



Bringing the Universities in Afghanistan Online

Mujibullah Shams,
Student Of Master's in Computer And Information Engineering,
Sakarya University, Sakarya, Turkey.

mujibshams@yahoo.com
mujibshams94@gmail.com

Two Success Stories Along the Way

- Virtual Silk Highway
- Afgren (Afghanistan Research and Educational Network)



Source: <http://www.nato.int/science/country-fliers/Afghanistan.pdf>



The Silk Project

From trade route to information superhighway

Virtual Silk Highway

- Named after the ancient trade route between Asia and Europe.
- High-speed internet access via satellite to the academic communities of the Caucasus and Central Asia.
- 2004-2006: Following a planning stage, provision for Internet access for Kabul University by NATO.
- 2009-2011: Extended connectivity to 14 provincial universities and planned to extend to 34.
- 2010: Silk Afghanistan was launched.
- 2013: It was extended to June 2015 with continuing funding from both donors.
- Funded by NATO Science for Peace and Security (SPS) Program and the US Department of State with further financing provided by the European Commission.

The Silk-Afghanistan 2.0

- A contract between Afghan Telecom and NATO for a high-speed fibre-optic link to Europe.
- Internet access via microwave radio technology to universities not yet connected to the fibre-optics network.
- A more sustainable solution for the handover of the network to a European Commission (EC) funding mechanism, the TEIN4 network (Trans-Eurasia Information Network, phase 4).
- The option to apply for NATO networking infrastructure grants and training assistance of their IT staff.
- 20 NIGs have been awarded to Afghan universities and the MoHE.
- <http://www.nato.int/science/country-fliers/Afghanistan.pdf>

AfgREN

- Within the framework of SILK-Afghanistan, NATO has also been working with the MoHE since 2012 to set up an **“Afghanistan Research and Education Network”**
- AfgREN:
 - Allows Afghan students and researchers to hold video teleconferences (VTCs) with the MoHE and with other universities and countries;
 - Provides distance learning capabilities and the ability to broadcast and receive lectures;
 - Gives access to a digital library, virtual laboratories, and other research materials;
 - Provides VoIP (Voice over Internet Protocol) telephone services;
 - The opportunity for Afghanistan to join larger regional and international research networks.

GEANT

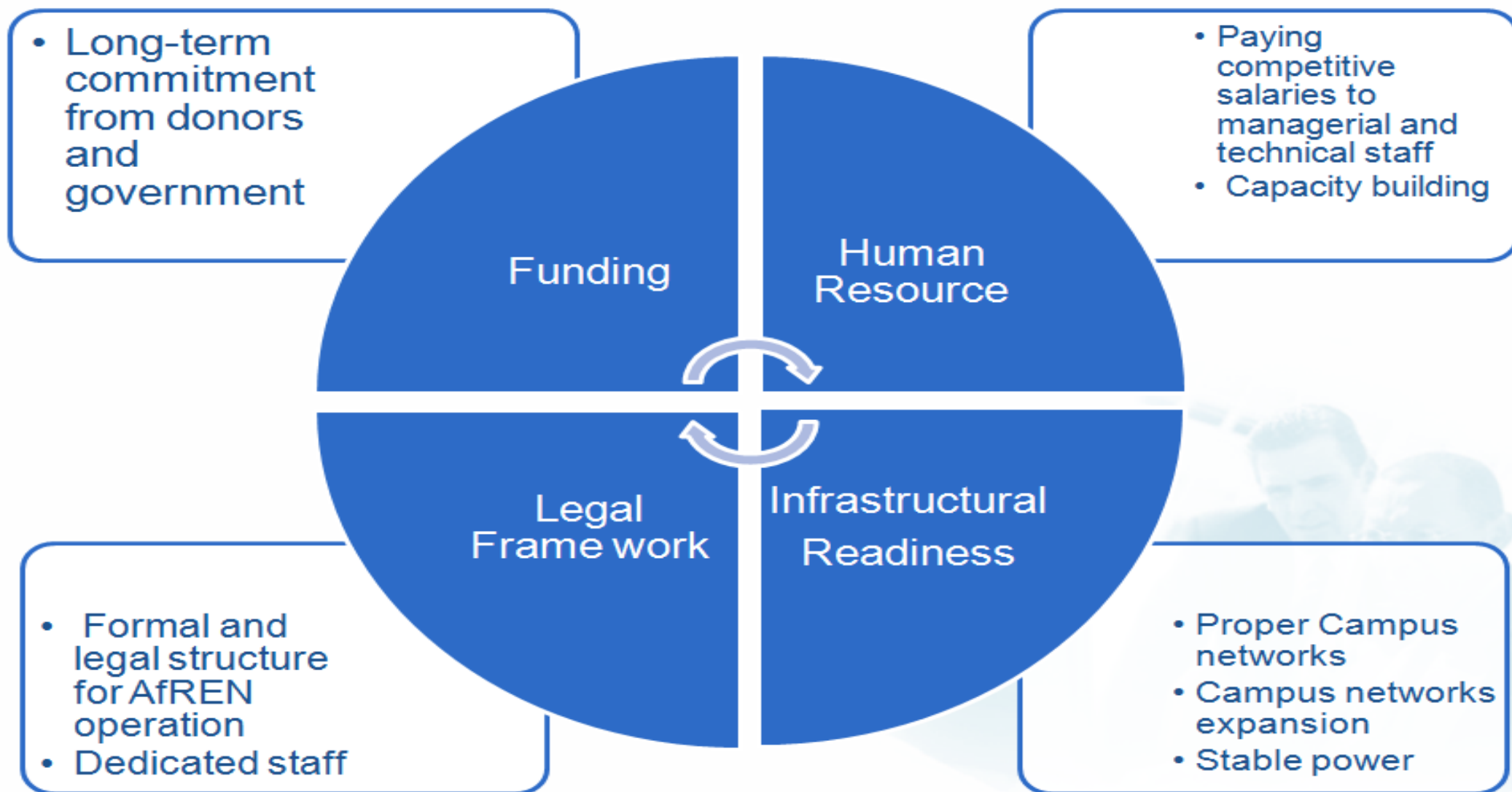
- Capacity was immediately doubled on the SILK-Afghanistan project's link to the pan-European GÉANT network.
- Connection capacity to GÉANT has been increased from 75Mbps to 155Mbps
- Internet traffic between Kabul and the GÉANT Vienna hub is now running solely on terrestrial fibre optic networks.
- Connecting an estimated 70,000 Afghan students, teachers and researchers with GÉANT's 50 million users at 10,000 institutions across Europe.

TEIN

- Afghanistan has also joined the pan-Asian TEIN research and education networking project.
- By also joining the TEIN project, Afghanistan has gained access to:
 - Expertise, support and technical knowledge;
 - Training and opportunities for collaboration provided by the world's largest regional research and education network.
- A new high-speed network connection to the TEIN network backbone was planned for 2015.
- A direct connection to the TEIN network backbone which currently serves over 50 million users in 16 Asia-Pacific countries.
- https://dante.archive.geant.org/Media_Centre/News/Pages/virtual-Silk-Road.aspx

Milestones Along the way of AfgGREN

- Physical topology
- Logical topology
- Bandwidth requirements
- Monitoring and reporting
- Security and management
- Sustainability



Questions?

