VECTOR CONTROL INNOVATION PROCESS ENGINEERING

A JOINT PROJECT OF THE STAKEHOLDERS IN PUBLIC HEALTH VECTOR CONTROL

UPDATE AND PROGRESS JANUARY 2013
Example: ITN development took 19 years from start to scale up
Approximately ~1 million lives at stake each year in the late 1990's

Timeline
- First small scale trials
- TDR large scale mortality trials (1991-1996)
- Consensus on ITN effectiveness
- WHO policy reco of ITN, but role seen as limited
- RBM strategy for scale up
- LLIN reco for all populations at risk

Key lessons
- Lack of defined pathway for paradigm validation contributed to significant delays
- ITN trials driven by independent academic groups and dependent on few donors
  - Limited involvement of manufacturers, structured consortium only set up for RCTs
  - Funding dependent on contributions from TDR
  - Trial design "missed" certain parameters
- Final consensus and adoption of ITNs driven ad hoc by implementation agencies
  - Epidemiological impact debated during two years after trial results were reported, clear strategy only adopted five years after epidemiological trials were finished

Source: Net Gain; Interviews; BCG analysis
Why is innovation in Vector Control so difficult?
October 2011 meetings

Bill & Melinda Gates foundation

Malaria Forum

Industry
Academic Institutes
WHO
Funders / Donors
Buyers
Regulatory Authorities
Country NMCPs

Need for a set of maps of the innovation process

BCG

Vector Control Innovation Process Engineering Project

Workshop on Opportunities for increased and Accelerated Innovation in Vector Control

GMP / NTD Consultation on establishment of the Vector Control Advisory Group
Highly consultative process – ~70 interviewees consulted across all major stakeholder groups

WHO
Robert Newman, GMP
Abraham Mnzava, GMP
Morteza Zaim, WHOPES
Rajpal Yadav, WHOPES
Jeffrey Hii, WPRO
A.P. Dash, SEARO
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Keith Carter, AMRO
Salaheldin Elkhalifa, EMRO
Paul Acrivias, WHO Procurement
Sergio Vasques, WHO Procurement
Kevin Marsh, MPAC Chair / KEMRI
Jan Van Erps, RBM Secretariat
Gamini Manuweera, UNEP

Academia
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Maureen Coetzee, NICD
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Immo Kleinschmidt, LSHTM
Jo Lines, LSHTM

Vector control industry
Egon Weinmueller, BASF
Mark Birchmore, Syngenta
Andy Bywater, Syngenta
John Lucas, Sumitomo
Nobuako Mito, Sumitomo
M. Vestergaard, Vestegaard Frandsen
H. Pates-Jamet, Vestegaard Frandsen
Gerhard Hesse, Bayer
Joseph Naro, Clarke Mosquito Control
John Dawson, Dow AgroSciences
John Fitt, Dow AgroSciences
Maude Meier, SC Johnson
Richard Allan, Mentor
Bernhard Johnen, CropLife
Ole Skovmand, IIC

Instit. buyers
Joelle Daviaud, Global Fund
Sophie Logez, Global Fund
Michael MacDonald, PMI
Francisco J. Blanco, UNICEF
David Whybrew, Crown Agents
Desmond Chavasse, PSI
Melanie Renshaw, ALMA
Neel Lakhani, CHAI
Justin Cohen, CHAI
Bruno Moonen, CHAI

Other
Americo Rodriguez, RCRPH
Mexico
Btissam Ameur, Morocco
Renata Mandike, Tanzania NMCP
Hmooda Tutu Kafy, Sudan NMCP
Benoit Bouato, Cameroon IPCC

NMCP / NRA

PDPs
Tom McLean, IVCC
Robert Sloss, IVCC

R&D funder s
Ted Bianco, Wellcome Trust
Janice Culpepper, BMGF
David Brandling-Bennett, BMGF
Kate Aultman, BMGF
Erin Shutes, BMGF
Vincent Ahonkhai, BMGF

Vector control industry

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### Outcomes from the Innovation Process Engineering Project

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<tbody>
<tr>
<td><img src="image1" alt="Mapping Diagram" /></td>
<td><img src="image2" alt="Identification Diagram" /></td>
<td><img src="image3" alt="Case Studies Diagram" /></td>
<td><img src="image4" alt="Benchmark Diagram" /></td>
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<tr>
<td>Activities and milestones for new formulations, active ingredients product categories and paradigms</td>
<td>Opportunities for improvement identified in stakeholder interviews</td>
<td>7 case studies developed with input from manufacturers</td>
<td>Start packs with output from project work streams (challenges, solutions) for each initiative</td>
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<tr>
<td><img src="image5" alt="Workshop Diagram" /></td>
<td><img src="image6" alt="VCAG Proposal Diagram" /></td>
<td><img src="image7" alt="Clarification Diagram" /></td>
<td><img src="image8" alt="Architecture Diagram" /></td>
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<tr>
<td>Common goal, clarification of the resources and constraints, initial brainstorming on solutions</td>
<td>VCAG proposal further developed and refined (objectives, mandate, scope); WHOPES 2-pager</td>
<td>Communication material developed on role of different groups and committees involved in innovation</td>
<td>Architecture and governance for post-workshop initiatives</td>
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Introducing a **new VC paradigm** involves work in six areas

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**Phase 1**
- **Product development**
  - Intervention concept and draft TPP
- **Validation of paradigm**
  - Proof of concept studies
- **Policy recommendation**
  - Epidemiological trials
- **Eval. of safety, efficacy, acceptability and specification dev.**

**Phase 2**
- **Evaluation**
  - Product evaluation
- **Policy recommendation**
  - Development of testing guidelines

**Phase 3**
- **Country policy development**
  - Initial WHO reco's for pilot impl.
  - Broad WHO public health policy

**Phase 4**
- **IVCC Partners**
  - Industry / Institutions and ESAC 3 + Others
  - WHO Pesticide Evaluation Scheme
  - WHOPES$^1$ recommendation

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1. Made by WHOPES Working Group 2, or equivalent authority
2. Source: Interviews; IVCC web page; BCG analysis

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Country uptake
6 key issues arising from the workshop

- Process to introduce breakthrough innovation
- Market incentives
- Cheaper and shorter process
- Product Quality Assurance
- Protection of investments / competition
- Assessment & recognition of public health value of innovation
A light and flexible structure for continued dialogue

"Innovation Umbrella Team"

- Light umbrella that could function as a "coordination committee"
- Ensures all initiatives are set-up with balanced representation among groups, overviews overall progress and provides support if needed
- Shared leadership
- No decision rights on proposals per initiative

- Each initiative could result in a consultation convened by an existing mechanism
- A small but representative group could develop concrete proposals to be discussed during the consultation
- Role: develop proposals and roadmaps
  - Propose solutions based on consensus and roadmap for implementation
  - Report regular progress to Innovation Team

- Decisions of implementation taken by each constituency based on their own processes
A light and flexible structure for continued dialogue

"Innovation Umbrella Team"

- VCAG proposal completed
- Market incentives on Hold pending GFATM MDAG
- 4 Team conveners Appointed:
  - Cheaper and Shorter Process: Industry EW
  - Protection of investment: IVCC
  - Recognition of Value: Funders JW
  - Quality assurance: WHOPES MZ

- Decisions of implementation taken by each constituency based on their own processes

Stakeholder Constituencies

WHO Industry Funders Institutes & academe Country NMCP and Regulator IVCC
### Progress of the Working Teams

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<thead>
<tr>
<th>Working Team</th>
<th>Convened by :-</th>
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<tr>
<td>Process to introduce breakthrough innovation</td>
<td>Vector Control Advisory Group funded and established. Appointments now under way.</td>
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<td>Protection of investments / competition</td>
<td>IVCC has sponsored an independent review of the legal options.</td>
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<td>Cheaper and shorter process</td>
<td>Discussions between parties proceeding</td>
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<td>Increase viability of market and reduce risks</td>
<td>UNITAID has undertaken a market landscape analysis of VC products. Results will influence the major purchasers.</td>
</tr>
<tr>
<td>Assessment &amp; recognition of added value of innovation</td>
<td>UNITAID has undertaken a market landscape analysis of VC products. Results will influence the major purchasers.</td>
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<td>Quality</td>
<td>WHO NTD leading capacity development of country level QA activities</td>
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Working together