Cisco | Networking Academy®
Mind Wide Open™

The Role of Private Sector in Building Capacity -
Cisco Networking Academy Program

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Networks and People

For Thousands of Years,

Networks have connected people in all facets of life—families, communities, institutions, commerce.

Networks and People

The Internet Is Empowering

Billions of people to communicate and collaborate using all forms of human expression— data, voice, video—without regard to location, whether at work, at home, at school or on the road.

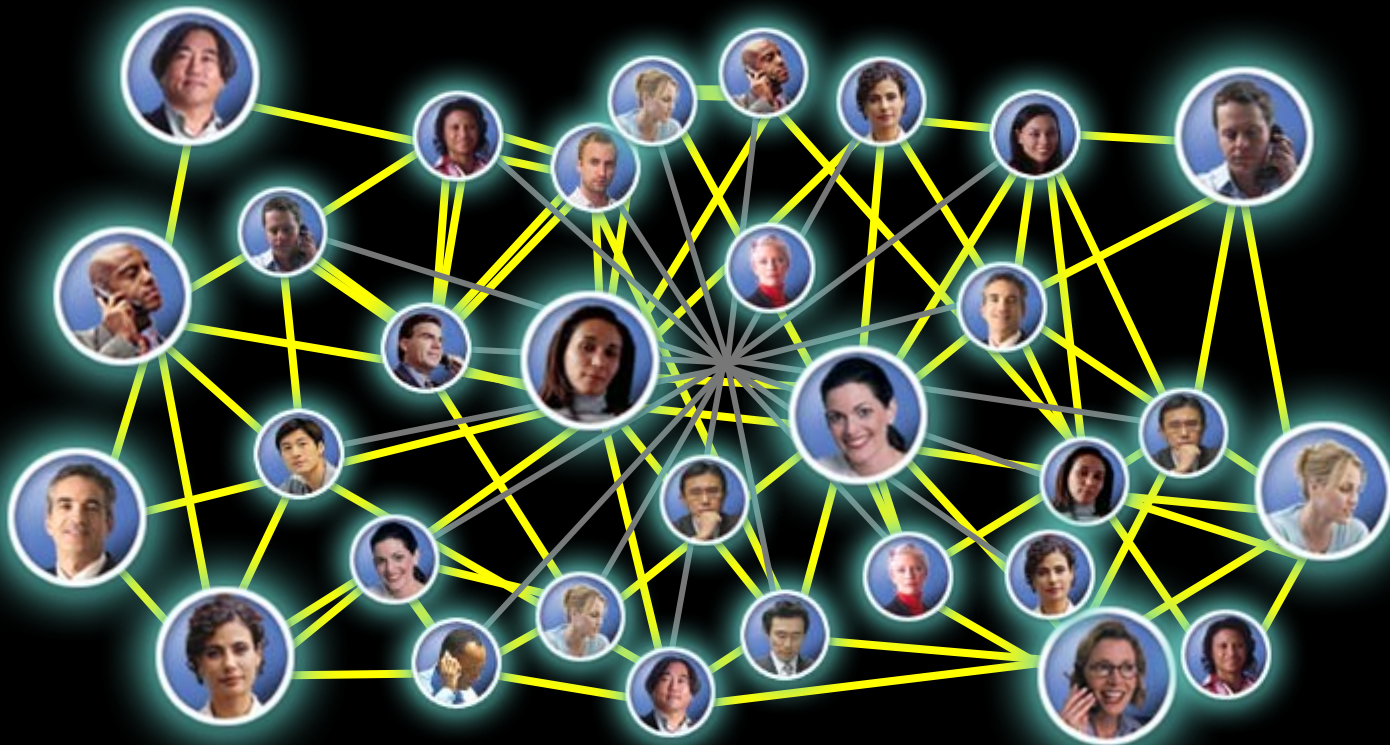| TV	Blogs	Gaming	Social Networking	Music

Welcome to the Human Network

The Internet Is Not a Network of Computers,

It is a network of people.

Demanding Marketplace, Impacting All

More Sophisticated Networking Skills

Business Understanding

Skills for All Environments...
Homes, Schools, Streets, Offices

Work Ready Graduates

Talent Spotting...
Certifications

Inclusion...
Older, Unemployed,
Under-qualified, Women

Shortages and Leapfrogging

Heightened Pressure
on Education Systems

Tech Sector Tipped to See Fastest Job Growth
From Now to 2014

Networking Top of the List for 10 Fastest-Growing Jobs

Note: Fastest-growing occupations for college-educated workers.
Source: Bureau of Labor Statistics

IDC MEA Skills Gap Study 2006

- Covered 9 countries in the Middle East region, Pakistan and South Africa

- Alarming Networking Skills shortage across key Emerging Markets

- In three years there will be a shortage of approx. 265,000 skilled people

- By 2009, demand will outstrip supply by 24% in Israel, 24% in South Africa and 35% in countries surveyed in the Middle East region and Pakistan

- In the areas of IP telephony, security and wireless networking, South Africa will have a projected gap of 30%

- Nigeria

IDC Skill Gap Study South Africa

Shortage of techies: risk of IT blackout in 2010

Ana Monteiro

AS THE 2006 FIFA World Cup went off without any technical hitches in Germany, the information technology industry (IT) in SA is ringing alarm bells about whether it will be as hassle-free when the country hosts the sporting spectacle in 2010.

Spurred by the release of a report last week that found SA needs 70 500 networking professionals just to fill current vacancies in the market, commentators are concerned that South Africa

online – as access platforms need to be secure at all times.

Hamid says that focus on basic IT skills such as using word-processing, spreadsheet and e-mail packages has lead to the neglect of developing more advanced skills. "Had we not done the study, we wouldn't have known that we now are in dire straits. By 2009 we are looking at a shortage of 113 000 network professionals," he says.

Benjamin Mophatlane, the deputy CEO of Business Connexion, the biggest outsourced

SA in dire situation with skills shortage of 100 000 in ICT sector

BY THOMAS MCLACHLAN
Business Correspondent

THE frightening skills shortage in South Africa will soon ravage the Information and Communications Technology (ICT) industry, according to a new report which found that more than 100 000 extra professionals would be needed by 2009.

Within three years the demand for networking skills in South Africa will exceed supply by 24%. This will leave a shortage of 113 900 skilled people in the sector.

At least 70 000 of these are in specialised fields such as wireless technology.

This is one of the findings of a new report on the demand for networking skills across Middle East and Africa by the Industrial Development Corporation.

"The study findings represent a call to action to governments, the private sector, educators and individuals to do more to address these needs," said Clive Fynn, Cisco Systems South Africa general manager Clive Fynn, Cisco Systems commissioned the report.

"We began feeling the crunch in the first quarter of this year. We wanted to bring in 30 new entrants with focused skills, but couldn't find them," said Fynn.

"If plans are not put into place now, technology adoption, business competitiveness and market growth will be placed at risk."

"The government identified the shortage of suitably skilled labour as the single biggest threat to the successful implementation of the Accelerated and Shared Growth initiative of South Africa (Asgisa)," said education department director general Duncan Hindle.

Asgisa was launched earlier this year by deputy president Phumzile Mlambo-Ngcuka.

"Not having sufficient networking skills available... influences the competitiveness of not only

Skills gap may thwart SA's tech boom

HOPES that liberalisation of the telecoms sector will let SA use new technologies to catch up in the global economy could be thwarted by a severe skills crisis.

Firms eager to use cost-cutting technologies face another hurdle in finding people able to implement and manage them.

The skills shortage could damage government's chance of achieving its growth targets, research house IDC has warned.

Last year, companies were un-

porting business processes.

All the respondents said in the past they had recruited purely locally. In the future, 14% expect to recruit internationally to find more advanced skills. Many hope to recruit South Africans who are coming home after gaining experience abroad.

"We needed to get an understanding of where the skills gap is," said Cisco SA GM Clive Fynn.

Companies can still find general networking skills relatively

Cisco is working with the education ministry and the Western Cape government to try to influence school curriculums.

Numerous firms and organisations are clamouring to put forward their ideas of what should be taught in schools, but Cisco says it has piqued the education department's attention.

"Government has been very clear that if we are to going to transform the working environment, one of the key fields we need to promote is science and technology."

Cisco has also partnered with the Nelson Mandela University and the Cape Peninsular University of Technology to create training courses that offer what the market needs. But the pace at which educational institutes evolve means it will be next huge before the new curriculums are even introduced, and far longer before the first graduates reach the market.

Those university courses will include internships with hi-tech companies to give the students work experience and make them marketable once they graduate.

Cisco runs its own two-year internship courses, but with only 10 people going through the system each year, its effect on the skills gap is almost negligible.

SA needs 70 000 techies

Huge shortage of people with networking skills

ANA MONTEIRO

THE IT sector is short of 70 500 people with networking skills, an authoritative study reveals.

And unless urgent action is taken, the deficit of networking professionals will climb to 113 900 by 2009.

These findings were made by ICT research consultancy IDC. Its research was commissioned by Cisco Systems, the biggest networking company in the world.

"Demand for networking skills still outstrips supply and is accentuated by high economic growth in South Africa," author of the White Paper, Philip van Heerden, said.

"In addition to networking skills, significant gaps were found in the areas of the more advanced networking skills such as security, Internet protocol telephony and wireless networking skills."

Networking involves linking computers and computer systems for information to be shared and is becoming more prevalent.

The study stated that 86% of respondents used the network as a key platform to share processes with important partners, suppliers, and customers.

While these skills are sought after the world over, their paucity is more evident in SA than in western and eastern Europe.

"The South African gap is twice as wide as that of eastern and western Europe," said Clive Fynn, GM of Cisco Systems SA.

Looking to 2008, forecasts show demand will outstrip supply by

24% in SA, in Europe it will be 12% and in the UK, the deficit will be less pronounced at 9%.

The report stated that while the gap in SA is high in absolute terms, it is smaller than that of Middle Eastern and other African countries.

Fynn said 36% of the survey's respondents had hired over the 12 months to December.

"Of that number, 62% of these said it was very difficult to find engineers with the right skills. This is a major challenge, as we could have a sea full of people, but they don't have the skills considered important for the future."

Recruiters are setting their sights beyond SA borders. About 14% of respondents have indicated they will be recruiting abroad. "For the most part, this means SA nationals returning to the country after having gained experience abroad."

About 95% of respondents said certification at time of recruitment was either very or relatively important. "You have to have the paper that says you can do the job," said Fynn. Also, just under two thirds of respondents felt that vendor certification carried more weight than government certification.

Industry is stepping up its interaction with government in helping to create courses that are relevant. The cost of obtaining certification was also brought into question as many professionals and their employers struggle to

afford the prices charged for courses that bring skills up to date.

Cisco has started the Network Academy Programme, which is offered at high schools, technical colleges and universities in SA and around the world, that is offered on a cost-recovery basis. Qualifications can cost up to R40 000, but can be reduced by up to 70%, depending on the academy.

There are 32 such academies in SA, with 3 133 participating students and 3 212 graduates.

"The current skills shortage may undermine the accelerated shared growth initiative, Asgisa.

"The SA government identified a serious skills shortage and has put in place a framework to address this; the framework is now putting the necessary skills foundation in place to support economic growth.

"A key question arises: how will a growing SA achieve the Asgisa objectives with an increasing skills gap?"

The report suggests "making students aware the future in technology is bright and rewarding, training existing skills in more advanced technologies, and; finding a way to curb the continued movement of South African advanced skills to other countries.

"Government must make a serious and sustained effort to guarantee the supply of general and advanced skills in SA. These skills will enable the economy and the country to remain globally competitive." – ana@moneyweb.co.za

Major skills shortage in the ICT sector

By Thomas McLachlan

The skills shortage in South Africa will soon ravage the Information and Communications Technology industry, according to a report which found that over 100 000 extra professionals will be needed by 2009.

Clive Fynn, Cisco Systems South Africa general manager, said: "The findings represent a call to action to governments, the private sector, educators and individuals to do more to address these needs."

"We began feeling the crunch in the first quarter of the year," he said. "If plans are not put into place now, technology adoption, business competitiveness and market growth will be at risk."

Fynn said some institutions had recently begun offering networking related subjects, and with 500 000 graduates currently unemployed nationally "we need to address how [students]

choose their subjects at higher education level".
— With I-Net Bridge

CONCERN: A survey has found that 100 000 extra professionals will be needed in the ICT sector by 2009.

Value of State and Vendor Backed Certification

Thinking about certifications, which of these elements do you believe to increase their value?

Recognised by Government 40%

Backed by vendor 60%
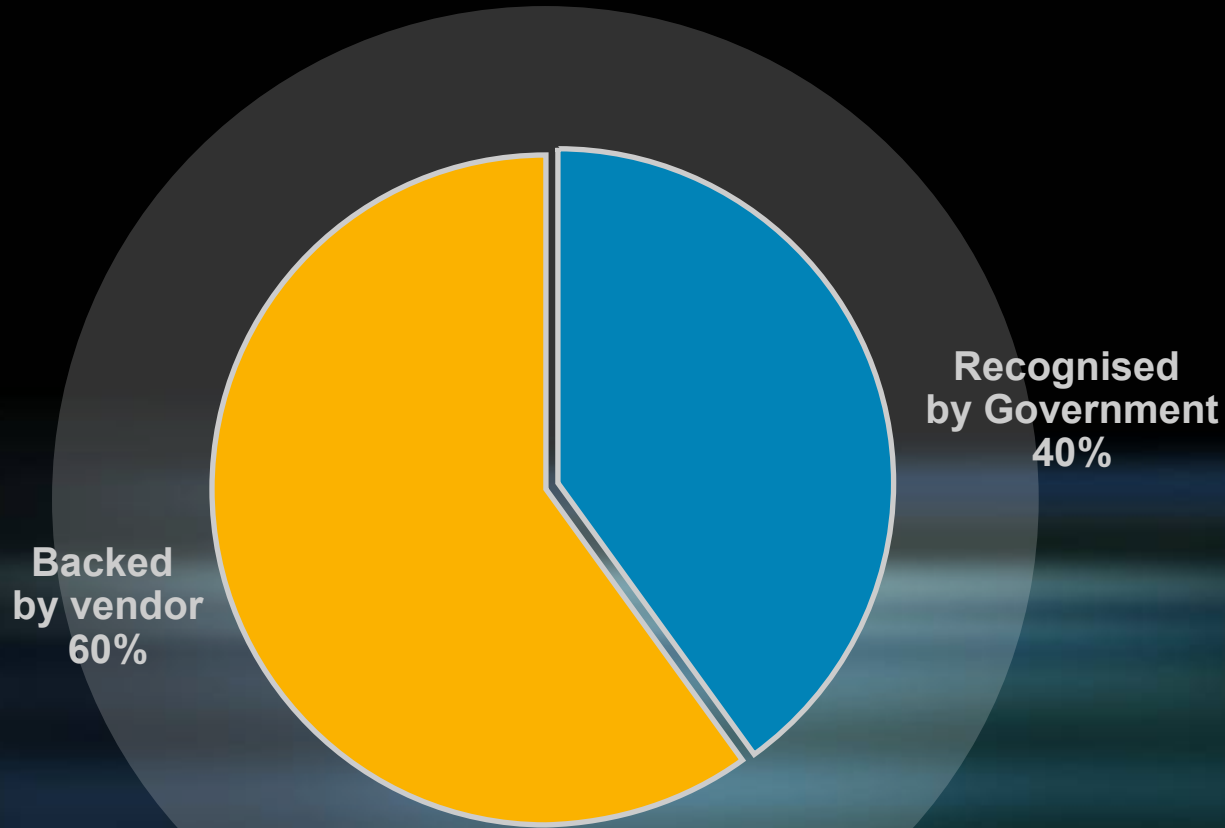
Technology is Key to Development

" The two fundamental equalizers in the global economy are the Internet and education. The Internet is creating unprecedented opportunities for businesses, individuals and governments and the winners will be those with the right skills and knowledge to compete."

John Chambers
President and CEO

Cisco Systems, Inc.

Cisco Networking Academy Program

- The Cisco Networking Academy is a dynamic educational program that teaches students relevant technology skills

- This increases students' competitiveness in the global marketplace and opens doors to different employment opportunities

History of Cisco Networking Academy Program

- Created as a solution for schools installing networks in the US

- Challenge: Schools lacked financial and human resources to manage networks

- Solution: Curriculum to train teachers, staff, and students to wire and maintain networks in their schools

- Academy program launched

  - August 1997 in the United States with 64 Academies in 7 states

  - Globally in 1998 – Argentina, Australia, Canada, and UK/Ireland
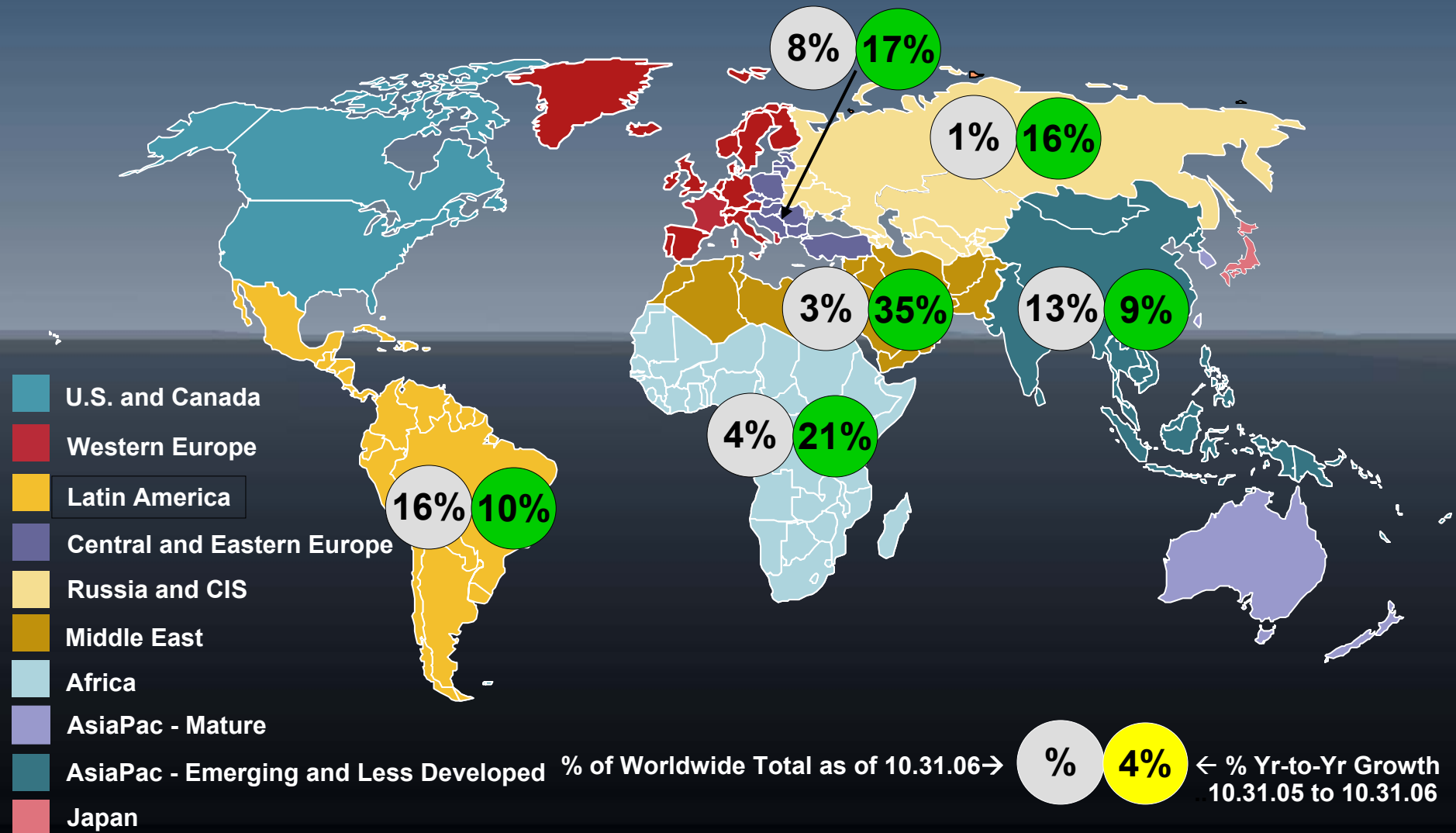
Network Academy is Strong
Cisco's longest running and most successful education initiative

Quickview:	#
Participating Countries	166
Participating Academies	9,500
Participating Students	500,000
Participating Instructors	17,000
CCNA 4 Graduates *(since inception)*	407,000
Classes in session right now	30,000+
Online exams taken every 24 hrs	25,000+
New students enter the program every 24 hours	500+

Success Metrics	
Percent of Students indicating they use Networking Academy skills on a daily basis	91%
Percent of Students indicating they pursued more education in IT	79%
Percent of Students indicating that Networking Academy helped them make IT contacts	78%
Percent of Students that indicated they were able to get a new job in IT	50%
Percent of Students that indicated they started a business in IT	29%

13

Emerging Theatre's Students by Region
(500,000+ Students)

Legend:
- U.S. and Canada
- Western Europe
- Latin America
- Central and Eastern Europe
- Russia and CIS
- Middle East
- Africa
- AsiaPac - Mature
- AsiaPac - Emerging and Less Developed
- Japan

Map data points:
- 8% / 17%
- 1% / 16%
- 3% / 35%
- 13% / 9%
- 4% / 21%
- 16% / 10%

% of Worldwide Total as of 10.31.06 → **%** **4%** ← % Yr-to-Yr Growth 10.31.05 to 10.31.06

**Source: AME, prepared by jzinn on October 31, 2006 - data as of November 19, 2006**

…..Partnering with Local Educational Institutions

Legend (regions):
- U.S. and Canada
- Western Europe
- Latin America
- Central and Eastern Europe
- Russia and CIS
- Middle East
- Africa
- AsiaPac - Mature
- AsiaPac - Emerging and Less Developed
- Japan

Legend (institution types):
- Upper Secondary
- 2-3 Year Institutions
- 4 Year Institutions
- Other
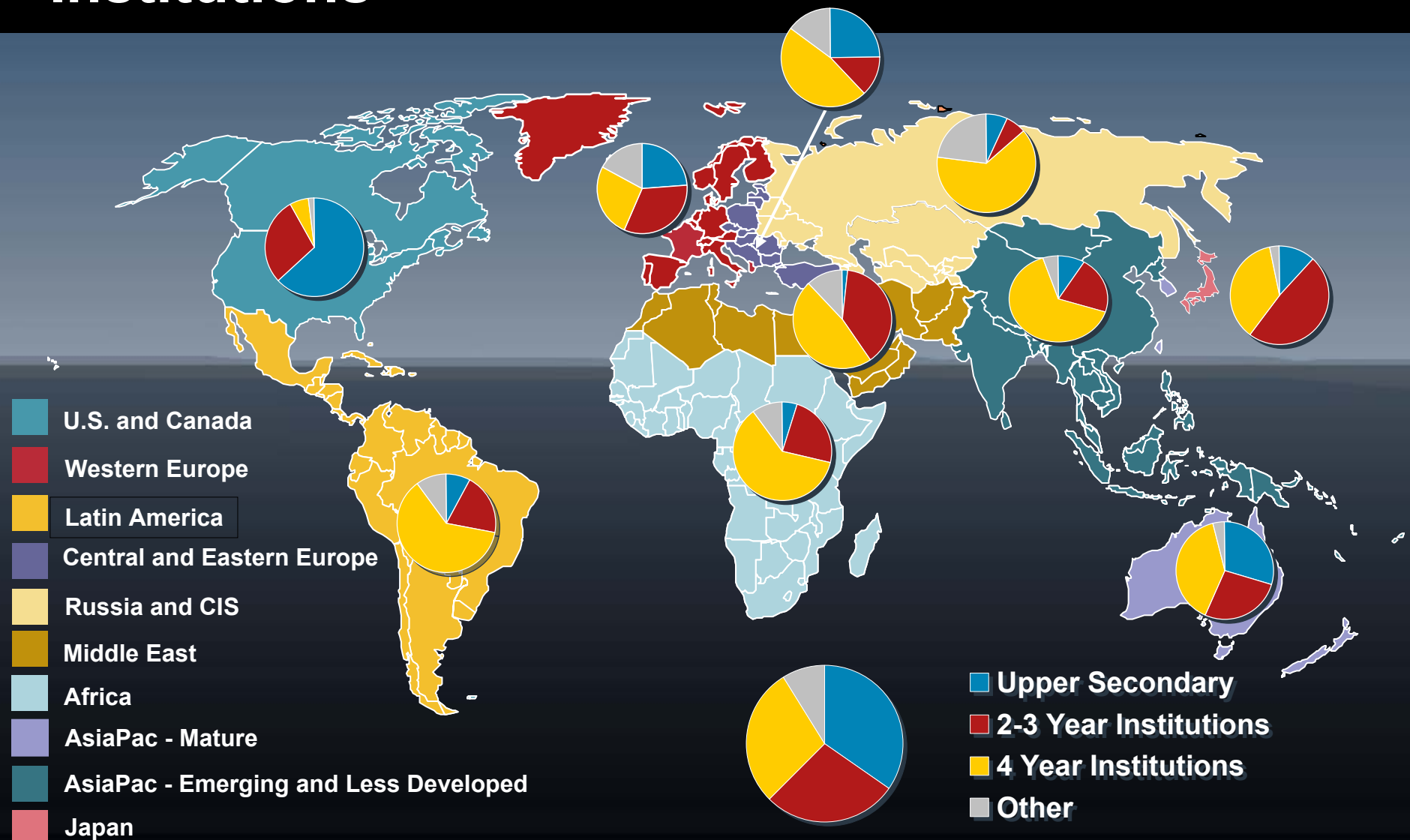
Source: AME, prepared by jzinn on October 31, 2006 - data as of October 31, 2006

Cisco Networking Academy - Africa
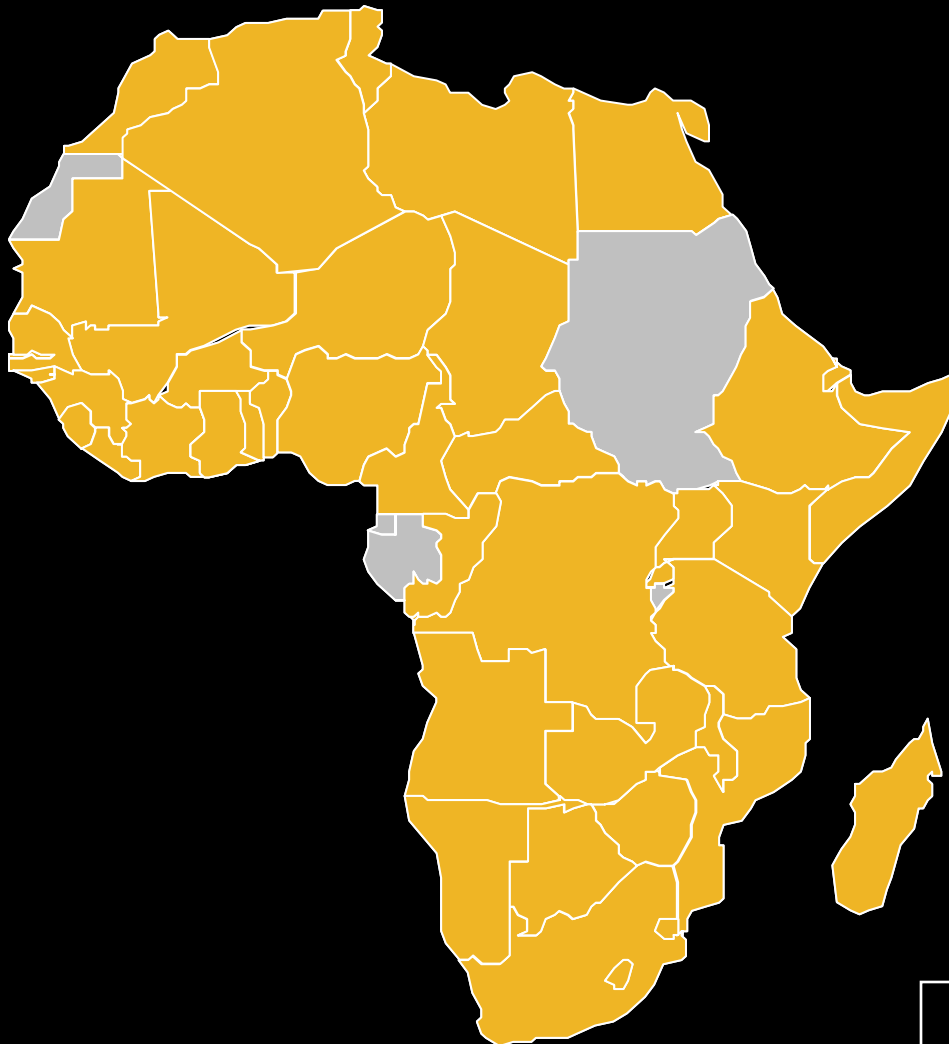
Africa NetAcad Participation

47 Participating Countries*

435 Participating Academies

24,400+ Participating Students

30% Women

670+ Participating Instructors

12,000+ CCNA 4 Graduates

Source: NetAcad Metrics as of October 31, 2006 for combined: North Africa & Sub-Saharan Africa
*2 additional countries (Libya & Somalia) added since Oct 06, for a total of 49 countries

Cisco Networking Academy Presence
No Current Presence

Government Partnership Examples

CAMEROON: 11 Acads; 326 students; 428 CCNA 4 graduates

<u>Key Initiatives</u>

- MOU for Cameroon ICT Transformation through NetAcad
- Networking Academy Taskforce:
    ANTIC, Ministries of Education, Post & Telecom, Women's Affairs

<u>Objectives</u>

- Launch 30 new Networking Academies over next three years
- One Academy per province
- Instructor capacity building

ETHIOPIA: 14 Acads; 432 students; 167 CCNA 4 graduates

<u>Key Initiatives</u>

- 100 Academies: 10 completed, 90 more identified
- High Schools Integration: 269 high schools, 168 vocational & teacher training colleges

<u>Objectives</u>

- Launch ICT education and training program over next two years
- 600 schools across the country delivering ICT training
- Deliver digitized E-Learning curricula

Stats as of Oct 31, 2006

Government Partnership Examples

Nigeria:

<u>Key Initiatives</u>

- FME 100 Academies

- Networking Academy Taskforce:
  FME, Cisco Systems

<u>Objectives</u>

- 32 000 First Degree Holders in an FME survey between 1996 – 2006, 60% still unemployed (i.e. 20 000 Degree holders unemployed). This has led to the Nigeria 20000 initiative through the creation of 100Acads
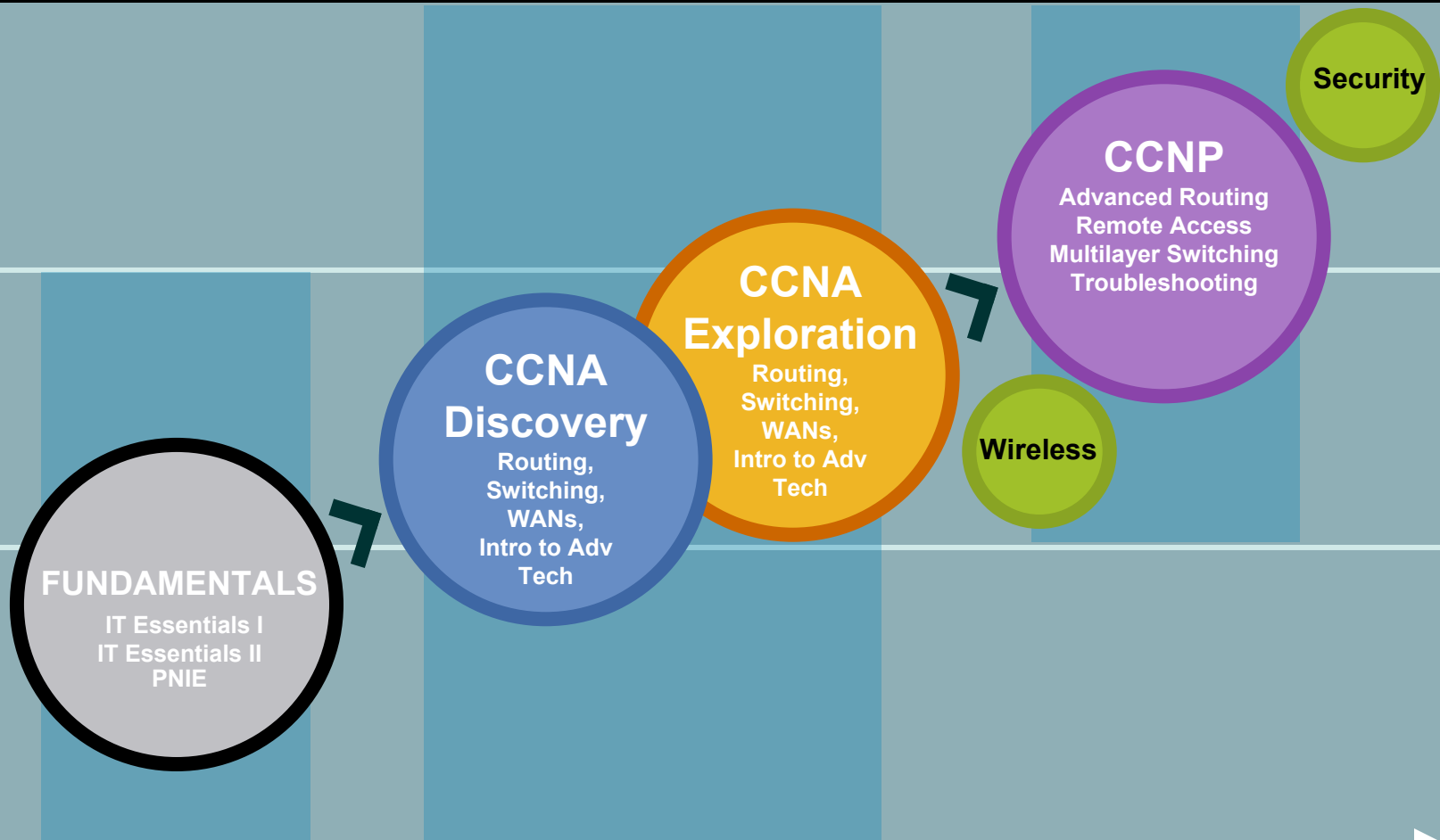
Networking Academy Program "2.0" Portfolio – 18 Courses
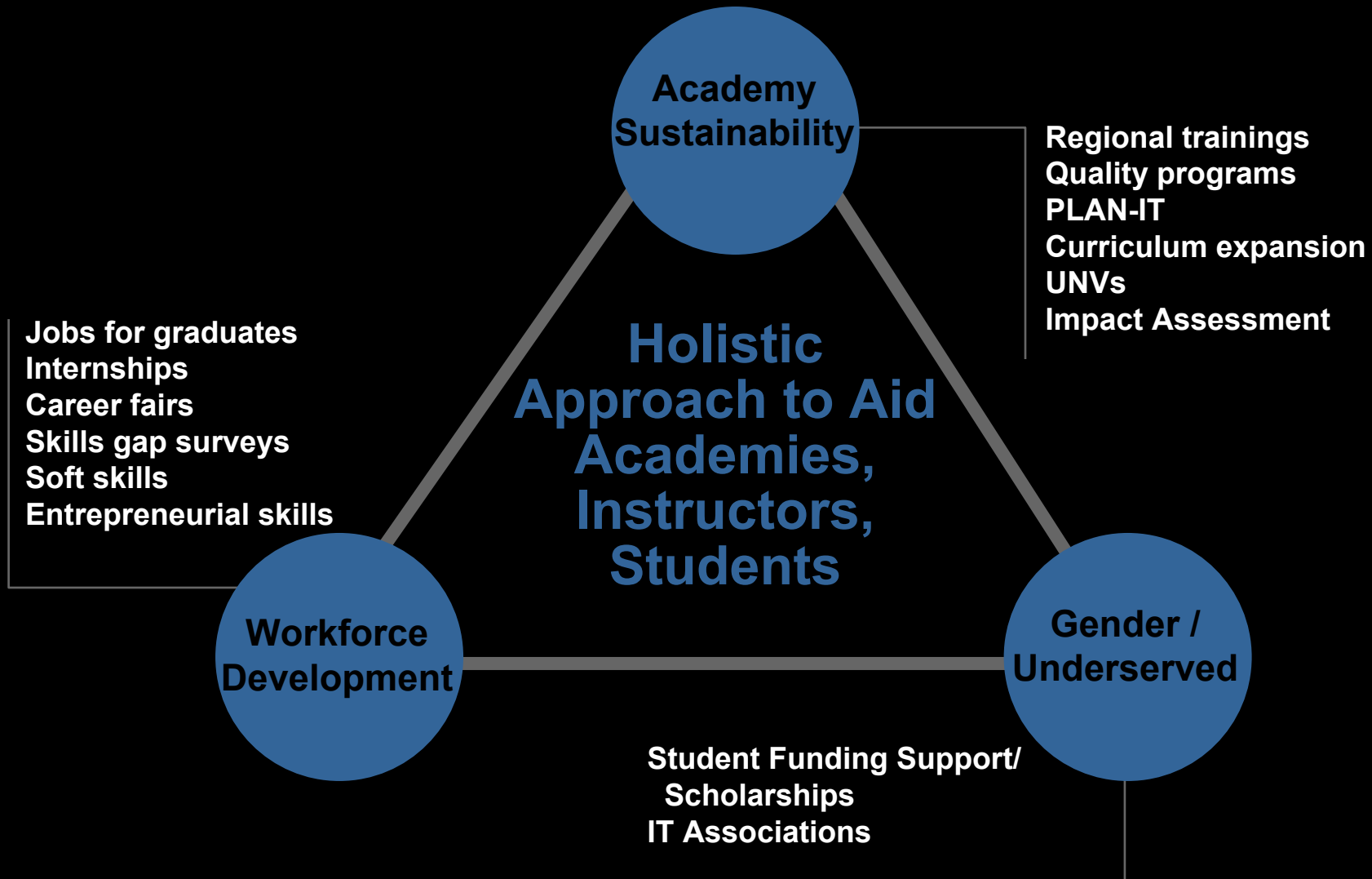
CAREERS

Enterprise Networking

Small and Medium Business Networking

Network Installer

Basic IT Support

System Admin

FUNDAMENTALS
IT Essentials I
IT Essentials II
PNIE

CCNA Discovery
Routing, Switching, WANs, Intro to Adv Tech

CCNA Exploration
Routing, Switching, WANs, Intro to Adv Tech

Wireless

CCNP
Advanced Routing
Remote Access
Multilayer Switching
Troubleshooting

Security

Student Networking Knowledge and Skills

Partner Strategy: Three Pronged Approach

Academy Sustainability

Regional trainings
Quality programs
PLAN-IT
Curriculum expansion
UNVs
Impact Assessment

Jobs for graduates
Internships
Career fairs
Skills gap surveys
Soft skills
Entrepreneurial skills

Holistic Approach to Aid Academies, Instructors, Students

Workforce Development

Gender / Underserved

Student Funding Support/ Scholarships
IT Associations

Global Development Partners

- United Nations Development Program (UNDP)

- United States Agency for International Development (USAID)

- International Telecommunication Union (ITU)

- United Nations Volunteers (UNV) / (UNITeS)

- United States Peace Corps

- United Nations Development Fund for Women (UNIFEM) – Arab States

- United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA)

NetAcad Mission for Least Developed Countries

1. Help eradicate poverty, support MDG's

2. Provide ICT education to underserved communities (female, community centers, slums)

3. Provide a wide range of career opportunities for graduates

THE END OF POVERTY

ECONOMIC POSSIBILITIES FOR OUR TIME

JEFFREY D. SACHS

FOREWORD BY BONO
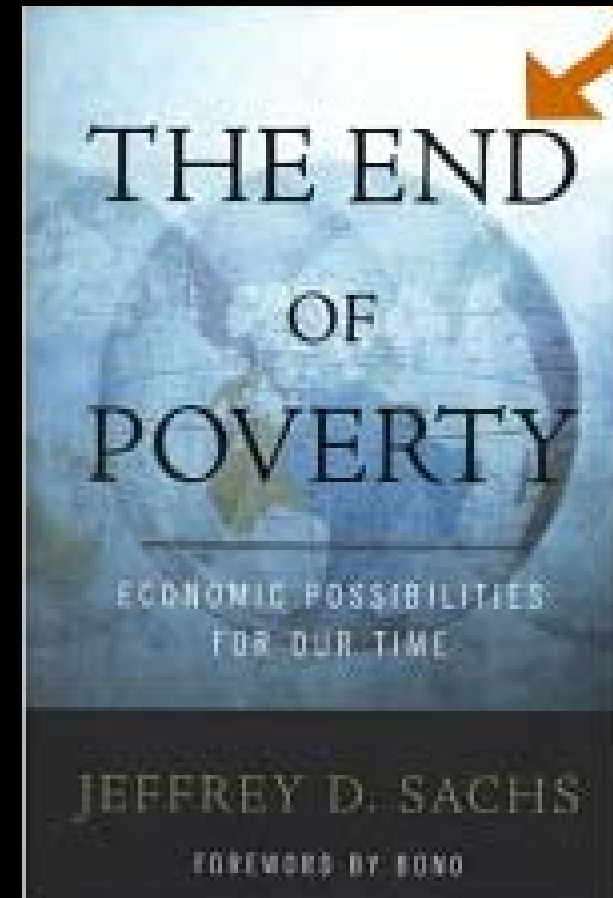
Least Developed Countries Initiative— "A Call for Action" - UNDP, UNV, USAID

Results to Date:

51	Countries (40 LDCs, 11 non-LDCs in Africa)
204	Academies
589	Instructors trained in Africa, Asia, Arab States
11,475	Continuing CCNA Students as of Sept 2006 (27% female)
7,478	Graduates

GENDER INITIATIVE: 50/30

LDC Phase II – Africa 100, Afghanistan Expansion, PLAN-IT

Cisco Networking Academy Program
Gender Initiative

- Increase the number of females pursuing academic and career opportunities in Information Technology

- Gender Initiative established in 2000 "50/30"

    Increase females' access to IT training and career opportunities

    Utilize Academy program as a model / gender laboratory

    Collect and share information on best practice recruitment and retention strategies

    Develop tools and resources to attract and retain more females to IT

    Female role models

GENDERINITIATIVE

Working to increase participation of women and girls in information technology worldwide.

International Development Initiatives
Cisco Gender Initiative

- **EDUCATE** young women on careers in Information and Communications Technology (ICT)

- **EXPLORE** opportunities for females to participate in the Cisco Networking Academy Program

- **EMPOWER** females to succeed and continue their education in engineering and computer science

- **CONNECT** women to other women in ICT

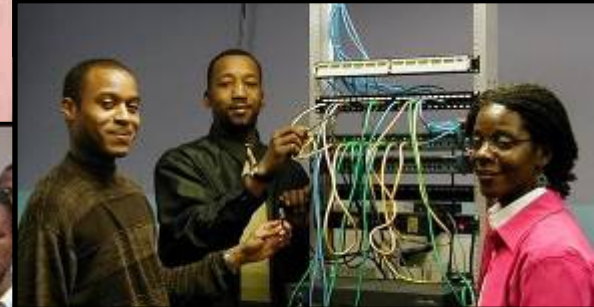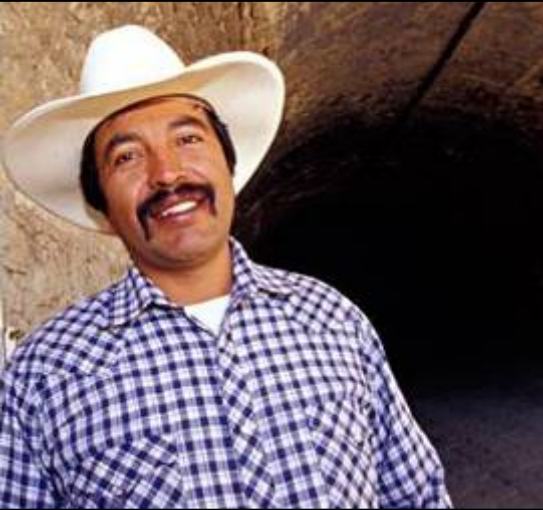- Create a **PIPELINE** of females entering the ICT workforce

Student Successes
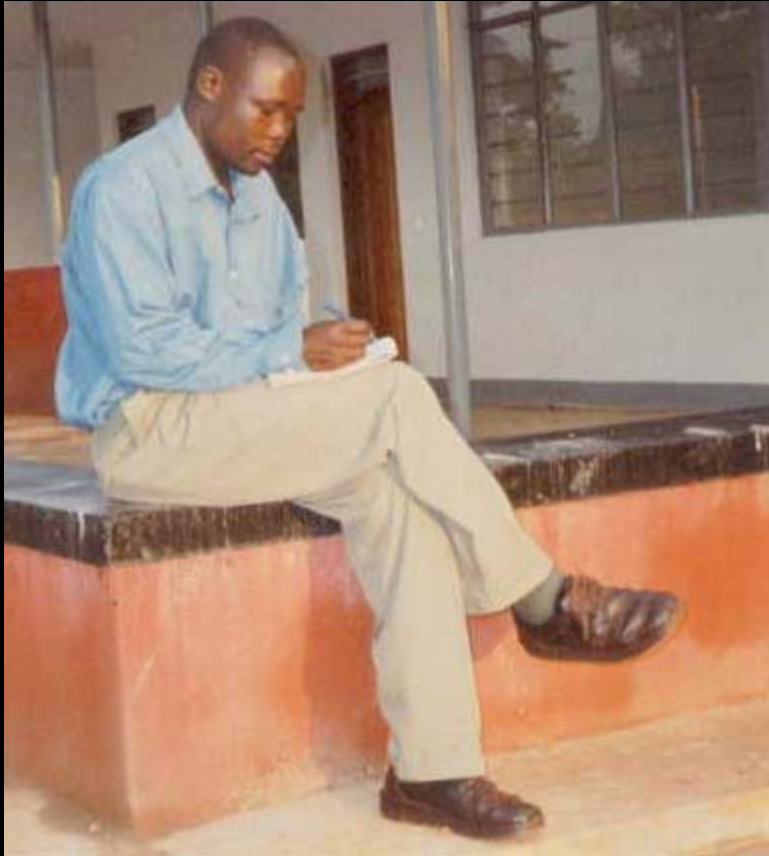
• At 37 years of age, there is no turning back for Francis Okethwengu. He is currently unemployed- but has no regrets as he is now a student of CCNA, a far cry from his days as cleaner.

• Worked for 5 years as a cleaner with Jefkee General Cleaners contracted to the University. Saw a light in the academy program and quit his job to become a full time student.

"I did a short time course in Computer Literacy (prior to the Cisco classes) which built a foundation for me in the computer field and therefore thought it necessary to venture into the IT field by way of embarking on CCNA. This has gradually and significantly improved my skills in IT.I am confident that with this certification, I will get a better job and will be able to provide a better life for my wife and 5 children."

Thank You