

# **Digital Inclusion**

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The Next Generation Technology and e-Services for a Sustainable and Accessible Digital Inclusion





### 1 Background

The Digital Divide is the gap between people with effective access to digital information and communication technology and those with very limited or no access at all.

Digital Divide may be classified based on gender, income, race groups, and locations. The term global digital divide refers to differences in technology access between countries or the whole world.

It also exists between those in cities and those in rural areas. It also exists between the educated and the uneducated, between economic classes, and, globally, between the more and less industrialized nations.

Advances in communication technologies, mainly centering on the Internet and the World Wide Web, are the basis of a new form of society, called Information society.

Elderly, poor and people with disability form a quite considerable proportion of the world population (disabled 15%; elderly 25%; poor >50%) and additionally those people are probably the most in need of modern technology and e-services than others.

In the information society for all, everyone must have equal access to information in order to function effectively. Those that are unable to access vital information, which is increasingly distributed via the Internet, will become marginalized within society.

With over 1 billion people living with a disability and over 2 billion people not having access to ICT, this represents a significant communication challenge. With current trends in population growth, medical advances and an increasingly greying population, these numbers are constantly and rapidly growing.

#### 2 LUCY Vision and Goals

Why the name LUCY?

LUCY is the given name of the first found hominid that had walked erect. The LUCY skeleton was found in Ethiopia in 1973 by a French-American expedition and she is estimated to have lived 3.2 million years ago. LUCY is our symbol of the evolution of the human race but also the return of a more human oriented technology.

The Strategic Vision of LUCY is to address with a new ICT technology & concept over 3 billion people (novice ICT users) by offering a sustainable access to the Information and Communication Technology, services and Contents in order to secure know-how, services and skills and by consequence improving the quality of life, reducing poverty, discrimination and ignorance, create a more equal, peaceful, democratic and sustainable world for everyone.

LUCY's aim is to provide to all people, in particular the one excluded from the digital world, a new technology platform, which guarantees full access to the technology, services and contents as well as important information in different areas like education, government, health care, skills, climate change, etc.

This new platform allows the full access to everybody regardless the age, physical ability, income, language, location and knowledge. The key points are Accessibility, Universal Design, Localization, Content and, more important, Sustainability.

LUCY solution merges and combines efforts and work of Governments and International Institutions with the most state-of-the-art ICTs and AT technologies, and the real needs of people in the digital divide group, all these with a new Technology Approach and Business Model by leveraging Cloud Computing and PPP (Public-Private-Partnerships) and based on the concept of "Access to ICT and services anytime & anywhere".

We do not believe on charity for medium-long term success and sustainability. LUCY shall not be considered a charity or philanthropic project but it aims to create a new important community of Internet users.



### 3 LUCY Digital Inclusion Approach

The LUCY Digital Inclusion objective is to provide full access to the Internet and related e-Services and e-Content to all people, regardless the age, location, economic resources, knowhow and abilities.

A new concept of technology tailored and built around the needs and requirements of the User and not the opposite.

It also provides build-in Assistive Technologies (AT), Communication and Information tools, Office tools, Applications, Content, public and private e-Services; all in one single and fully accessible platform.

LUCY pays special attention to vulnerable groups including women, children, youth, persons with disabilities and illiterate by ensuring that the Software Applications, Services and the Content to be delivered are fully accessible and consider the local environment and meet respective international standards and comply with universal design principles, and also consider the minority languages.

This initiative aims to localize and deploy the LUCY e-Inclusion platform which provides both Social services which are free of charge to all users and Premium services which are needed for ensuring Digital Inclusion sustainability and foster the local economic growth.

Some of the most important aspects of LUCY approach are summarized as follow:

- Technology. LUCY provides a state-of-the-art and scalable digital inclusion platform based on Cloud infrastructure, in order to reduce time-to-market, ensure the needed quality of service and optimize costs. Multi-channel also enables access not only with PC, but also with Smartphones and Tablets. This means free and full access anywhere and anytime.
- Accessibility & Usability. Accessibility (for Persons with Disability) and Usability (for so called First-Time-Users or Novices) are also a unique and important LUCY aspect, which groups most popular Assistive Technology tools in a single web browser plug-in, and completely free of charge.
- Sustainability. It is the crux of all Digital Inclusion projects, in order to guarantee mid-long term sustainability. Past experiences show that most projects failed because sustainability was not appropriately addressed or not achieved therefore they were not able to survive without constant contributions from donors or public bodies.
- ► Localization. LUCY promotes a standard approach to Digital Inclusion, but at the same time a successful deployment has to consider the localization of services and content at Country or Regional level according to its specific needs, languages (also minority), culture, regulations and social and economic environments.
- PPP: Public Private Partnership. LUCY is based on an active and strong partnership between several public and private partners like International Institutions, Governments (al National and local level), Private Sector, NGOs and Academia, in order to successfully achieve its goals.

LUCY aims to reach people living in different countries; therefore it must be able to meet both global and local needs. Therefore, it comes in two versions:

- LUCY: the solution for global users.
- MyLUCY: the localized version of the portal at country level.



#### 4 LUCY Platform

**LUCY** concept is a new Digital Inclusion platform which utilizes Next Generation Technologies and Services, consisting of the following main components:



Fig. 1: LUCY®

- Lucy Apps with incorporated internet browser and more important with built-in Assistive Tools allow not only to freely surf the WEB but also the correct and full access to the LUCY environment, services, technology and content from any Operating System (Windows, Android and iOS) and type of Device (Desktop PC, Tablets and Smartphone).
- LUCY is a Global Web Portal which includes:
  - User Profile in the Cloud for easy access from any device (Desktop PC, tablets and Smartphones). Full access Anytime & Anywhere. Includes a very advanced Accessibility section and an Accessibility Wizard to help users with Disability configuring the system.
  - Productivity Web Applications (Word, Excel, Power Point, agenda, calculator, etc).
  - Communication Web Tools (Skype, e-mail, IM, audio Calls, video Calls, etc.)
  - Web Entertainment (Photo, eBooks reader, Web Radio, Web TV).
  - Assistance to Person with Disability (geo-location and mapping, transportation and publicly available accessible sites, etc.)
  - Social Networks access.
- In addition, LUCY® platform includes a set of e-Services (and Apps):
  - e-Learning: i.e. teachers training on Accessibility, etc.
  - e-Education: i.e. learning English, etc.
  - e-Skills: i.e. learning ICT skills, how to use applications, etc.
  - e-Health: health related information and content for PwD.
  - e-Job: online job portal for PwD with online CV (also Video CV).
  - e-Emergency: Emergency Info System for PwD.
  - LucyStore: an online store where developers can offer Apps Open Source or Proprietary, products and services, from global or local providers.
  - AccessMy: AccessMy, brings together geo-location and mapping technologies, transportation data, and publicly available accessibility information to help local residents and visitors with disability to find information and accessible points of interest.
  - Microcredit.
  - e-Commerce & e-Payment.
  - e-Government.



Some of the most important unique aspects of LUCY are:

- The User Interface, Accessibility Tools, Services and Content automatically customize itself according to the User Profile stored in Lucy environment.
- The User access is Free of Charge.
- Full compatibility with any Operating Systems.
- Device/Hardware independent.
- Online and Offline capabilities.

Content and Services localization is one of the most important aspects for a real and pragmatic Digital Inclusion, therefore LUCY pays particular attention on localized Services, Content and Apps at country/regional level with a new concept and solution called **MyLUCY**®.

MyLUCY, the federated Web Platform, allows the deployment of localized services and contents for a specific country or group of Users in respect of local languages (also minority languages), culture, regulations or needs. Moreover, MyLUCY services may be customized in order to provide e-Education, e-Health and e-Government services, according with the requirement of local Governments and institutions. Localized initiatives are based on a Public-Private-Partnership, which deployment includes direct involvement of local Industry, Government (at national and local level), Institutions and NGOs.

The concept of LUCY and MyLUCY is summarized in the following scheme:



Fig. 2: MyLucy®



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