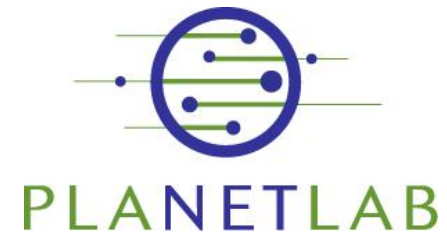


PlanetLab

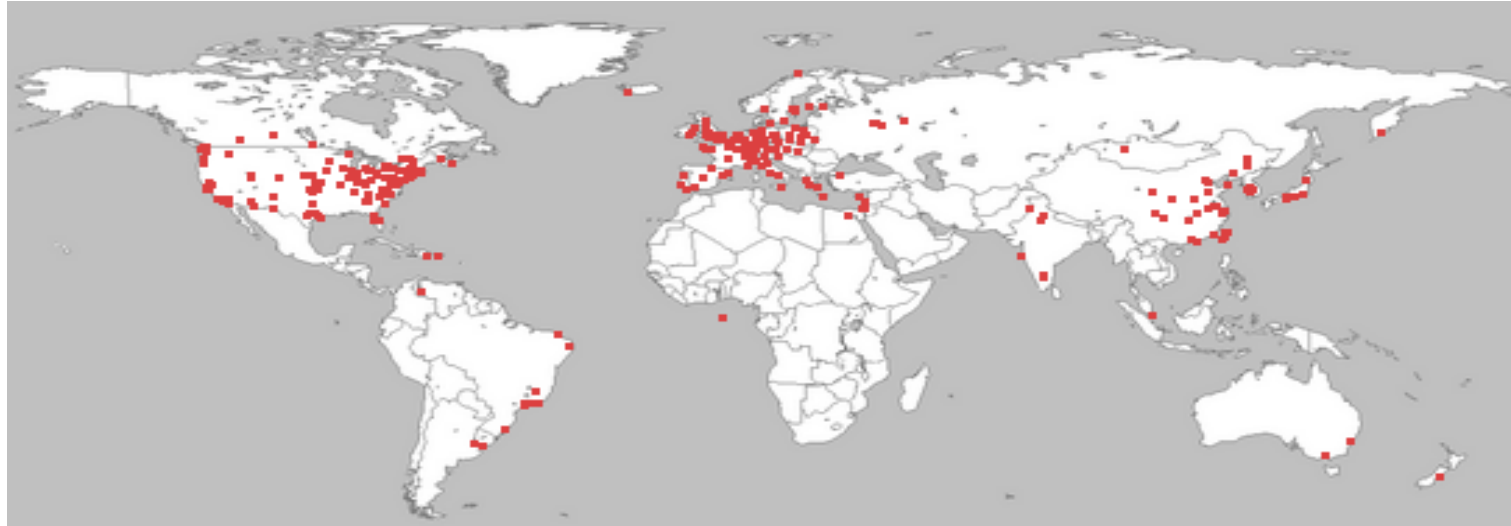
Now and into the Future

Marc E. Fiuczynski

**Princeton University
PlanetLab Consortium**

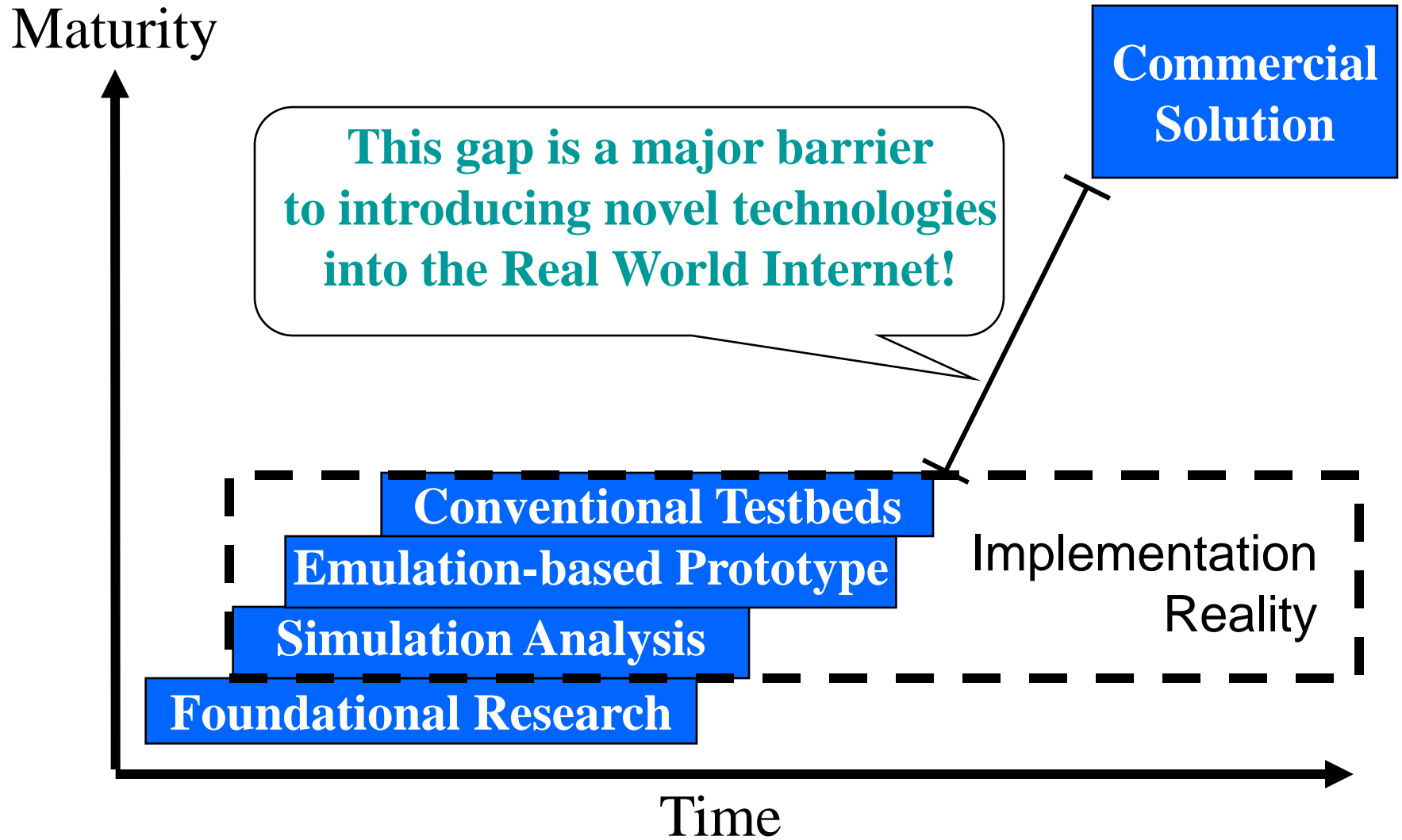


PlanetLab Testbed (9/2008)



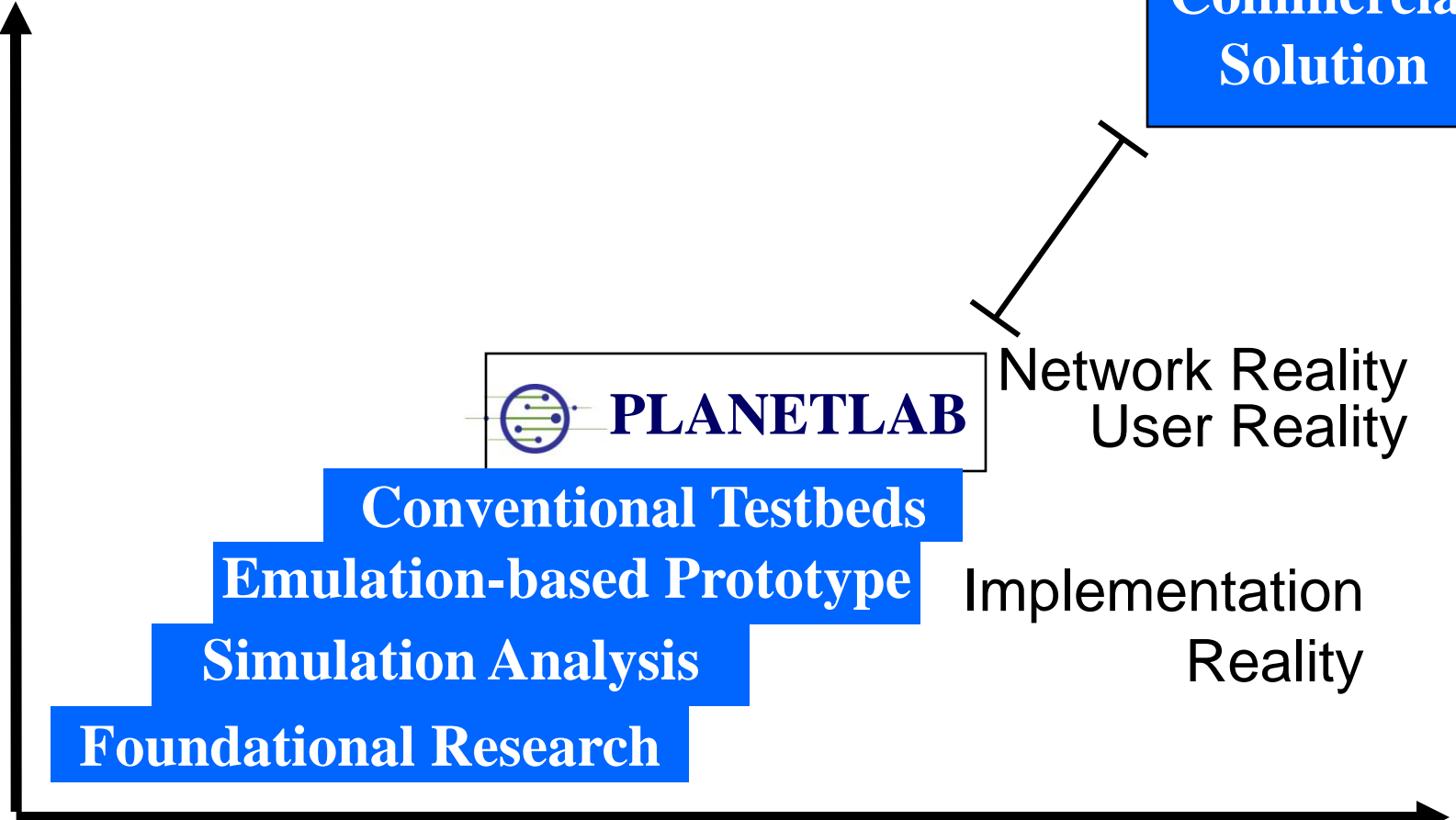
- 900+ servers spanning 450+ sites in 40+ countries
- 1000s of researchers \approx 100s of papers
see www.planet-lab.org/biblio
- Short running experiments & long-running services
- Per day communications:
 - about 1M unique IP clients
 - about 4TB transmitted on behalf of real users

Gap between Research & Real World



PlanetLab Decreases this Gap

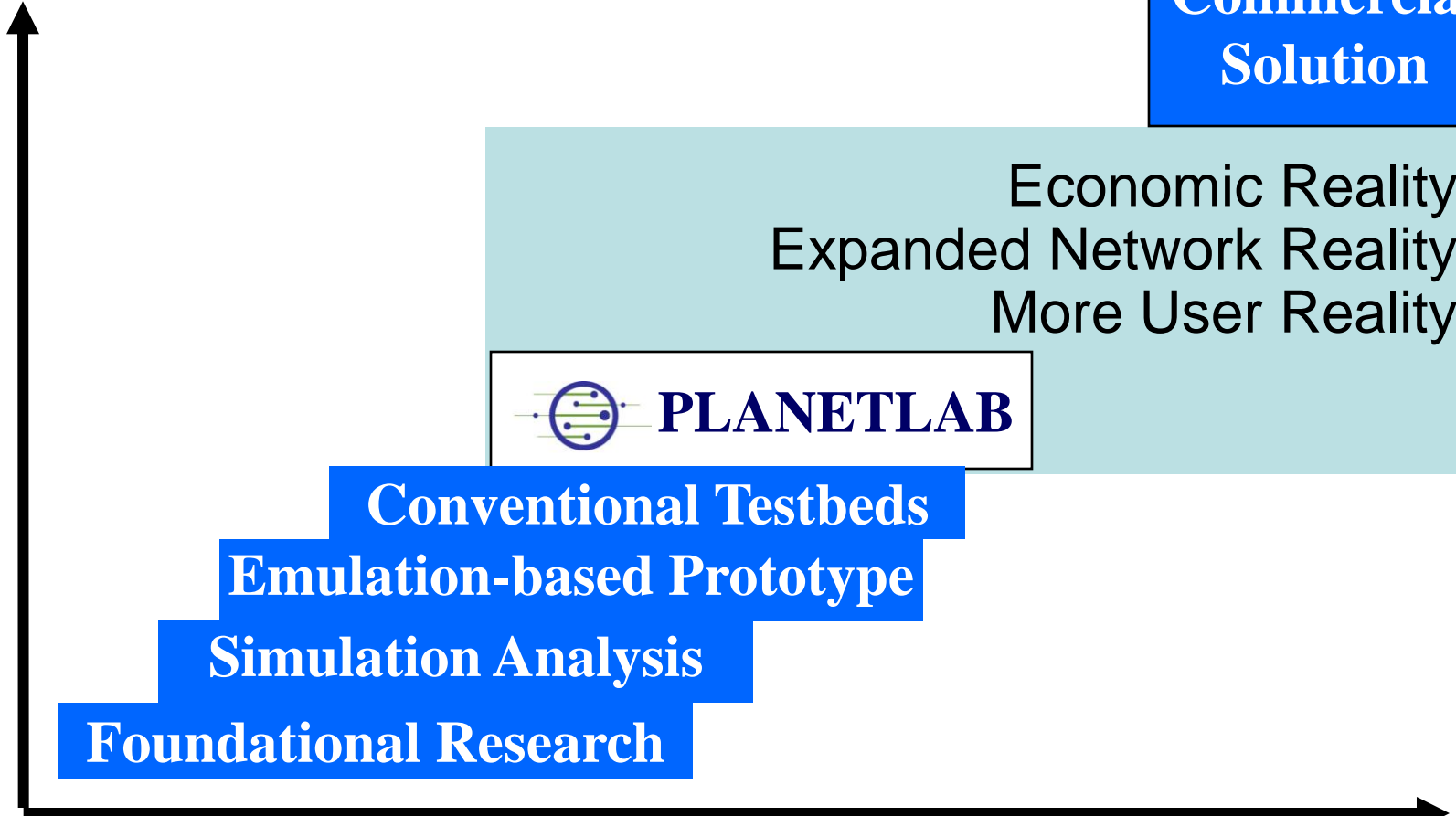
Maturity



Time

Much more to do to close the gap...

Maturity



Time

Transition from operations to software (PlanetLab \Rightarrow MyPLC)

- **Building** testbeds for their own researchers
 - OneLab (EU), CoreLab (Japan), G-Lab (Germany)
 - AT&T Labs, Intel, ...
 - Korea (both NREN and Commercial), China, ...
- **Evaluating** Commercializable PlanetLab-developed Service
 - Polish Telecom (CoBlitz), ...
- **Exploring** future “service deployment platforms” for Telcos
 - AT&T Labs, Polish Telecom (OneLab), BT (OneLab), Intel, ...
- **Deploying** an Internet Observatory for Net. Neutrality R&D
- *... and other projects using MyPLC ...*

Initiatives Leveraging MyPLC

- **New Technologies**

- VLAN, MPLS, IPv6, wireless, layer-2 circuits
- Partners: Intel, OneLab, China/Cernet

- **New Devices**

- Network processors, FPGA, access points, mesh routers
- Partners: Washington University STL, Stanford, OneLab, Intel

- **New Relationships**

- Federation of autonomous substrates
- Partners: GENI (US), OneLab (Europe), CoreLab (Japan), G-Lab (Germany)

- **New Environments**

- National backbones, Telco networks (PoPs, central offices), home and neighborhoods, remote/rural areas
- Partners: *CoBlitz Inc.*, Polish Telecom, OneLab, HP, *PlanetWorks Corp.*