



Atos Origin

CONSULTING > SOLUTIONS > OUTSOURCING

- >> BOOST PERFORMANCE
- >> REDUCE COST
- >> INCREASE AGILITY
- >> ENHANCE CRM
- >> SHORTEN TIME TO MARKET
- >> DRIVE INNOVATION
- >> IMPROVE EFFICIENCY
- >> INCREASE ADAPTIVITY
- >> ENABLE BUSINESS TRANSPARENCY
- >> ENSURE REGULATORY COMPLIANCE

Data Sharing *sans frontières*

Putting Global Good before Personal Privacy?

Paul Cheshire

Global Forum, Paris November 2006

The Black Death 1347-1351 ... 1400

Death *sans frontières*

- › 30% of Europe's population - 25 million people - died
- › Wars and trade ceased (only briefly)
- › Wages increased (labour in short supply!)
- › Erosion of hitherto rigid stratification of society
- › The stimulus for future public health reform
 - ›› a system of sanitary control for contagious diseases
 - observation stations
 - isolation hospitals
 - disinfection procedures
 - ›› major efforts to improve sanitation
 - development of pure water supplies
 - garbage and sewage disposal
 - food inspection.

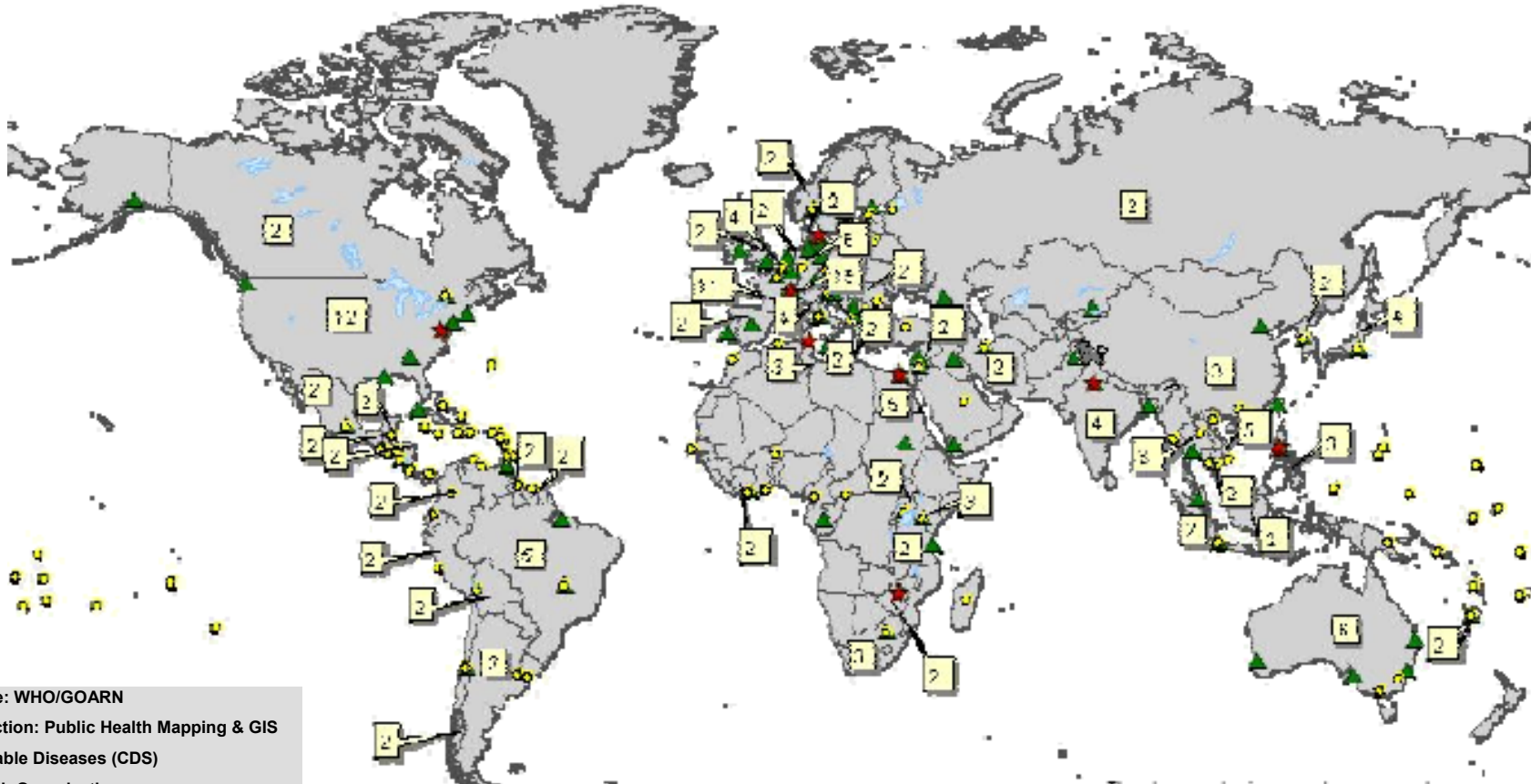


500 years later ...

Action *sans frontières*

- › Paris – 1851: The first formal international health conference
- › Prelude to similar conferences to draft international quarantine regulations.
- › A permanent international health organization was established in Paris in 1907
 - ›› to receive notification of serious communicable diseases from participating nations
 - ›› to transmit this information to the member nations
 - ›› to study and develop sanitary conventions and quarantine regulations on shipping and train travel
- › This organization absorbed into the World Health Organization (WHO) in 1948
- › WHO is a clearinghouse for information about disease throughout the world
- › The Global Outbreak Alert and Response Network (GOARN) provides field support

WORLDWIDE DISTRIBUTION OF GOARN PARTNER INSTITUTIONS AND NETWORKS



Data source: WHO/GOARN
Map production: Public Health Mapping & GIS
Communicable Diseases (CDS)
World Health Organization
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Can we do better?

Improvement *sans frontières*

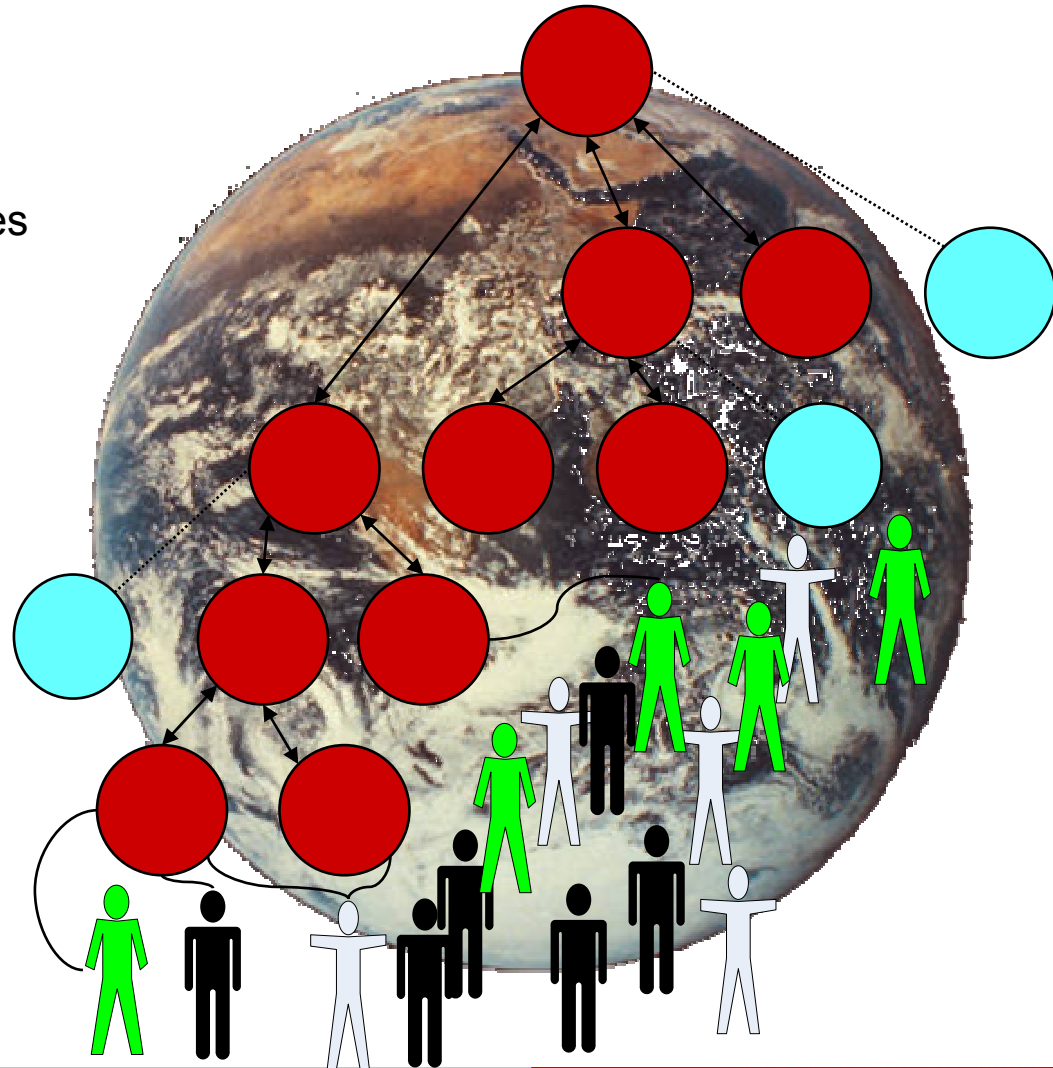
- › Faster detection of disease?
- › More certainty in detection and diagnosis?
 - › confirmed
 - › suspect
 - › clear
- › Pre-emptive and ex-post actions
 - › screening?
 - › quarantine?
- › Faster central reporting of cases
 - › from multiple sources
 - › on an individual basis
 - › level of detail?
- › Better processing of reports
 - › for outbreak management
 - › for individual follow-up?



Who might be involved?

Cooperation *sans frontières*

- › Central outbreak response service
- › Regional / national command centres
- › Public Health services
- › Private Health Services
- › Voluntary sector
- › Employers
- › Citizens



Issues?

- ▶ Improved detection and diagnostic procedures
- ▶ Getting commitment from governments, organisations and citizens
- ▶ Agreeing when to start sharing data about which conditions?
 - » after some agreed threshold (infections or deaths)?
 - » at the first sign of danger?
 - » routinely?
- ▶ Allowing personal health data to be shared globally?
 - » Anonymised?
 - » Pseudonymised?
 - » Fully identifiable?
- ▶ Timeliness and completeness of information
- ▶ Valid statistical / probabilistic models to support decision-making
- ▶ Two way communication focused on prevention of (further) infection
 - » semantic interoperability
- ▶ Information and Communications Technology infrastructure unlikely to be the biggest challenge

The future?

Data Sharing *sans frontières?*

- › Were we (relatively) lucky with HIV/AIDS and SARS?
 - ›› and meningitis, yellow fever, ebola, cholera ...
- › Will the threat from Avian Flu materialise?
- › Is there a real danger of a pandemic from bio-terrorism?
- › GOARN is excellent, but ...
- › ... can we do more and better?
- › Should we put Global Good before Personal Privacy?





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