

**eLearning in Africa:
Building the Infrastructure and
Providing the Services**

Leopold Reif, Online Educa Conference, Berlin, Germany, 2 December 2005

eLearning in Africa: the infrastructure is being set up



All photos 2004 in Nigeria. The Jigawa State eGovernment Programme; the Benin City University Internet Centers; nurses at the Ile Ife University Hospital; the NITDA mobile Internet Unit.

eLearning in Africa: the capacity is being built



Egypt, Ethiopia, Nigeria, South Africa and Uganda

The eLearning actors: World Bank

- Budget of US\$ 20 billion p.a.;
- ICTs are a cross-cutting tool for all projects;
- US\$ 1 - 2 billion p.a. are spent on ICTs within the sectoral programs; US\$ 4 billion are spent on educational programs, ca US\$ 400 millions on ICT enhanced education and training (1);
- The development of knowledge societies is seen as a core element in the fight against poverty;
- ICT is seen as a key for allowing access to education and training;
- Further activities: the Development Gateway, the Global Development Learning Network with 84 centers, the Virtual Colombo Plan, the African Virtual University.

(1) See the estimations of InfoDev in 2001:

<http://www.infodev.org/library/WorkingPapers/dalywp.pdf>

The eLearning actors: Australia

The “Virtual Colombo Plan” – a joint program of the World Bank and the Australian government with a budget of US\$ 750 million.

Focus: ICT supported education through helping already established programs such as the African Virtual University. Australian IT companies and Australian universities provide the services.

The eLearning actors: Japan 2000 - 2005

During the G8 Summit in July 2000 in Okinawa, Japan announced the "Comprehensive Development Package" with a budget of US\$ 15 billion devoted for "ICT for Development" in education and training.

This 5 year program had four aims:

- 1.) Raising awareness and contributing intellectually to policy and institution-building;
- 2.) Developing and training of human resources;
- 3.) Building IT infrastructure and providing assistance for network establishment;
- 4.) Promoting the use of IT in development assistance.

The eLearning actors: USAID

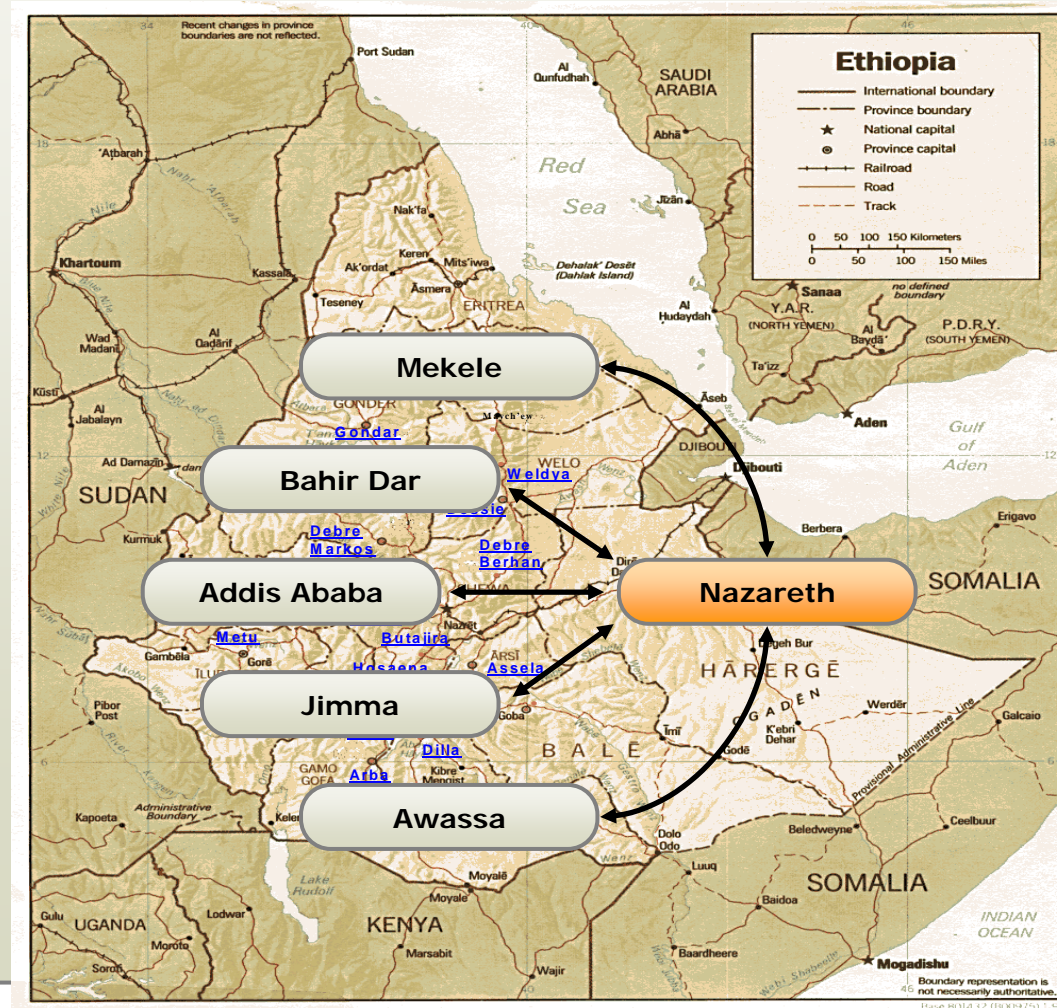
- For USAID ICT is a “cross-cutting tool” and integrated in all programs;
- In 2003 about 90% of all 82 USAID Missions had ICT components, comprising 351 separate ICT for Development activities worldwide;
- In the fiscal year 2002/2003 the total spending on these ICT project components was US\$ 440 million, with US\$ 200 million from USAID funds and US\$ 240 million from outside contributors;
- About 30% of the activities focus on ICT as a sector and 70% on ICT as a development tool;
- Education is one key sector in which USAID applies ICT.

The eLearning actors: a national education network in Ethiopia

In Ethiopia all universities, 500 secondary and TVET schools and 600 local authorities are networked.

Germany is supporting the reform of the Higher Education system and just started to build twelve new universities in the federal states.

Budget: € 380 million



Ethiopia: the infrastructure is being constructed

- WoredaNet: 600 local government and administration units (Woredas) are networked and equipped with videoconferencing facilities;
- SchoolNet: 500 secondary schools (including TVET schools) are networked and equipped with learning centers;
- AgriNet: 30 agricultural centers are networked by the end of 2005;
- HealthNet: it is planned to network all regional hospitals and to introduce tele-medicine applications;
- In 2005/2006 Cisco and Ethiopian partners are building the national Internet infrastructure with a 10.000 km optic fibre cable backbone, becoming the basis for the WoredaNet, SchoolNET, AgriNet and HealthNet.

The challenge is now to build the necessary human resources so that the technical infrastructure and applications can be maintained and used.

The promises of eLearning in developing countries

- Access for Learners
- Empowerment for Faculty and Researchers

Learners:

The Millenium Goal „Education for All“ will only be achieved when ICTs provide access and reach.

„Your're not going to train 15 million teachers just by adding a few seats to a traditional teacher training facility.“ (Sir John Daniels)

Faculty, Researchers:

eLearning empowers local knowledge owners to represent their knowledge – such as courses and research – directly and by themselves and to offer new services.

eLearning in developing countries – allowing contextual knowledge to become a competitive advantage

Through the production tools of eLearning teaching staff and researchers become enabled to represent directly their knowledge, courses and research.

The direct representation of knowledge by its owner results in a high degree of competitiveness through improved

- authenticity,
- contextuality,
- adaptability,
- time-to-market,
- and allows for new service and business opportunities for knowledge workers in the South never seen before.

Need for consensus building, coordination and a common strategy

eLearning for the Ethiopian Banking and Insurance Sector

eLearning for the Ethiopian Telecom

The Dutch "ICT-development Higher Education Institut" Project

GTZ-IS: Building 12 new Universities

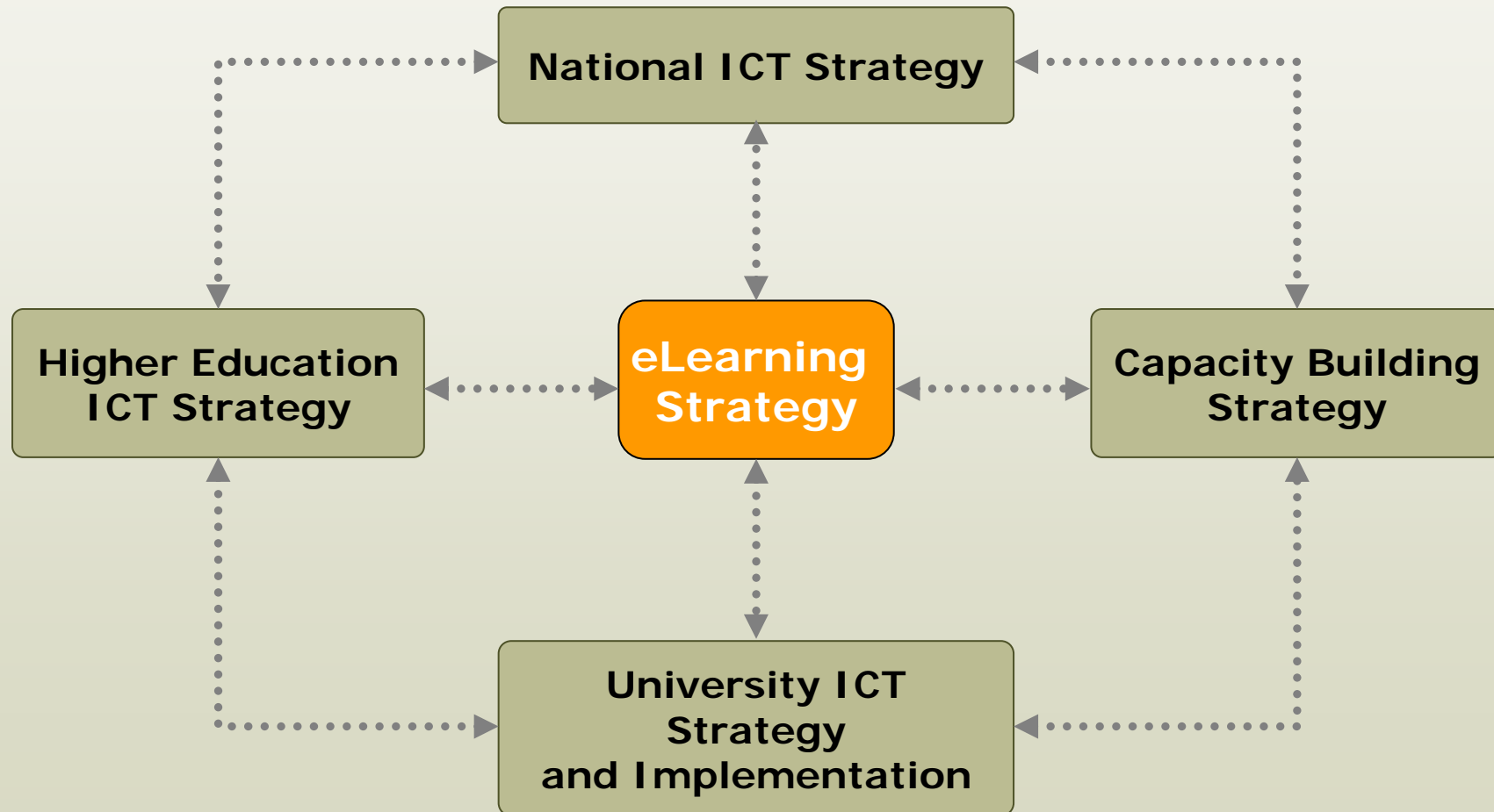
100 Cisco Academies and Cisco ICT projects

ECBP: GTZ, defining the role of eLearning in Higher Education

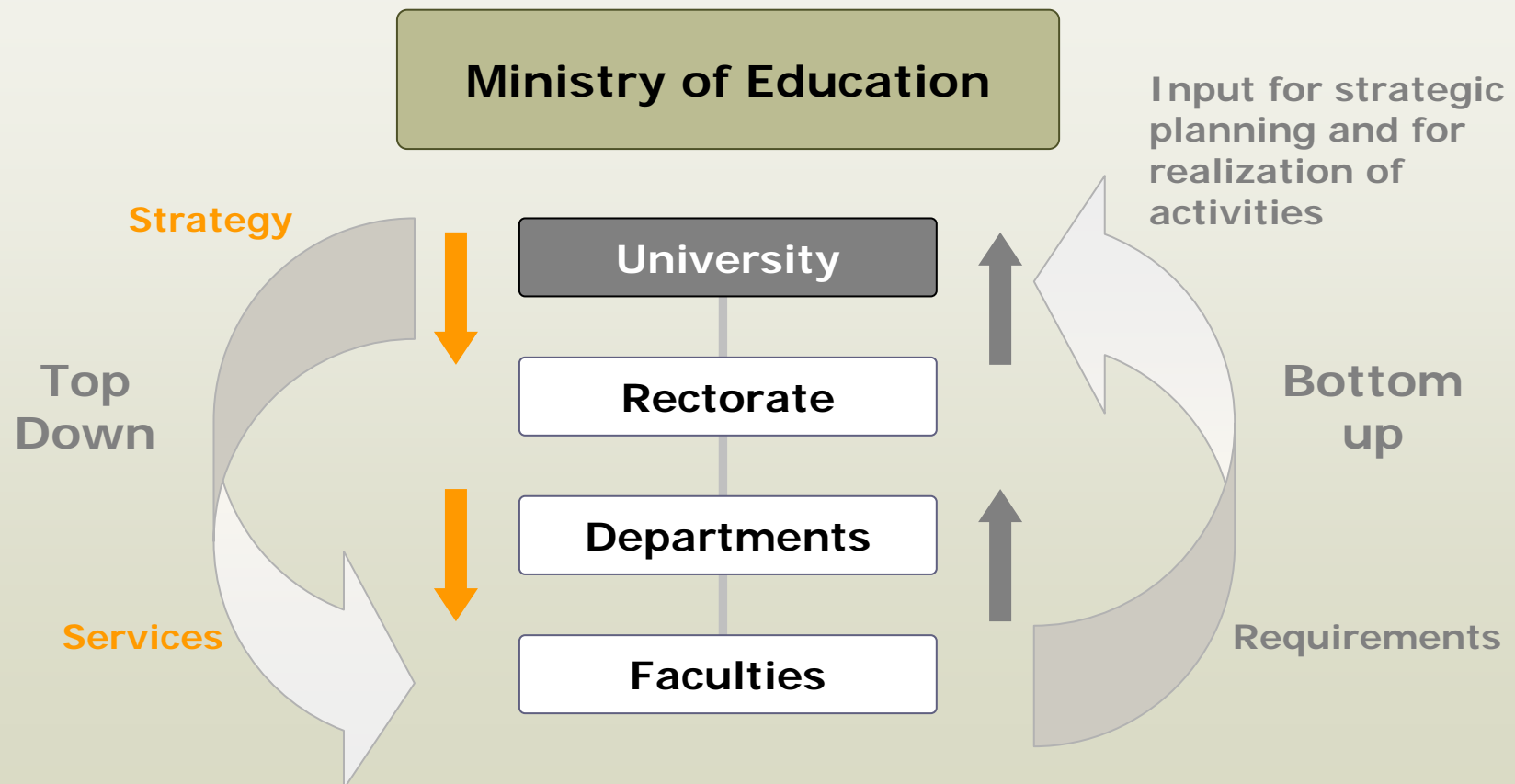
ICT-AD: a World Bank programme with a strong DED engagement

The Ethiopian case: Many ICT projects and many projects with ICT components, but lack of a common strategy.

The big void in many developing countries: no strategy integration



The big void ... : A need for institutionalising processes and engaging all actors



The challenge: Building an eLearning service framework

	Infrastructure	Consulting	Training
Learning: Learning Centers	<ul style="list-style-type: none"> • Computers • Media • Learning Material 	<ul style="list-style-type: none"> • Procurement • Learning Software • Support of students 	<ul style="list-style-type: none"> • Management of Learning Center • Advise and support
Teaching: Faculty	<ul style="list-style-type: none"> • Computers • Media • Teaching Material 	<ul style="list-style-type: none"> • Pedagogy • Concepts • Production • Implementation 	<ul style="list-style-type: none"> • Pedagogy • Concepts • Production • Implementation
Media: New Media Center	<ul style="list-style-type: none"> • Video production • Multimedia production • MM-Software 	<ul style="list-style-type: none"> • Production of MM-material • Media Technology 	<ul style="list-style-type: none"> • Videoproduction • MM-Production (Web, Flash, Mpeg..) • Media Design
Technology: Computer Center	<ul style="list-style-type: none"> • Platforms • Servers (mail, Forum, Chat, Web) • Videoconferencing 	<ul style="list-style-type: none"> • Technologies • Hard- and Software-procurement • Design of learning centers 	<ul style="list-style-type: none"> • Applications • Standard Software • Internet • Platforms • Communication Tools

Adopted from a model of the University of Basel, Switzerland; Dr. Gudrun Bachmann

The key for building eLearning services in educational systems: eLearning Competence Centers

Enabling or facilitation Model

A central unit within a university (or in a country) offers funding to faculties and departments. It offers training, support and consultancy, e.g. on course production and Internet based tutoring. Subject matter experts become enabled to provide eLearning services.

Examples: Universities in England, Germany and the USA

Contractual Model

A lead organisation becomes a central organizer for the development and delivery of eLearning courses to students. It contracts institutions to develop and deliver the courses.

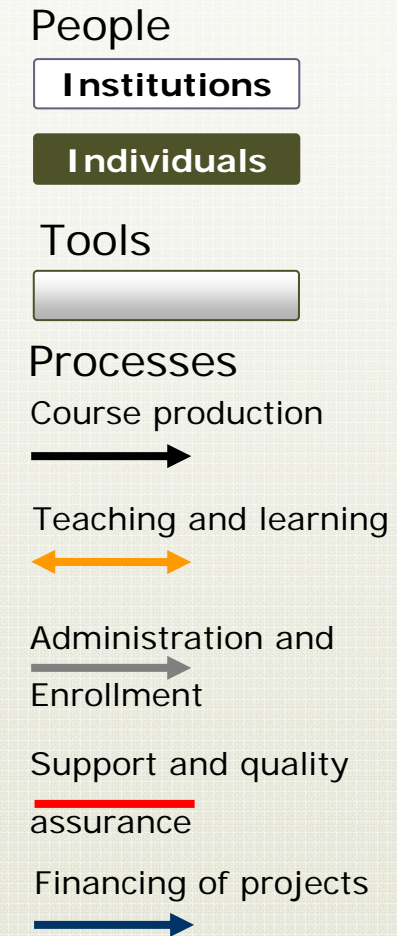
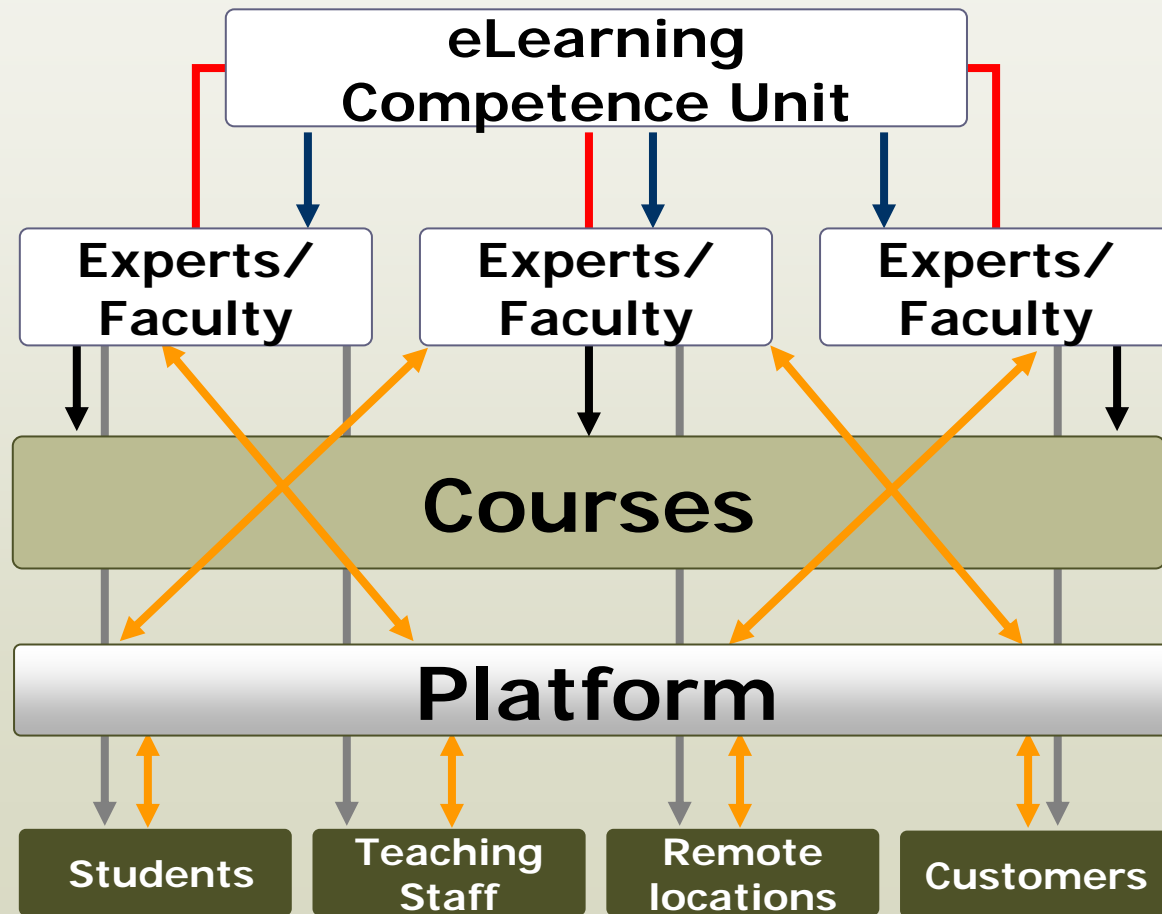
Examples: African Virtual University, UKeU

Multiple Alliance Model

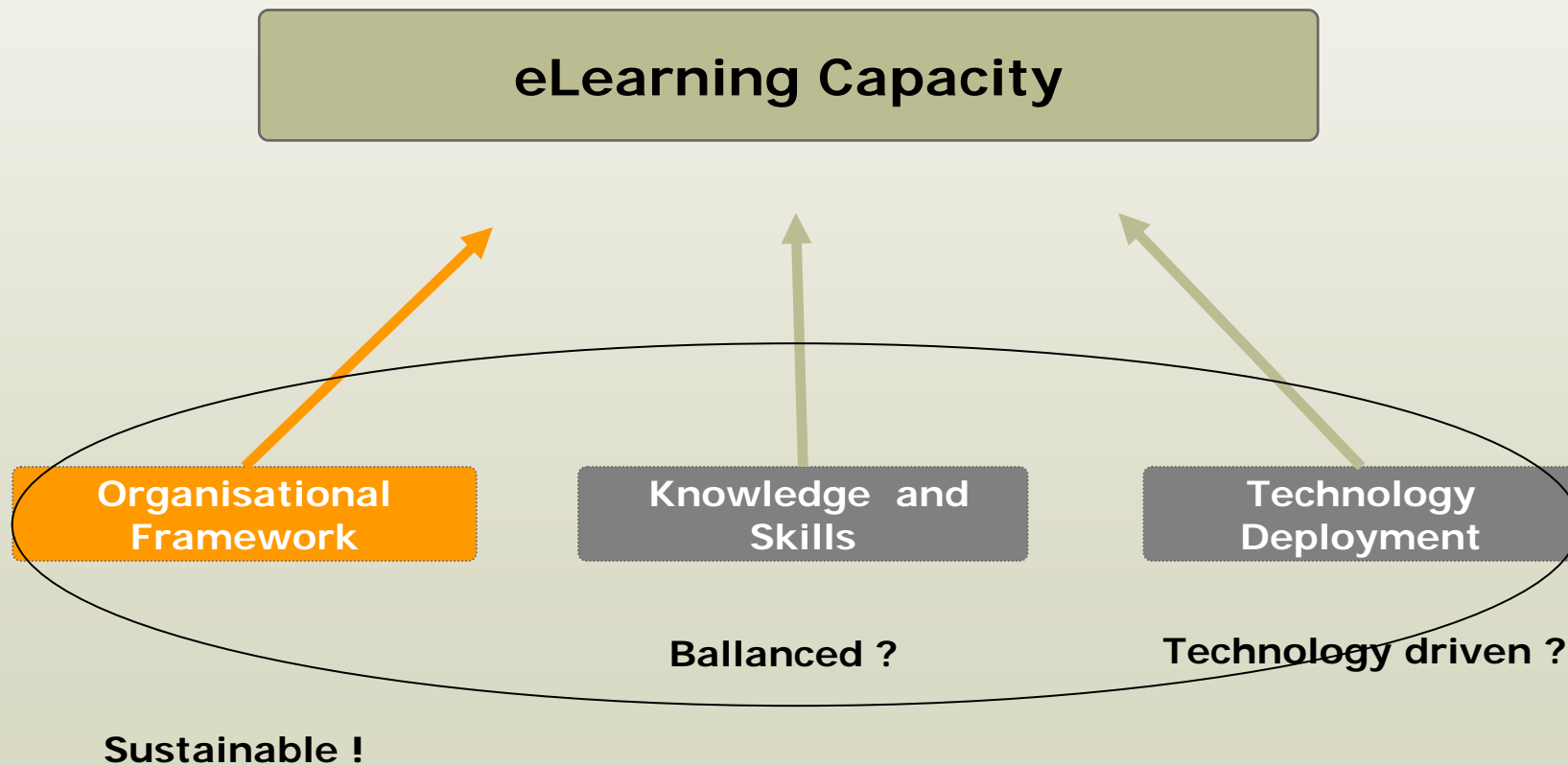
Institutions create a partnership and jointly develop and deliver courses in response to identified regional needs.

Example: NetTel@Africa

The „enabling“ eLearning Competence Center

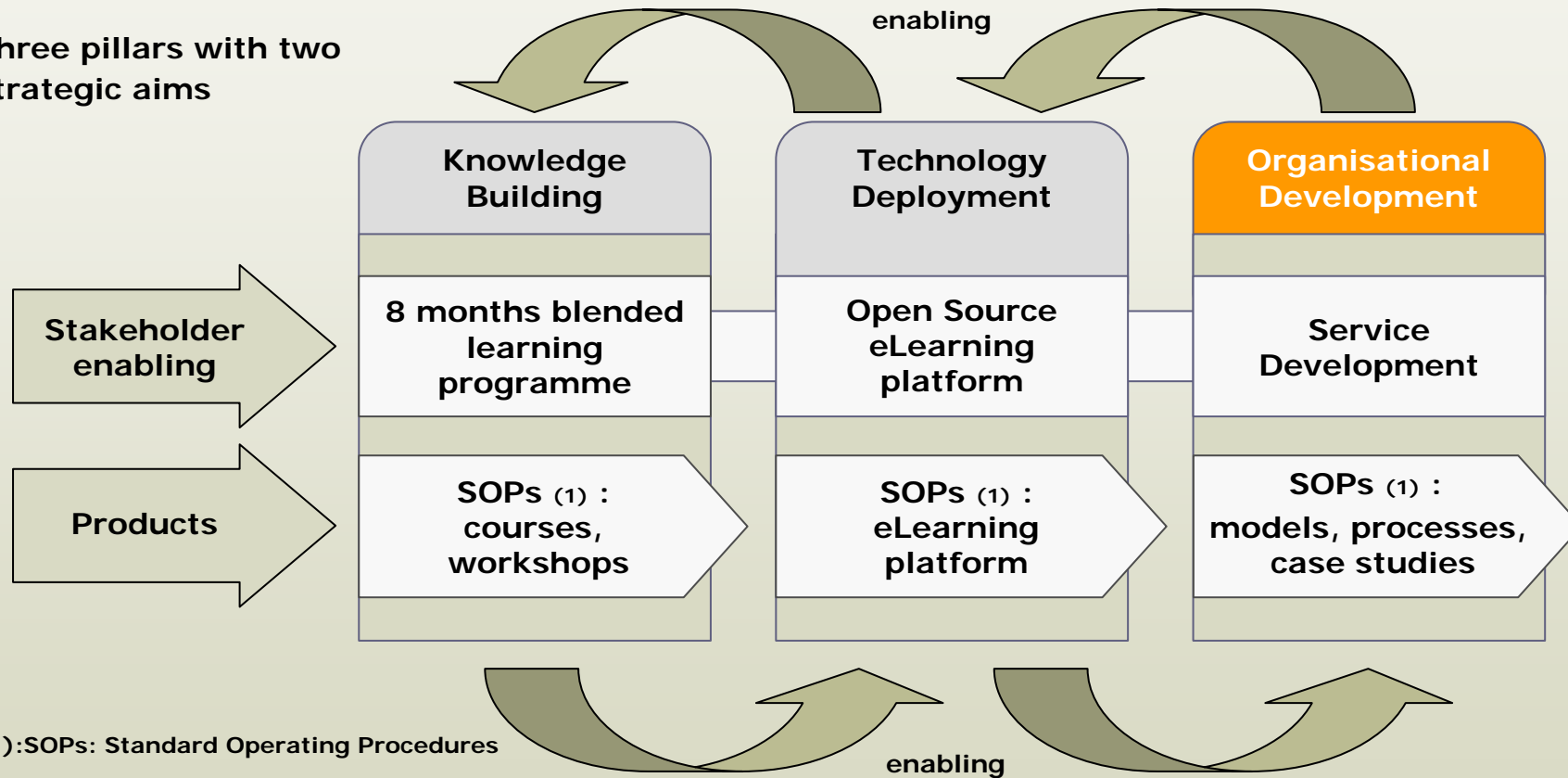


Three capacity building pillars for achieving eLearning service sustainability



A comprehensive approach for building eLearning services

Three pillars with two strategic aims



This programme has been implemented in Africa and Asia by the German development cooperation agency GTZ/Crystal:
<http://www.crystal-elearning.net>

Some sources

The World Bank: <http://www.worldbank.org>

The “Virtual Colombo Plan”:

http://www.usaid.gov/hottopics/topic.cfm?id=326_3216_5474_6437_2910

The “Global Development Learning Network”: <http://www.gdln.org>

The Development Gateway: <http://www.developmentgateway.org>

The African Virtual University: <http://www.avu.org>

The Japanese “Comprehensive Cooperation Package”:

<http://www.mofa.go.jp/policy/economy/it/oda/role0106.html>

The Asia Broadband Program: <http://www.dosite.jp>

The BMZ/GTZ sector project Crystal: <http://www.crystal-elearning.net>

Hoffmann & Reif Consultants: <http://www.hoffmann-reif.com>

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THANK YOU!