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#### THE KNOW-DO GAP

"There is a gap between today's scientific advances and their application: between what we know and what is actually being done "

"Action without knowledge and knowledge without action means wasted resources and missed opportunities"



Dr J.W. Lee WHO Director-General 2004 & 2005



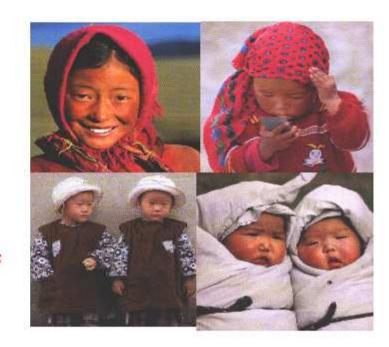


#### The know-do gap & infant mortality

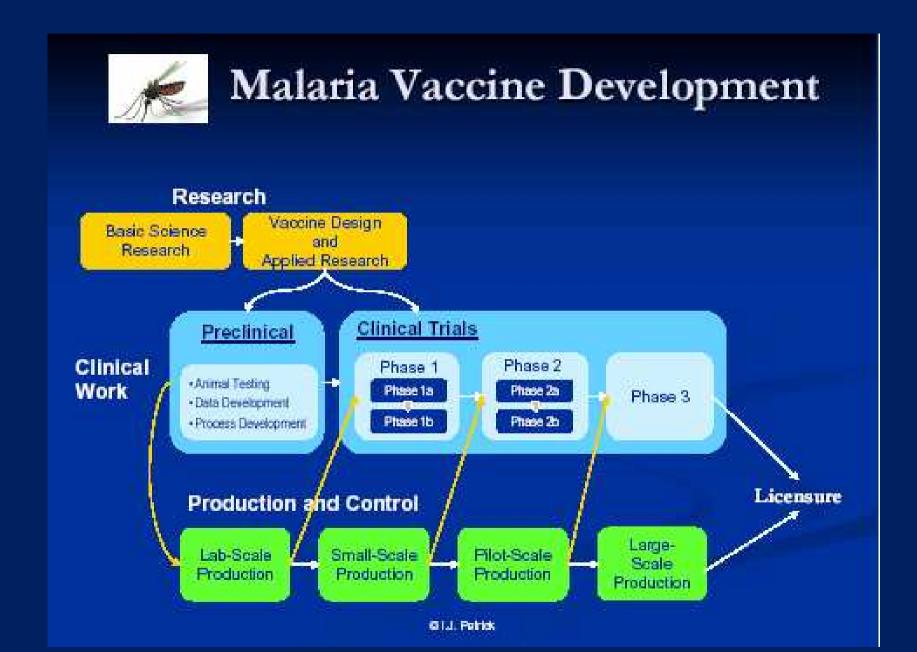
11 million children under-5 yrs old die every year-90% of them in the developing world

**2/3** of these deaths (7 m) can be prevented by available, effective and cheap interventions

Source: Lancet 2005;365:1147







# Public Health Strategy Development – Malaria Vaccine Community

#### Vision

Market, Social, Policy Factors
Strategic Goals and Framework
Major Scientific Challenges



#### Technology Roadmap

Science, Technology, Engineering Critical Activities & R&D Priorities Activity Pathways and Action Plans



Problem Definition

**Potential Solutions** 

Q IJ. Patrick

#### From Vision to Initiatives Vision Results Technology Roadmap Topic Areas Shared Vision Scientific Discovery. Vaccine Design Goals **Big Scientific** Product. Enabling Technologies Questions · Process · Clinical Trials · Policy & Markets · Cross-Cutting Activities Process Enhancements Aution Plans (25) Strategies (47)Activities (228)**Priorities** (79)Top-Priority Initiatives (15)@ LJ. Potrick

## HUNGARY'S ONLY HUMAN INFLUENZA VACCINES AND STEM CELL RESEARCH AND MANUFACTURING COMPANY

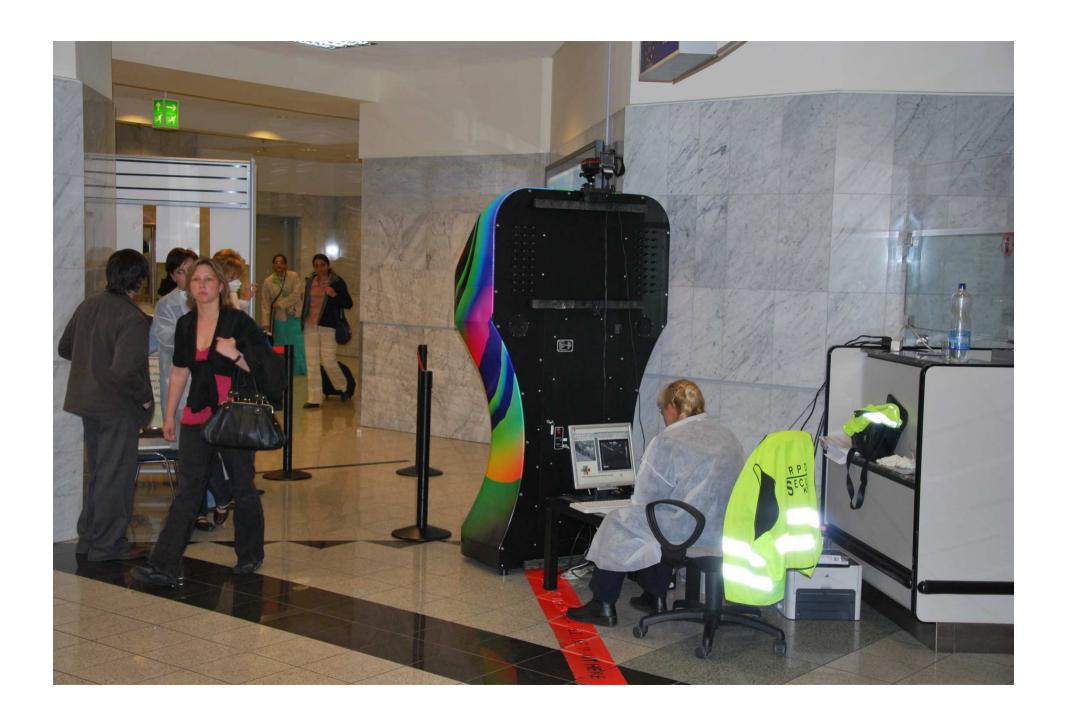


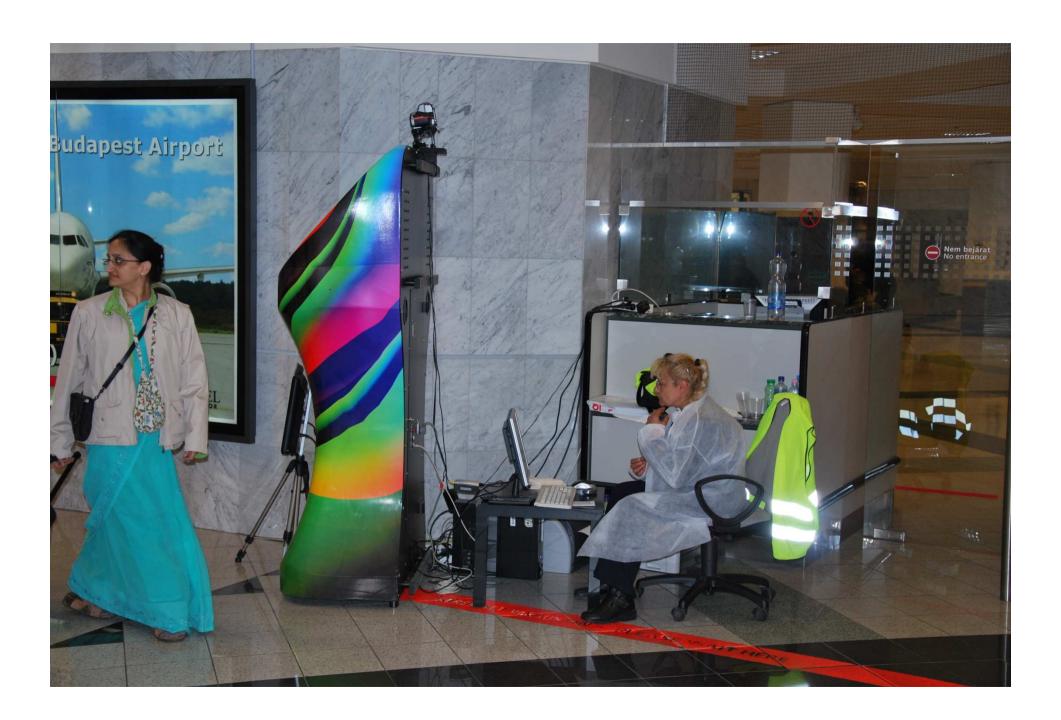








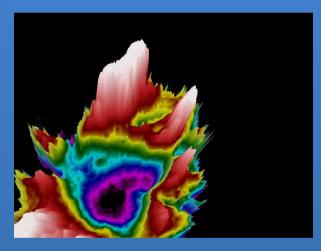






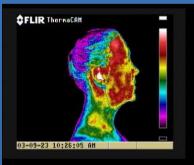


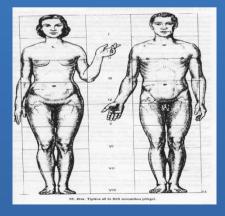
### Somatologia

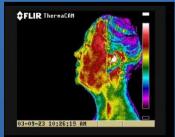


Biológiai antropológia Humánbiológia Somatoinfra®© Mellékletek

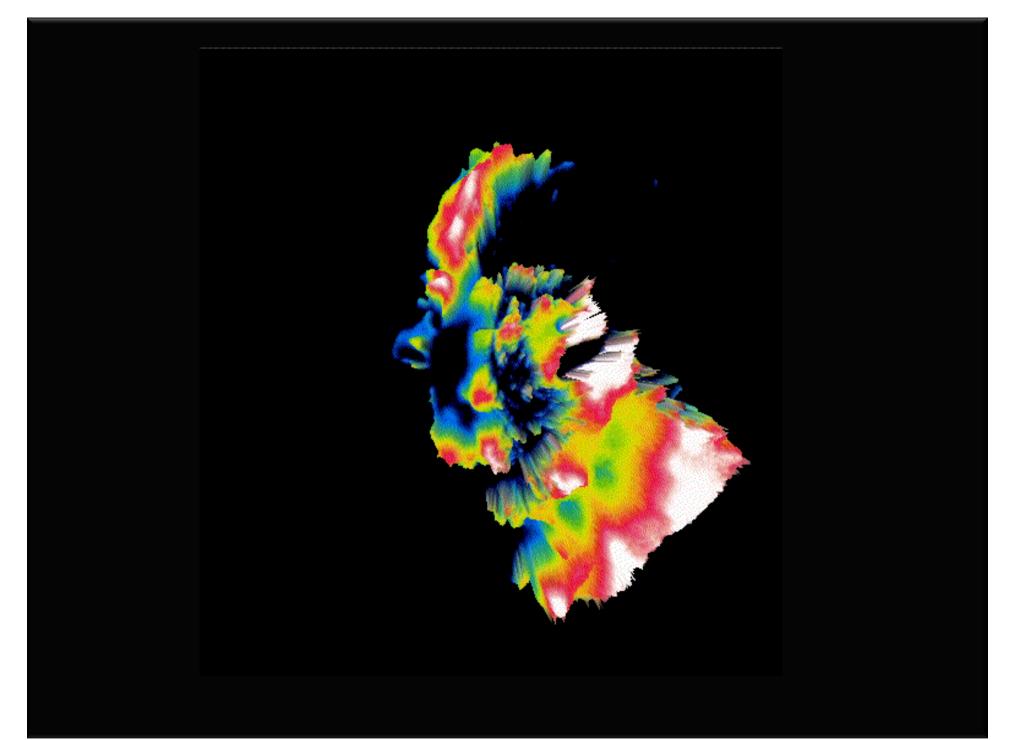








Budapesti Műszaki Egyetem Természet Tudományi Kar Nukleáris Technikai Intézet









#### The Changing Global Environment



Bridging the know-do gap...



### **Collective Intelligence**







HolP and WABT to the WORLDCOMP 2009
WABT Organization invites his members and associated partners
to join this world event and to contibute
to the First Translational Track on Health and Health-Care over the Internet.





General Chair's Welcome (Prof. Hamid R. Arabnia)

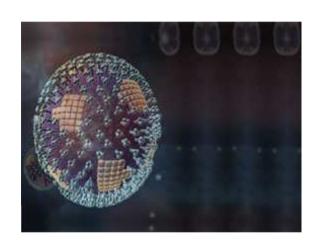
Welcome to The 2009 World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP'09) Website. WORLDCOMP'09 is the largest annual gathering of researchers in computer science, computer engineering and applied computing. It assembles a spectrum of affiliated research conferences, workshops, and symposiums into a coordinated research meeting held in a common place at a common time. This model facilitates communication among researchers in different fields of computer science and computer engineering. The last Joint Conferences (WORLDCOMP'08) attracted over 2,000 computer science and Engineering researchers from 82 countries. It is anticipated that The WORLDCOMP'09 will attract about 2500 participants.

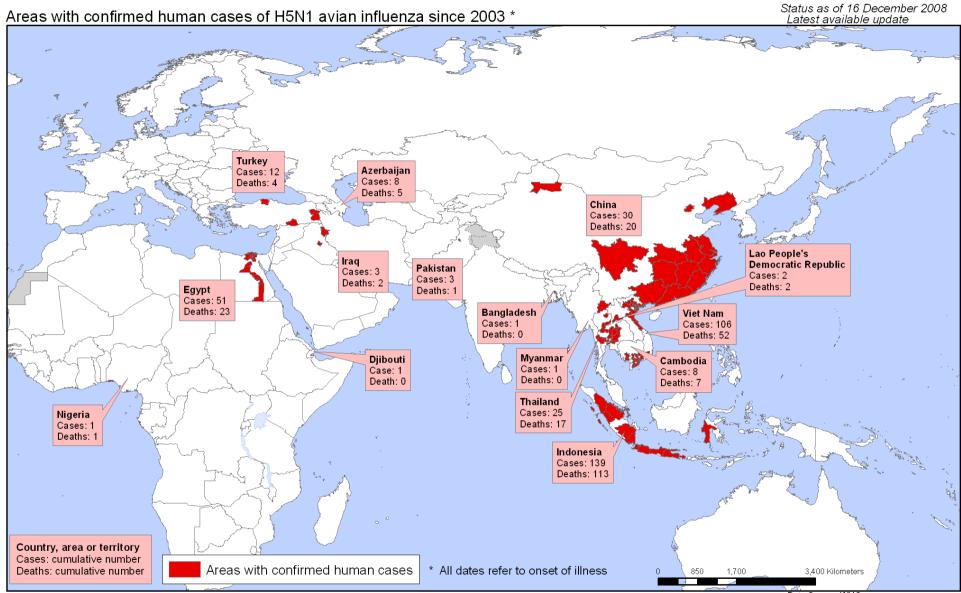














The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement. © WHO 2008. All rights reserved

Data Source: WHO
Map Production: Public Health Information
and Geographic Information System (GIS)
World Health Organization





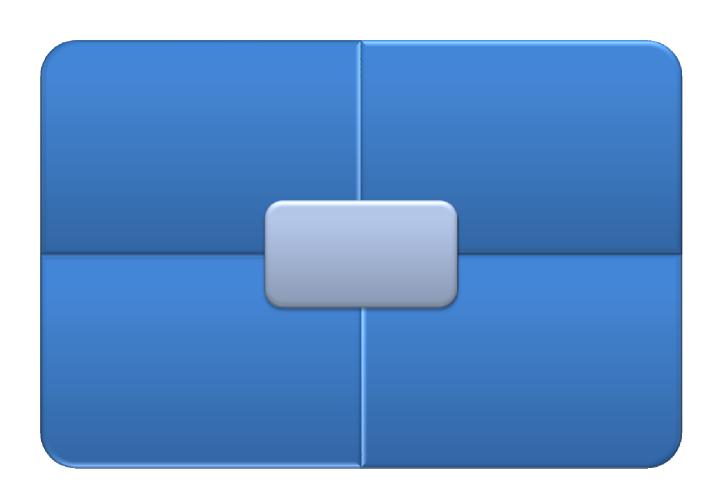












#### WHO Department of Knowledge Management and Sharing

#### THE KNOW-DO GAP



KNOWLEDGE TRANSLATION IN GLOBAL HEALTH Geneva - Oct 10-12, 2005



- 1. The Challenge
- 2. The Opportunities



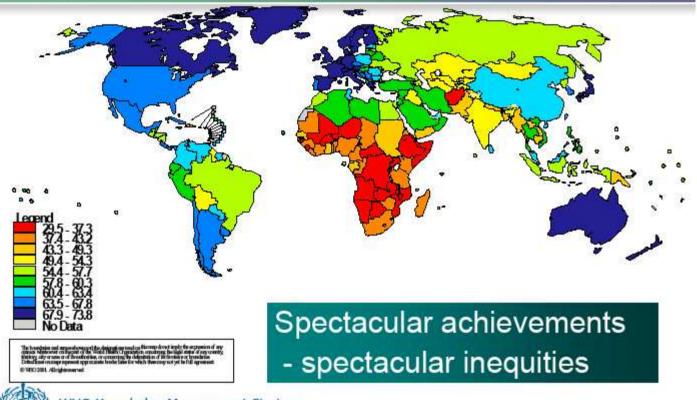


#### Know-Do Gap

The chasm between what is known and what gets done:

- the gap from research to policy and practice
- the gap from knowledge/awareness to action/behavior change

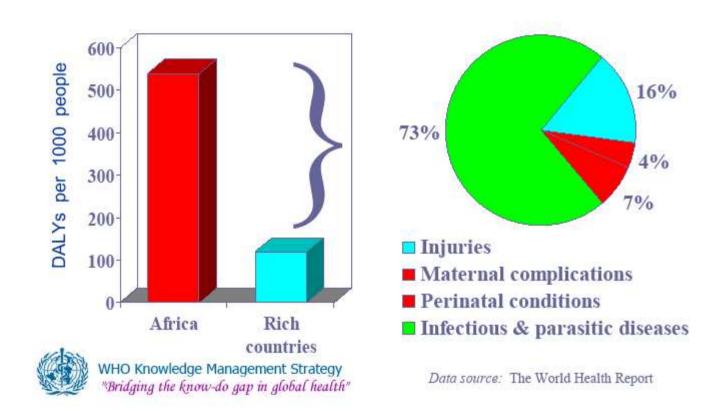






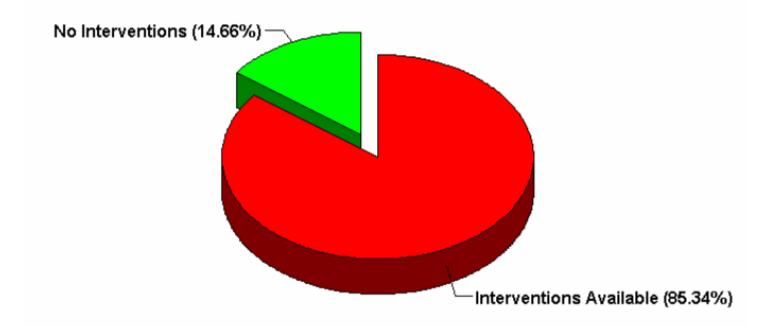


#### Disease Burden Differential



#### District Disease Burden Addressable by Available Cost Effective Interventions

Derived from TEHIP/AMMP Cause Specific Mortality Data (YLLs) for Rufiji Sentinel District, 2000





# The Challenge is Universal & Complex



Pittet D. J Hosp Infect. 2001





#### "Laws of Improvement"

Every system is perfectly designed to achieve exactly the results it gets

All improvement is change, though not all change is improvement



Don Berwick (IHI) 2004



#### Traditional Knowledge Enterprise

**Basic Science** 

Surveillance

Intervention Research

Other sources

Knowledge Synthesis & Dissemination





#### The Digital Divide





### Drowning in data & information!

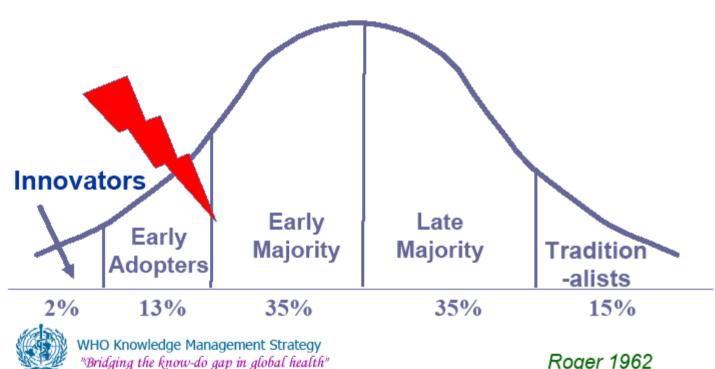


WHO Knowledge Management Strategy
"Bridging the know-do gap in global health"

- Just too much of it and not always what you need
- Multiple parallel demands
- Information goes up and never comes down
- Key consumers of information not being served:
  - Policy makers
  - Health Managers
  - Service Providers
  - General public



#### Diffusion of Innovation



Roger 1962

# Bridging the know-gap in public health

<ul> <li>Period</li> </ul>	Era	Strategy
• Until 1960s	Passive	'Diffusion' via journals
• 1970s +	Push	'Dissemination', e.g. practice guidelines
• 1990s +	Push harder	Implementation, e.g. behavior change,
• 2000 +	Partner & Pull	Linkage & exchange





#### After all these years...

"This review highlights the fact that despite 30 years of research in this area, we still lack a robust, generalisable, evidence base to inform decisions about strategies to promote the introduction of guidelines or other evidence-based measures into practice."

Grimshaw et al. "Effectiveness and efficiency of guideline dissemination and implementation strategies" Health Tech Assess 2004; 8(6): 66



#### "We don't know how"

- Figuring out a path to action (embedded in the complexity of a given social setting)
- Continuous improvement to make it easier and cheaper to achieve success
- Replicating model for scaling up (itself requiring adaptation and improvement)



#### KT "Field" Challenges

- The literature on KT is still scarce and not systematic – we could learn from other sectors
- There is no agreed conceptual framework and even consensus on KT terminology
- Experiences abound but we lack a learning platform to develop and spread good practices
- KT cadres are still young, and most funding/promotion systems not very supportive
- Evaluation and accountability systems not always aligned



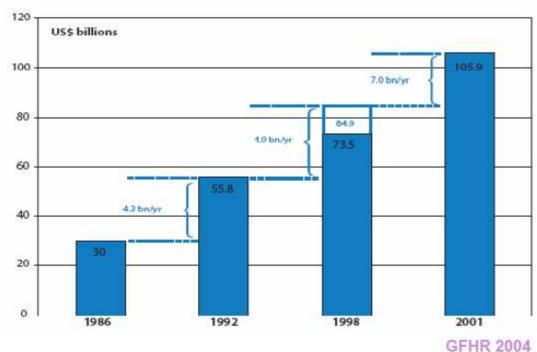
1. The Chahange

2. The Opportunities





#### Global Investment in Health Research





#### **Knowledge Translation**

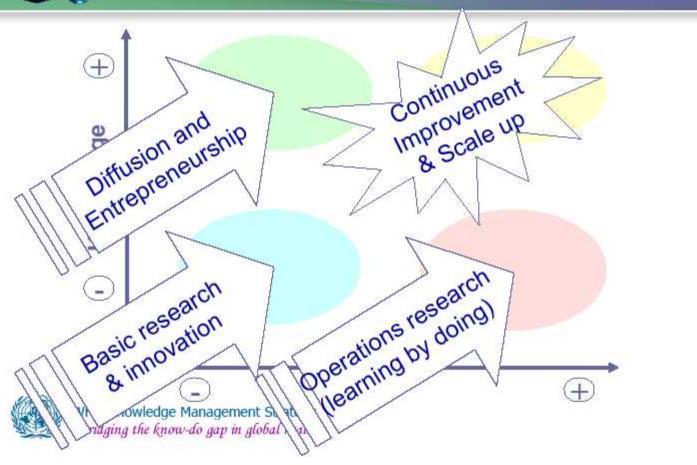
"Knowledge Translation is the exchange, synthesis, and ethically sound application of knowledge within a complex set of interactions among researchers and users to accelerate the capture of benefits of research through improved health, more effective services and products, and a strengthened health care system."

Adapted from the Canadian Institutes for Health Research, 2001.



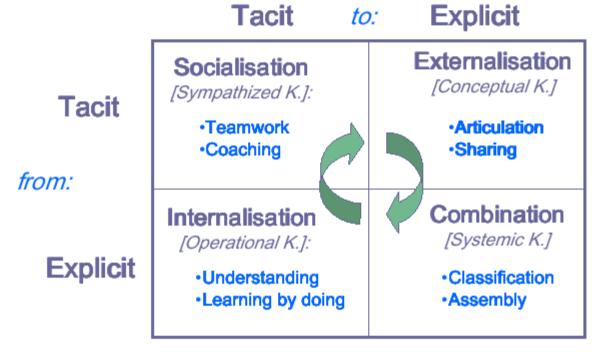


#### **Bridging the Know-Do Gap**





#### Tacit knowledge and social context





Source: Nonaka and Takeuchi, 1995

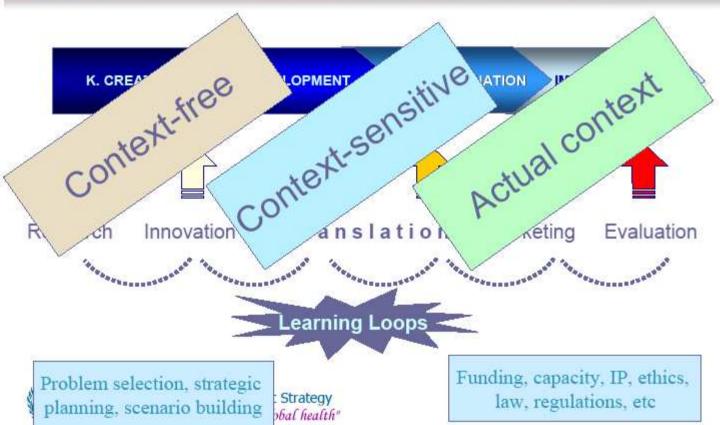


#### Lots of activity in KT

- PPPs addressing market failures in R&D for diseases of poverty
- BRAC scaling up essential health services
- TEHIP aligning district budgets with disease burden
- Demand-driven evidence provision (HEN EURO, UK CHAIN, WPRO EVIBNET)
- Social Franchising fostering access to essential health products in rural areas
- Continuous improvement work in clinical settings



#### **Know-Do Value Chains**





## Several tracks & value chains

**POLICY: formulation & implementation** 

**COMMUNITY: social co-productions** 

**BEHAVIORS:** healthy lifestyle and adherence

PRACTICE: clinical or organizational

TECHNOLOGY: drugs, equipment, etc.



# **W**

### KT Null Hypothesis

 $H_0$  = Evidence cannot get into practice

 $H_0$  = The problem cannot be solved

'At the moment of commitment, the entire universe conspires for our success' - Goethe





# BRIDGING THE KNOW-DO GAP IN GLOBAL HEALTH

Improving Access to Access to Health Information Improving Access to Access to Health Into policy Information Access to Access to Health Into policy Information Access to Acces

Fostering an enabling environment and culture change





#### KT "Field" Opportunities

- A new focus on health systems and increasing investment in health and international aid
- Growing research over last decade including Cochrane's initiatives in this arena
- ICT boosting knowledge access and sharing across the world
- Known successes and the emergence of regional KT networks
- Some donors stepping up the plate on KT
- Your leadership and experience