Arab States Research and Education Network

SHARING KNOWLEDGE
ACROSS THE MEDITERRANEAN (7)

To Face a changing World

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ASREN
Arab States Research and Education Network

What are Research & Education Networks?

- Research and education networks are **dedicated** networks connecting the Universities, Schools, Research Centers, Hospitals, Museums and any other institution that may have research and education activities.

- National Research and Education Networks **(NRENs)** are established to provide connectivity and communications services for the research and education communities at the national level

- Regional Research and Education Networks **(RRENs)** are connecting the NRENs to provide connectivity and services to researchers and educators across the boarders.

Main Drivers for Research Networks

- **Technological:** Satisfy high demand *eScience* initiatives, **Multimedia Collaboration**, Distributed High Performance Computing (**HPC, GRIDs**) for **Earth Sciences, High Energy Physics** (CERN, LHC...), **Bioinformatics**, **Computational Chemistry**, **Radio-astronomy**, **Engineering Planning** (computations, emulations & simulations), *Cultural* (archiving, collaborative digital access & processing) ...

- **Social:** Common culture of R&E community, Virtual Organizations VOs, collaborative research, tele-education, Smoothing the Digital Divides, affordable high bandwidth linkage to the Global R&E community

- **Economic:** Demand aggregators: University & school staff, students, researchers. Consolidation & control of diverse public expenditures. Promotion of Information Society (e-Government, e-Business, e-Health). Stimulation of technological & telecom markets → Competitiveness

Major Objectives for R & E Networks

- Provide scientific research and education institutions with reliable means of communication in order to facilitate ease of cooperation and coordination

- Strengthen the notion of partnership and encourage joint scientific research among communities.

- Minimize cost of research by using diversified academic and technical resources to be made available for use on the network with no need for duplicating investment.

- The fact that students, teaching staff, and researchers use such dedicated networks would eventually uplift efficiency and productivity and would boost the concept of creativity and innovation.

NRENs Status
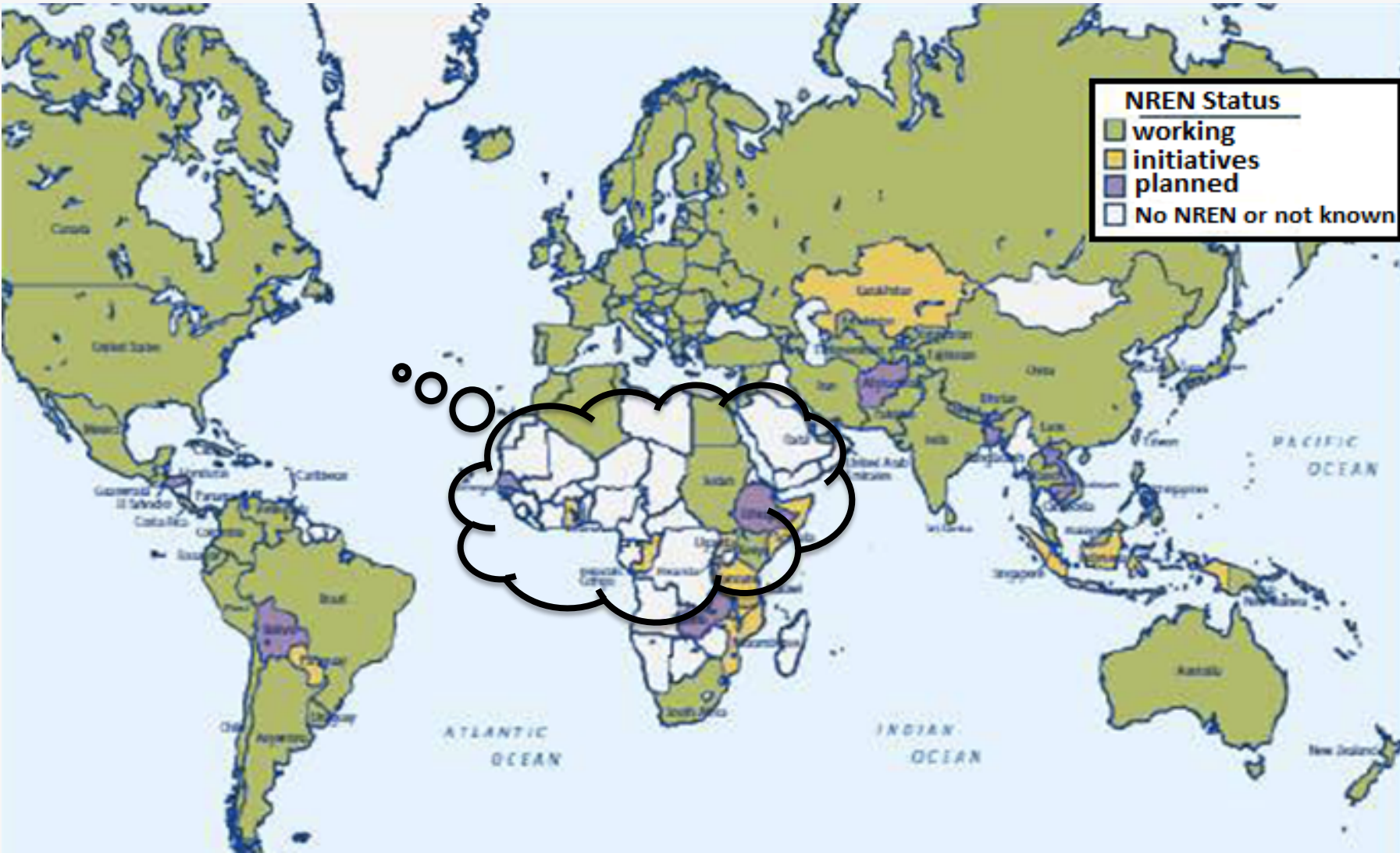
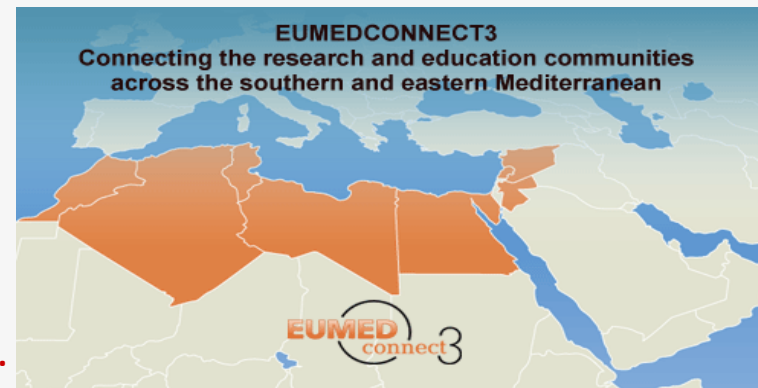# EUMEDCONNECT: The only regional network in the Arab Mediterranean Countries

EMEDCONNECT 1&2

- ~2m users at ~700 institutions connected among each other and with their peers in Europe and beyond

- Directly connecting Algeria, Egypt, Jordan, Morocco, Palestine, Syria and Tunisia

- Linking Med & European partners via GÉANT

- Jointly funded by the EC and MED partners to reduce the digital divide
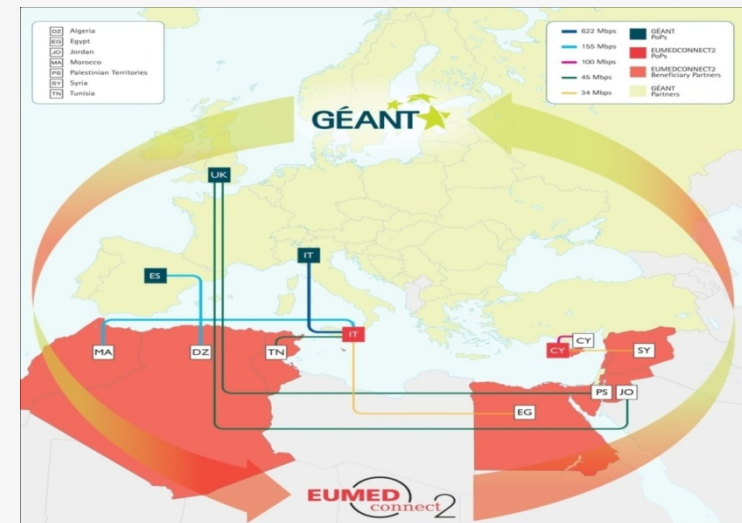
EMEDCONNECT 3

- Approved upon the creation of ASREN

- Launched in Amman December 2011

- Only Algeria and Palestine are connected so far.

EUMEDCONNECT3
Connecting the research and education communities across the southern and eastern Mediterranean

Other Supporting Projects

 The EUMEDGRID Support Project

 Coordination and Harmonization of Advanced e-INfrastructures

 Exchange Programme to advance e-Infrastructure Know-How

 Linking Scientific Computing in Europe and the Eastern Mediterranean

Regional Efforts, historical background

- **PAN Arab Network, 2005**
  - Initiated by MoICT of Jordan to study the feasibility of using the power distribution grid network to build a PAN Arab network. The study was sent to the League of Arab States.....

- **Rome Declaration 2006**
  - The Arab MED NREN managers signed a declaration in Rome to work on establishing a consortium to take the responsibility of creating an Arab Med Network...

- **NAP, the Network Access Points 2007**
  - A business initiative to build Internet exchange points for the Arab region....

- **CAMREN 200?**
  - Was proposed as an action for the Rome Declaration....

Arab States Research and Education Network — ASREN لمنظمة العربية لشبكات البحث العلمي والتعليم

NRENs of Morocco, Algeria, Tunisia, Egypt, Jordan, Palestine, UAE, Syria and Qatar and after several meetings in Cairo, Algeria and Rome, and monthly video conference meetings, decided to establish the Arab States Research and Education Network (ASREN).

Arab States Research and Education Network (ASREN) is the association of the Arab region National Research and Education Networks (NRENs) and strategic partners, that aim to implement, manage and extend sustainable Pan-Arab e-Infrastructures dedicated for the Research and Education communities and to boost scientific research and cooperation in member countries through the provision of world-class e-Infrastructures and E-services.

"The ASREN initiative will connect our researchers and scholars allowing them to share knowledge and to collaborate. It is a unifying network for the Arab region, and I commend it."

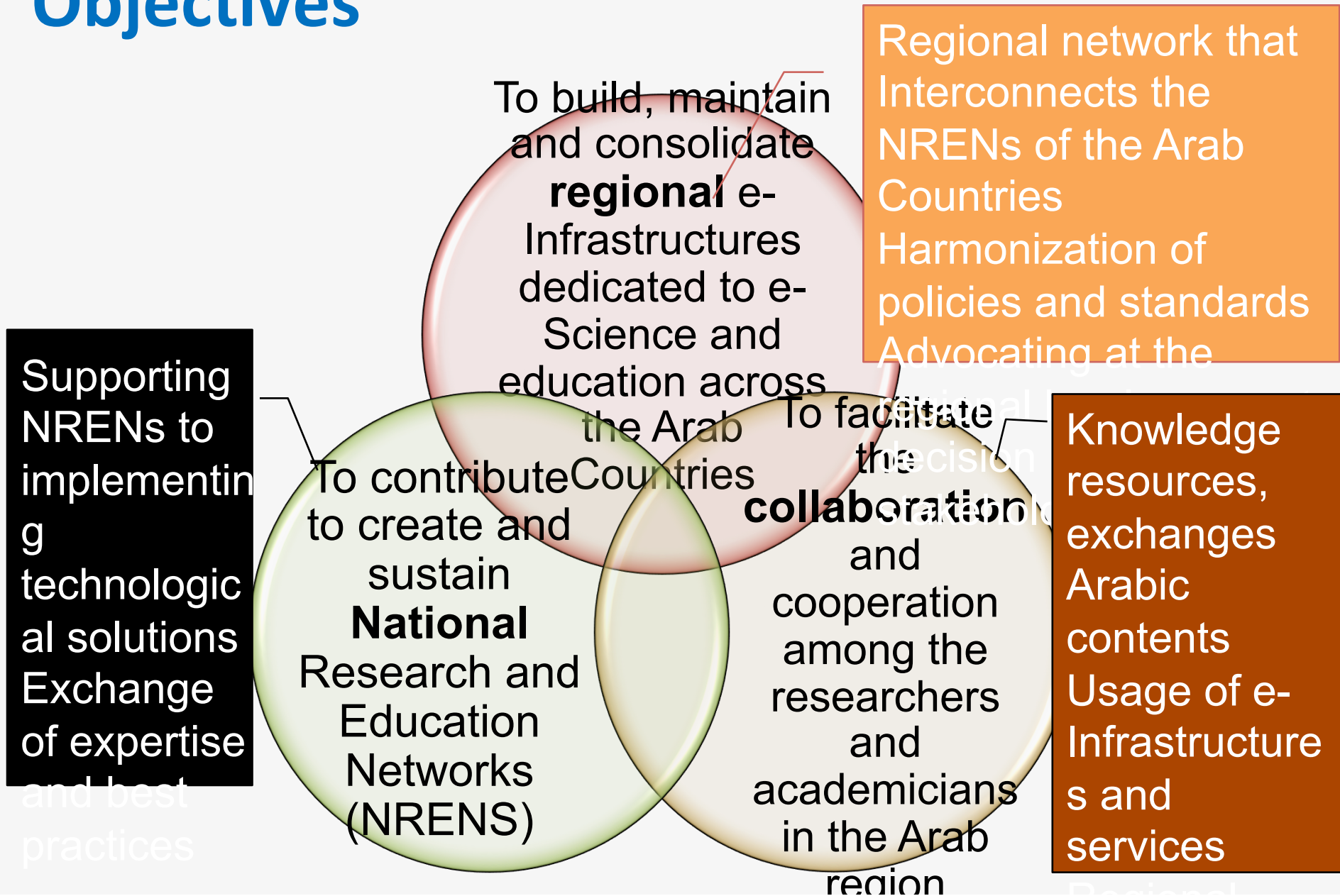H.E. Amro Moussa, Secretary General of the Arab League , 2010

"Investing in e-Infrastructures will advance inter-Arab research and education and promote cooperation with Europe and the World"

H.E. Talal Abu-Ghazaleh, Chairman of ASREN

ASREN: Vision and Mission

- **Vision Statement**: Pan-Arab collaborative research and education projects and activities, contribute to boost the scientific research, innovation and education levels in the Arab countries by uplifting efficiency and productivity of research and education communities.

- **Mission statement**: To implement, manage and extend sustainable Pan-Arab e-Infrastructures dedicated for the Research and Education communities and to boost scientific research and cooperation in member countries through the provision of world-class e-Infrastructures and E-services.

Objectives

Regional network that Interconnects the NRENs of the Arab Countries Harmonization of policies and standards Advocating at the regional decision makers

To build, maintain and consolidate **regional** e-Infrastructures dedicated to e-Science and education across the Arab Countries

Supporting NRENs to implementing technological solutions Exchange of expertise and best practices

To contribute to create and sustain **National** Research and Education Networks (NRENS)

To facilitate the **collaboration** and cooperation among the researchers and academicians in the Arab region

Knowledge resources, exchanges Arabic contents Usage of e-Infrastructures and services

ASREN Functions

Core Functions

Interconnection

(NRENs interconnection, Network operations center, technical/ financial resources)

Network Management

design topology, tendering and managing NRENs interconnection, monitoring traffic and providing technical support and training to member (NRENs)

Commercial Management

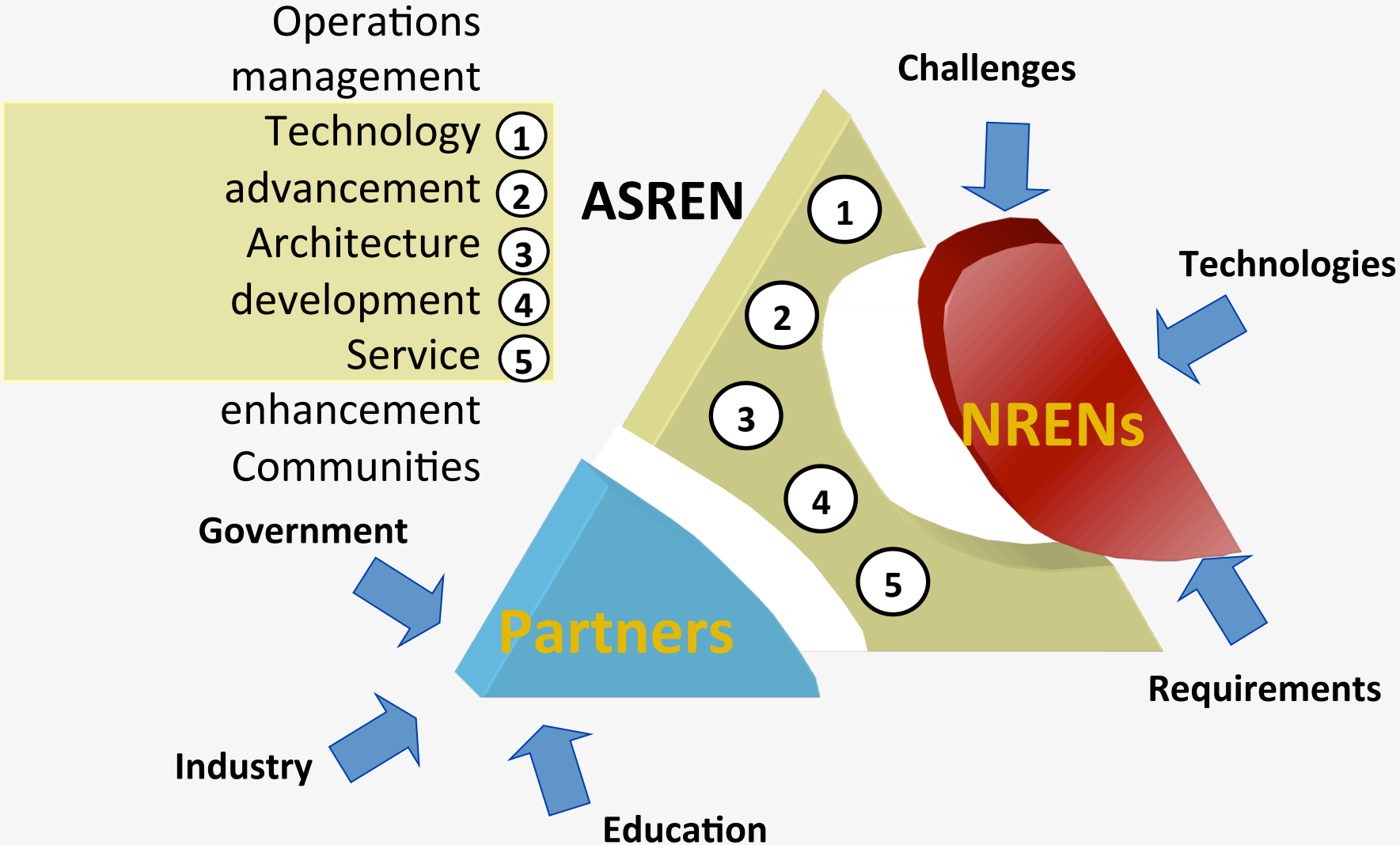Managing contracts/ agreements with network suppliers/ NRENs funds , funding agencies and conducting advocacy

Interoperability

Guidelines for security policy/ interoperability of services and protocols for supporting applications

Support Functions

Cloud computing, Content, eLearning resources, eLibrary, Research,

Eco-system model

Operations
management
Technology ①
advancement ②
Architecture ③
development ④
Service ⑤
enhancement
Communities

Challenges

ASREN

Technologies

NRENs

Government

Partners

Requirements

Industry

Education

Service portfolio

1. • Connectivity

2. • Security and authentication

3. • Hosting and content delivery

4. • Communication tools and conferencing

5. • Computing resources

6. • Dissemination

E-infrastructure Status

Legend:
- **HPC**
- **NGI**
- **In progress**
- **Active local users (1-10)**
- **EGI core sevices**
- **Functional sites**
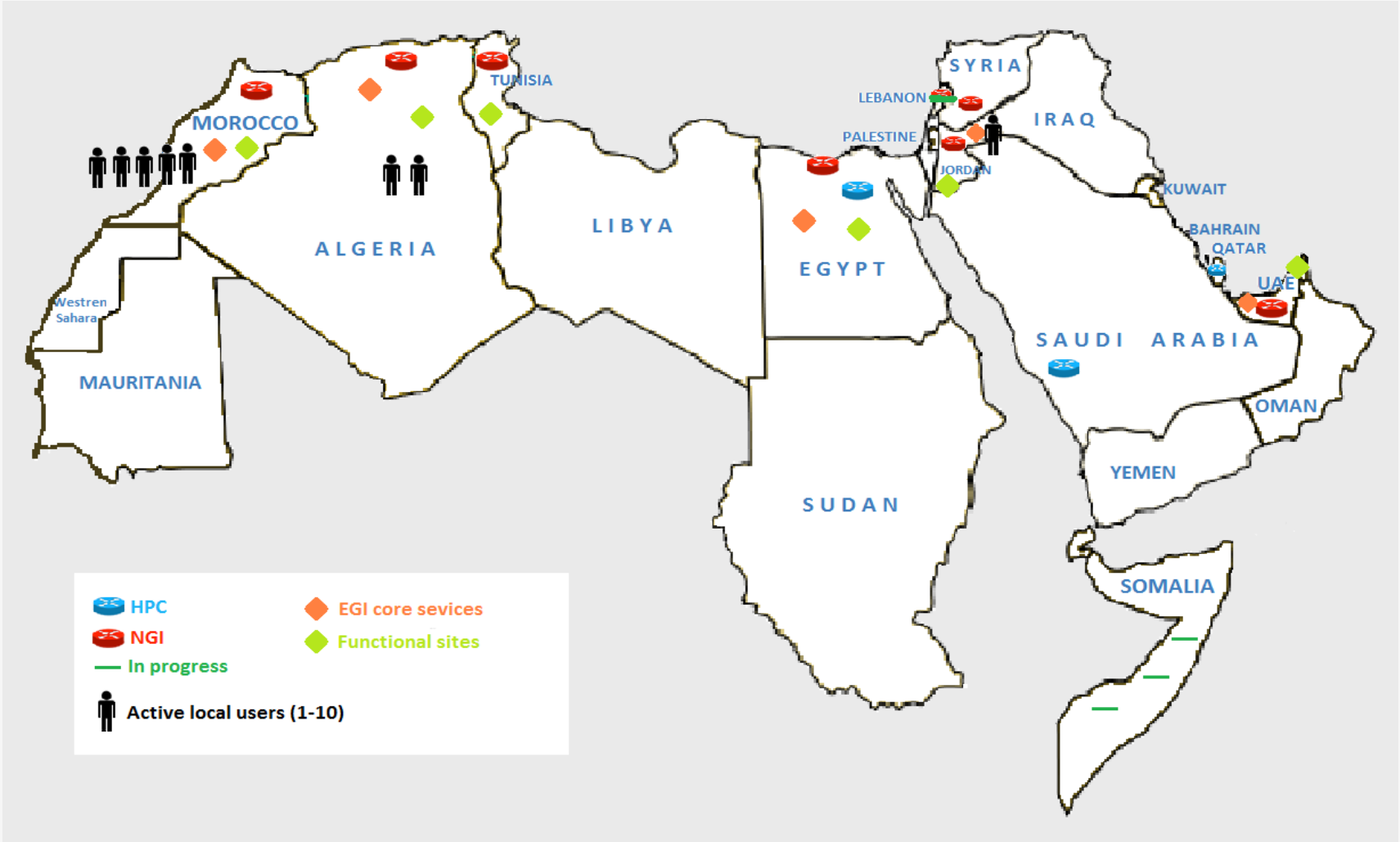
One Year of History (2010)

– ASREN was proposed in Cairo, January 2010, by Arab NRENs during the EUMEDCONNECT2/EUMEDGRID Support Meetings.

– Announced in Brussels March 2010 During the 3rd EUMEDEVENT.

– Planning meetings were conducted during the EUMEDCONNECT2/EUMEDGRID Support meetings in Algeria (July 2010) and Rome (November 2010)

– Launched in the League of Arab States in Cairo under the Patronage of HE Amre Moussa, December 2010. and Chaired by HE Talal Abu Ghazaleh with high level participation

A year of achievements (2011)

– ASREN was present in many activities and events around the world addressing the research and education communities, specially the Arab World.

– ASREN was officially registered in Germany as a non profit GmbH with 3 shareholders (JUNet of Jordan, CNRST of Morocco and Talal Abu Ghazaleh Consulting GmbH)

– ASREN became official partner in the EUMEDCONNECT3 project which aims to provide connectivity to the Arab-Med countries to GEANT

– ASREN is partner with CHAIN project which aims to coordinate and harmonize the e-Infrastructures around.

– ASREN conducted several workshops in Lebanon and UAE

The e-AGE 2011

http://eage2011.asrenorg.net

- The *1st International Platform on Integrating Arab e-infrastructure in a Global Environment, e-AGE2011,* conducted in Amman December 2011 under the Royal Patronage.

- The conference was attended by high level representatives including Ministers and decision makers, academics, network professionals, researchers, scientists from 32 countries.

- The event included:
  - EUMED Event 4
  - Internet2 SIG Middle East Meeting
  - ASREN 1st Annual Meeting

- 11 Arab NRENs were present and 8 NRENs signed letters of accord to start joining ASREN

Another year of Challenges (2012)

- Increasing the number of partners
  - At least, NRENs of Sudan, Somali, Tunisia and Palestine to be partners in 2012
- ASREN to provide assistance to the development of NRENs in the Arab World.
  - Lebanon, Jordan, Bahrain and Kuwait
- Together with DANTE to connect Arab NRENs to GEANT
  - Palestine and Algeria are connected
- To cooperate with world wide organizations and regional communities
  - EC, World Bank, ISESCO, ISOC, MENOG, ITU, QF, SKF
- eAGE2012
  - December 2012, UAE

Upcoming Events

Workshop on
"Ubiquity in e-Infrastructure, Networks, Applications & Services"
5-6 September, 2012, NRF Auditorium, Dubai, UAE
www.asrenorg.net

The 2nd International Platform on Integrating Arab e-infrastructure in a Global Environment

e-AGE 2012

Let's Collaborate to improve research by developing the e-ifrastructures.

UAE
12-13 December 2012 (tbc)
http://eage2012.asrenorg.net

www.ASRENOrg.net

Thank You

www.ASRENOrg.net

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