ASREN Update

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Arab States Research and Education Network
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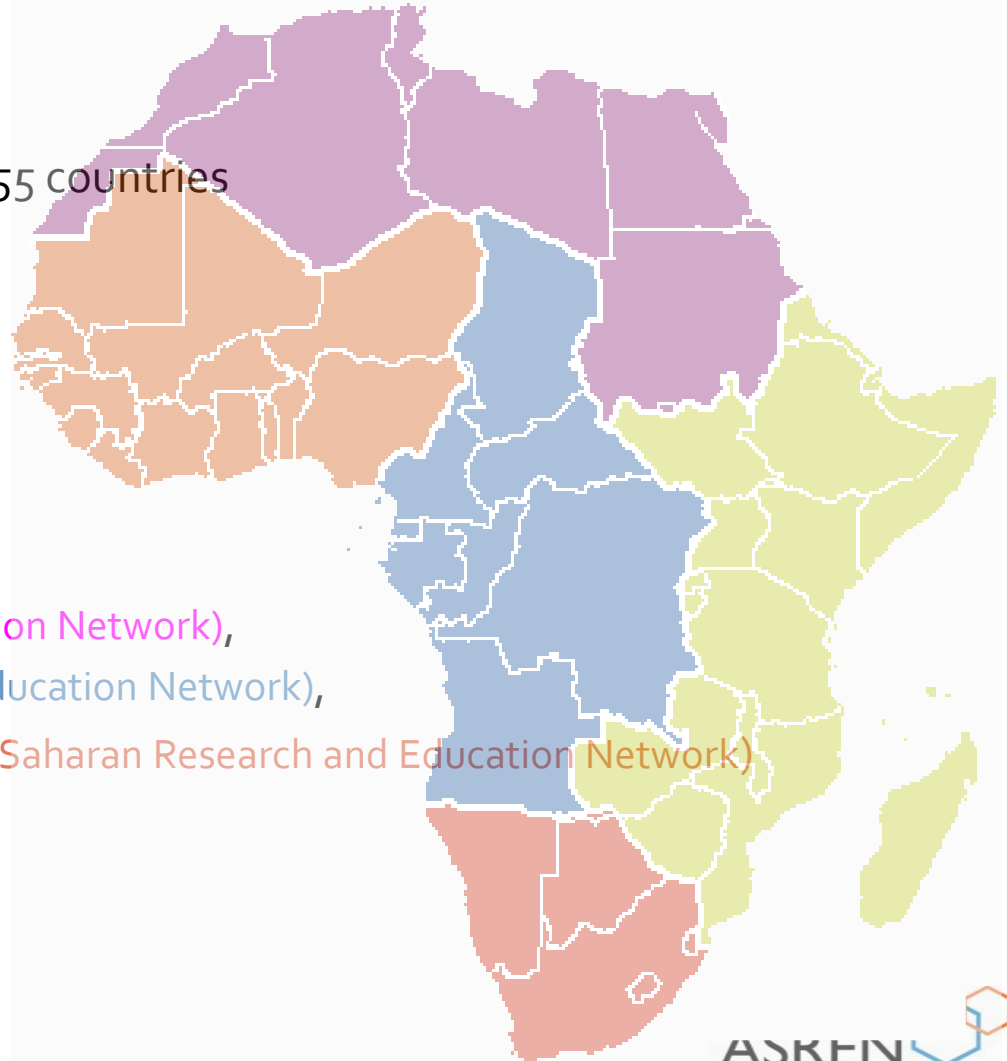alagtash@ASRENOrg.net

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Status

Potential

- A region with 1.1 billion inhabitants
- Vital energy of ~ 700 Million youth in 55 countries

Users

- 1 Million research and education institutes
- 12 million NREN users

RENs

- ASREN (Arab States Research and Education Network),
- WACREN (Western Africa Research and Education Network),
- UbuntuNet Alliance (The Eastern and Sub Saharan Research and Education Network)
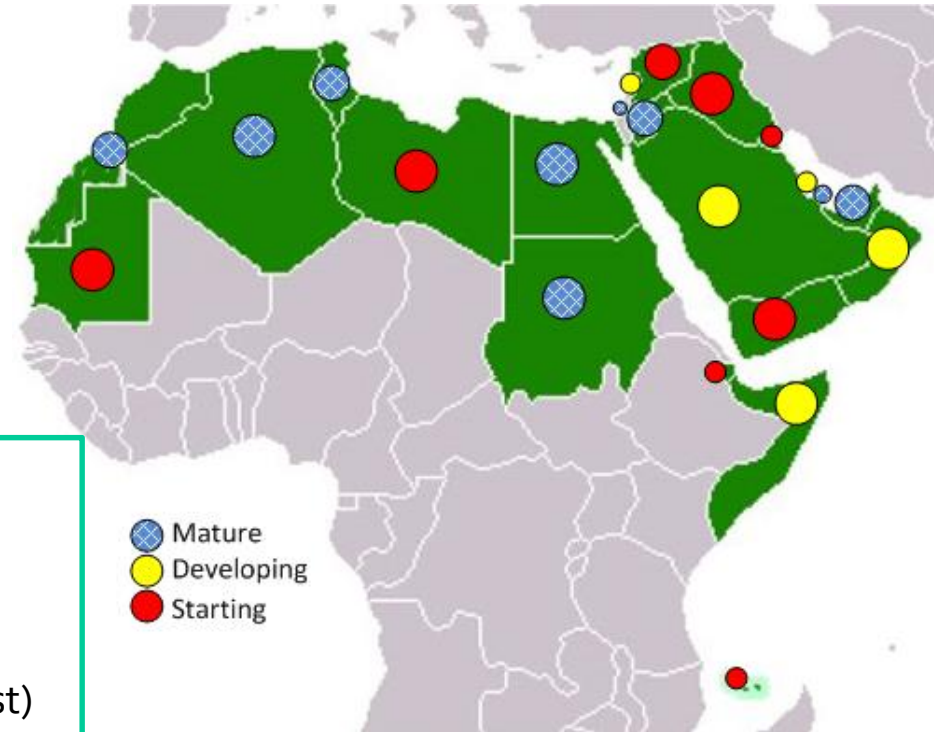
Arab e-Infrastructures

Potential

- Vital energy of estimated 200 Million youth in 22 Arab state countries
- 20 Million students in 1000 institutions

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Arab States Research and Education Network

- Shareholders: Abu-Ghazaleh GmbH, JUNET (Jordan), EUN (Egypt), CNRST (Morocco), SudREN (Sudan), CCK (Tunis)
- In process: Iraq, Somalia, UAE (letter of interest)
- Co- funded by EUMEDCONNECT, now AC2
- Partner in EC funded projects: CHAIN-REDS, MAGIC

Mature
Developing
Starting

Global integration
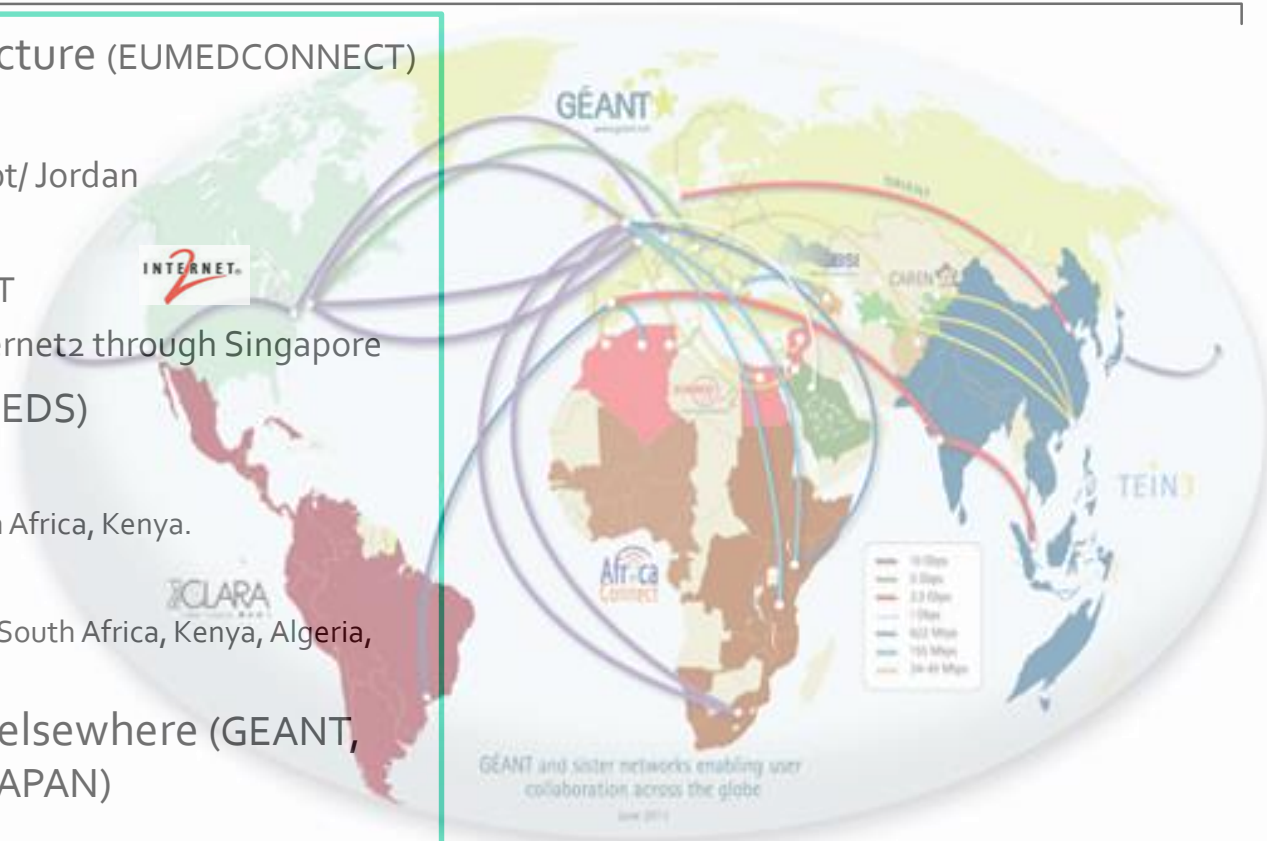
Developing network infrastructure (EUMEDCONNECT)

- Aggregation points
  - London, Fujairah, and Egypt/ Jordan
- International links
  - 1-2 Gbps capacity to GEANT
  - 2.5 Gbps capacity from Internet2 through Singapore

Deploying platforms (CHAIN-REDS)

- Science Gateway
  - Jordan, Morocco, Algeria, South Africa, Kenya.
- eduroam
  - Jordan, Morocco, Saudi Arabia, South Africa, Kenya, Algeria, Oman, Qatar

Access to resources available elsewhere (GEANT, Internet2, RedClara, UbuntuNet, APAN)
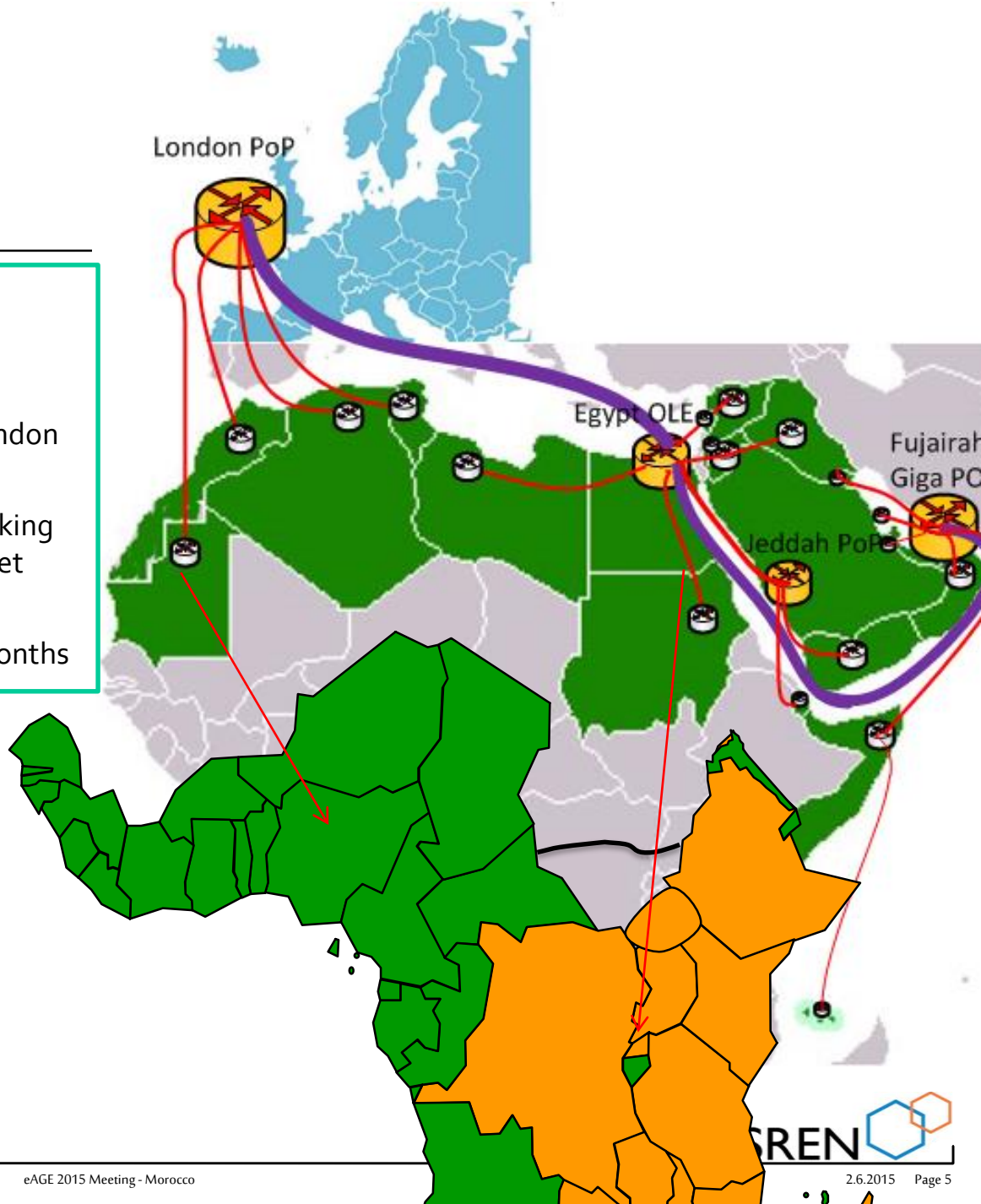
- Grid, HPC, and Cloud
- Learning platforms (MOOCs: EdX, Coursera, OCW..)
- Scientific applications
- Data sources, content, and repositories

GÉANT and sister networks enabling user collaboration across the globe

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Topology

London PoP (AGE – OP)

- Co-located with WACREN
- Donated by ISOC and Cisco
- Installed and operational at Telicity in London
- NOC operated by ASREN and DANTE
- 1 Gbps cross connect to Open GEANT, linking to GEANT, Internet2, RedClara, Ubuntunet
- Jordan STM1 link operational
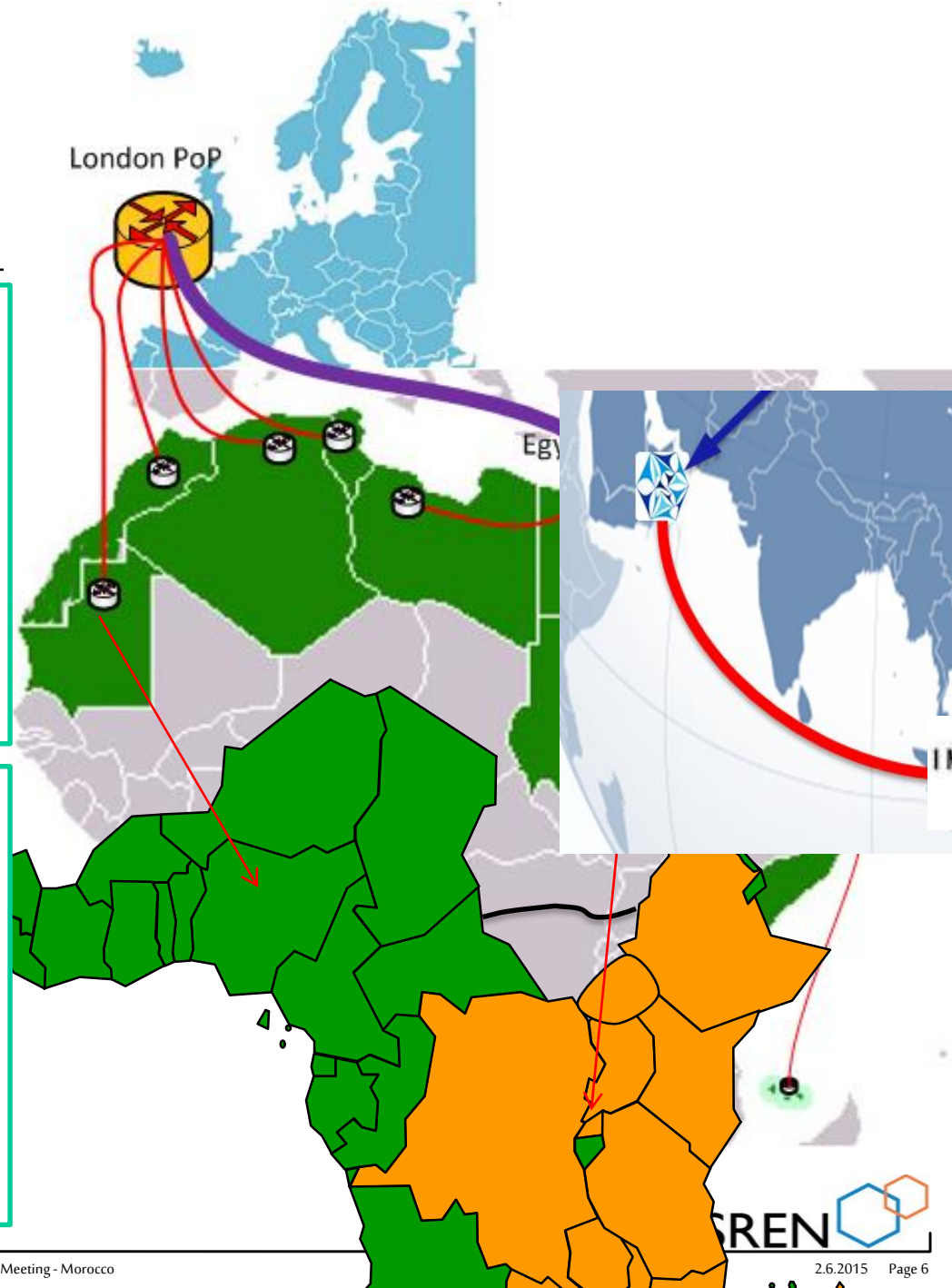- Algeria 2.6 Gbps link to operate in few months

London PoP

Egypt OLE

Fujairah Giga PO

Jeddah PoP

SREN

Topology

London PoP

London PoP (AGE – OP)

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- 1 Gbps cross connect to Open GEANT, linking to GEANT, Internet2, RedClara, Ubuntunet
- Jordan STM1 link operational
- Algeria 2.6 Gbps link in evaluation

Fujairah Giga PoP (AGE – OX)

- Internet2 and Ankabut collaboration
- To be Installed and set operational at Etisalat in Fujairah
- Internet2 2.5 Gbps link to Singapore
- Support US campuses and research collaboration in the region

Challenges

- ASREN/ NREN development - takes long for countries to participate

- Inability of some NRENs to raise resources for participation

- Limited progress and high cost of cross-border networks:

  - Policy

  - Regulatory

  - Perception

- Lack of workable business model towards sustainability in the current terms

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Opportunities

- Engaging potential NRENs (Algeria, Morocco, Tunis, Palestine, Egypt, Sudan, Jordan)

- Raising awareness on requirements to raise resources

- Policy makers involvement

- e-Infrastructures create economic cooperation

  - In an era of financial crisis, the Arab region grows 7 times in economic growth)

- Overall commitment from

  - European Union - Technical and Financial

  - League of Arab States – Political so far

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- Connectivity providers

  - More data and engagement on cross-border connection

- Equipment suppliers

  - delivery, donation, requirements (Cisco, ISOC)

- Arab NREN resources

  - $AGE - OP$ (London)

  - $AGE - OX$ (ANKABUT)

  - $AGE - OLE$ (Egypt)

- Capacity building (MENOG, TERENA, NSRC, ICANN, IT Synergy)

Foreseen plans

- E-Infrastructure

  - ASREN backbone

  - ASREN router and peering

  - Connectivity Ring and Landing Points

- Roll out network services as well as scientific applications at the regional level

- Support Arab countries in the development of NRENs and e-Infrastructure services

- Identify and build research communities

- Activities for federated identity and science gateway and building capacity through joint research projects

- Continuing e-AGE efforts towards better integration of efforts at the regional and international levels

- Consolidate efforts with regional RENs

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Readiness assessment and ownership

- Objective is to get the official ownership for NREN development

- Elements

  - Status of Higher Education (universities, research centers, students, faculty, etc..)

  - Motivation and reform

  - NREN development and Why RENs

  - Survey

- Research status, tools, and applications at Universities, Innovation profile and patenting, Research Funding and capabilities, Interconnection and networking , Computational resources and facilities, eScience repositories

Announcement2

- Africa Connects with 26 Million Euro

- Lebanon international connection

- Palestine international connection

- Increasing deployment of eduroam and eduGAIN

- DAAD funding for ASREN and BRSU cooperation to support Open Source development in Morocco – 200 K

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In summary

- Increasing interest in building regional Arab R&E network as globalization of e-Infrastructure became inevitable

- Lack of physical connection and no regional network of collaboration

- Continuing of EC funding on regional efforts for e-Infrastructure and a growing excellence of Arab research portfolio

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Why connect - Watch

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