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# Implementing e-Health in Developing Countries: Principles and Strategies

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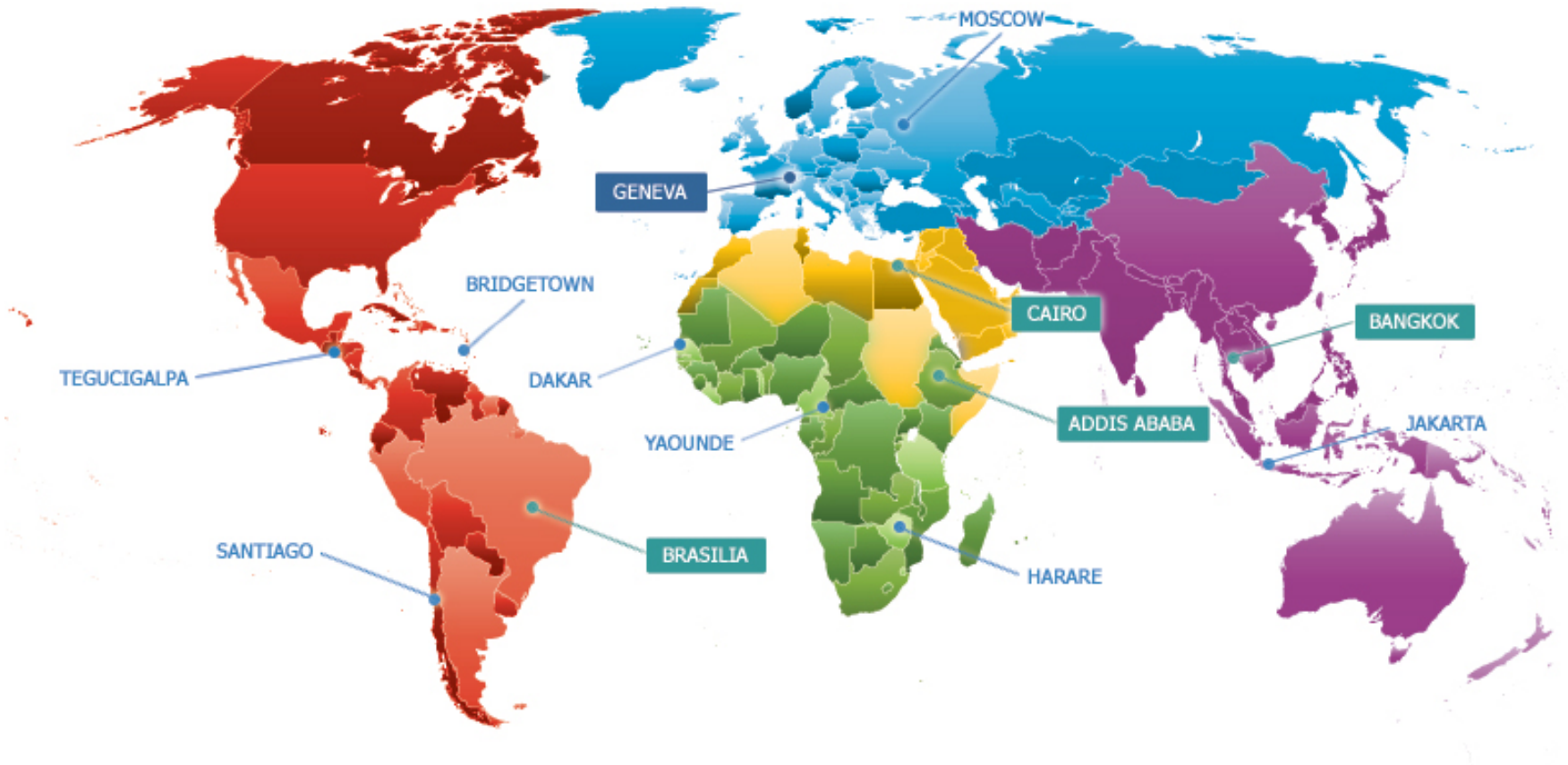
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# ITU in brief

- Leading United Nations Agency for Information and Communication Technologies (ICTs)
- 191 Member States, 700 Sector Members
- Three sectors:
  - **Radiocommunication (ITU-R)**
  - **Standardization (ITU-T)**
  - **Development (ITU-D)**
- ITU TELECOM Events



# ITU's Global Presence



5 regional offices, 8 area offices  
HQ in Geneva, Switzerland

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# e-Health: A Priority for Development

- The Geneva Action Plan (Section C7.14) identifies e-Health as one of the fields where ICT applications can **support sustainable development**
- Doha Action Plan established the promotion of ICT applications, including e-health, as one of the priorities for its Programme 3 on E-strategies and ICT applications
- ITU-D's ICT Applications and Cybersecurity Division
  - Responsibility for implementation of Programme 3
  - Identified e-health, e-government and e-environment as the three priority domains for the ICT applications area



# E-Health Challenges in Developing Countries

- Weak health systems and infrastructure
- Need for increased awareness at the national and local level about
  - potential of existing ICT infrastructure and applications for health care provision
  - How to implement e-Health to help meet international and national health priorities
  - Available expertise and financial resources to develop and implement national e-Health strategies

# ITU e-Health Activities



- UN agencies and health authorities share the challenge of implementing e-Health systems and services
- **ITU Focus:** Assisting Member States in exploiting ICTs' potential to:
  - Meet national health care priorities and public health needs
  - Expand the reach of their existing health resources to distant communities
  - Diffuse vital health information among the population
  - Collect health data and monitor diseases

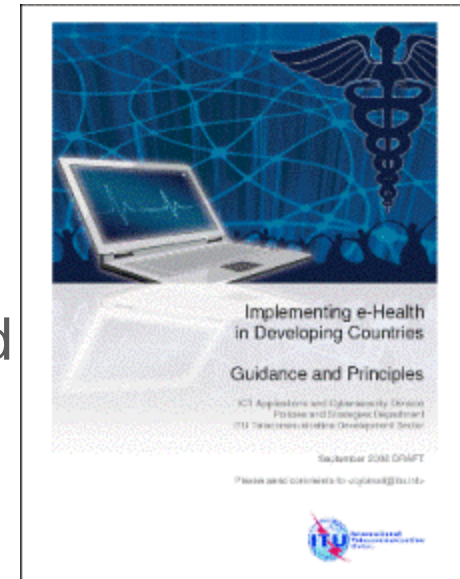
# Strategies for e-Health Inclusion



- In accordance to the mandates of the Geneva Plan of Action, ITU-D is implementing the following strategies to promote the introduction e-Health applications in developing countries:
  1. Provide tools for the development of **national e-health strategies**
  2. Promote **cooperation among** relevant stakeholders
  3. Facilitate **information exchange**

# 1. Providing Tools for National e-Health Strategies

- To support the development of national e-strategies, in 2008 ITU produced the scoping study *“Implementing e-Health in Developing Countries”*
- The scoping study:
  - Provides an initial outline of a general methodology for implementing ICTs in health
  - Aims to help developing countries avoid costly errors
  - Intends to enhance the efficiency of health systems and ultimately support the sustainable and effective use of such services





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# Providing Tools *(cont.)*

- Based on the report's recommendations, in 2009 ITU –in collaboration with WHO and other key players– is working on practical guides to examine principles, strategies and resources useful in the development and implementation of national e-Health strategies
- **Guidelines for National e-Health Strategies:**
  - Developed in a series of modules, the Guidelines will provide recommendations for and examples of best practices relating to the life-cycle of national e-health strategies, from needs assessments to the creation of the strategy, and from implementation to the evaluation process.
  - Work on “Module 1: Assessment of needs and priorities” is currently underway



# Principles for National e-Health Strategies

- e-Health applications must be part of a comprehensive national health strategy that, based on current and future health and healthcare issues:
  - Identifies **opportunities** and **challenges** for the health sector in general and e-health in particular
  - Sets up **priorities** and determines the best means to achieve them in a **sustainable** manner
  - Includes **capacity building and promotion** activities
  - Considers **national and regional differences** in priorities and needs
  - Is integral part of **national development projects**
- Integrated health and e-Health strategies can improve productivity, reduce costs and improve service quality of the health sector in the long-run

# Other Principles for National e-Health Strategies

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- Wide deployment of e-health applications in developing countries requires achieving **interoperability** among systems and reducing the cost of devices through economies of scale
- Developing global international standards with the involvement of the major players is key to achieve these objectives
- Many organizations are developing standards related to diverse e-health fields, yet there is still a need to harmonize and coordinate these efforts
  - Within ITU-T, Study Group 16 leads the work on multimedia terminals, systems and ubiquitous applications, such as e-health and e-business



# Other Principles for National e-Health Strategies (*cont.*)

- **Security** is another key area for the evolution and adoption of e-Health services that needs to be addressed in national e-health strategies
- E-Health applications using mobile terminals and Internet services demand authentication methods that provide high security and are convenient for users
- The increasing use of biometric authentication for identification is creating new challenges regarding security, safety, and privacy protection
  - ITU-T's Study Group 17 (Question 9) leads the work on telebiometrics, aiming to study and develop requirements for appropriate generic protocols for "manipulating biometric data"



## 2. Promoting Cooperation

- The introduction of e-Health applications requires **multidisciplinary collaboration**, with active participation of telecommunication operators and health care professionals
- **Resolution 41 of World Telecommunication Development Conference** (Istanbul, 2002) recommended all countries to create national e-Health Committees or Task Forces for such cooperation and coordination
- **ITU** provides a forum that facilitates the establishment of public-private partnerships among national, regional and international stakeholders



# Cooperation: mHealth Initiative



- The introduction of cost-effective and interoperable ICT applications in health care is essential to foster the implementation of e-Health initiatives in developing countries
- With over 4 billion mobile cellular subscribers, mobile technology provides an ubiquitous platform to provide e-health services in developing countries
- To promote the coordinated introduction of cost-effective mHealth applications in developing countries, ITU is discussing with other UN organizations and members of industry to develop a BDT/ITU umbrella for « mHealth Initiatives »

# Facilitating Information Exchange



- To collect information on and facilitate the exchange of best practices and successful initiatives on e-health, ITU and WHO are collaborating this year in:
  - 2009 Global Observatory for e-Health Survey:
    - Updates WHO's survey conducted for WSIS in 2005
    - Aims to gather information on ongoing national e-Health programmes or initiatives, including mobile e-health (mHealth)
  - e-Health event @ TELECOM World (Geneva, Oct. 09):
    - Promotes m-health applications and technologies deemed valuable for use in developing countries
    - Brings together representatives from government, industry, donors and international organizations to exchange ideas and opportunities

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# ITU-D, Question 14-2/2

- ITU-D Study Group 2 created this Question to study e-Health applications in developing countries
- The Question assists in raising awareness of decision-makers, telecommunication operators and donors on the role of ICTs in supporting health-care in developing countries
- Participants in the Question share information on technical solutions and successful initiatives on e-health
- Dr. Androuchko, Rapporteur for Question 14-2/2. is conducting a workshop on e-Health Strategies at Med-e-Tel 2009



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# Conclusions

- The telecommunication and health care sectors have to work together in developing national e-Health strategies
- Successful e-Health services require more than just technology: Committed policymakers who promote national strategies and facilitate capacity building are essential for the e-Health system to work in practice
- ITU-D is ready to assist its Member State in strengthening their in e-Health capacity to increase the impact and effectiveness of their investment in this field

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# More Information

- ITU-D ICT Applications and Cybersecurity home page

[www.itu.int/ITU-D/cyb/](http://www.itu.int/ITU-D/cyb/)

- ITU-D e-Health home page

[www.itu.int/ITU-D/cyb/app/e-health.html](http://www.itu.int/ITU-D/cyb/app/e-health.html)

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# International Telecommunication Union

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