THE CHALLENGE

Sub-Saharan Africa (SSA) faces a critical shortage of scientific, engineering and technological expertise - from the level of the technician to the level of the applied scientific researcher. This contributes to limited adoption, adaptation and diffusion of the scientific and technological innovations sweeping the world that could benefit the continent.

Together with appropriate economic and social policies, incentives and institutional structures, building this critical mass of technical-scientific expertise is essential to enable Africa’s transformation.

THE SOLUTION

Partnership for skills in Applied Sciences, Engineering and Technology (PASET), a regional, collaborative approach brings together African governments, local private sector and donors to revitalize higher education and TVET institutions and programs refocusing them towards development of excellence in science and technology to build skills across key sectors driving development on the continent.
### Regional Initiatives Launched:

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Scholarship and Innovation Fund (RSIF):</td>
<td>A pan-African Science Fund, seeded by African governments and envisaged as a Permanent Fund, to raise the quality of Ph.D training and applied demand-driven research in competitively selected SSA universities through partnership with international universities. RSIF has three windows – Ph.D grants, Research grants and Innovation grants. Recipients of RSIF Ph.D grants are competitively selected across the region. RSIF supports PASET’s vision of the emergence of a few high quality research universities in sub-Saharan Africa, with expertise in selected domains.</td>
</tr>
<tr>
<td><strong>PASET Regional Benchmarking of Universities:</strong></td>
<td>Development of standardized methodology and tool, based on the adaptation of the Shanghai Jiao Tong methodology to African contexts through a consultative approach.</td>
</tr>
<tr>
<td><strong>Regional Flagship TVET Institutes:</strong></td>
<td>Networked centres for training high quality technicians meeting international certification standards for regional infrastructure and regional integration projects.</td>
</tr>
</tbody>
</table>

### In Numbers:

- **$36** million
- **6** African Governments, Government of Korea, and the World Bank
- **5** additional African Governments have made commitments
- **80** SSA universities participating
- **$293** MILLION
- **16** regional institutes
- **30** SSA countries

### Knowledge Sharing:

- Focused study tours of government officials, private sector and institutions to Brazil, China, India, Japan and Korea. Korea Development Institute’s Knowledge Sharing Program for PASET countries on human resource development for priority sectors. PASET’s knowledge sharing events are open to all SSA countries and provide inputs for countries’ strategies and action plans.
**KEY GOALS**

**IMPACT THROUGH:**

- Over 10,000 new African high quality Ph.Ds in the applied sciences in priority domains, who will train the next generation of students, researchers and innovators in priority areas, particularly women.

- At least 5 SSA universities that emerge as leaders in applied research in one or more domain.

- Increasing the proportion of students enrolled in applied sciences, engineering and technology courses in higher education.

- Establishing SSA-wide post graduate regional scholarship program in ASET areas.

**FINANCIAL CONTRIBUTION GROWTH:**

<table>
<thead>
<tr>
<th>Year</th>
<th>RSIF SELECTION</th>
<th>University Applicants*</th>
<th>Ph.D Student Applicants*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>$0</td>
<td>15</td>
<td>980</td>
</tr>
<tr>
<td>2017</td>
<td>$2.5M</td>
<td>144</td>
<td>*From across SSA</td>
</tr>
<tr>
<td>2018</td>
<td>$29M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>$36M</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GROWTH IN PARTICIPANTS**

- **2014: Pilot**
  - 7

- **2016: 1st Round**
  - 48
- **2019: 2nd Round**
  - 74

**TRANSPORT & INFRASTRUCTURE**

**POWER & ENERGY**

**MANUFACTURING**

**ICT**

*World Bank financing for regional project in East Africa

**PARTICIPANTS**

- 700

**PASET FORUMS**

- 5

**Data**

- The development of a regional quality assurance mechanism for ASET programs, benchmarked to comparable systems globally.

- Establishment of high-quality data systems and benchmarking of ASET programs and institutions in at least 10 SSA countries.

**Skills Development**

- At least 5 regional TVET centers of excellence for training faculty of TVET institutions, to enable resource sharing/quality assurance and provide specialized training in emerging areas.
PASET GOVERNANCE: NIMBLE AND INCLUSIVE

**Governing Council (GC)**
High-level body for Ministers and donors to provide thought leadership and take major policy decisions on PASET’s direction.

**Executive Board (EB)**
Managing body of PASET responsible for overseeing implementation of PASET’s activities.

**Consultative Advisory Group**
Provides scientific and technical advice to the EB and GC. Composed of experts from higher education and TVET/skills from Africa and other regions.

**Secretariat**
Responsible for implementing technical assistance, knowledge sharing & convening of GC and EB meetings.

**RSIF Implementation Unit**
Implements RSIF according to guidelines/procedure set by EB and contributing donors.

The World Bank facilitates the partnership and hosts a small interim secretariat.

PASET technical partners: the International Centre of Insect Physiology and Ecology (icipe) implements the RSIF; Inter University Council of East Africa (IUCEA) implements the East Africa regional TVET project of the World Bank; African Virtual University implements the benchmarking initiative.

Note: Solid arrow represents reporting line, while dotted arrow represents close working relationship.

SUPPORT PASET

PASET provides a viable and efficient platform for all those interested in creating, shaping and implementing operational regional initiatives to build Africa’s technical-scientific capability.

Building high quality technical-scientific capacity is expensive and involves considerable sharing of tacit knowledge. By pooling resources at the regional level, SSA countries and donors can amplify the return on investment and generate spill over benefits for shaping their TVET, higher education and research systems.

African governments, donors and private sector (foundations, companies, individuals) can join by contributing to one or more of its regional initiatives and be represented on the PASET governing bodies.

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