



eHealth – eCommunication. A Vision to Overcome the Gap between the Developed and the Underdeveloped World.

Multi-Infrastructure Services for enhanced eHealth delivery
Enabling eHealth Applications for Fixed and Wireless
Infrastructures.

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Setting the scene:

- Socio-demographic challenges and infrastructure prerequisites

Bridging the gap:

- How eCommunication enables eHealth

Embracing the opportunities:

- Enhanced eHealth services by new technology developments

Deutsche Telekom.

CSR and sustainability policy.

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- Deutsche Telekom's long term goal is to become a sustainable organization in a sustainable society:
 - Environmental friendly
 - Economically viable
 - Socially responsible

Setting the Scene.

The gap between high earning – and mid/low earning countries .

- Climate change
- Socio-demographic developments
- Health care provision
- eCommunication
 - Telecom infrastructure
 - PC and Internet availability and usage

The ,digital divide‘ between high- and low/medium earning countries inhibits better eHealth exploitation and standards.

Setting the Scene.

Bridging the gap on the 'digital divide'.

- Cell phone infrastructure in sub-Sahara counties is soaring
- SMS Health information services are introduced all over Africa
- Cross border tele-medical support for doctors in Panama

Wireless telecommunication infrastructure will close the ,digital divide', quickly and cost effectively.

Bridging the Gap.

From eCommunication to eHealth.

- Healthcare provision in geographically remote areas
- eHealth provides care in low earning countries in the form of:
 - information , advice, interactive communication
- Tele-diagnostic applications from e.g. one country to another country

- Fixed and cellular systems opening new areas for health provision:
 - health maintenance and disease prevention
 - centralized diagnostic services
 - centralized medical data base

From eCommunication to eHealth.

Sample applications – Strategic plan telemedicine by T-Systems.

Telemedicine	Tele-surgery	■ A medical technology that allows a surgeon to operate long distance, by combining advances in imaging, video, robotics and sensory devices.
	Tele-dermatology	■ Tele-consultation service based on transmission of digital images including remote light microscope.
	Tele-cardiology	■ Tele-monitoring for patients with pacemakers via mobile technology
	Tele-radiology	■ Tele-radiology is the ability to send radiographic images (x-rays) from one location to another.
	Tele-psychiatry	■ A consultation between a patient and psychiatrist can be conducted using real-time interactive videoconferencing
	Tele-pathology	■ Tele-pathology is the process of diagnostic histopathology performed on digital images viewed on a display screen rather than by conventional glass slide light microscopy.
	Tele (Home) monitoring	■ The use of ICT to enable effective delivery and management of health services between a patient's residence and a health care facility or professional
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Aus: Medizintechnik und Informationstechnologie, TÜV Media, Armin Gärtner 2006

Trends in eHealth.

Technological platforms for new eHealth applications.

- Combinations of fixed-line, wireless and internet technologies are the basis for new eHealth solutions and applications
- Hybrid infrastructures providing platforms for new eHealth services:
 - Tele-consulting services, such as interactive voice communication
 - Tele-treatment, such as exchange of pictures and large volumes of data
- Area of application and its infrastructure requirements:
 - Tele-consultation → low bandwidth, voice based, mobile and land line
 - Tele-treatment → high bandwidth, normally a land line

Embracing Opportunities. Vision.

- Virtual health care provision helps to improve health standards:
 - access for larger groups of the population
 - wider geographic scope
- Telemedicine is key for health care provisioning in low earning regions

Telecommunication infrastructure and intelligent IT systems
provide
sustainable eHealth developments.

Thank you.