

# Digitization for Health

## CN/PPHM & TVD

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# Digital health

WHO adopted a global digital health strategy in 2020.

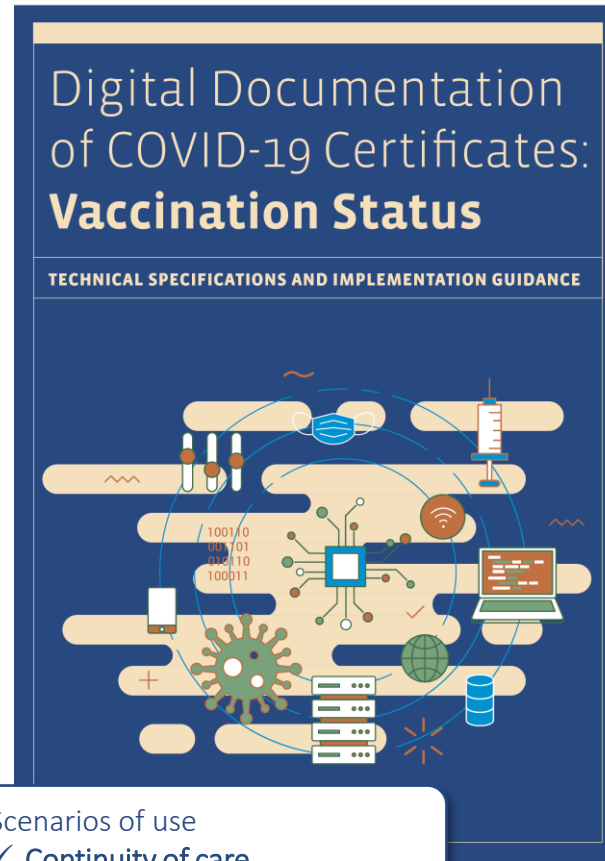
## Aim

To advance and apply digital health technologies towards the achievement of the SDG-3 vision of “health for all” as well as the other health-related SDGs

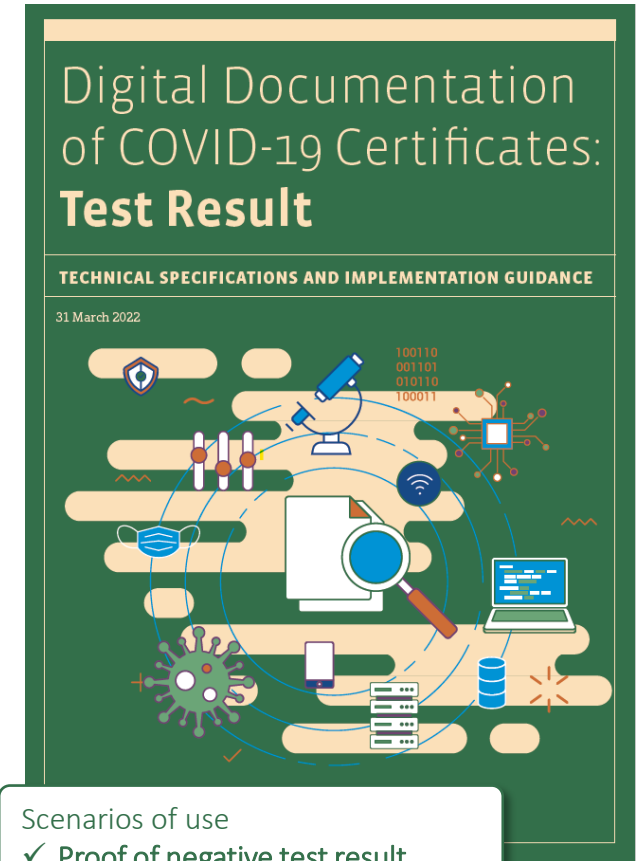


# DDCC: guidance during COVID-19

- Requirements and specifications for technology implementers
  - Business processes, workflows & use cases
  - Core data elements mapped to standard terminology code sets (including an annexed spreadsheet)
  - Functional and non-functional requirements
  - Overview of signing a digital certificate with PKI
  - HL7 FHIR Implementation Guide (linked website) detailing relevant standards for consistent representation and interoperability
- Implementation considerations
  - Data protection principles
  - Ethical considerations
  - National governance considerations



- Scenarios of use
- ✓ Continuity of care
  - ✓ Proof of vaccination



- Scenarios of use
- ✓ Proof of negative test result
  - ✓ Proof of previous SARS-CoV-2 infection

# Mega-trends in the Africa Region



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**Rapid Population Growth and urbanisation**

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**Dysfunctional or weak health systems – impacting health service delivery e.g., vaccination**

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**Adoption of ICT for health – some encouragement BUT requires more**

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**Climate Change : Increasing risks to health and human security, food and water security, and socio-economic development in Africa**

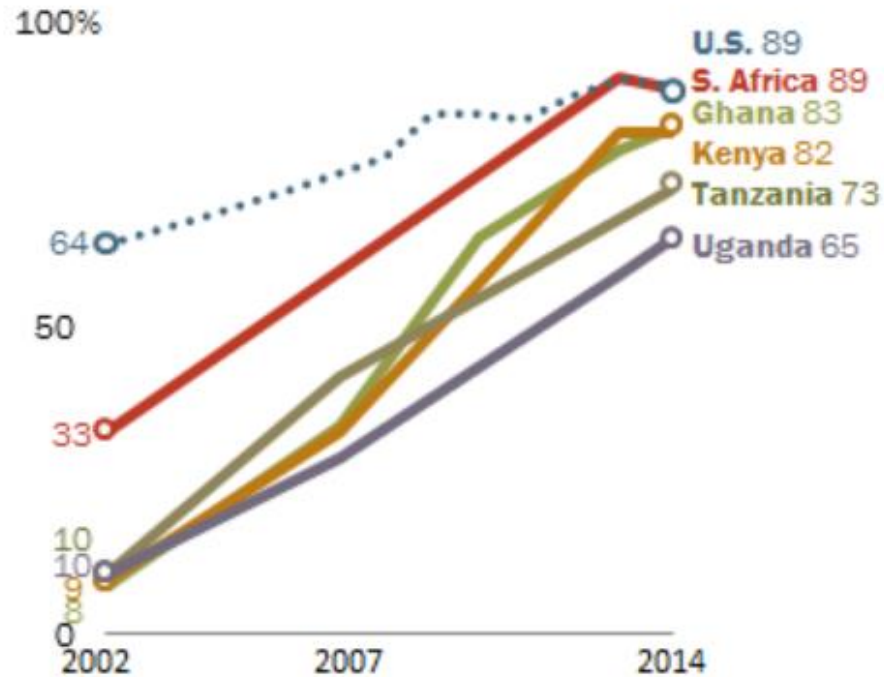
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**Triple Burden of Disease:  
Communicable, NCDs, & Health emergencies**



## Cell Phone Ownership Surges in Africa

Adults who own a cell phone



Note: U.S. data from Pew Research Center surveys.

Source: Spring 2014 Global Attitudes survey. Q68.

PEW RESEARCH CENTER



## Opportunities – 1: Rising Internet Penetration in Africa

- Africa internet penetration less than global average: Africa = 43% in 2021; Global av = 66%
- Internet penetration in Africa growing in Africa.
  - “Sub-Saharan Africa has the highest growth in global internet penetration, increasing from less than 1% in 2000 to 30% today. Between 2019 and 2021 internet use in Africa jumped by 23%.” (<https://www.internetsociety.org>)
- Opportunity for maximizing e-government in health or use of technological communications to provide health service
  - Africa is awash with digital applications (Apps) maximizing analytics and artificial intelligence technologies.
  - Many countries have started using drones in their health systems.
  - There is a near universal to smart telephones and other handheld gadgets and tablets
  - Social media has created one global village of communication without barriers
- It is imperative to contextualize service delivery to the characteristic of the population – burgeoning, urbanizing, mobile and techno-savvy population

## Opportunities – 2: Explosion of knowledge and interconnectedness among people

Africa's people on the continent and in the diaspora are now more interconnected through existing digital infrastructure;

Remote engagement with people has become norm, same as remote work, service delivery and knowledge and information sharing

Technology has made it possible to order and receive services without leaving one's home or location.

Artificial intelligence, analytics and GIS technologies have made it possible to triangulate data, stratify disease and population groups based on predefined variables and map population groups by disease incidence or prevalence, by status of coverage with health interventions, by health or disease management outcome, and the like.



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# Opportunities – 3: Lessons on drivers of successful COVID19 response in countries

- ✓ ***Countries with strong pre-existing public health institutional capacities*** were more successful in responding to the pandemic;
- ✓ ***Countries with strong pre-existing data metrics and analysis capacities*** were able to tailor and target their COVID-19 interventions through epidemiological stratification and predictive modelling of their pandemic, guiding shutdown of constituent high-risk districts or communities rather than the whole country;
- ✓ ***Countries with strong pre-existing research and development and/or innovations capacities*** were able to test available compounds and tools in search of treatment, diagnostics, and vaccines for COVID-19;
- ✓ ***Countries prioritized the governance and systems stewardship role of government and enhanced response coordination*** through empanelling high-level task forces and strengthening health systems capacities, especially in the areas of laboratory science, disease surveillance, communication and information management, and procurement and supply management.

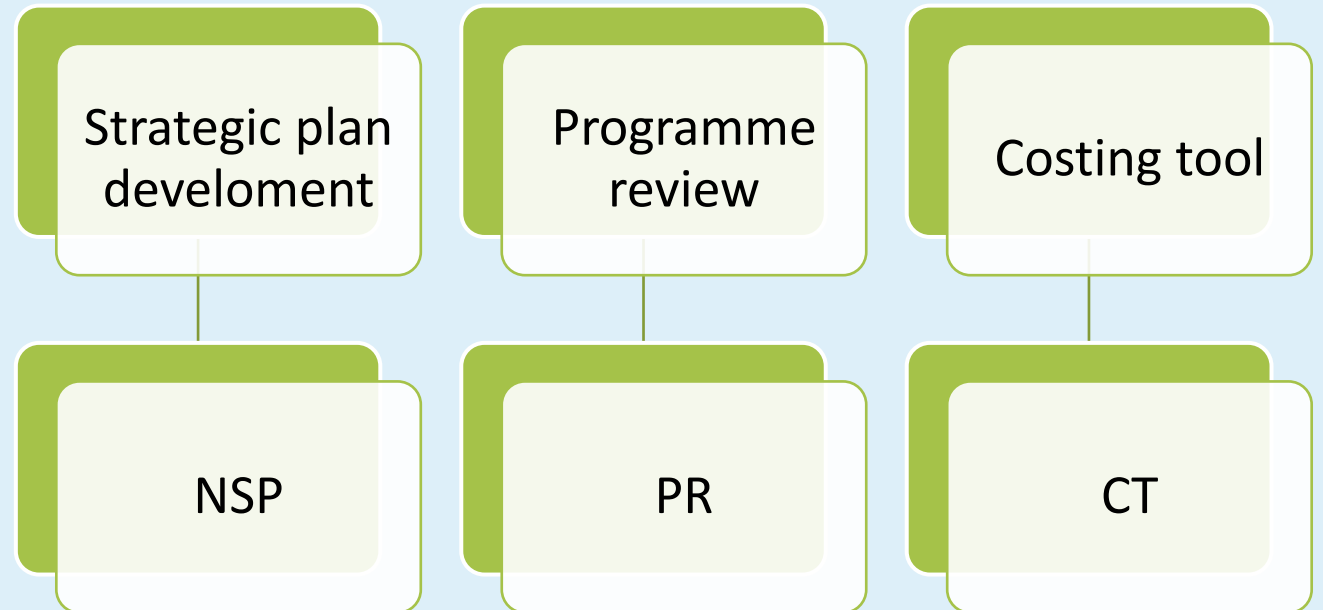
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# WHO AFRO NSP digitalization project

WHO has also embarked on the digitization of the Disease Programme Reviews as well as Strategic Plans development:

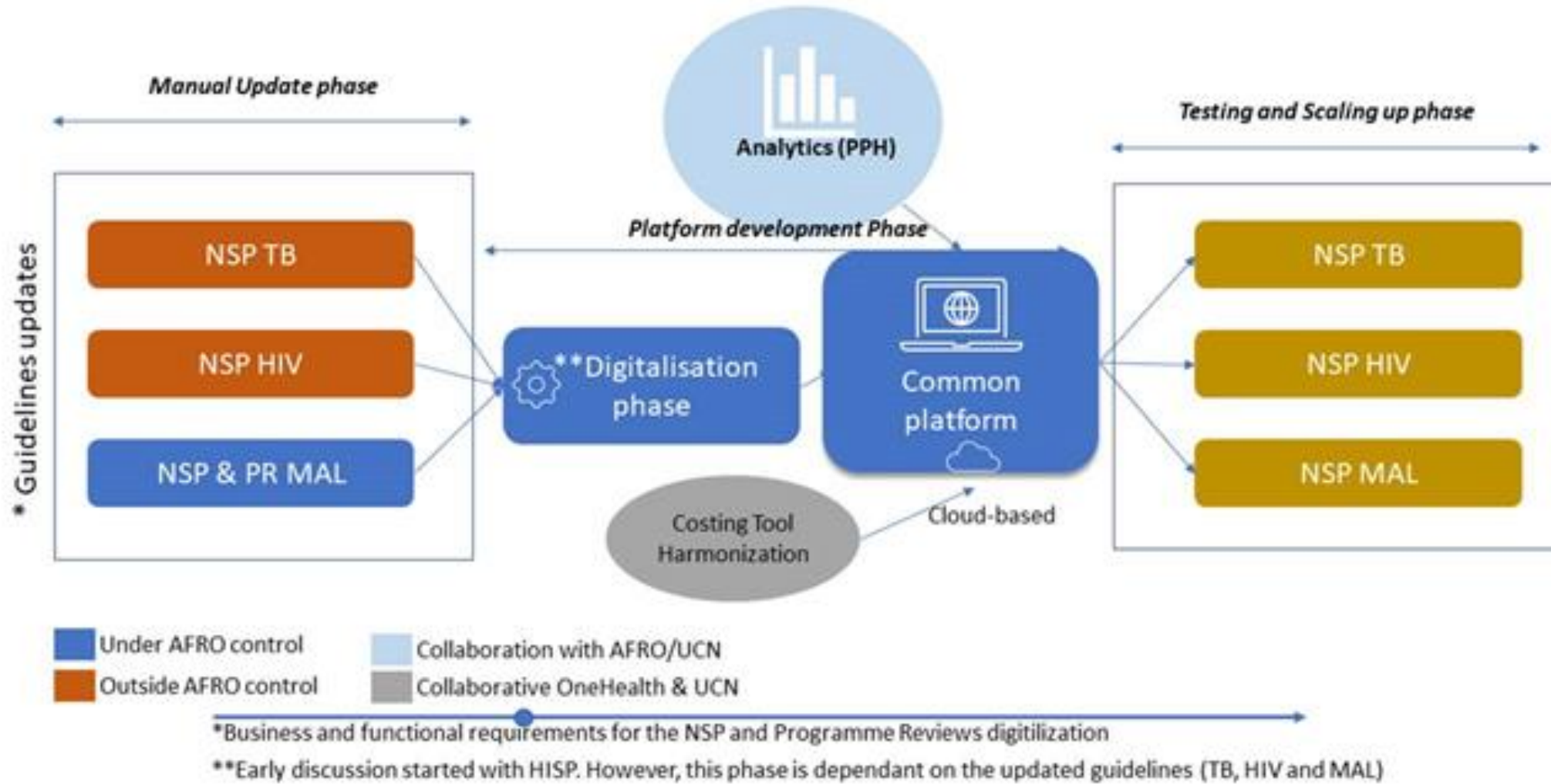
- ✓ To leverage advanced analytics such as epidemiological stratification
- ✓ To promote gender, equity and human right,
- ✓ To optimize resources usage and technical support
- ✓ To improve the overall planning and review process

## Integrated tools





# NSP digitalization application



# Conclusion

- Digitalization can also help to address public health challenges related to chronic diseases, such as diabetes, heart disease, and obesity. Mobile health apps, wearable devices, and other digital tools can be used to monitor patients' health, provide personalized health advice, and encourage healthy behaviors. This can lead to better health outcomes and reduced healthcare costs over time.
- Health equity. Digital tools can be used to reach underserved populations and provide access to healthcare services that might not otherwise be available. For example, telemedicine can be used to provide medical care to patients in remote or rural areas, while mobile health apps can be used to educate and engage communities on important health issues (eLearning).

Overall, digitalization has had a positive impact on public health services, enabling better data collection, analysis, and communication, as well as more efficient delivery of services.



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# Thank you