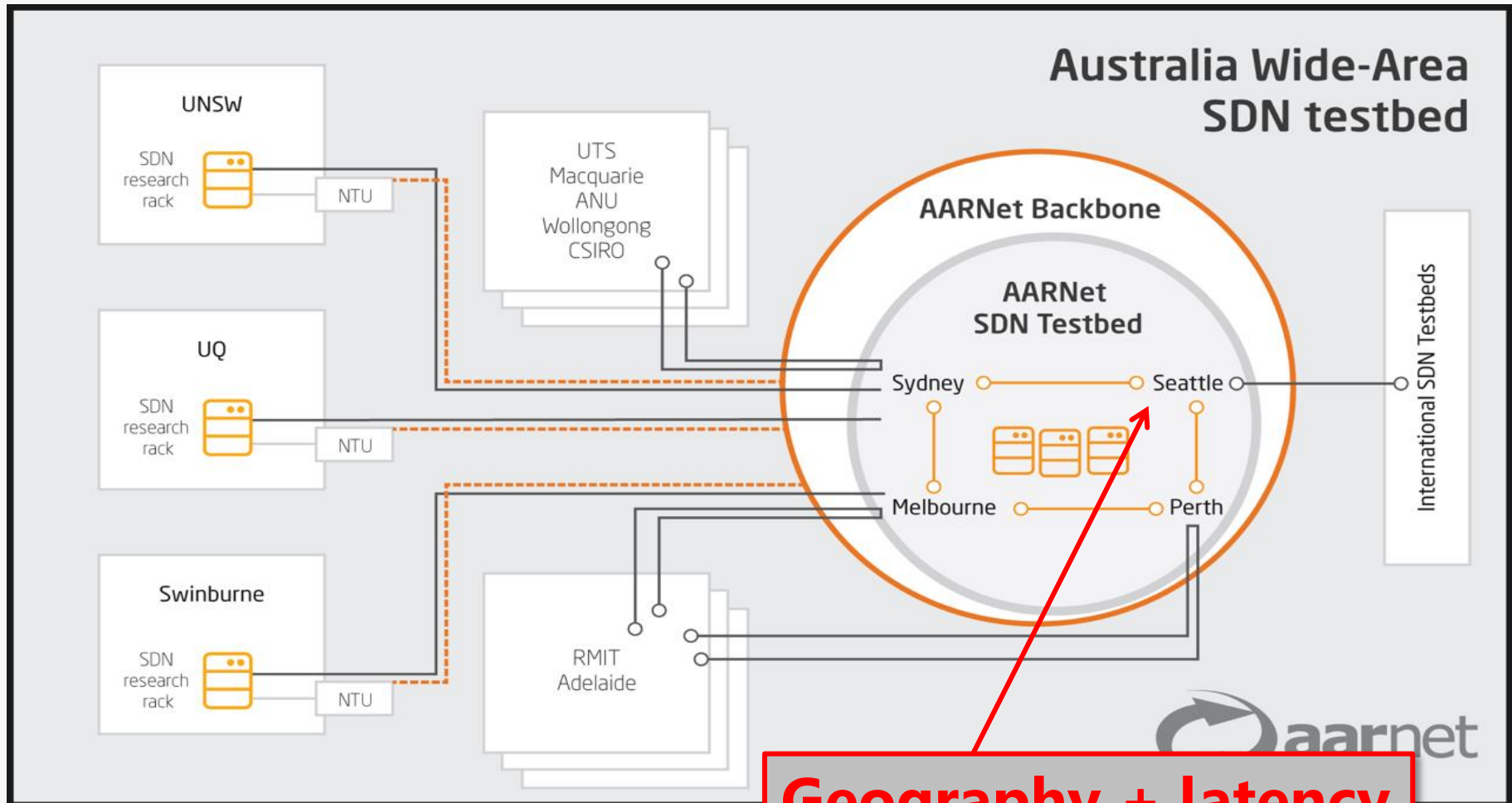
Focus: SP/telco



Focus: SP/telco

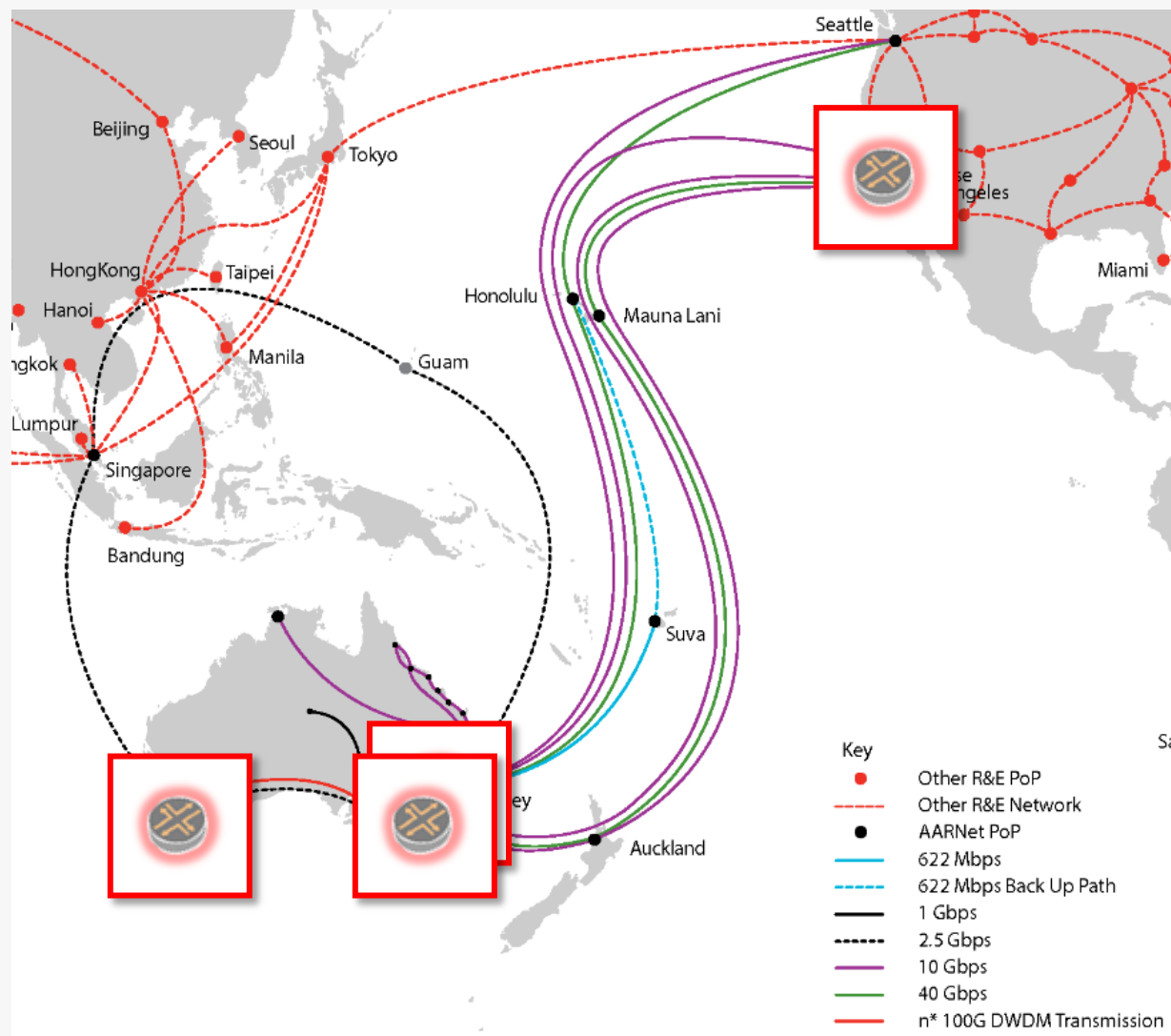


Focus: internet-scale

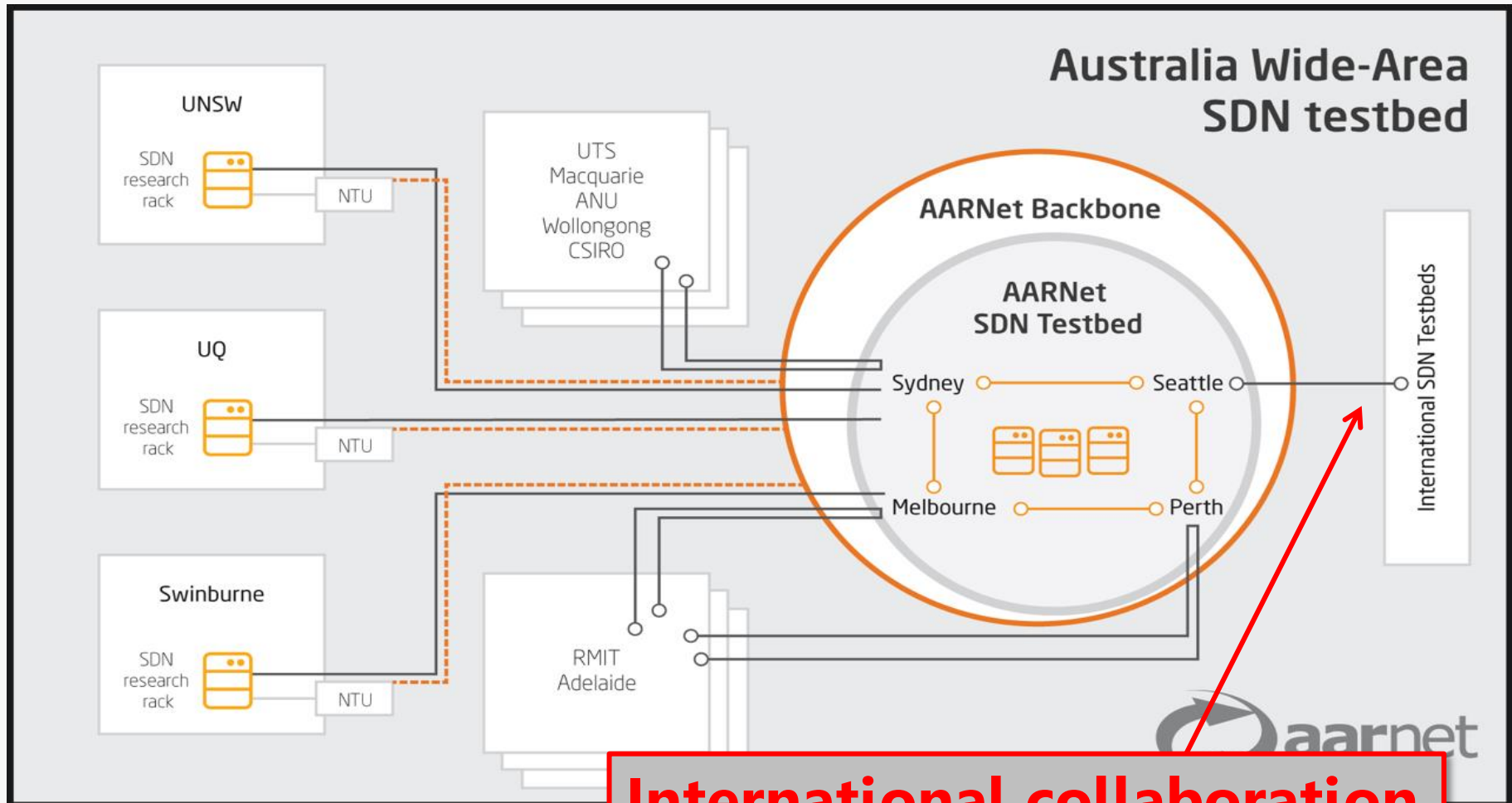


Geography + latency

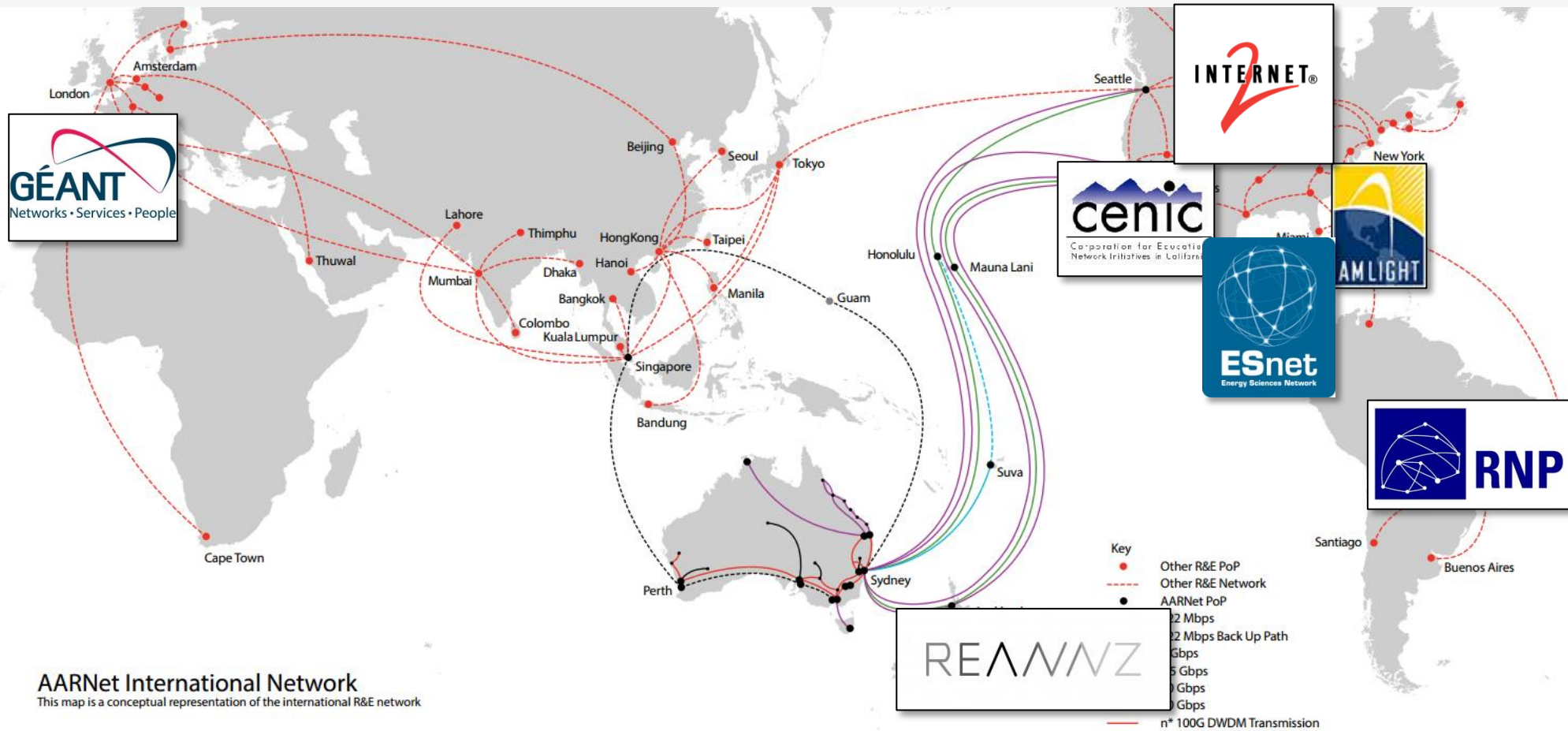
Focus: internet-scale



Focus: international collaboration



Focus: international collaboration





Australia Wide Area SDN Testbed

PROMISING RESEARCH DIRECTIONS

Research directions

1. Multimedia service quality
 - Streaming / immersive / interactive video
 - APIs for network state & application requirements

2. Network design and optimization
 - Instrumentation for dynamic measurement & analysis
 - Optimize mobility, load-balancing, traffic engineering

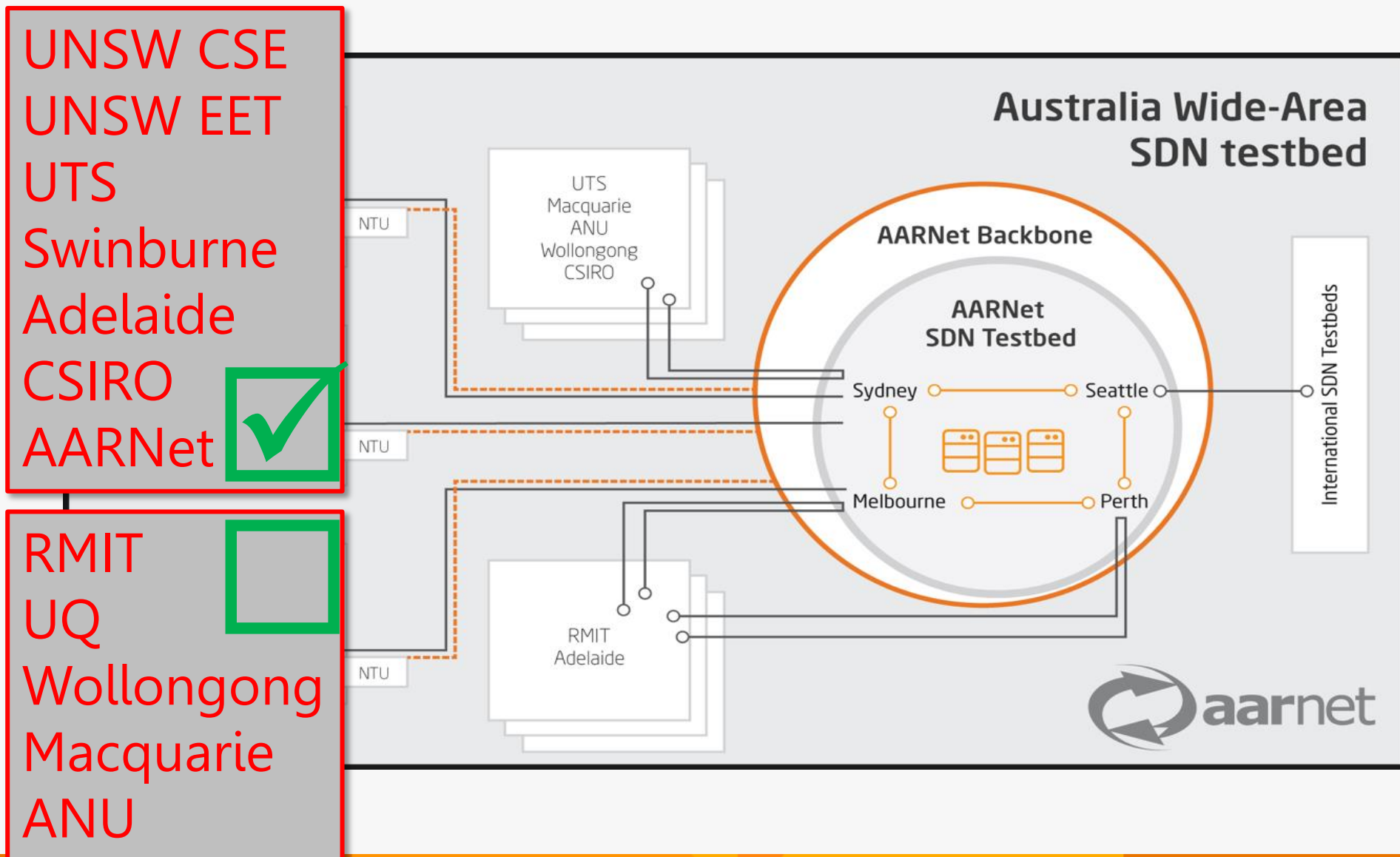
3. Security
 - Real-time threat detection and access control
 - Declarative security policies



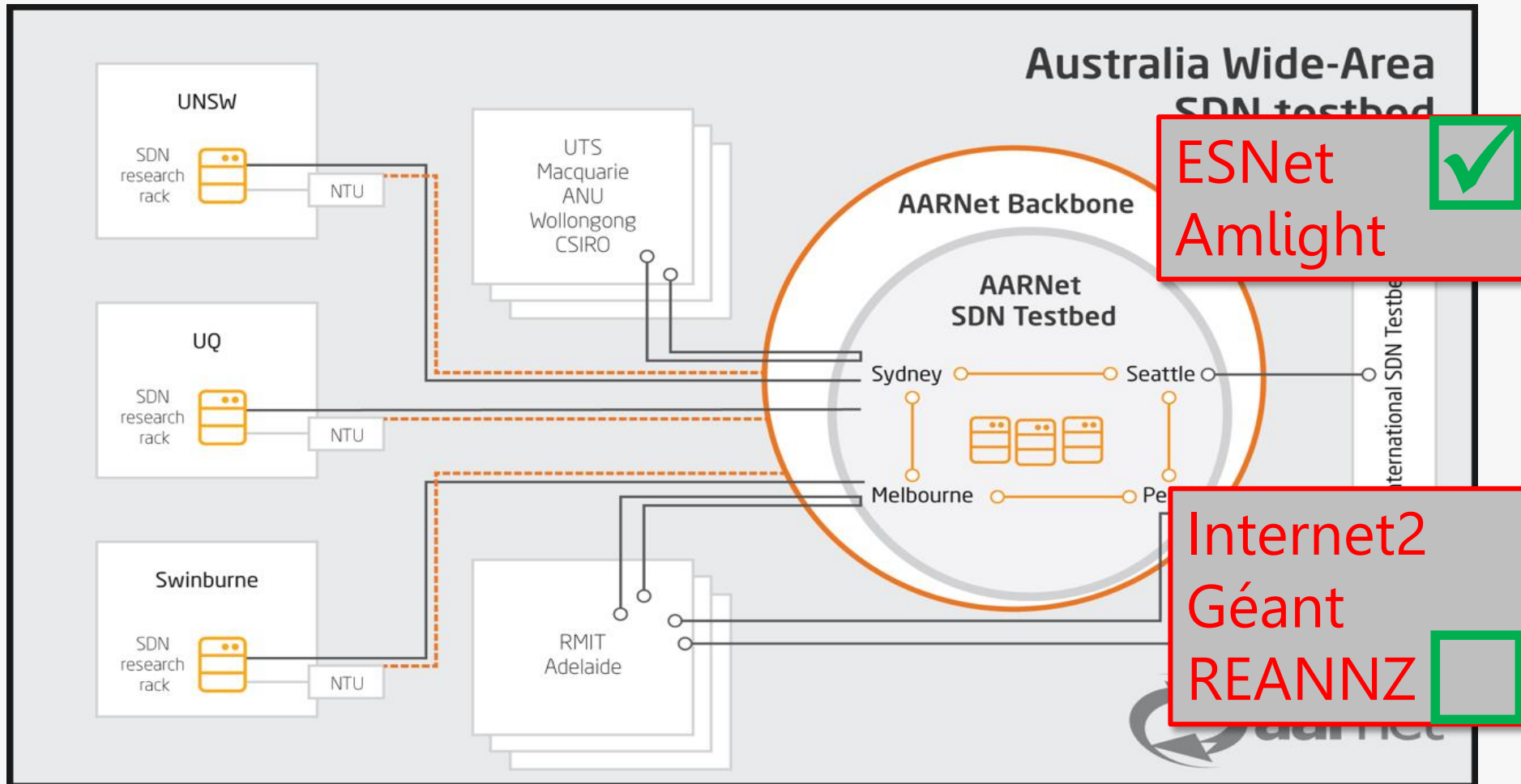
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LOOKING FORWARD

Status



Status





Australia Wide Area SDN Testbed

THE ANZSDN ALLIANCE

<http://www.anzsdn.net>



ANZSDN Alliance

1. Facilitate ecosystem development and adoption
 - Facilitate open-source projects between industry/academia
 - Access to SDN test-beds for validation
 - Align activities with global trends and partners e.g. ONF

2. Education, training, skills, certification
 - Help design content for University courses
 - Promote SDN training and certification
 - Facilitate short-courses and workshops

3. Community building
 - Build collective knowledge pool on SDN ecosystem
 - Meet-ups, events, hackathons, hands-on workshops, ...

The aim:

**Collectively build understanding
of the SDN ecosystem**

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