

Marketing approaches to promote ceramic water purifiers in Cambodia



Introduction

IDE

- International, non-profit NGO founded in 1981
- Offices in Canada, USA, and UK
- Country programs in Cambodia, Bangladesh, Ethiopia, Myanmar, Nepal, Vietnam, Zambia, Zimbabwe
- ***IDE employs business principles to facilitate market systems in which the rural poor can participate effectively as producers and consumers of products and services that reduce poverty by increasing productivity, income, and quality of life***

Outline

Background

National roll-out strategy

Results to date

Analysis of choices

Future challenges



Drinking Water Crisis

Global

- 1.1 billion people without access to improved water sources (UNDP)
- Lack of safe water and sanitation is the world's single largest cause of illness (UNICEF)

Cambodia

- Two-thirds of the rural population is without access to safe water
- Water-borne disease is a major contributor to Cambodia's under-five mortality rate of 83 per 1000 live births, one of the highest rates in Asia.

What is already happening in Cambodia?

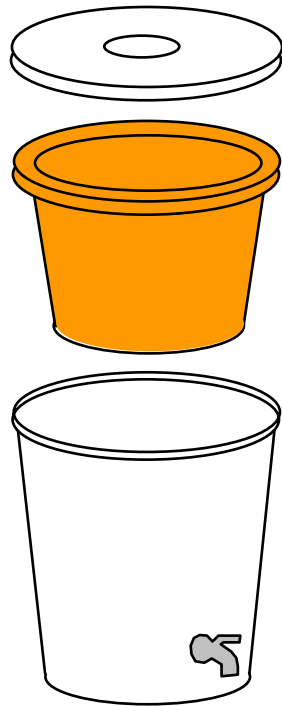
Subsidized well drilling programs	Community systems with high social transaction costs Poor maintenance, high breakage and abandonment Not sustainable
Subsidized rainwater collection systems	Poor water storage and handling >> contamination Not sustainable
Promotion of water boiling	Incomplete adoption of practice Financial and environmental costs
Private well drilling services	Poor quality installations easily contaminated Limited areas where affordable drilling is possible
Private water treatment and piped distribution	Limited to large villages (400+ households) High connection fees
Private water vendors (carts, trucks)	Poor quality water High unit cost

Selected Strategy

Introduction of a new technology

- Addresses many of the weakness of other available solutions
- Adds to range of choice available in Cambodia
- Lends itself to a sustainable, market-driven, pro-poor approach:
 - Low cost
 - Can be manufactured locally
 - Appropriate for household level use

Ceramic Water Purifier



- Porous ceramic filter impregnated with colloidal silver provides physical and chemical barrier to micro-organisms
- Plastic receptacle tank with lid and spigot protects water from recontamination.
- Water flows by gravity at a rate of 2 to 3 litres per hour
- Produces 30 litres of water per day with three fillings, or more if required.
- Monthly maintenance: scrub ceramic element to unclog pores and wash receptacle tank to prevent bacterial growth
- The ceramic element has an average lifespan of two years. Receptacle and spigot are expected to last five years.
- Production cost is about \$5.70 for a complete set. Retail price is \$7.50 to \$9.50 for a complete set and \$4.50 to \$5.00 for replacement filters.

Stages of Introduction



CWP Distribution Tests

CWP Distribution in 4 provinces over 18 months using a variety of methods

Pursat and Kampong Chhnang

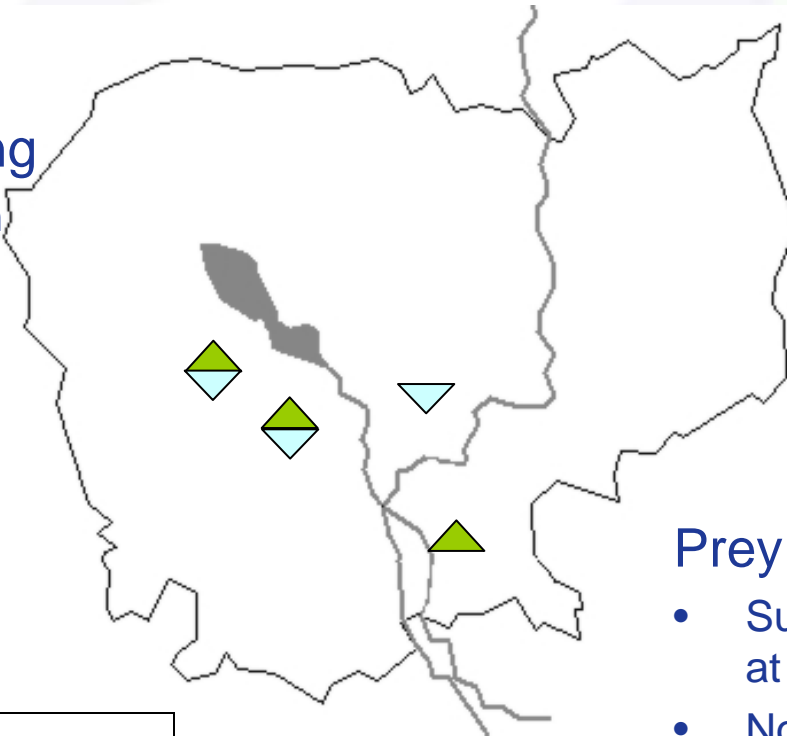
- Subsidized distribution by at \$0 to \$4
- Market distribution at \$7.50 to \$8

Kampong Cham







- Unsubsidized market distribution at \$8
- No subsidized distribution

Prey Veng

- Subsidized distribution at \$5
- No market distribution



Subsidy vs. Market

	Subsidized Distribution	Unsubsidized Market Distribution
Impact Depth (Poorest level reached)	<ul style="list-style-type: none"> ▪ Can reach the very poor ▪ Better-off often capture more subsidy than the very poorest 	<ul style="list-style-type: none"> • Can reach the poor • Ability to reach the <u>poorest</u> is limited by affordability • Provides source for “smart” subsidies 
Impact Breadth (Number of HHs reached)	<ul style="list-style-type: none"> • Limited by donor resources 	<ul style="list-style-type: none"> • Potentially much larger • Dependent on consumer demand 
Impact Longevity (Sustainability of benefits)	<ul style="list-style-type: none"> • Not sustainable • Relies on continued donor support 	<ul style="list-style-type: none"> • Potentially very sustainable • Dependent on supply chain profitability 

Mixing Distribution Methods

Subsidized distribution tends to undermine market distribution in areas where both methods are used:

- Price confusion
- On-selling of subsidized CWPs
- Households delay purchasing in hopes of receiving a subsidy
- CWP perceived as “something you receive”, not “something you buy”

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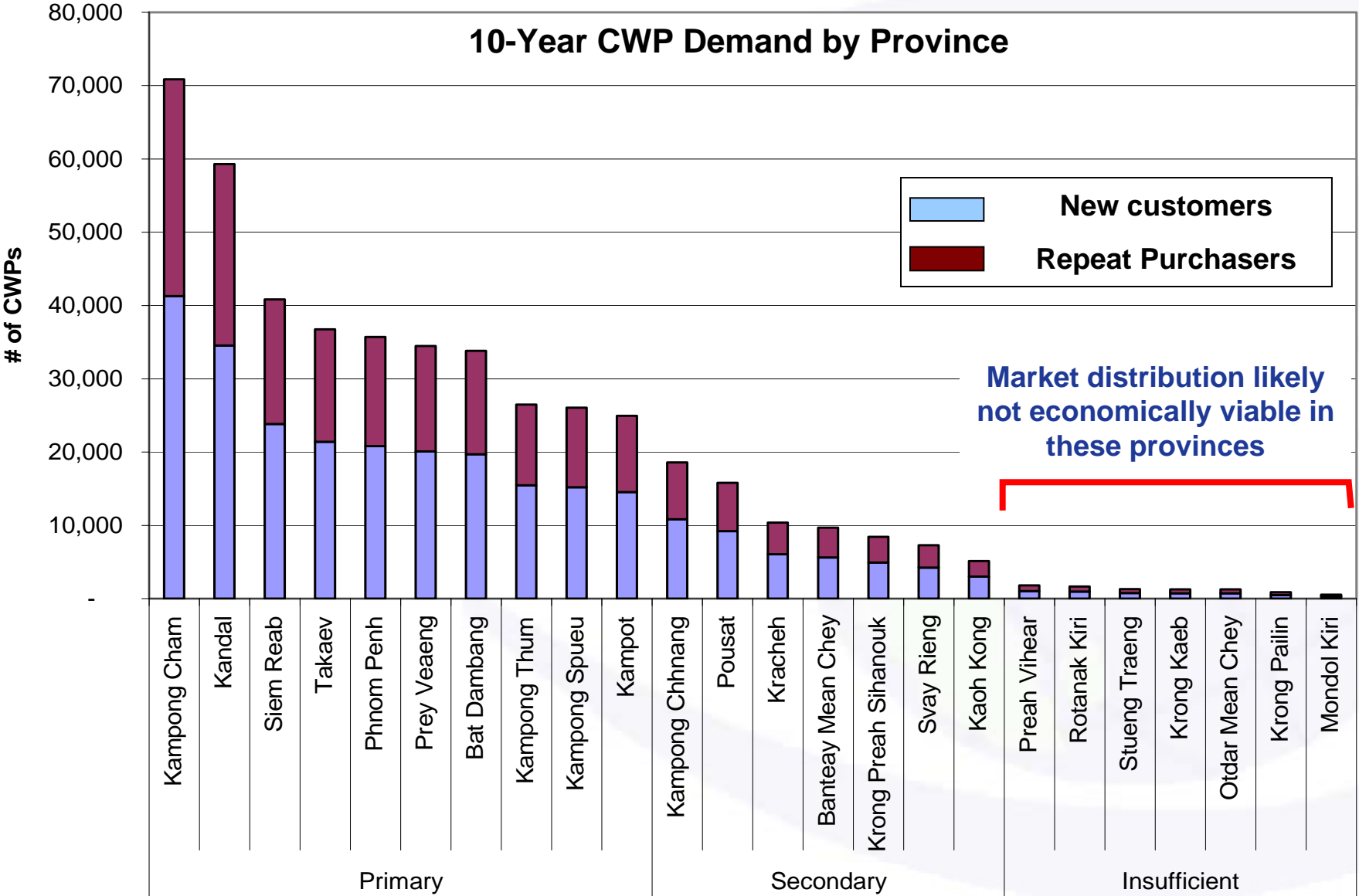
CWP National Roll-out Plan



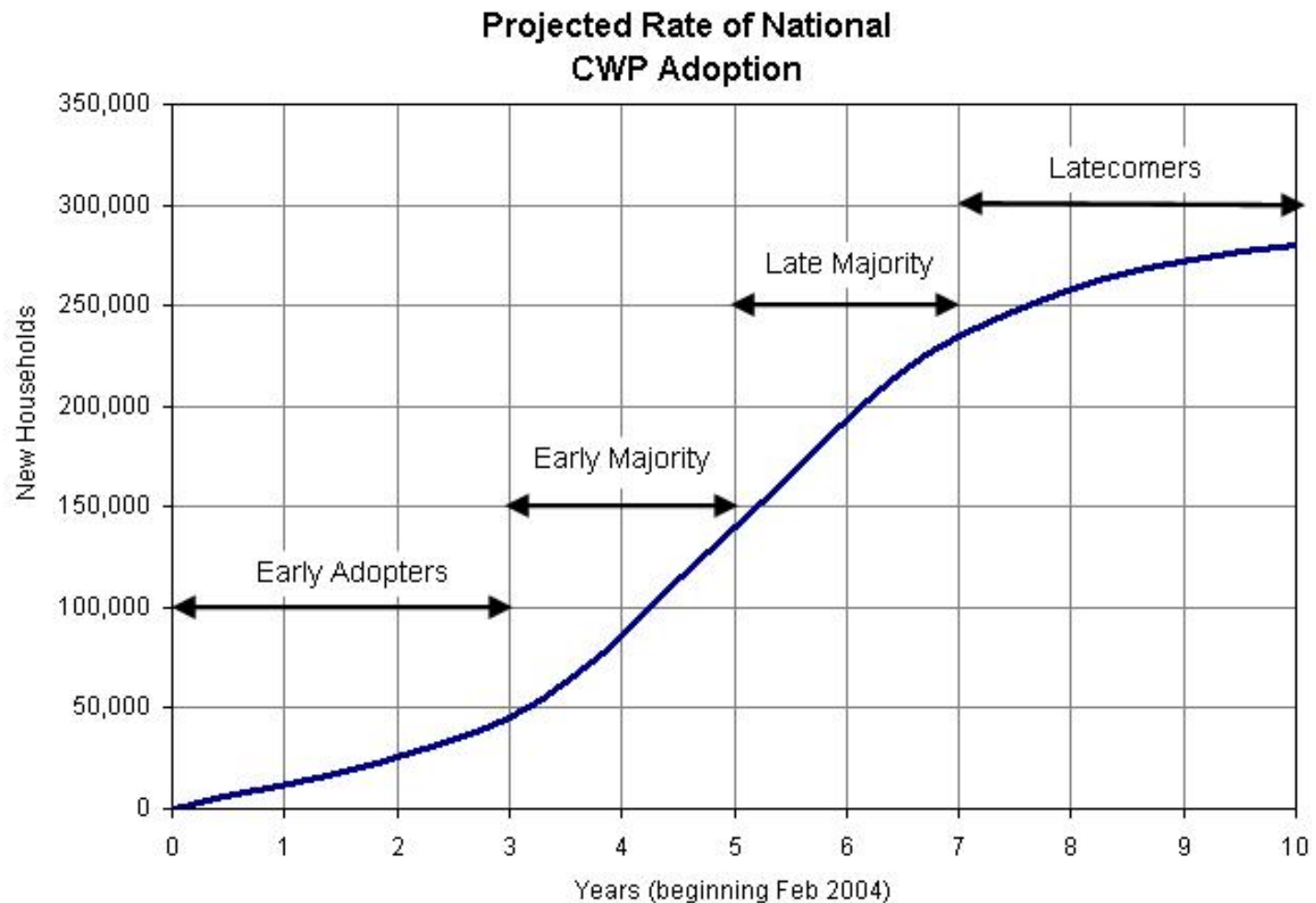
Objectives:

- Sustainable private-sector production, distribution and sale of CWPs in rural and urban areas nationwide
- Creation of awareness and demand for household water treatment
- Quality control mechanism to ensure that CWP purchasers receive a high-quality and effective product

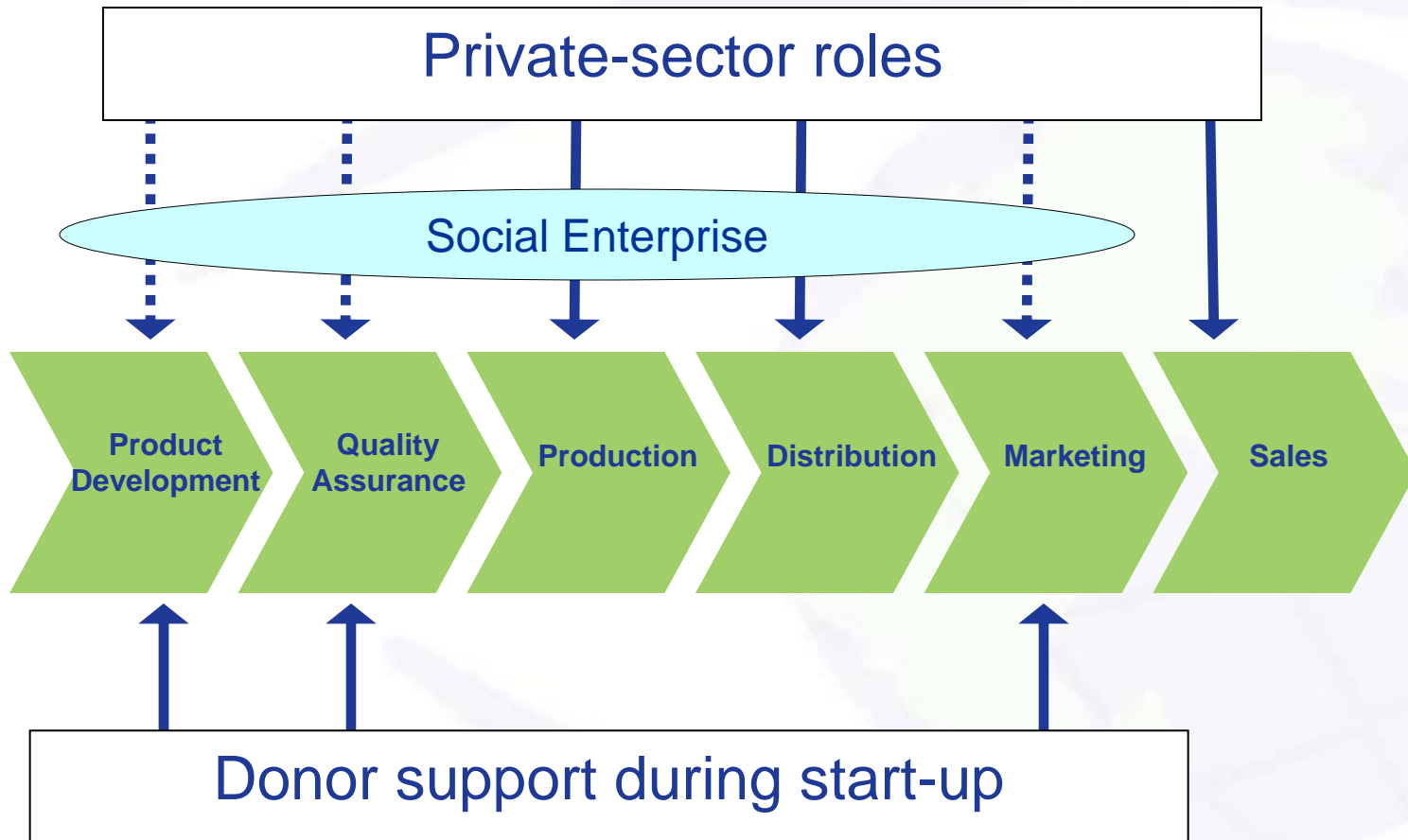
Demand Projections



Demand Projections



Social Enterprise Model



Dotted lines show roles increasingly taken up by the private sector

Retailers

Current status:

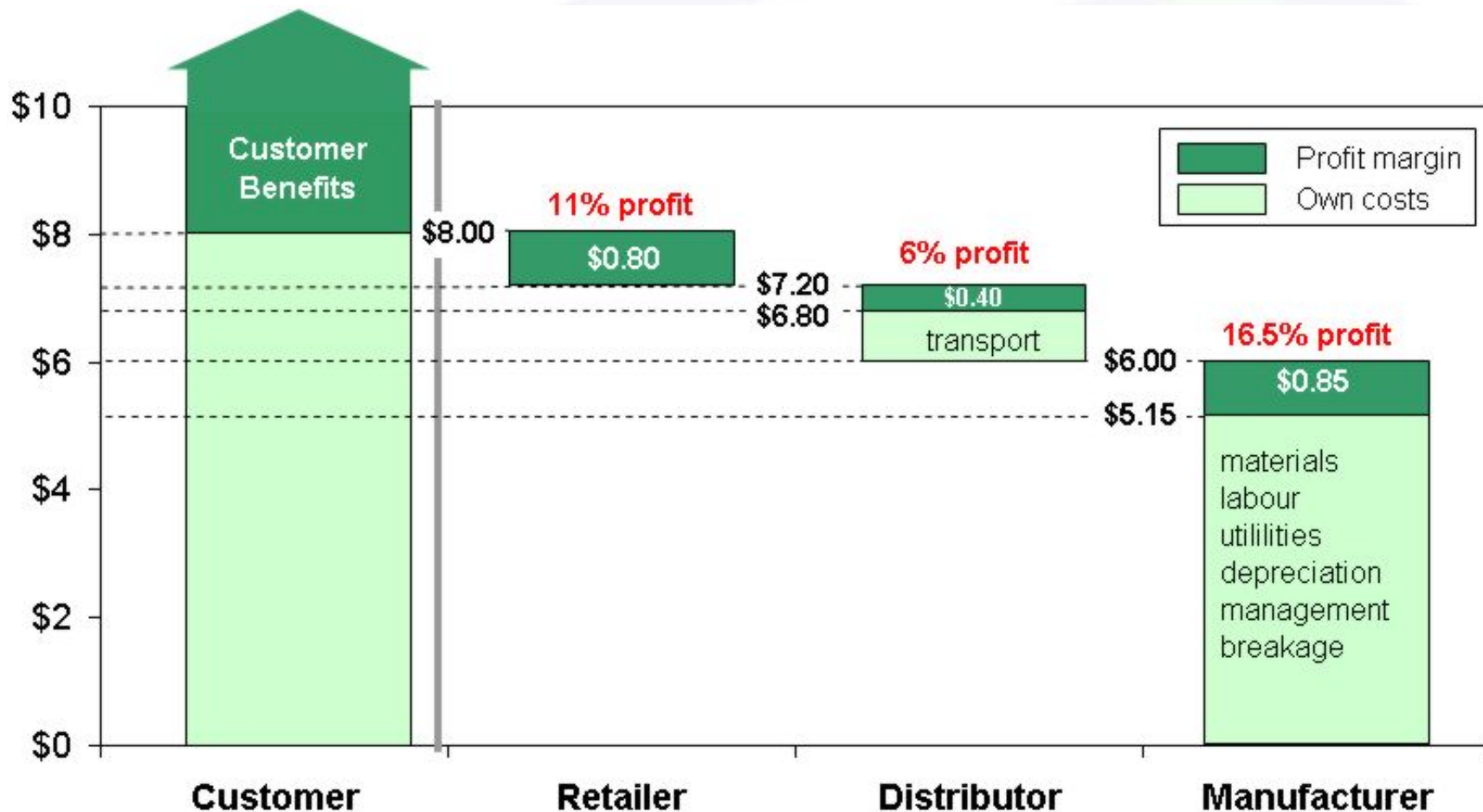
- 145 retailers in 19 provinces
- Retailers include pharmacies, health clinics, and household good shops

Target:

- 250 retailers in 19 provinces



Supply Chain Margins (indicative)



Quality Assurance



Three “Threats”

- Unethical copy-cat producers
- Poor quality from authorized producers
- Improper use of product by consumer

Complicating Factors

- No consumer protection from government
- Invisible "key technology"
- Decentralized manufacturing

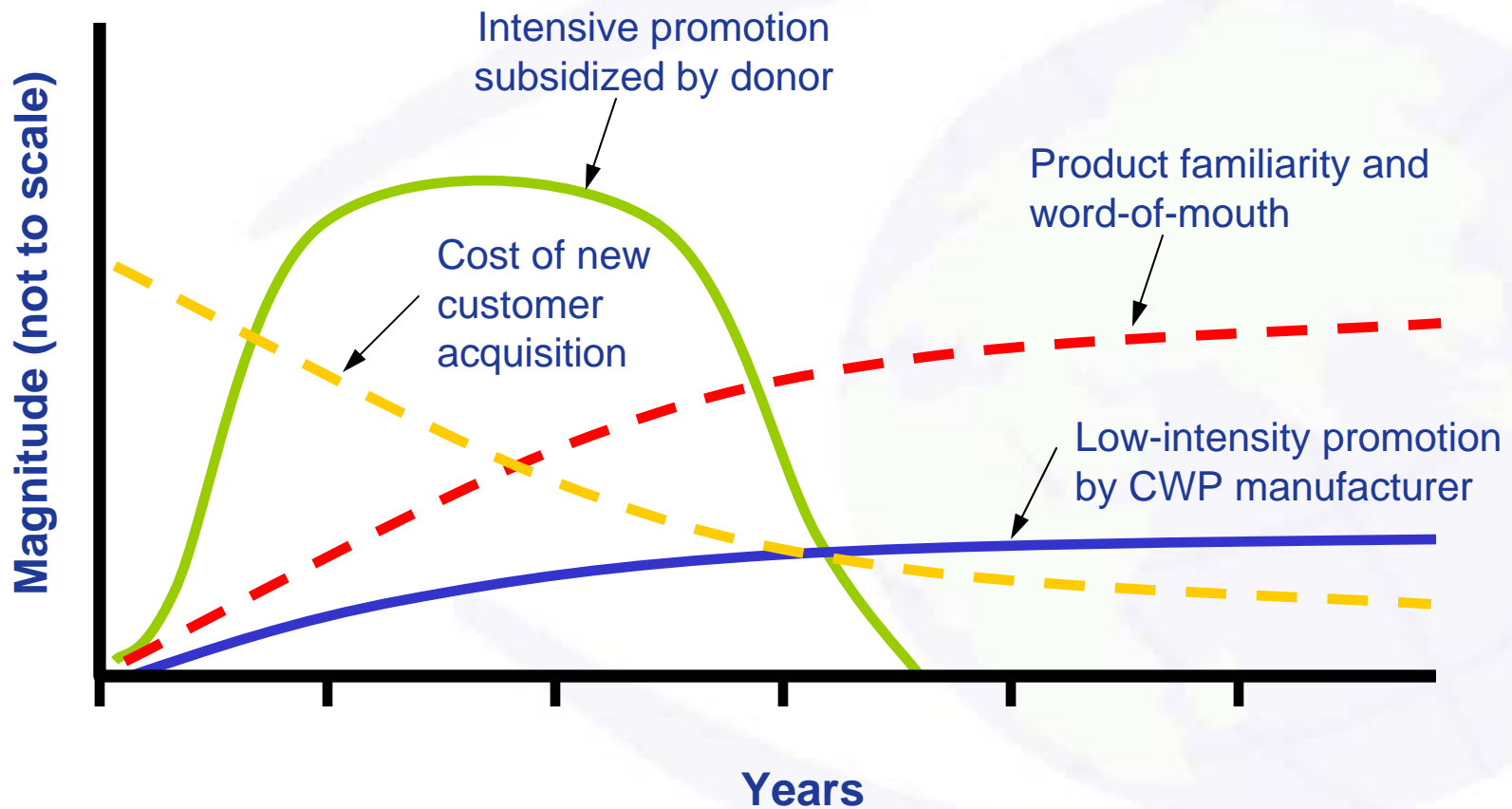
Strategies

- Product certification
- Certification / inspection of factories
- Product branding and design
- Consumer education

Promotional Strategy

- Promotional campaigns based on consumer research and consumer/retailer feedback
 - National and regional mass media (TV, radio) to create awareness and brand recognition
 - Live demonstrations/events to create see-touch-taste experience
 - Pointer advertising (posters, billboards) to direct customers to retailers
 - Point-of-Sale materials (banners, displays, leaflets) to identify retailer and help them close the sale

Promotional Strategy



Outline

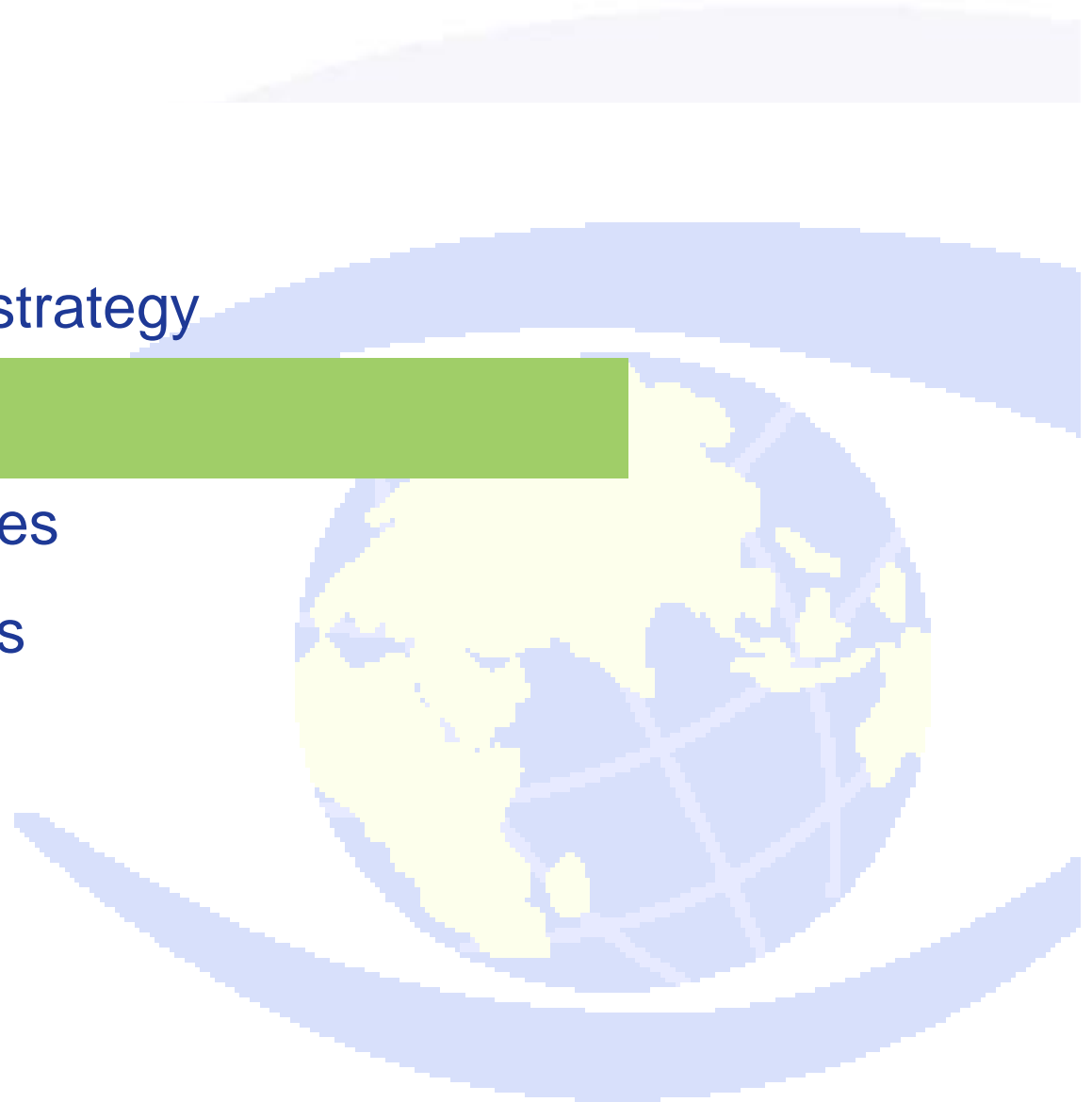
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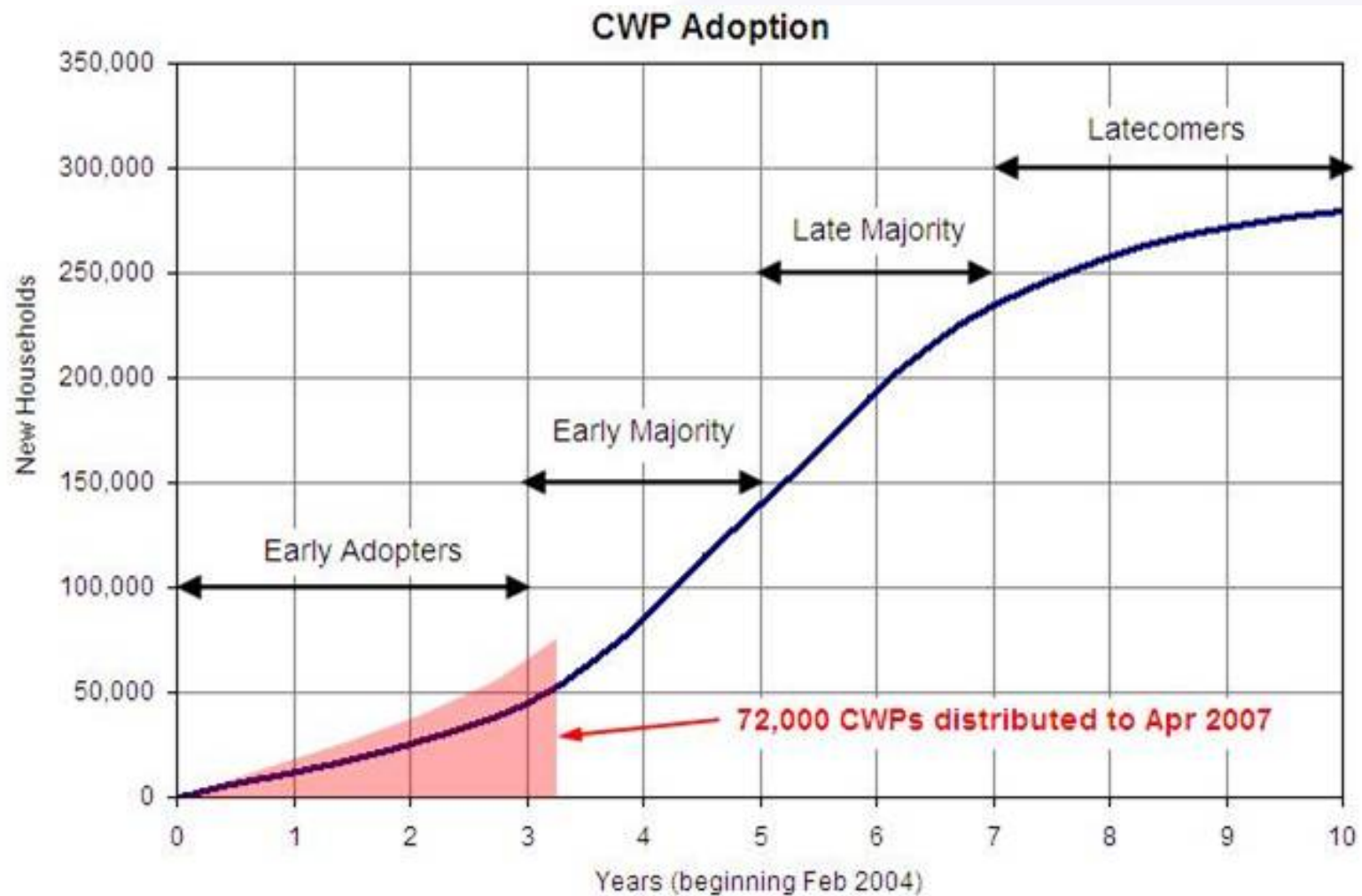
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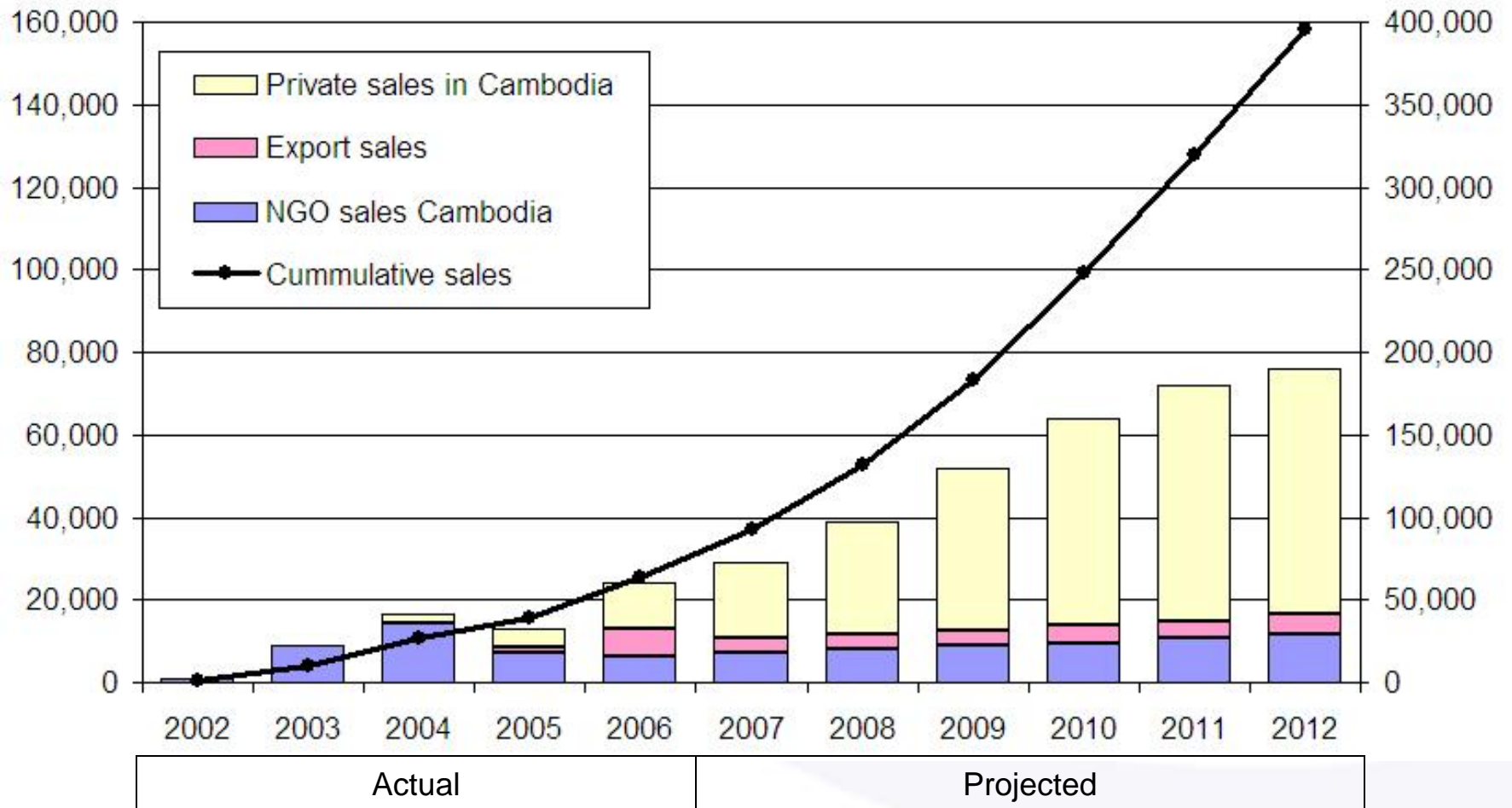


Results to Date



Results to Date

**IDE Ceramic Water Purifier Sales:
Actual (2001-06) and Projected (2007-12)**



Impact Surveys

- IDE study (2003) of CWPs in 1,000 households over 12 months
 - 900+ water samples
 - Before & after surveys
 - Control group comparisons
- UNICEF-sponsored study (2006) conducted by University of North Carolina
 - Longitudinal sample of 80 households with and 80 without CWPs

Effectiveness

- Under controlled laboratory conditions:
100% of filters removed 100% of E. coli (n=100)
- Under household use:
98% of CWP's produce water meeting WHO low-risk guidelines or better (<10 E. coli /100 ml)



Impacts on CWP Users

<p><u>Did boil</u> drinking water before using the CWP</p>
<p><u>Did not boil</u> drinking water before using the CWP</p>
<p><u>Purchased</u> drinking water before using the CWP</p>

- Time savings of 22 hours per month spent collecting firewood and boiling water (primarily women), and/or
 - Reduction in fuel expenses (average \$1.40 savings per month).
- Half the number of diarrhoea cases,
 - One third of the diarrhoea treatment costs (average \$1.20 savings per month),
 - One fourth of the number of school/work days missed due to diarrhoea.
- Reduction in water expenses (average \$2.11 savings per month).

Supply Chain Impacts

- 140 Retailers with average net profit of \$73 in 2006 (estimated 3% of total annual profit)
- Manufacturer/Distributor net profit of \$19,000 on revenue of \$174,000 in 2006
- IDE activity has spurred two other non-profits to begin manufacture of CWPs, creating competition on price, quality, and design factors.

Outline

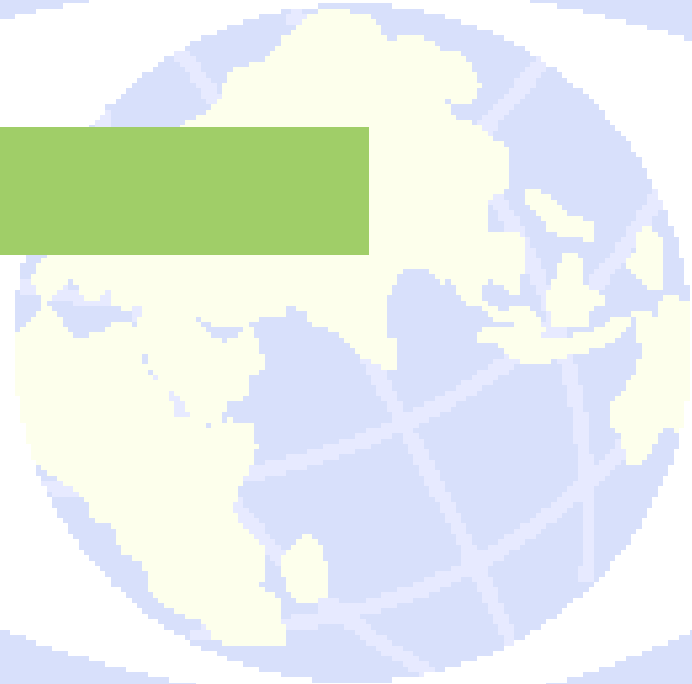
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Choices and Decisions

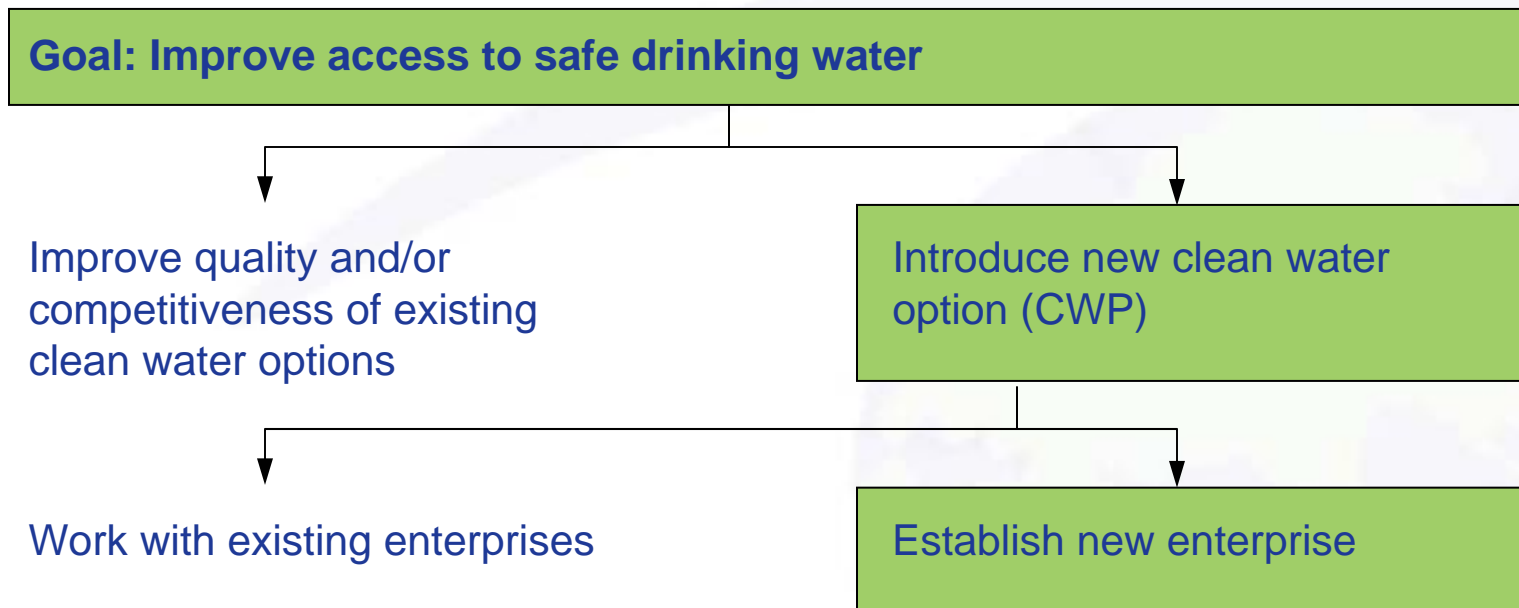
Goal: Improve access to safe drinking water

Improve quality and/or competitiveness of existing clean water options

Introduce new clean water option (CWP)

- **Addresses many of the weakness of existing solutions**
- **Adds to range of choice available in Cambodia**
- **Lends itself to a sustainable, market-driven, pro-poor approach:**
 - **Low cost**
 - **Can be manufactured locally**
 - **Appropriate for household level use**

Choices and Decisions



- **Weak manufacturing industry**
- **Lack of consumer protection regulations to ensure quality (of life or death importance for this product)**
- **Systemic constraints are deep-rooted and extend beyond the water sector**
- **Maximize poverty impact**

Choices and Decisions

Other factors affecting decisions

- Organizational mandate and capacity
- “Patchwork” funding
- Donor preferences



Outline

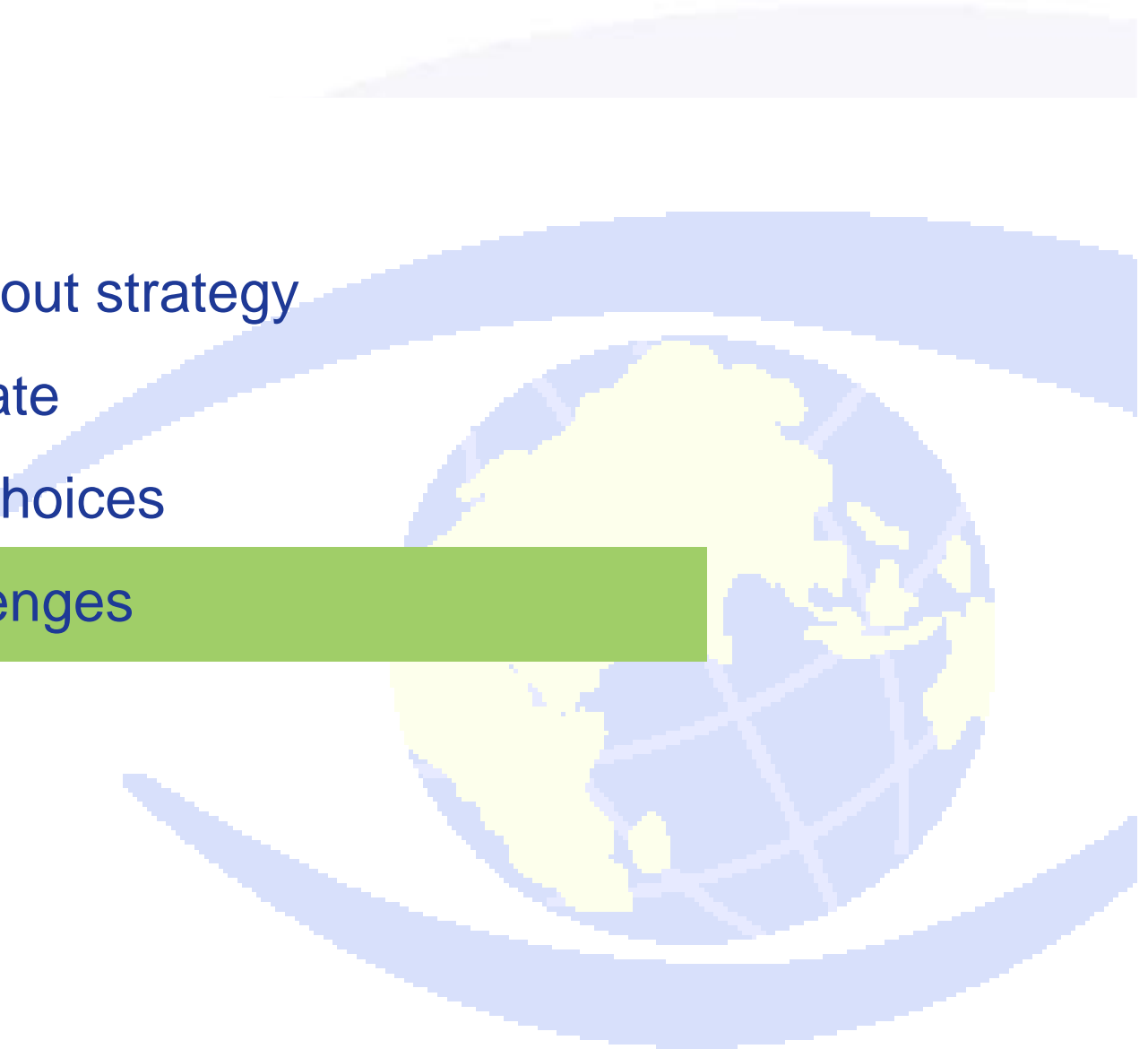
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Reaching the Poorest



“Okay, but how does this help the poor?”

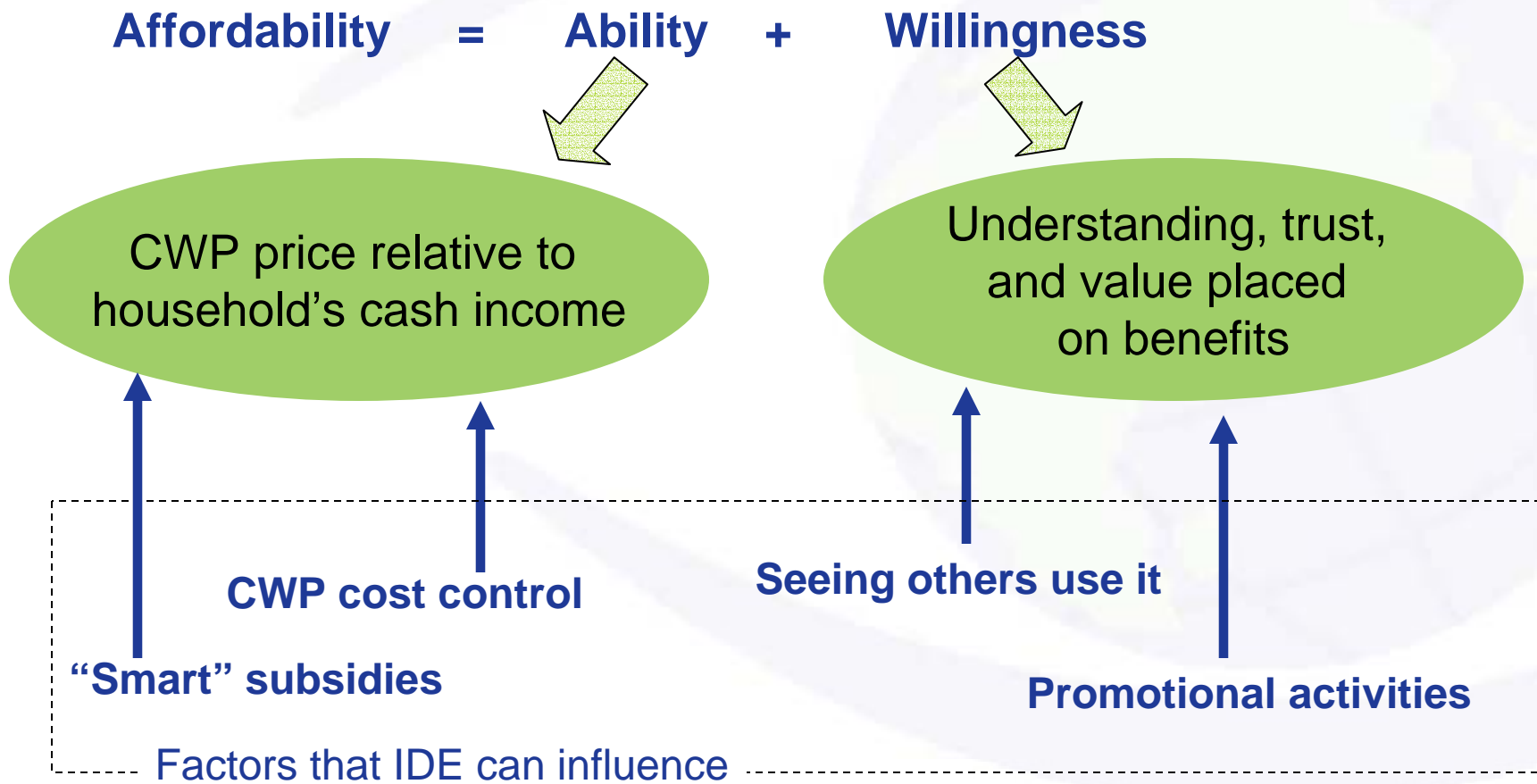
- The CWP is low-cost but still unaffordable for the very poorest
- The majority of CWP purchasers come from medium or poor levels but not from the poorest and most vulnerable groups

Two strategies:

- Influencing affordability
- “Smart” subsidies

Influencing Affordability

Affordability will change over time for many people



Smart Subsidies

Vouchers, credit, or installment schemes

- Target those who cannot pay full price
- Partial or full price charged; no free hand-outs
- Do not bypass the private suppliers in their area
- Do not distort perceptions of the actual price and value of the CWP



“Work in progress”, still have much to learn

Participant's dilemma

- As a market player, the CWP enterprise must seek to gain market share and limit competition
- As an NGO with a wider interest in promoting the market for clean water, IDE needs to encourage new entrants and increased competition
- In this sector, therefore, IDE is not well-placed to take on a market facilitation role (conflict of interest)

Thanks !



**Donor agencies
that have contributed
to the CWP program:**

- **AusAID**
- **CIDA**
- **UNICEF**
- **NZAID**
- **World Bank**

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