

# The Role of Digital Applications in Health and Social Protection Systems

SN HeSPA REGIONAL CONFERENCE 2019

**RESILIENT SOCIETIES: Ready for the Future!**

The Contribution of Health and Social Protection to Africa's Social Development and Economic Transformation



Sector Network Health and Social  
Protection Africa/MENA/LAC

—  
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“What becomes clear as you start these types of project is that they start being seen as an IT programme. But it becomes clear *this is about changing business processes and getting people supported through use of technology.*”

Cerner go-live at Newcastle delayed. *eHealth-Insider*, 03. Sept. 2009

# OUTLINE

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- **Objectives and context**
- **Opportunities and challenges**
- **Towards a resilient Digital Health Ecosystem**
- **From policy to sustainable services**
- **Outlook**

# I) OBJECTIVES AND CONTEXT

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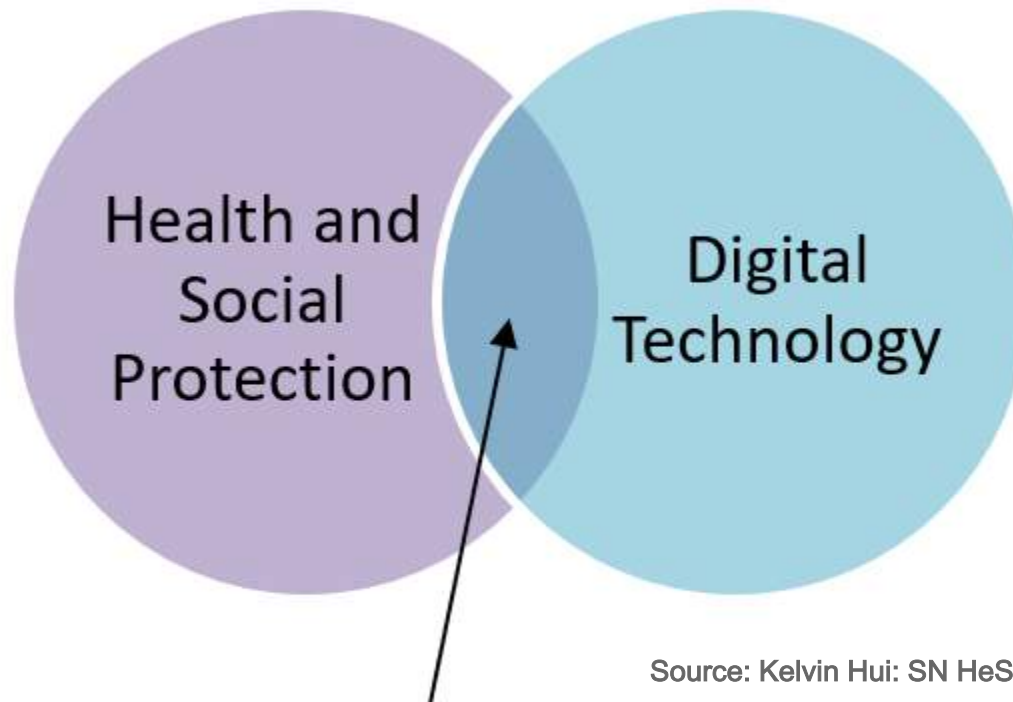
# OBJECTIVES

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- ❖ Put Digital Health into its policy and strategic context
- ❖ Provide insights into core concepts & approaches of Digital Health
- ❖ Understand its potential, and its limitations
- ❖ Learn about implementation processes, lessons learned, success factors and challenges

# DIGITAL HeSP STRATEGIC ORIENTATION OF GIZ

## 1. Develop Internal Competencies in Digitalisation



Source: Kelvin Hui: SN HeSP AV Meeting; 10 Sep 2018

Competency to develop digital solutions to reform health and social protection systems

# HEALTH POLICY FIRST

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**Health policy must guide health  
system transformation**

**Each health system is different**

***Digital Health is “only” an  
enabler – but a fundamental  
one***

# THE “WHY” AND “HOW” OF DIGITAL HEALTH

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- **Why:**

- Improvement of health & care, safety
- Efficiency gains
- Secondary usage of data

- **How:**

- Improvement of data gathering, exchange, access, analysis, quality
- Support for collaboration
- Knowledge generation, decision support

## Creation of a Learning Health System



# II) OPPORTUNITIES AND CHALLENGES

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# OPPORTUNITIES

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- Management of health system resources
- Public health
- Management of patients
- Disease specific programme support (HIV, TB,, Diabetes,...), perinatal services
- Electronic patient records
- Health insurance
- Telemedicine
- mHealth
- eLearning
- Knowledge generation (Big Data ...)

# CHALLENGES

## ➤ Pilotitis

- Numerous, mostly isolated pilot projects
- Very few scale up into sustainable services

## ➤ Infrastructure and connectivity

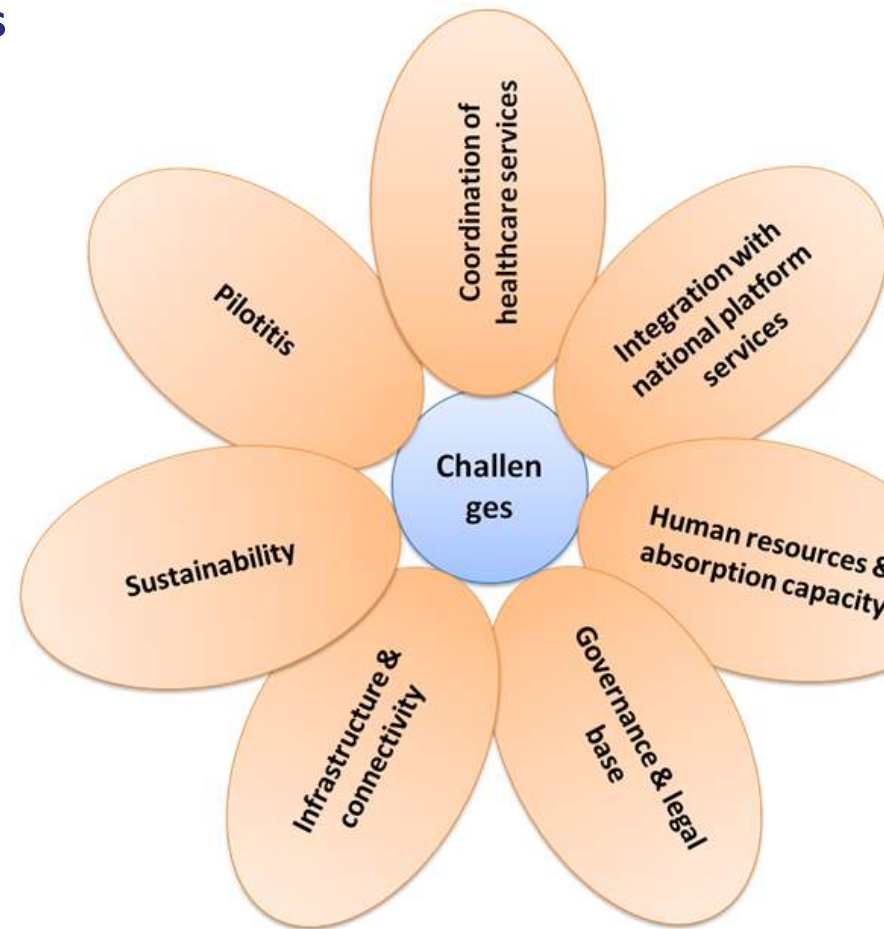
- ICT & electricity infrastructure
- mobile phone/internet connectivity

## ➤ Governance and legal basis

- Digital Health involves sensitive data
- Trust of patients is essential

## ➤ Human resources

- Health professionals with IT knowledge
- IT support and infrastructure providers
- Increase absorption capacity



# III) TOWARDS A RESILIENT DIGITAL HEALTH ECOSYSTEM

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# SILOS VERSUS INTEGRATION

- “ The deployed systems are in silos and there is no system that is integrated with another
- Due to the silos of systems patient records are only limited to the health facility visited
- Multiple reporting systems make it difficult to access data for evidence-based decision-making
- There is no proper interoperability framework in place for all these systems. They were developed on different platforms and data stored in legacy systems
- This has resulted in considerable duplication of effort and difficulty to access and consolidate data”

■ *Source: Ministry of Health of Rwanda (2018). Request for Expression of Interest - Enhancement of Rwanda National Digital Health Care System “Smart Health”*



# THE SOLUTION APPROACH: IMPLEMENT A DIGITAL HEALTH ECOSYSTEM (DHE)

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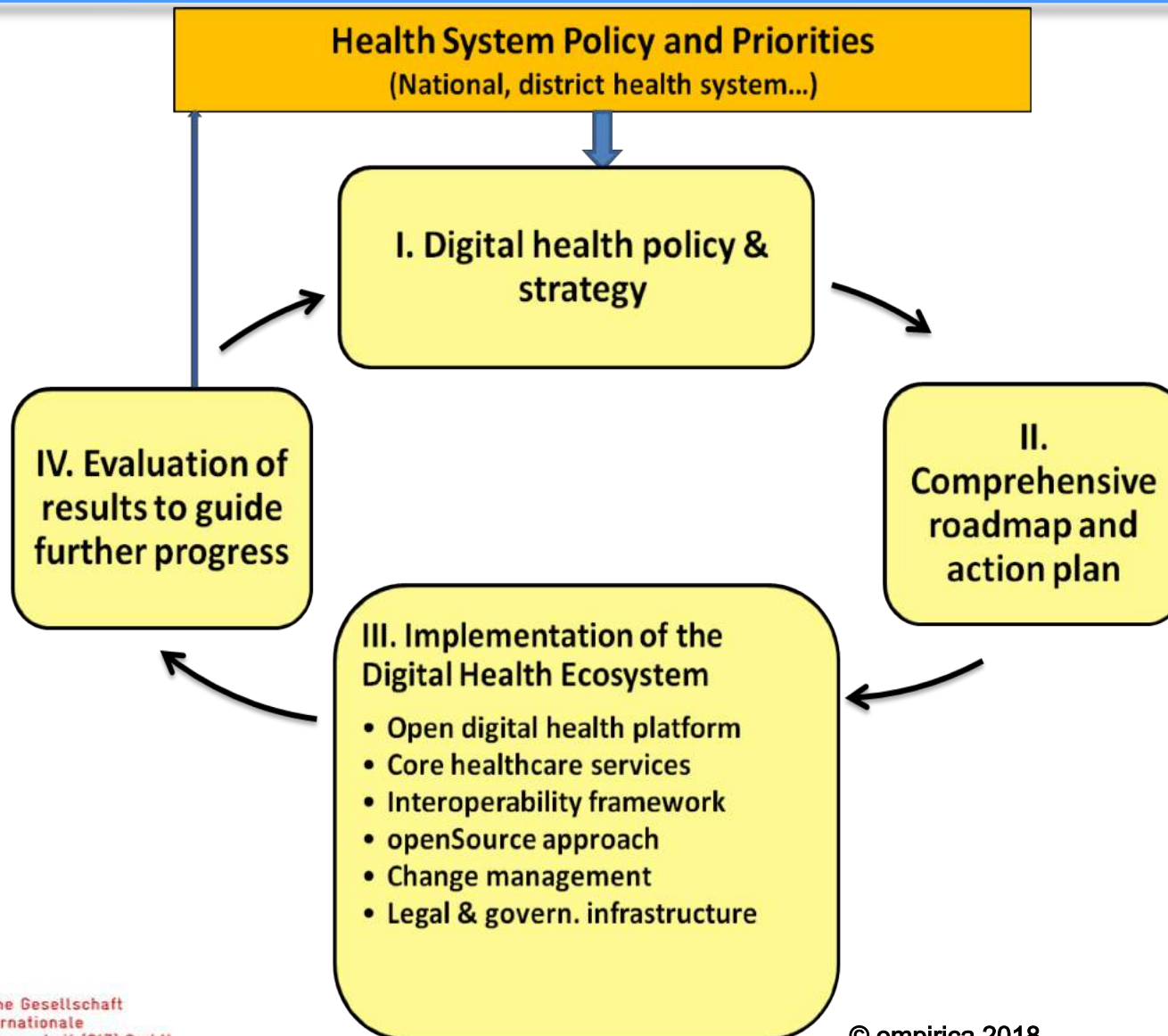
A 'Digital Health Ecosystem' is the holistic application of information and communications technologies (ICT) to support and improve healthcare delivery, its coordination and integration across providers in a given domain (local, district, national)

*Source: K.A. Stroetmann (2018). Digital Health Ecosystems for African countries – A Guide for Public and Private Actors for Establishing Holistic Digital Health Ecosystems in Africa*

# IV) FROM POLICY TO SUSTAINABLE SERVICES

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# FOUR FUNDAMENTAL BUILDING BLOCKS





# BUILDING BLOCK 1: STRATEGY

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# BUILDING BLOCK 2: ROADMAP

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- ✓ **WHY:** Detailed objectives
- ✓ **WHAT:** Problems to be solved
- ✓ **HOW:** Organisation, processes, digital solutions
- ✓ **WHEN:** Timing, interrelationships, dependencies

# BUILDING BLOCK 3: IMPLEMENTATION

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## III. Implementation of the Digital Health Ecosystem

- Open digital health platform
- Core healthcare services
- Interoperability framework
- openSource approach
- Change management
- Legal & govern. infrastructure

# **BUILDING BLOCK 4: MONITORING & EVALUATION**

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# OUTLOOK

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- ➔ A comprehensive approach builds on
  - a well-founded health policy
  - setting clear priorities for healthcare, and
  - appropriate digital applications
- ➔ Isolated Digital Health applications do not meet the needs of today's health systems
- ➔ Better coordinated, integrated and sustained healthcare requires an “open” digital approach
- ➔ Proprietary software hinders interoperability and the integration of new applications

# Further resources

- World Health Organization, International Telecommunication Union, National eHealth strategy toolkit, WHO, Geneva, 2012.
- N.K. Hanna. Mastering Digital Transformation – Towards a Smarter Society, Economy, City and Nation. 2016
- World Bank Group. World Development Report 2016 –Digital Dividends
- WHO resources: <https://www.who.int/ehealth/resources/en/>
- K.A. Stroetmann, Digital Health Ecosystems for African countries – A Guide for Public and Private Actors for Establishing Holistic Digital Health Ecosystems in Africa, Federal Ministry for Economic Cooperation and Development and Strategic Partnership Digital Africa, Berlin, 2018
- USAID, African strategies for health. The mHealth Compendium Series. 2016. Available from <http://www.africanstrategies4health.org/resources/mhealth..>
- Aranda-Jan, C. B., Mohutsiwa-Dibe, N., & Loukanova, S. (2014). Systematic review on what works, what does not work and why of implementation of mobile health (mHealth) projects in Africa. BMC public health, 14(1), 1
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- P. Drury et al., Guidance for Investing in Digital Health, Asian Development Bank - ADB Sustainable Development Working Paper Series, Manila, Philippines, May 2018.
- A. Labrique et al., Digital health and health systems of the future, (WHO) Global Health: Science and Practice, 6 (S1) (2018)
- African Centre for eHealth Excellence (Acfee) . Documents available at: <https://www.acfee.org/downloads>
- S.L. Greer, M. Wismar, J. Figueras (eds.), Strengthening Health System Governance: Better policies, stronger performance - WHO European Observatory on Health Systems and Policies, Open University Press, Berkshire/England, 2016.
- <https://www.who.int/ehealth/en/>
- Asia eHealth Information Network's (AeHIN) Online Tutorials, References, Tools, GAPS Framework (Mind the GAPS, fill the GAPS – Governance, Architecture, Program Management, Standards and Interoperability) , National eHealth Capacity Roadmap, at <http://www.aehin.org/Resources/eHealth.aspx>
- What is openEHR. [https://www.openehr.org/what\\_is\\_openehr](https://www.openehr.org/what_is_openehr)
- Apperta Foundation, Defining an Open Platform, London, 2017
- Open source software. <https://www.swisstph.ch/en/about/scih/health-technology-and-telemedicine/ehealth-toolbox/>

**Thank you very much for your kind  
attention!**

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