INTERNET 2

2017 global SUMMIT

BRINGING NETWORKS TOGETHER

TRUSTED BIG DATA ASSET SHARING

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CONTENT

- Sharing Big Data Assets and Trust
- Secure Digital Market Place concept
- Infrastructure model research
- Research project involvement.

Sharing Big Data Assets within a group needs

Clearly defined and agreed common **benefit** defining the group's identity

Common group rules governing use, access and benefit sharing.

Organizing trust amongst group members as **means to reduce risk**

Infrastructure supporting **implementation of trust** whilst ensuring **autonomy**

Trust as a means to reduce risk

Risk:

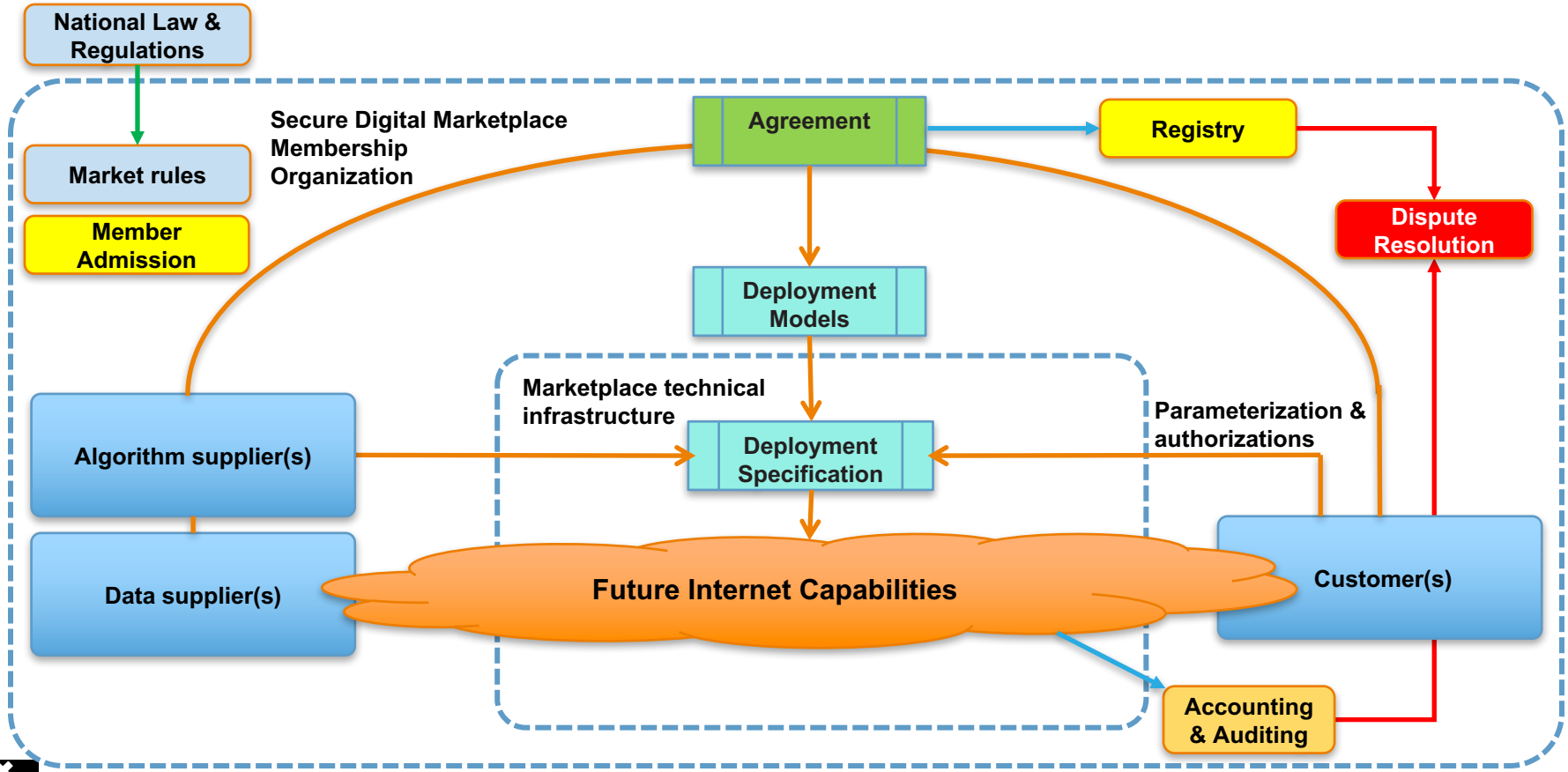
Compliancy
Liability
Disclosure
Ownership
Intellectual Property
Additional oversight
etc., etc...

Means:

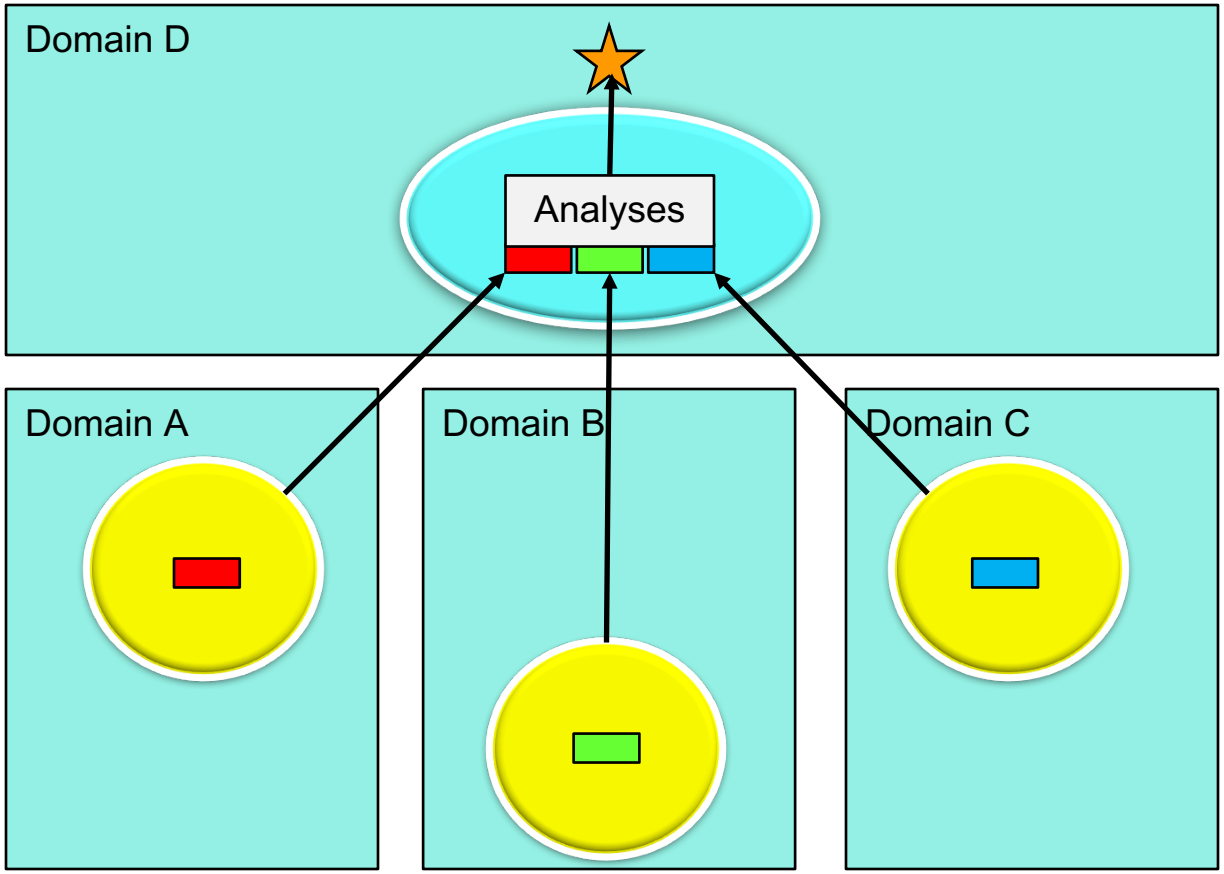
Trust and power are both means capable of reducing risk

How to organize trust and power? -> **The Secure Digital Market Place concept**

The Secure Digital Market Place: A high level framework

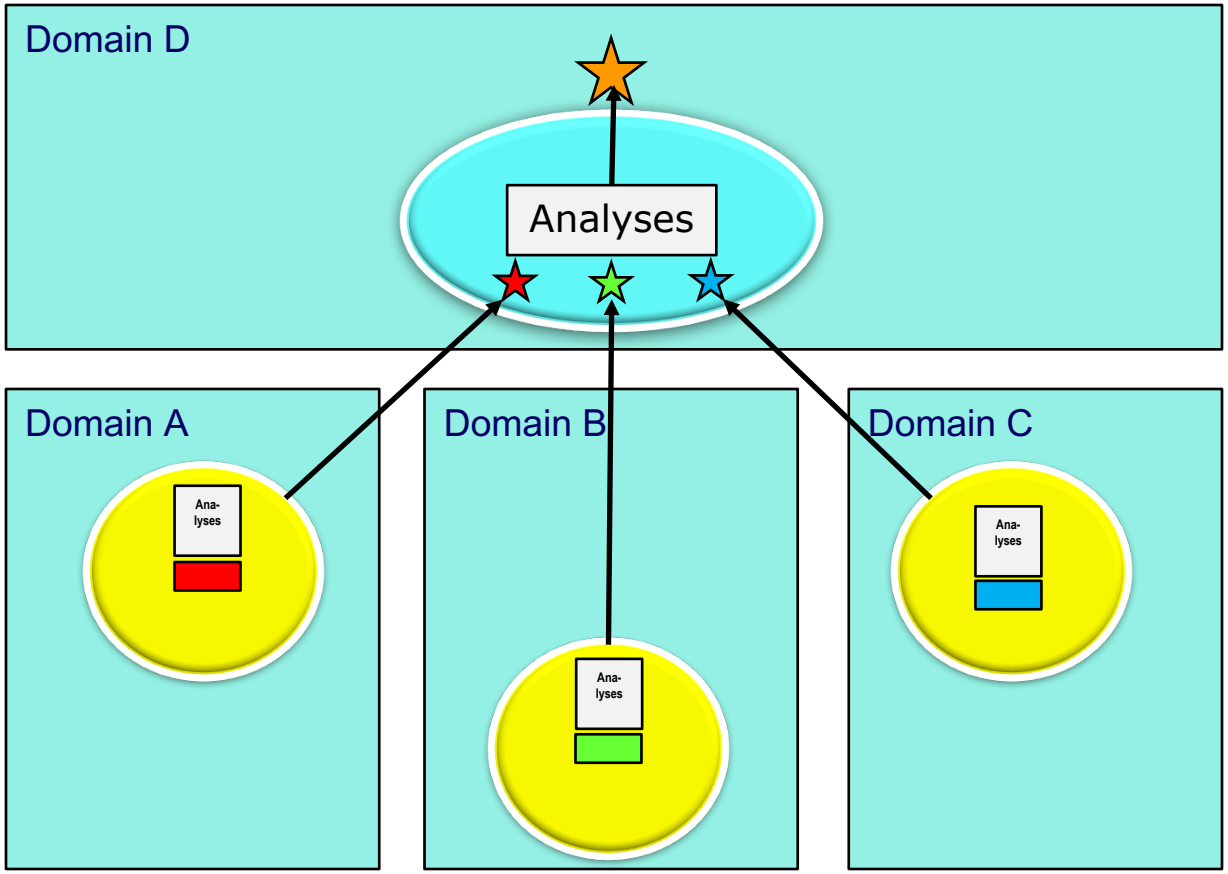


Traditional Model raising concerns

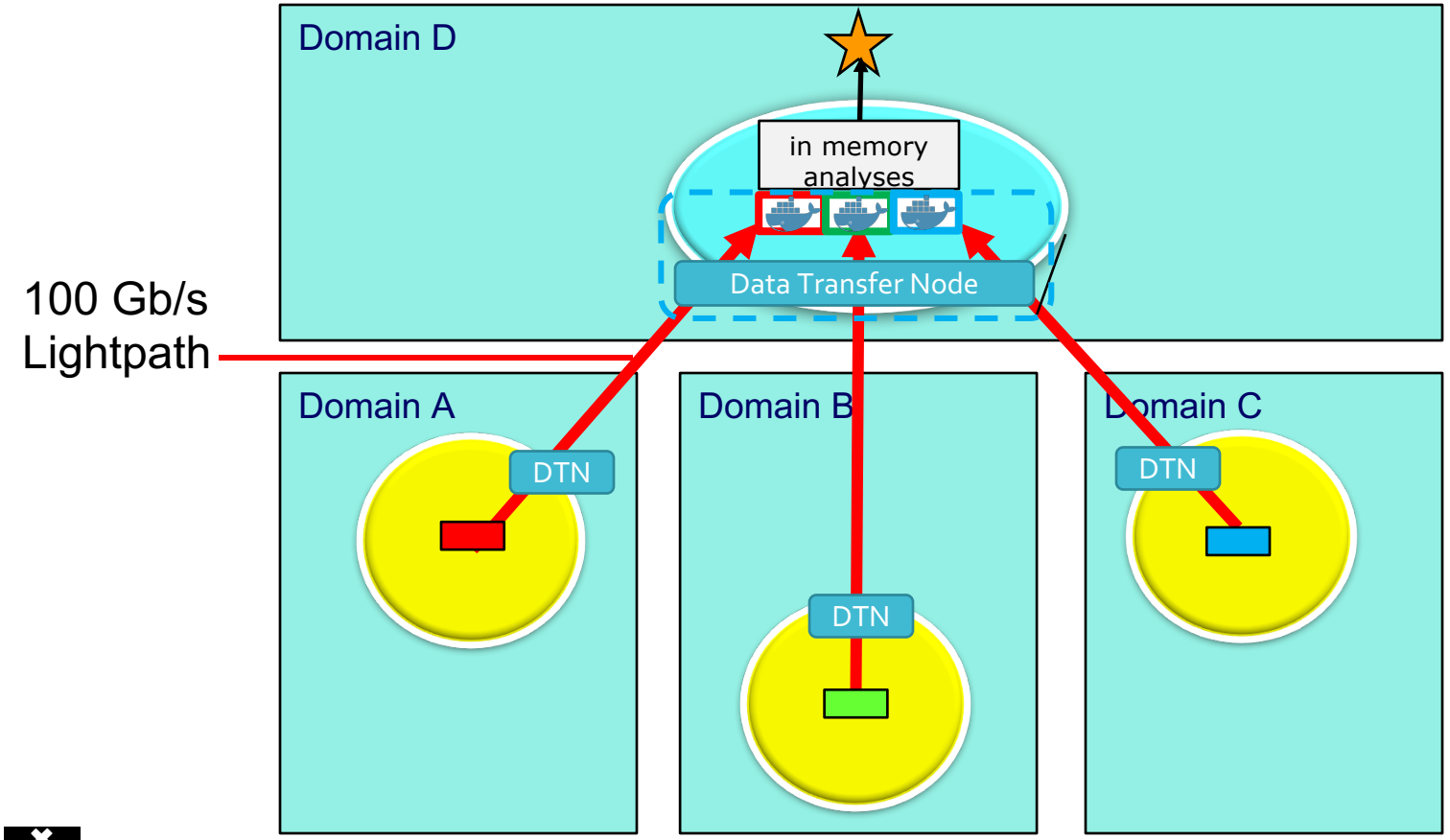


Domain = Autonomous Organization with own administration and enforcement

Alternative: bring processing to the data



An innovative deployment model: separate processing from data



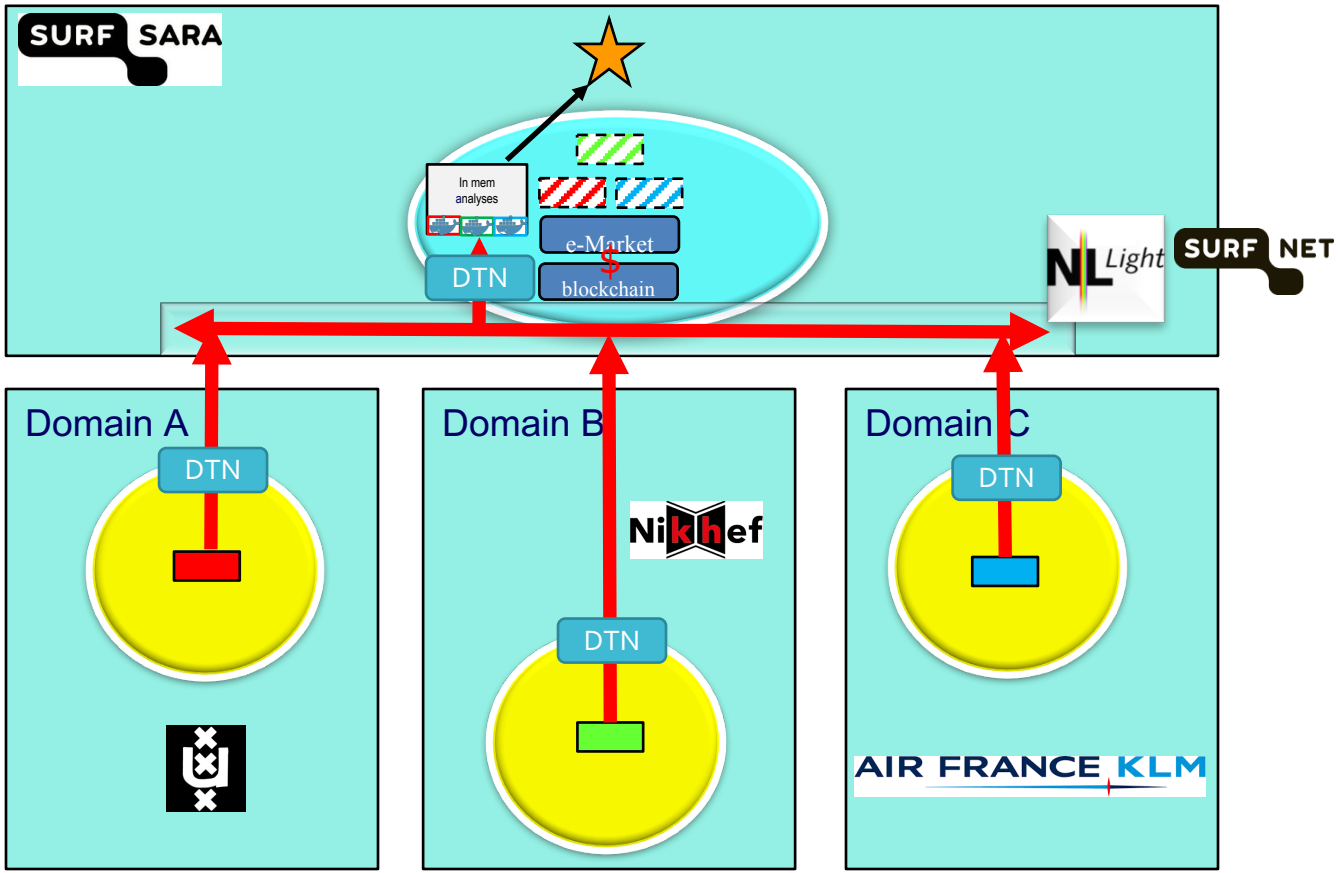
Data Transfer Node enables utilization of available high network bandwidth across distance

DTN is part of Science DMZ concept from

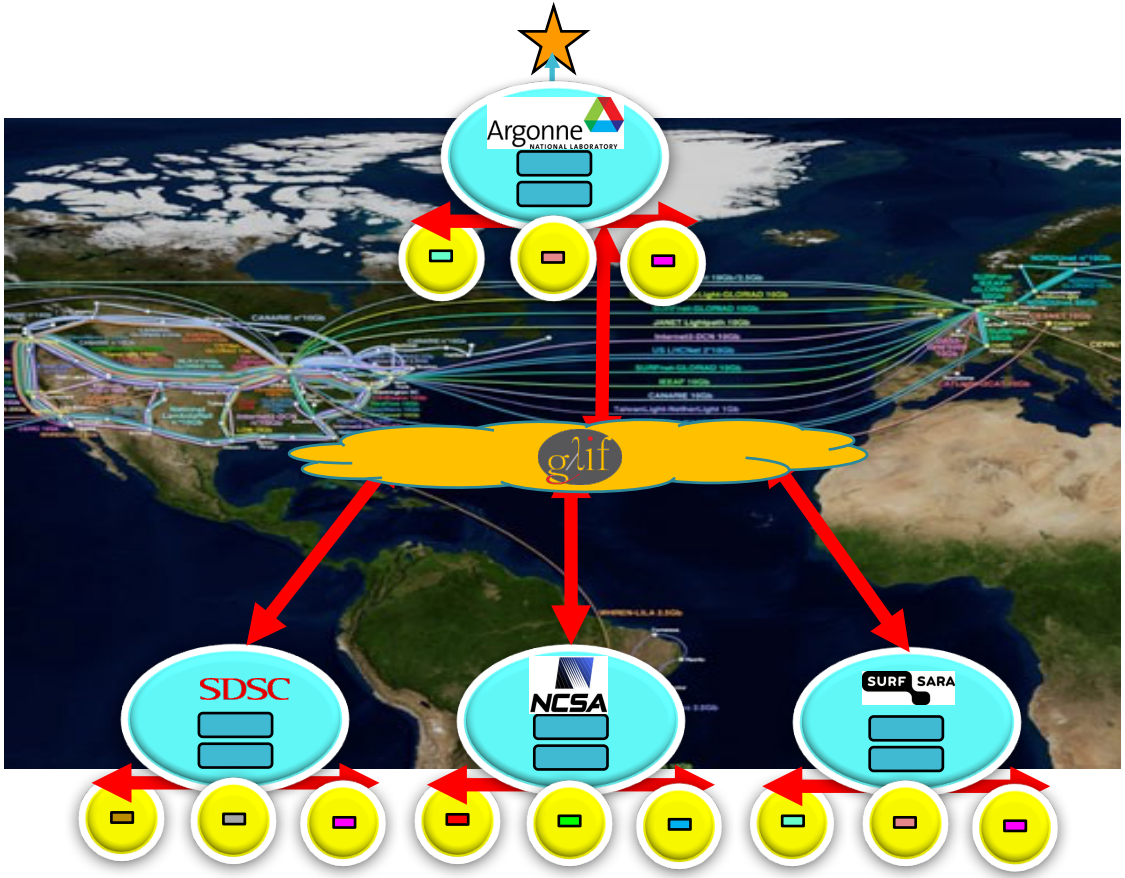
ESnet ENERGY SCIENCES NETWORK

PRP PACIFIC RESEARCH PLATFORM

Secure Digital Market Place deployment model research testbed



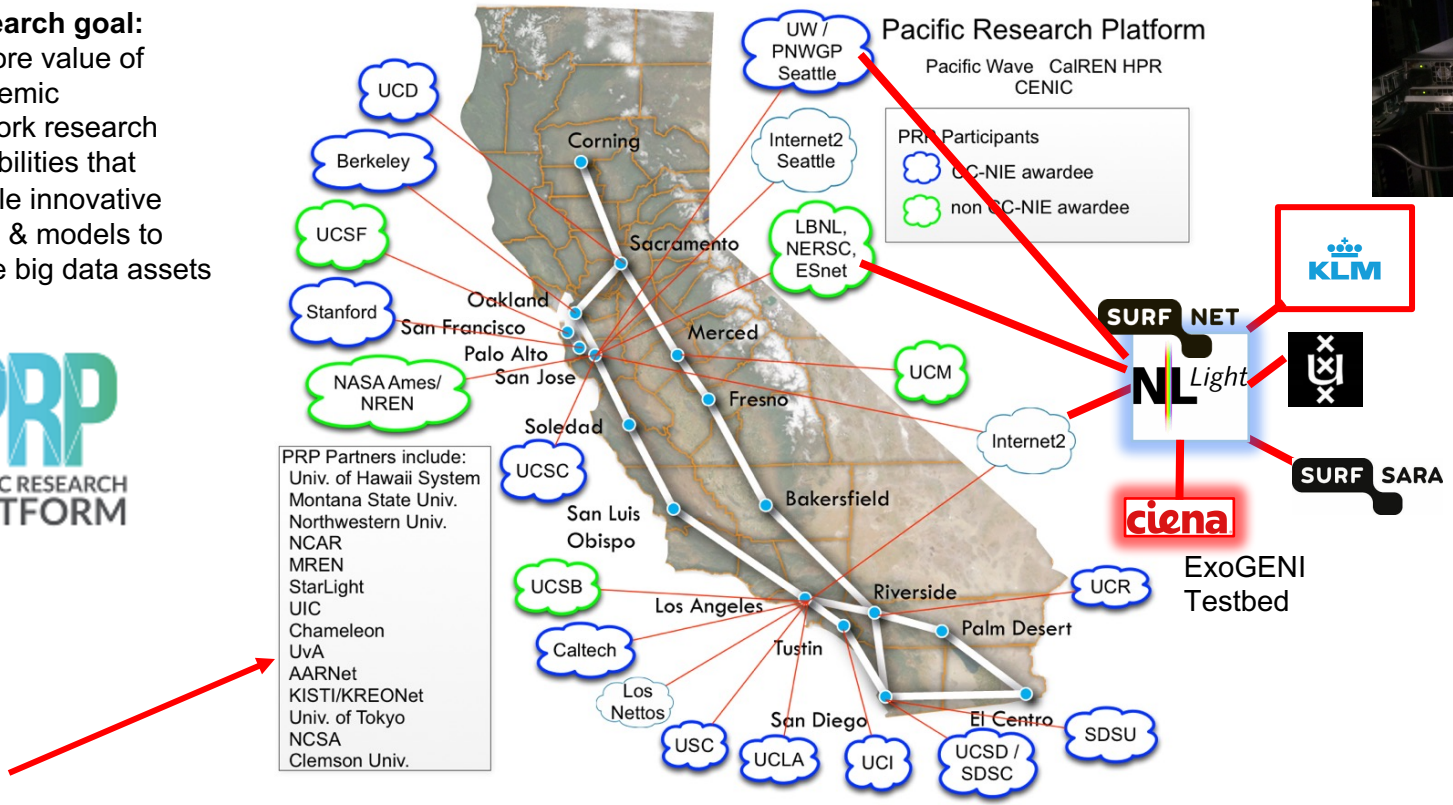
Global Digital Market Place Testbed via the GLIF?



Pacific Research Platform testbed involvement

Research goal:
Explore value of academic network research capabilities that enable innovative ways & models to share big data assets

Data Transfer Node at KLM fieldlab with 100 gb/s link to enable SDMP research thanks to UvA, SURFnet and Ciena



PRP PACIFIC RESEARCH PLATFORM

Big Data Sharing use cases placed in airline context

Global Scale

National Scale

City / regional Scale

Campus / Enterprise Scale

Aircraft Component Health Monitoring (Big) Data
NWO **CIMPLO project**
4.5 FTE

Cargo Logistics Data
NLIP iShare project

iSHARE
powered by NLIP

Cybersecurity Big Data
NWO COMMIT/
SARNET project
3.5 FTE

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