

# National roll out of District Health Information Software (DHIS 2), central server and cloud based infrastructure in Kenya, 2011

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# Outline of Presentation

- Introduction
- Approaches used in National roll out of the DHIS2 in Kenya
- Experience from the roll out of the DHIS
- Challenges of deployment of DHIS
- Conclusion

# Introduction –(why a new system?)

- Multiplicity of Health Information /M&E systems
- Inability to authoritatively state level of health sector performance
- Difficulty determining intra-district reporting rates
- Limited analysis of the FTP excel based databases with often conflicting statistics
- There was limited downward feedback to reporting facilities and districts
- Overall erosion of trust in the existing health information system

# Introduction

- Kenya adopted the use of the District Health Information Software (DHIS 2), in 2010, replacing File Transfer Protocol(FTP)
- DHIS was installed on a central server using the “cloud” based infrastructure
- DHIS’ aim was to address recommendations from previous evaluations of the Kenyan Health Information System
- This presentation outlines Kenya’s experience in deploying the DHIS2 countrywide

# Approaches used in deployment of DHIS

- Preparatory stage
  - Establishment of National Implementation Team
  - Stakeholders briefing
  - Establishment of TWG
  - Hiring of TA for the process
- System customization
  - Data elements and input forms
  - System configuration
- Pilot at district level and province (Coast province)- Findings from the pilot recommended the national roll out

# Approaches used in deployment of DHIS

- **National Roll out of the DHIS involved:**
  - Training of trainers (ToTs)
  - Training of District Health Management Teams, using ToTs
  - importation of historic data from the FTP
  - supportive supervision
  - stakeholder meetings
  - purchase of laptops, modems and calling cards.

# Results of Deployment of DHIS

- The system was rolled out to all 8 provinces between March – September 2011,
- Users across Kenya are now able to access the system online through modems and LANS
- FTP has now been officially closed
- The software has been widely accepted as the main reporting system(all parallel ones to close)

# Experience from the Deployment of DHIS

- DHIS provides simple analysis encouraging data use for decision making at lowest level
- Inbuilt data quality checks have improved overall data quality
- Improved the dissemination of public health information(guests could login)
- Strengthened ability to monitor the incidence of public health threats and timely response
- Improved the efficiency of administrative systems in health care facilities

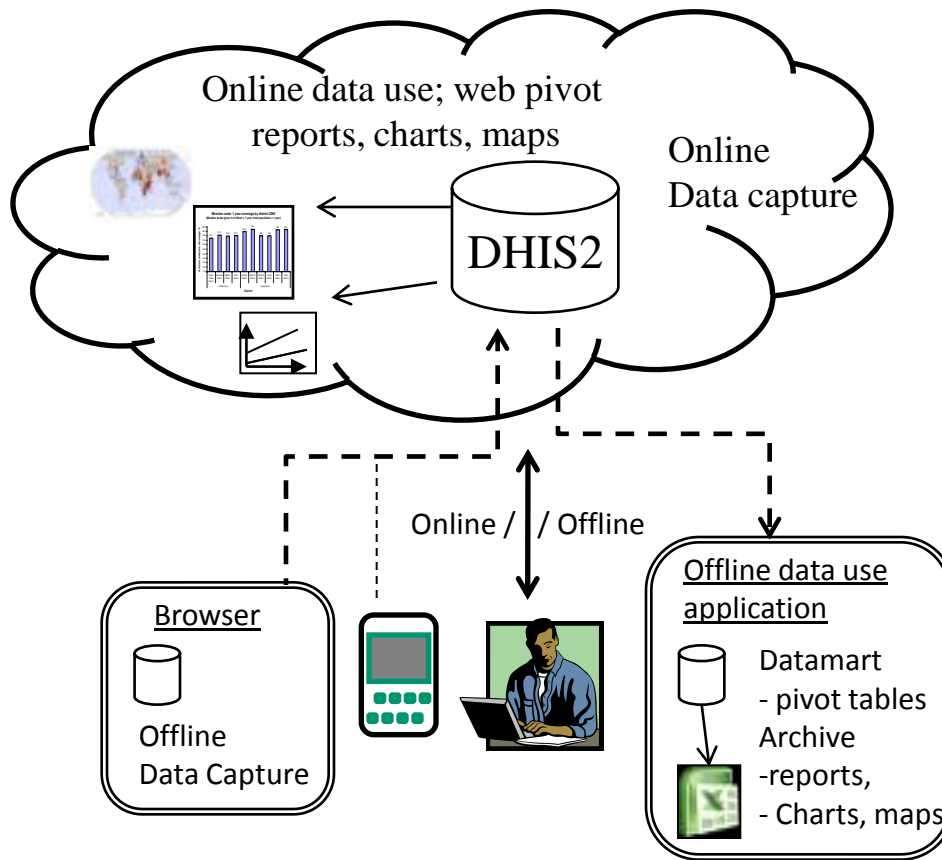


# Experience from the Deployment of DHIS

- The implementation HTML 5 standard, allowed offline data entry, thus improving the robustness of Internet connectivity in rural parts of Kenya
- Users capture data offline by using the memory in the browser and “flush” the data (i.e. transfer to the server) when online
- Reports are generated at night and are instantly available

# Experience from the Deployment of DHIS

- Central Server using cloud based technology
  - It was easy to maintain a central server database-changes made were available immediately to all users
  - Cloud based technology allowed efficiency as there was full time attention to the server
- Use of laptops- some areas had fluctuating networks and one could move with laptop
- Availability of TA- instant solutions



# Challenges in the deployment

- **Connectivity:** The strength of Internet connectivity varies widely in Kenya. Some regions also have less access to electricity and mobile telephony –Difficult to implement data entry by health facilities
- **Capacity:** The capacity to use ICTs effectively was a challenge. A skilled ICT work force is inadequate.
- **Stakeholders:** Taking care of all stakeholders' needs in the system risked overloading it
- **Capital:** While the project was heavily donor funded, there may be need to find ways to blend private and public resources in ways that would be sustainable.

# Conclusion

- Kenya made a bold move to adopt a web based system for data management
- DHIS deployment was successful due to its good attributes and support from stakeholders.
- This success proves that Cloud based infrastructure using a central server with universal access, can be appropriate for Africa
- It is however important that capacity building, relevant infrastructure and staffing levels be evaluated for the system to work well

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