



GRAND DUCHY OF LUXEMBOURG  
Ministry of Foreign Affairs

Directorate for Development Cooperation



European Union Africa  
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# The African Internet Exchange System (AXIS) Project

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## OUTLINE

- Background
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## Background

- The Program on Infrastructure Development in Africa (PIDA) envisaged establishment of Internet Exchange Points in its priority action plan. The African Internet Exchange System is an implementing project of PIDA.
- The African Union Commission signed an agreement on 06<sup>th</sup> May 2011 with the Lead Financier ( Luxembourg Development Agency) for the implementation of the African Internet Exchange System project funded by the EU-Africa Infrastructure Trust Fund and the Government of Luxembourg.
- Access to funds and project implementation began in 2012.
- The aim of AXIS Project is to support the establishment of internet exchange points at Member State level and Regional Internet Exchange Points and Carriers



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## **Capacity Building Support for Establishment of Internet Exchange Points**

Best Practice and Internet community mobilization workshops have so far been organized and conducted in the following 28 AU Member States that did not have Internet Exchange Points:

Algeria, Benin, Burkina Faso, Burundi, Cameroon, Cape Verde, Chad, Comoros, Congo Republic, Djibouti, Ethiopia, Gabon, Gambia, Guinea, Liberia, Madagascar, Mali, Mauritania, Mauritius, Namibia, Niger, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Sudan, and Swaziland.



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## Capacity Building Support for establishment of Internet Exchange Points

The key outcomes of each workshop included but were not limited to the following:

- ❖ Consensus to establish an Internet Exchange Point in the respective Member States
- ❖ Formation of a committee to conclude the shortlisted proposals on the following:
  - i. Name of the IXP
  - ii. Location of the IXP
  - iii. Organization structure of the IXP
  - iv. Constitution of the IXP



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## Capacity Building Support for establishment of Internet Exchange Points

- Technical Trainings with the objective to prepare organizational networks for interconnection to the Internet Exchange Point have been conducted in the following twenty eight (28) AU Member States:

Algeria, Benin, Burkina Faso, Burundi, Cameroon, Cape Verde, Comoros, Congo Republic, Cote de Ivoire, Djibouti, Ethiopia, Gabon, Gambia, Guinea, Liberia, Madagascar, Mali, Mauritania, Mauritius, Namibia, Niger, Sao Tome, Senegal, Seychelles, Somalia, South Sudan, Swaziland, and Togo.



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## Capacity Building Support for establishment of Internet Exchange Points

- A total of 500 participants have been awarded certificates on Technical Aspects of Setting up, Operating and Administering Internet Exchange Points.



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## Status on establishment of Internet Exchange Points (IXPs) in Africa

- The AXIS project has procured & donated equipment and facilitated the setting up of Internet Exchange Points (IXPs) in Member States that demonstrated readiness.
- Following the capacity building support, thirteen(13) Member States have since set up and operationalized their Internet Exchange Points(IXPs):

Benin, Burkina Faso, Burundi, Congo Republic, Cote D'Ivoire, Gabon, Gambia, Liberia, Mauritania, Mauritius, Namibia, Seychelles and Swaziland.

The IXP in Madagascar is scheduled to be the 14<sup>th</sup> IXP to be set up and launched on 17<sup>th</sup> March 2016





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## Status on establishment of Internet Exchange Points (IXPs) in Africa

- Internet Exchange Points in the following eighteen Member States had been established before the AXIS project;

Angola, Botswana, DR Congo, Egypt, Kenya, Lesotho, Ghana, Malawi, Mozambique, Nigeria, Rwanda, South Africa, Sudan, Tanzania, Tunisia, Uganda, Zambia, Zimbabwe



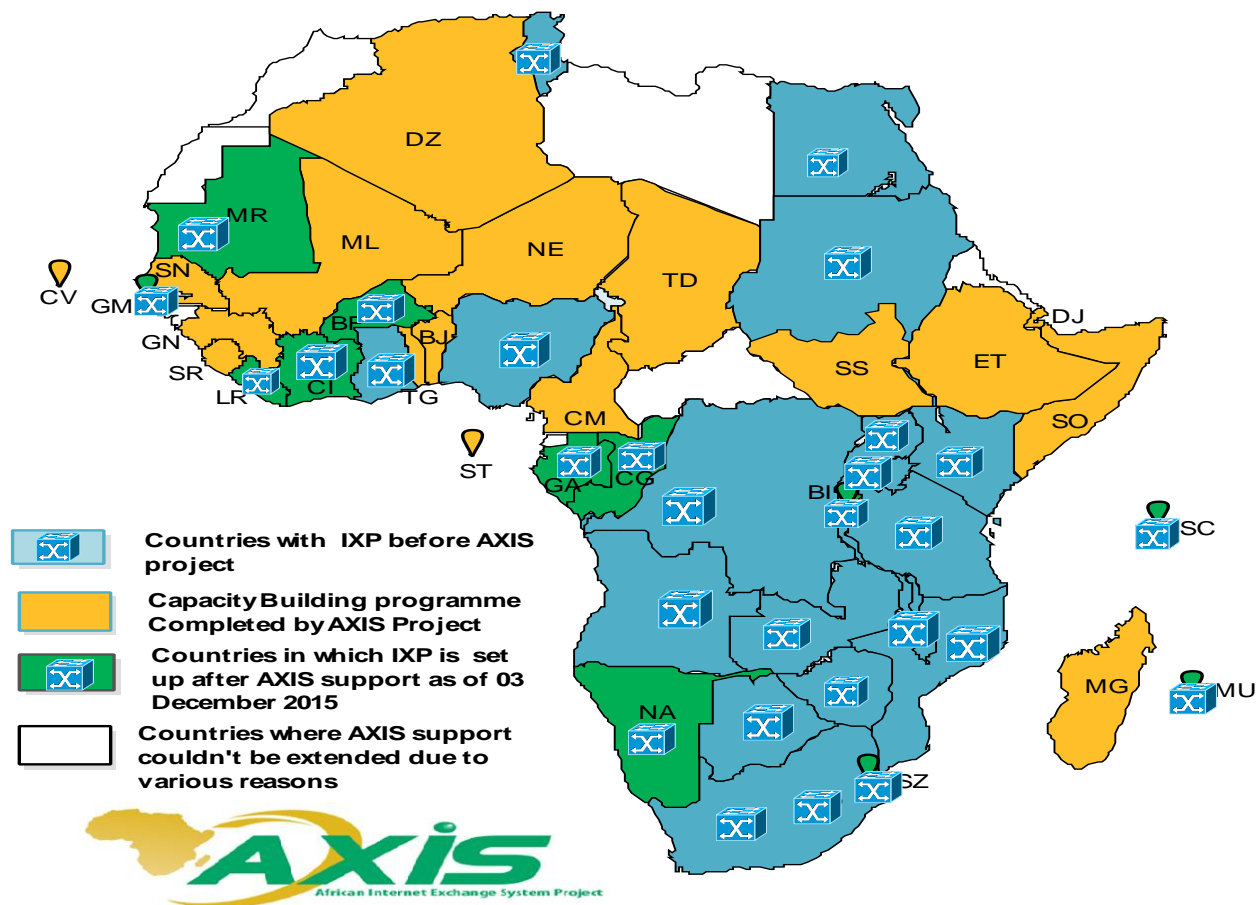
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# Status on establishment of Internet Exchange Points (IXPs) in Africa





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## Support for Establishment of Regional Internet Exchange Points

- A regional internet exchange point is an internet exchange point located in a host country, where traffic between at least two other countries is exchanged via public or private peering.
- The African Internet Exchange System Project has allocated a total grant amount of USD 1, 750,000 to support internet exchange points to grow to become regional internet exchange points.



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# Support for Establishment of Regional Internet Exchange Points

- Following the regional internet exchange point workshops organized in the five AU geographical regions, two call for proposals for internet exchange points to be supported to grow into regional internet exchange points were issued by AUC.
- Following the two call for proposals issued through open tendering, internet exchange points in Gabon (Central Africa), Kenya (Eastern Africa), Nigeria (Western Africa) Rwanda(Eastern Africa), South Africa(Southern Africa) and Zimbabwe(Southern Africa) have so far been awarded grants to become regional internet exchange points.
- A final call for proposals is underway in 2016.



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## Impact Examples

### Windhoek Internet Exchange Point - NAMIBIA

#### Transit Cost Savings

- Estimated cost saving of the IXP in Namibia after one year of being set up was nearly **US\$ 2 Million**

#### Reduced Latency to Access

- The average latency came down to **2 milliseconds** compared to more than **300 milliseconds** before the establishment of the internet exchange point.

### Serekunda Internet Exchange Point - GAMBIA

#### Transit Cost Savings

- Estimated cost saving of the IXP in Gambia after one year of being set up was **US\$ 100,000**

#### Reduced Latency to Access

- The latency came down to **1-2 milliseconds** compared to **60-100 milliseconds** before the establishment of the internet exchange point.



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## Conclusion-Lessons Learnt

- The African Internet Exchange System (AXIS) project is a quick win with concrete impact across the continent without using a huge budget
- The African Union Commission has gained experience and capacity to coordinate implementation of ICT projects with Member States and Regional Economic Communities
- Designation of a full time project manager and project officer contributed to good management of the project funds and there has been no ineligible expenses after three annual audits



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**Thank you**

