

**International Health Data Linkage Consortium 2008**

**Spatial Health  
(Concept – Culture – EVOLUTION)**

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## **WA - Data Linkage Overview**

- ◆ **First 10 years: concept to culture**
  - **Now routinely accepted: 500 projects, 900 sci. works, 60 higher degrees**
  - **Resolved privacy, ethics, security issues**
  - **Strong focus on translation of research data to policy, planning, service delivery, and outcomes evaluation**
  - **CoE DLA established (2006)**
  - **National extension (NCRIS)**
- ◆ **Next 10 years: application evolution**
  - **Focus shift - 'new methodology' to 'tool for use'**
  - **Increased use of State and Commonwealth cross-jurisdictional datasets**
  - **National and international collaborative platforms**
  - **Identify priority areas**

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## Spatial Health – a priority area

- ◆ Despite much interest - underdeveloped compared to other industries
- ◆ **Challenge:** to ensure that the significant progress in spatial information and technology is used to its full potential to improve the health of all Australians and best inform policy formation at local, state and federal levels

# Time for Spatial Health Solutions

- ◆ 19th/20th century mapping of health for disease clusters
- ◆ Project-specific desktop GIS to adoption of spatial technology in all aspects of health care

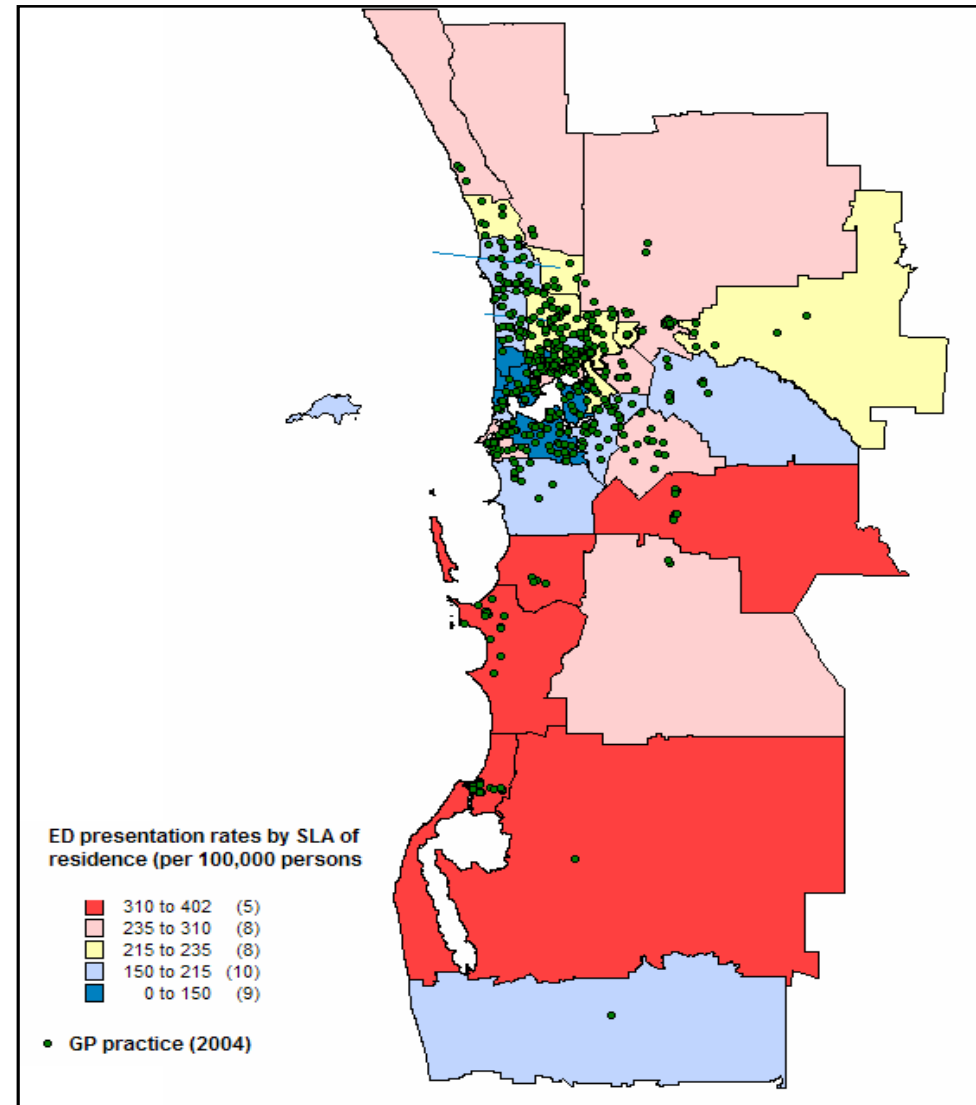


# Spatial Analysis: Health Service Planning

## Emergency Department Attendance

Used by DoH for planning best location to provide alternative services such as

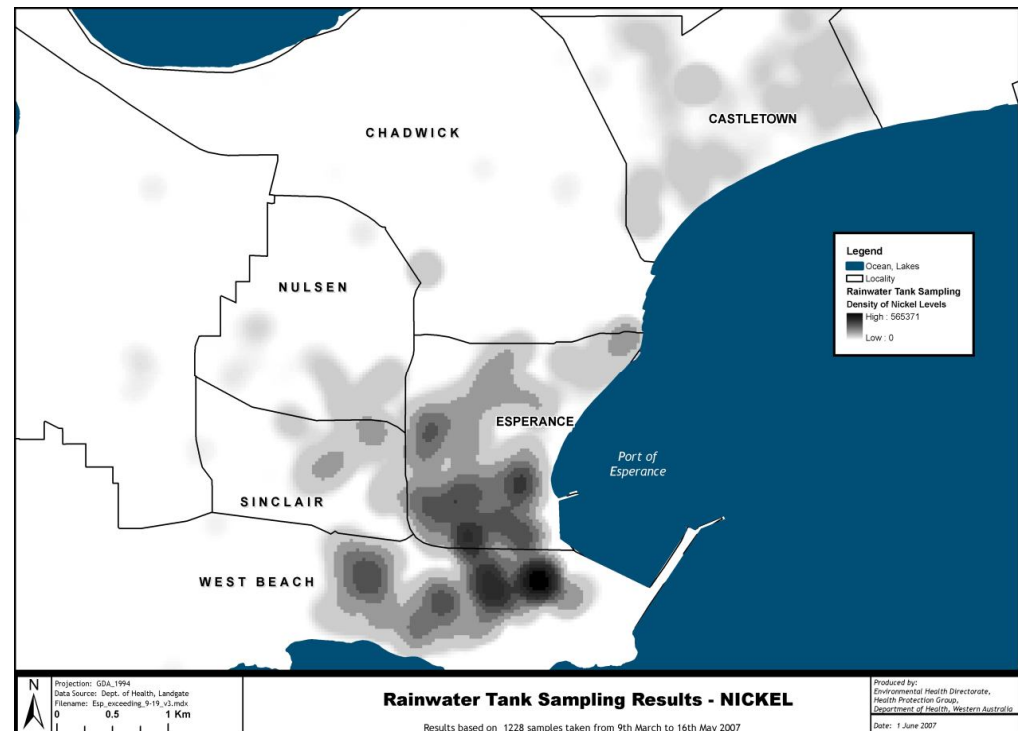
- GP After-hours clinics
- Super GP clinics
- Site where alternative practices for streaming patient flow through ED could be most effective



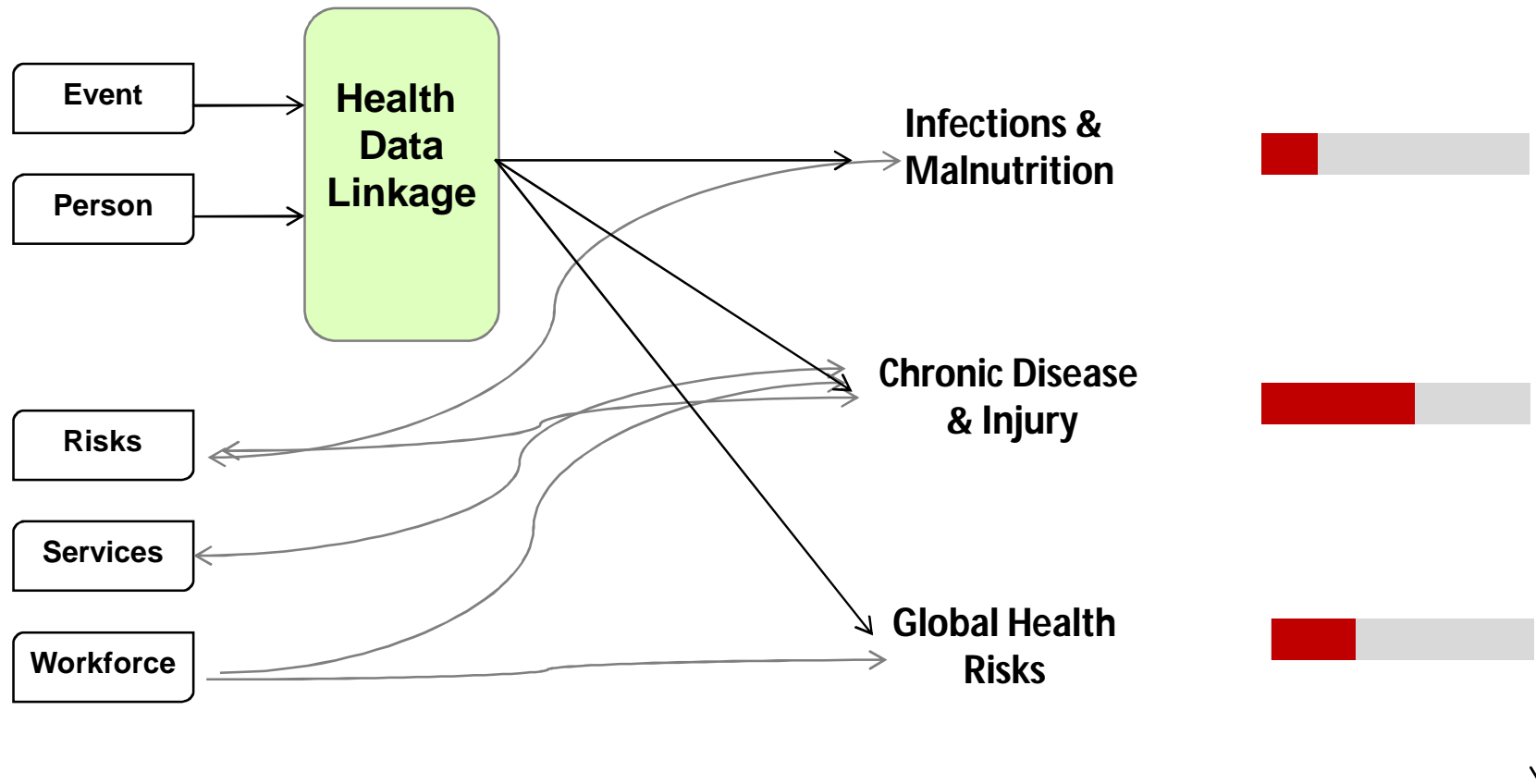
# Esperance Lead and Nickel Dust Exposure

**Environmental health** issues involve the consideration of disparate data sets of hazards, exposed populations and health outcomes

**Spatial technology** helps visualise the extent of contamination and provides a risk communication tool to residents

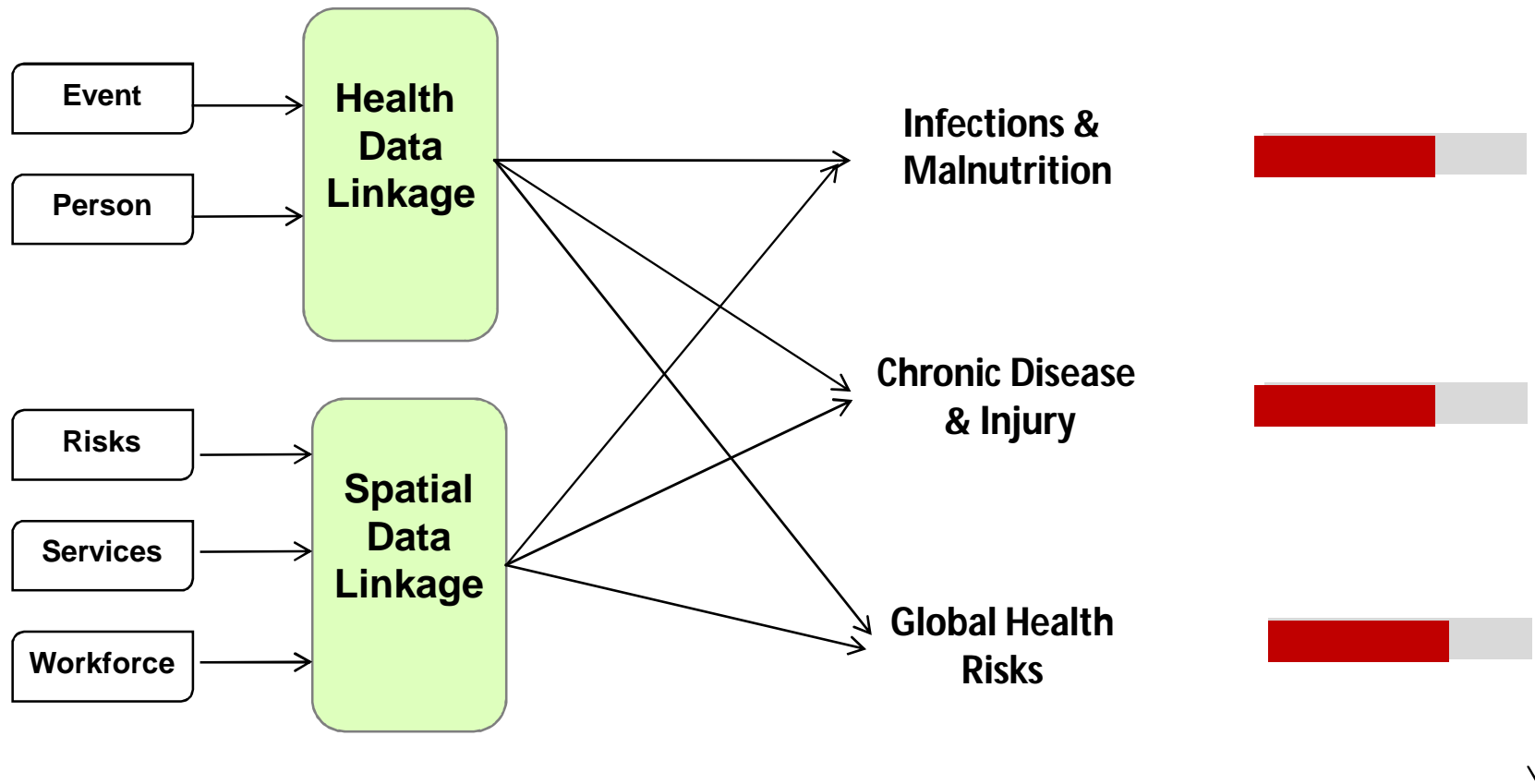


# Potential for Spatial Adoption



*Full potential -> reduction in burden of disease and cost savings*

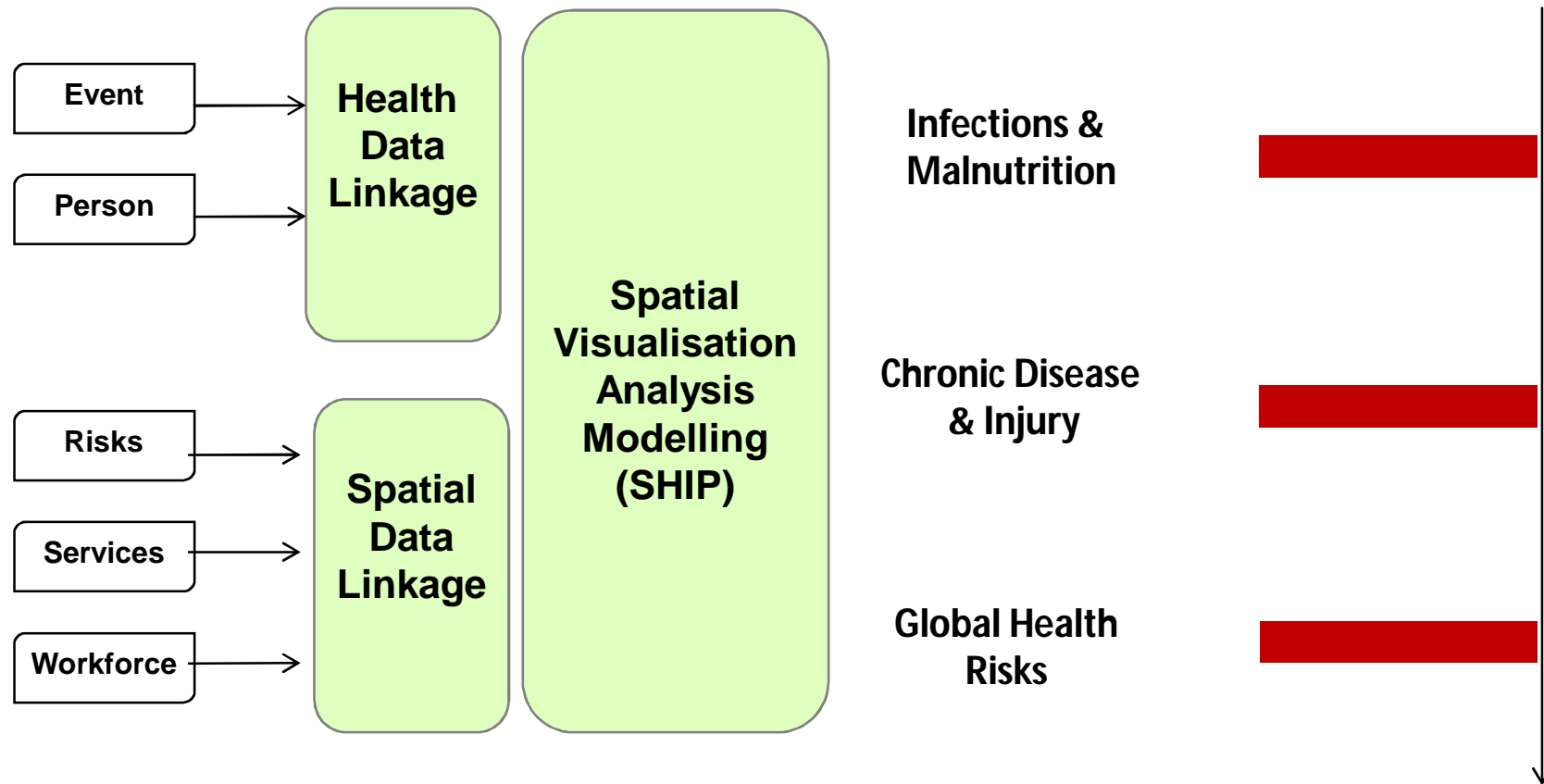
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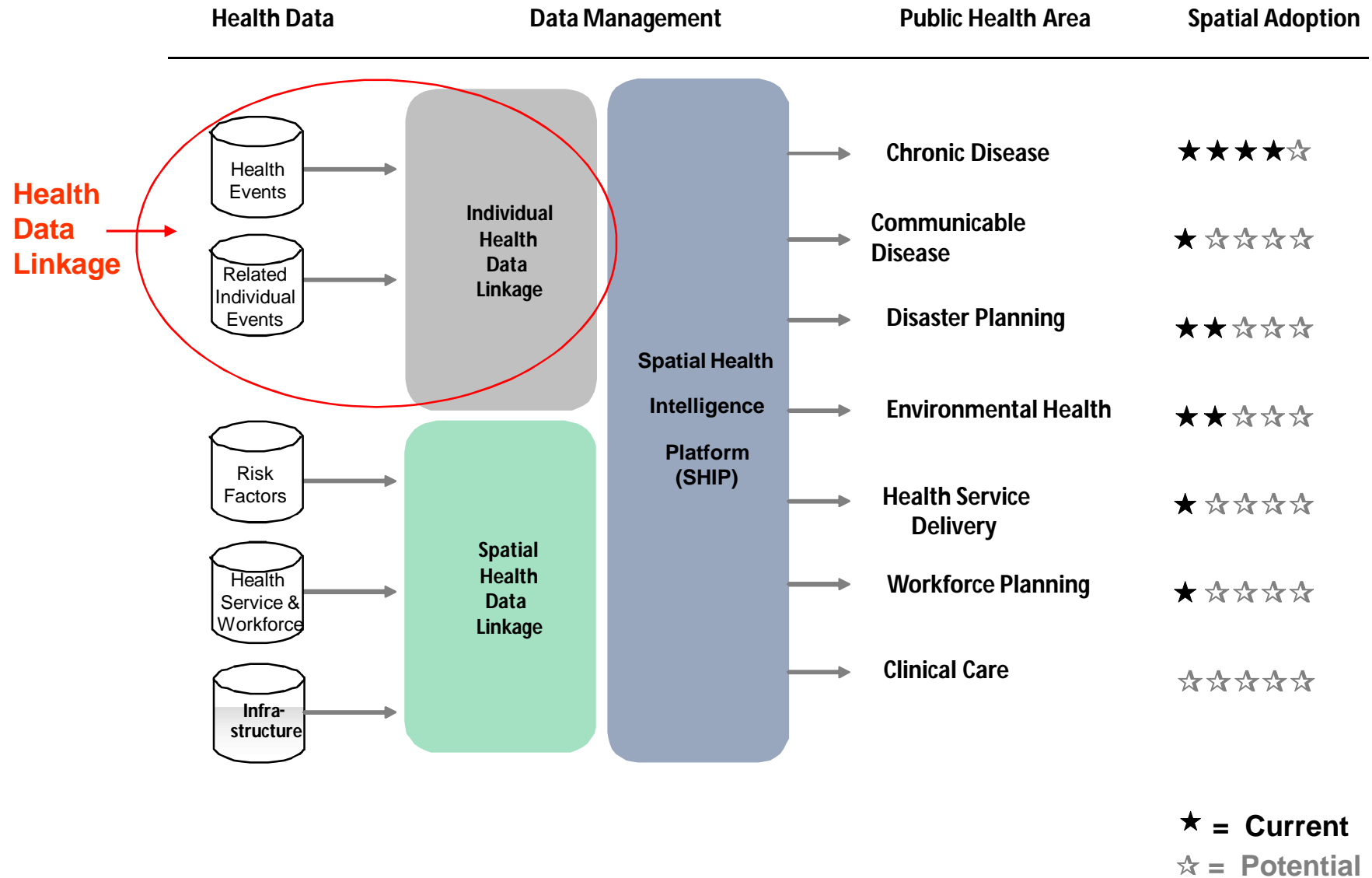


*Full potential -> reduction in burden of disease and cost savings*

# Spatial Health Intelligence Platform

- ◆ Assist health policy makers and program designers
- ◆ Planning new services and programs
- ◆ Evaluations (small area analysis, health risks, interventions, programs)
- ◆ Priority setting (population/disease migrations, rural, Indigenous, disaster modelling)
- ◆ Visualisation of complex spatial patterns
- ◆ Monitoring behaviours and outcomes
- ◆ Request collaboration/support from the IHDLC members

# Potential for Spatial Adoption



# CRCSI Health Demonstrator



◆ **18 months, complete March 2010**

## Three Outcomes

- 1. Develop a unique spatial health application (SHIP) using the existing SLIP framework**
- 2. Australian network of spatial health experts**
- 3. Future Health R & D for CRCSI  
– state, national and international focus**