

Realistic Role of Grids in a National Health Service for Venezuela

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Agenda

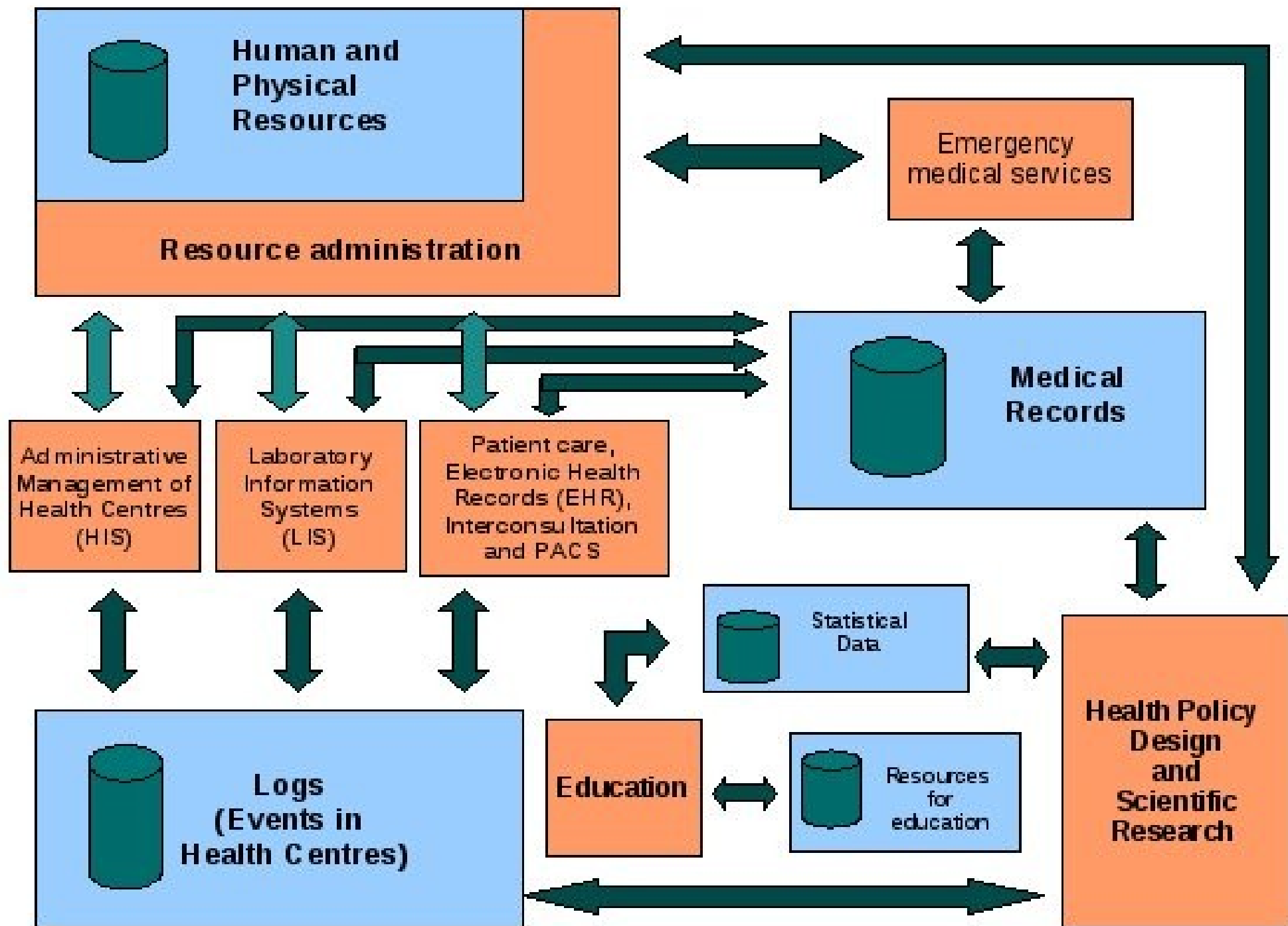
- Scenario and Goals
- National Information System for Health Service:
SINAPSIS
 - Goals
 - SINAPSIS as a Data Flow Diagram
 - SINAPSIS as a Memory Hierarchy
 - Role of grids in SINAPSIS
- Conclusions

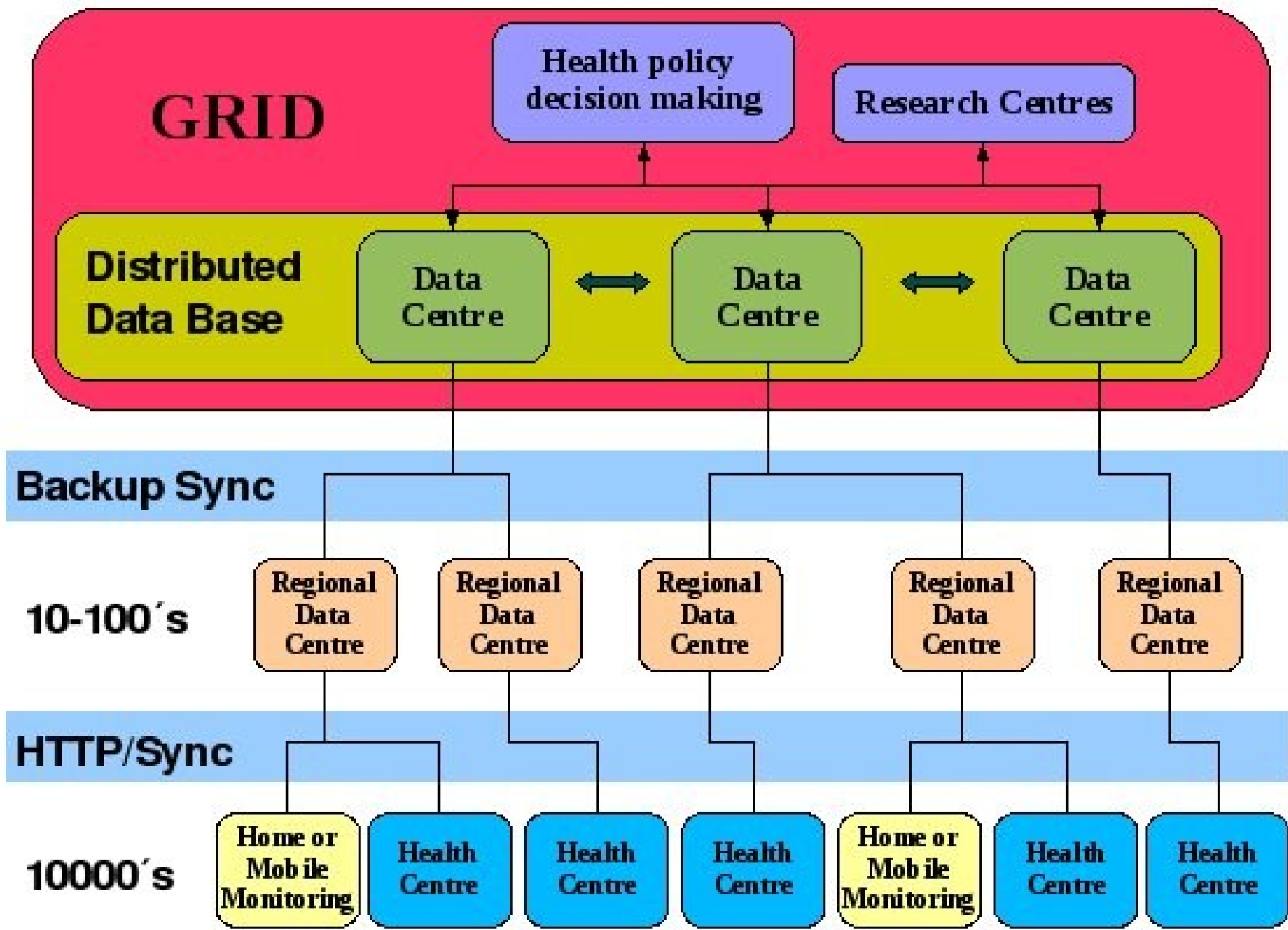
Scenario: Venezuela

- Inexistent previous national health information systems
- Remote rural communities in which only satellite links are possible
 - There is a commitment to giving support to them
 - Satellite links drop frequently under rain conditions
- Opportunities in the ICT sector
 - CANTV plan for taking fiber optics access to towns/cities of 3000+ inhabitants
 - Recently launched VENESAT-1 satellite, mainly devoted to education and health

Some goals

- Allow the health centres to continue using their Information Systems (HIS, RIS, LIS, PACS,...)
- For new developments, use an open source approach
- Use the Ministry of Health data standards
- **Conceive SINAPSIS as a nation-wide memory hierarchy**
- The top level should provide data for both health policy making and scientific research





SINAPSIS Deployment Methodology

- The deployment methodology considered has four dimensions for growth:
 - Inclusion of health centres.
 - Inclusion of software modules.
 - Connection capacity of health centres.
 - Inclusion of memory hierarchy levels.
- Currently we are deploying two modules
 - Medical record
 - Interconsultation

Role of Grids in SINAPSIS

- Limited use of grids because of the lack of:
 - Good communication links in rural areas
 - Trained people for running data centres
- Grids can be used at the upper level of the memory hierarchy → The grid becomes a backup level
- Only at the grid level we expect to achieve the goal of having unified data formats
- The information at the grid level can be used for:
 - Policy Making and Scientific Research
- Grids are useful for its security restrictions → however, they have to be complemented

Some challenges

- Improving the security model of grids for accessing medical data for non clinical purposes, such as research and policy making
- Moving up multimedia data across the memory hierarchy, probably by selecting relevant portions
- Monitoring and improving quality of data
- Automating medical data mapping between the Regional Level and the Grid Level, as well as getting information from the data collected (Ontologies)

Conclusions

- Grid platforms may play an important role in an IS for a National Health Service as the upper level of a Memory Hierarchy
- It is not realistic to think that, in general, Health Centres can run a grid site
- In the grid level both clinical and research services may be placed, as well as services for health policy making
- Note: this is an ongoing project, we still can change our minds!

Thanks!

**Contact for ideas on joint
research in related topics:**

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Any questions?