# An ICT Solution for the National Immunization Programme: WEBIIS

Lessons Learned

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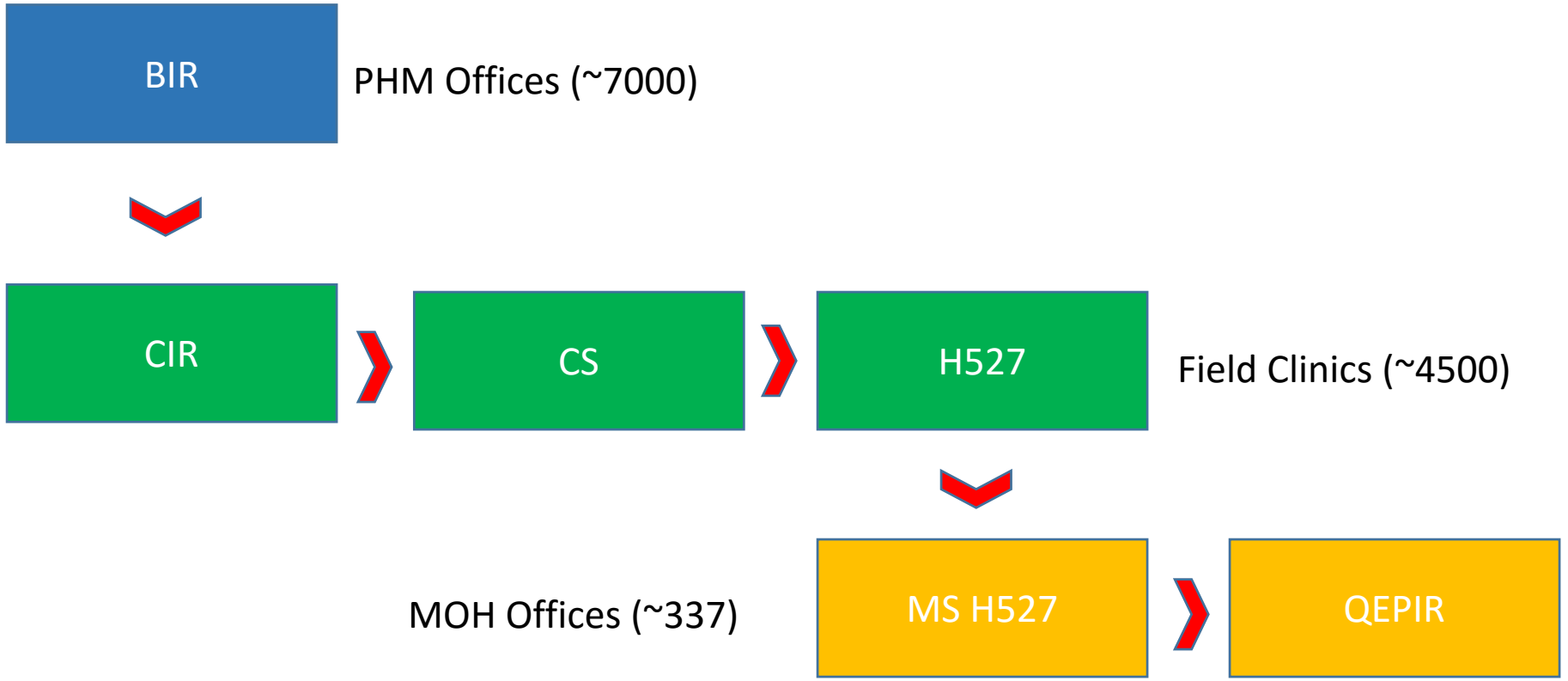
# Overview of Immunization Programme in Sri Lanka

- Immunization is one of the major strategies that is used in public health for disease control and prevention
- Immunization was started in Sri Lanka in year 1886 for smallpox
- Adoption of the **Expanded Programme on Immunization (EPI)** initiated by WHO & UNICEF in year 1978
- Achieved Universal Childhood Immunization status in 1990
- Eradicated poliomyelitis in 1993 and was offered the “Polio Free” status in 2014
- Currently in the elimination stage of measles

# Overview of Immunization Programme of Sri Lanka

- National Immunization Programme (NIP) of Ministry of Health is the main service provider
- Currently NIP provide vaccines against 11 childhood diseases
- Plan to introduce HPV and pneumococcal vaccines to NIP in future
- Private sector is now becoming an important partner in provision of immunization especially in urban settings
- National Immunization Policy was published in year 2014
- Programme is assisted by well established manual-paper based system covering each immunization delivery point

# Immunization Data Flow




|← Individual Data →|← Aggregated Data →|

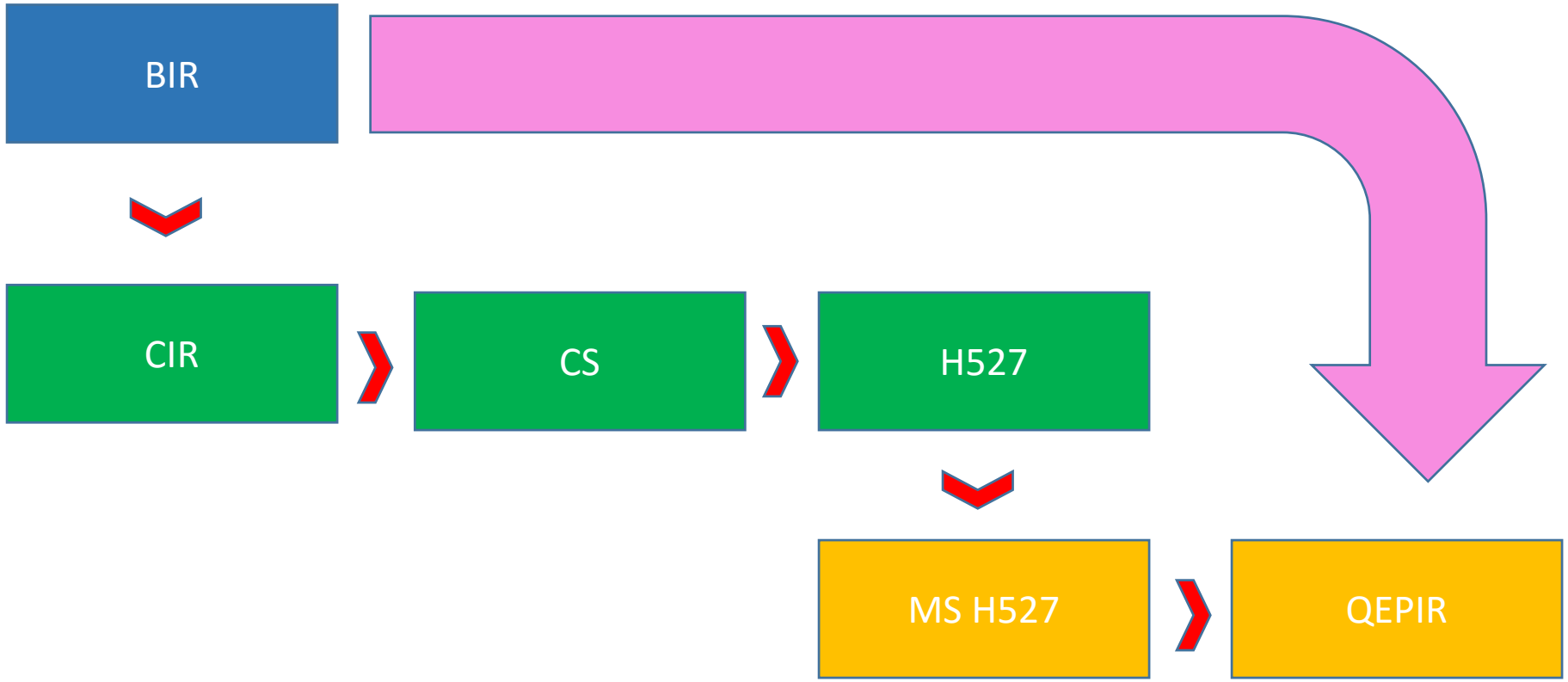
# Problems faced by MIS

- Birth registration & record maintenance
- Data entry errors and transcription errors at each step
- Mathematical errors, especially in MS-H527 and QEPIR
- Frequent loss of private sector immunization data

# New development in and around NIP

- Mandatory immunization and data transfer has been recommended by the National Immunization Policy
- Effective Vaccine Management (EVM) assessment of 2012 recommends to implement an IT solution for vaccine logistic inventory
- Adverse Events Following Immunization (AEFI) has become an important aspect
- Private sector contribution for NIP has become significant in urban settings
- Perception of high time consumption for documentation in clinics
- Near 100% births take place in hospitals
- eGovernment and eHealth policies encourage IT solutions for public services

# Solutions given by WEBIIS



# Pilot testing & Implementation of WEBIIS

- Started in the latter part of 2012
- Targeted three places
  - Medical Officer of Health offices
  - Vaccination centres
  - Labour Rooms
- Primary users of WEBIIS
  - MOOH/AMOOH, PHNSS, SPHMM, SPHII, DOO
  - PHMM, PHII
  - Nursing Officers

# Lessons learned

- Users
  - Different levels of IT skills in every category of health staff (Old & Younger generation) → Trainer should be skillful to be non technical in teaching
  - Training of total group vs. Master trainers → clearly spell out “computer literate” in your correspondence with organizers
  - Need to explore the possibility of providing basic computer literacy skills for healthcare works by incorporating it to their basic training curricula

# Lessons learned

- Hardware & Data
  - Clinics & LRs are busy places → ? Rugged equipment
  - Long term warranty and onsite maintenance is handy → Fast recovery
  - Highly recommend local /regional level primary hardware maintenance groups to be established
  - Servers and client computers, adhere to reputed brands → :D
  - Mobile internet, select more than one service provider to over come coverage issues → possibility needs to be clarified with current financial regulations
  - It is worth exploring the possibility of providing hardware and data packages for all healthcare users → possible Win – Win situation

# Lessons learned

- Software
  - OS: Windows or Linux flavour → Need guidance from experts and worth to have clear national policy
  - Software development:
    - Whether to develop in-house or outsource the project
    - Expert guidance for selection of software combinations according to a national policy and project scope
    - Will the lowest bidder deliver time bound project deliverables on time fulfilling the notion of low cost to the government with the highest standard product
    - Do we need a separate assessment criteria to select a software developer because we are dealing with an intangible product
    - What are the clauses we should include in the project agreement to impose penalty on developer as well as software owner who causes delay in project

# Lessons learned

- Administration
  - Who owns health data? → inform everybody handling relevant data
  - Payments of internet usage bills → proper communication with accountants through head of institution and follow up
  - Trade union actions → Discuss and Explain, Use of Administrative powers
  - Fair usage of data packages → Almost impossible. surcharging, LAN with controlled access, Dedicated APN
  - Keep all official correspondence filed → life saver

# WEBIIS experience vs. ICTA survey on Government Officers on ICT -2011

- Top five suggestions by respondents
  - Need more training
  - Improve IT infrastructure
  - Provide motivation to staff to adopt IT solutions
  - Change management in all level of staff
  - Establishment of maintenance system

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- All health staff who are using the system & providing useful feedback for further improvement of the system

Thank you.