Choose certainty.
Add value.

150 YEARS | INSPIRING TRUST

Actionable Standards

Accelerate the adoption of sustainable WASH technologies

AIDF Asia Summit

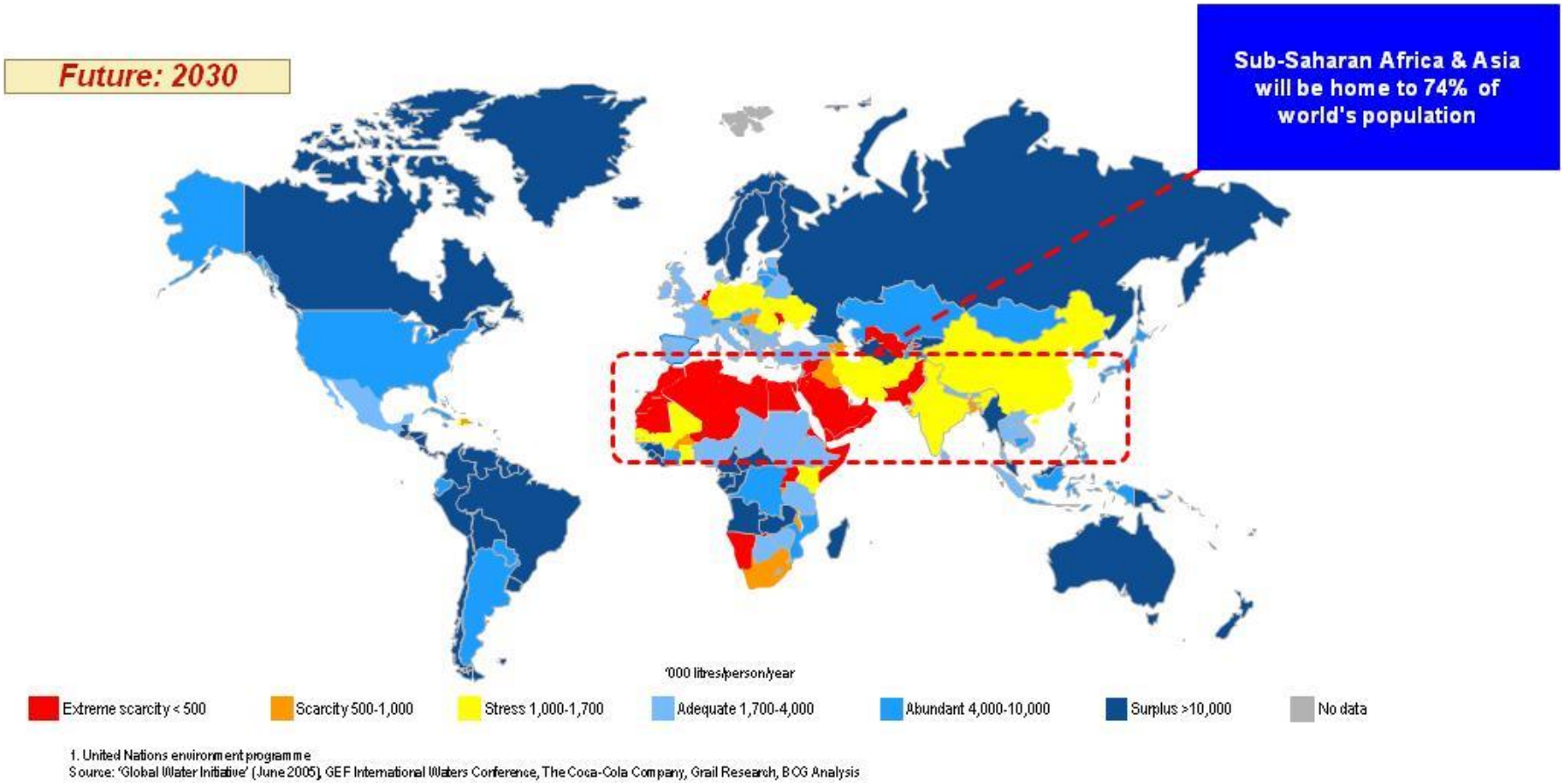
22 June 2016

Gerald Kresta - Water Services

‘Standards’, Best Practice, Leading Practices

- Standardization is producing documents “by **consensus** and approved by a recognized body, that provides, for **common and repeated** use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the **optimum degree of order** in a given context” (ISO/IEC Guide2004).

Growing water stress – supply/demand mismatch against growing global population, urbanization and economic development



1. United Nations environment programme
Source: 'Global Water Initiative' (June 2005), GEF International Waters Conference, The Coca-Cola Company, Grail Research, BCG Analysis

Water sector characteristics

- Public water sector is conservative, typically government driven and reluctant to adopt new technologies and business models
- Fragmented market
- High degree of engineering
  - Little modularization
  - Little standardization
- Water as a resource under valued, pricing dysfunction

Endless Piloting
One-off solutions
Long term impact?

- Yet water is unique
  - No substitute
  - Emotive issue, inherent tension with financial reality
  - Water-Energy-Food-Environmental nexus…tension

Point of View: Perceptions of standards lead to missed opportunity in fostering safe, sustainable, novel WASH solutions

While standards are perceived as:

- Onerous and abstract
- Lagging the market, too little, too late…too restrictive
- Not relevant for new and novel solutions
- Little relevance to aid and development work

Tailored Technical Water Meter Guideline to Improve Services and Utility Economics

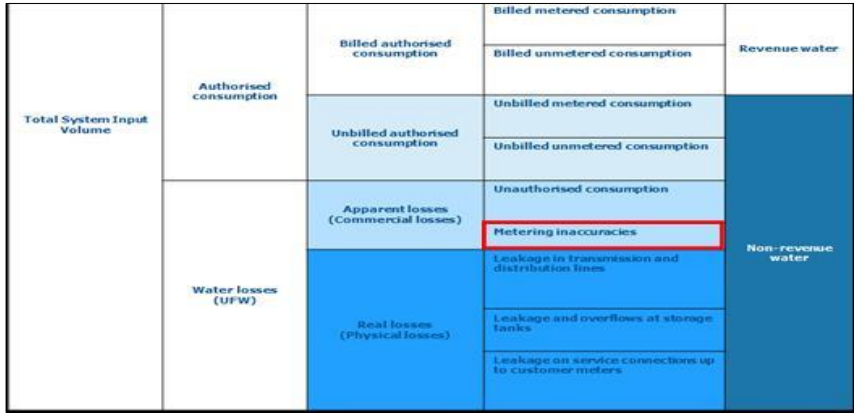
Guideline for Utility Association
European Agency Sponsor

Client Issue

- East African Utilities Association members have tremendous challenges with **non-revenue water of >40%**

Approach - Service provided (I)

- Development of a tailored **Technical Water Meter Guideline** based on field visits, consultation with user groups, and locally adapted leading global protocols and standards



Tailored Technical Water Meter Guideline to Improve Services and Utility Economics

Approach - Service provided (II)

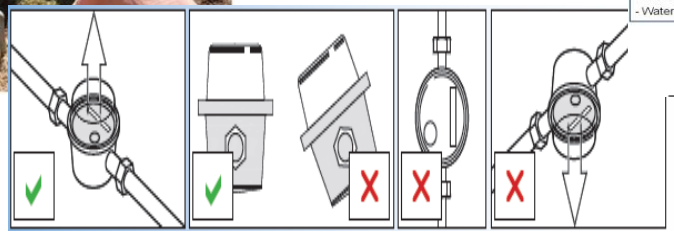
- Areas addressed:
  - Identification of **key selection criteria**
  - **Technical specifications** for tender document
  - Leading practices in **procurement** and **installation**
  - Ongoing device **management** and **maintenance**

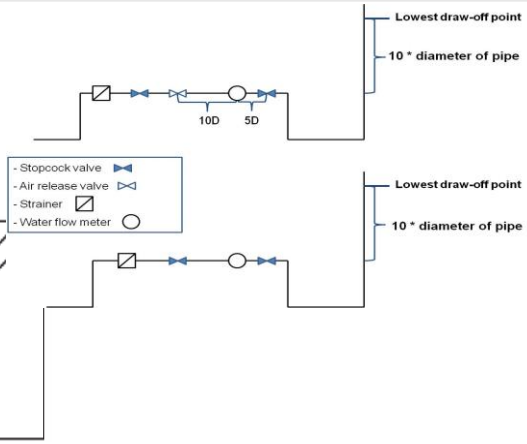
OUTLINE

3. Selection of Water Meters
4. Technical Specifications of Tender Document
5. Installation of Water Meters
6. Management of Water Meters
7. Maintenance of Water Meters

Solution / Benefit

- The guideline has been well received and implemented by association members → contract for follow-on product guidelines to create a toolkit signed





Water Meter Case Study Relevance for WASH Innovations and Good Practice

- Targeted the effective selection and deployment of **existing technologies** integrating global leading practice and state of the technology > **flexible**

- **Comprehensive tailored guideline** for local needs**, engagement of the beneficiaries,** interaction with product family experts > **tangible, actionable**

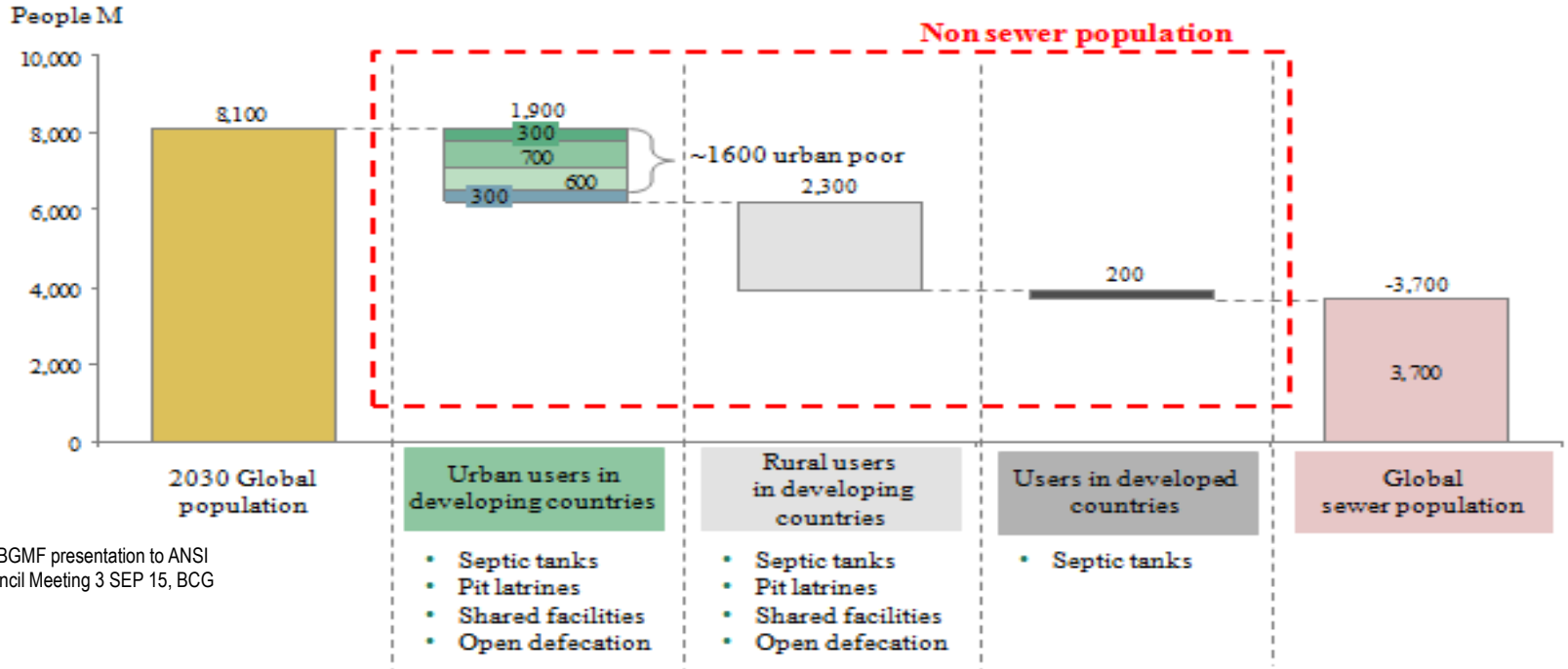
- Project completed in 5 months > **speed**

- Enabling a safe, efficient, economic water supply > supporting **economic and social development**

The risk and opportunity of non-sewered sanitation

According to the World Health Organization (WHO), an **estimated 2.5 billion people have no access to safe, clean sanitation** and **1 billion people are forced to defecate in the open**. The devastating consequences of these practices include an estimated **1 million preventable deaths** per year, primarily from dysentery-like diarrheal diseases.

Potential market estimated at **4.4B** people by 2030



Source: BGMF presentation to ANSI ISO Council Meeting 3 SEP 15, BCG Study

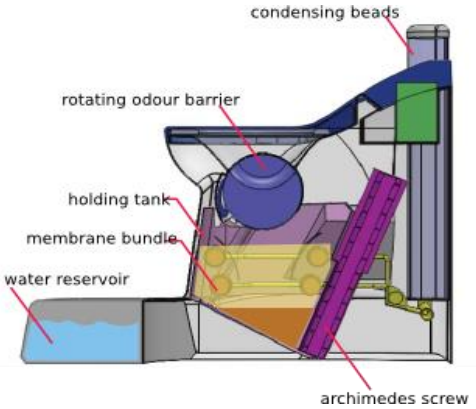
In a water stressed future is using drinking water to flush a toilet a desirable objective?

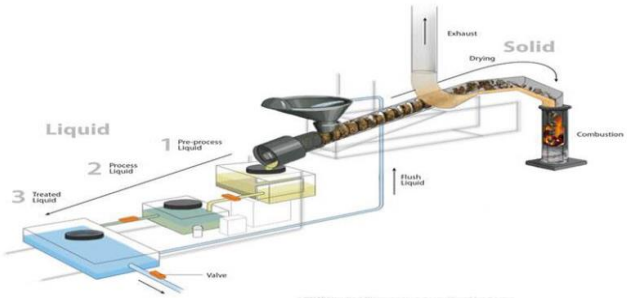
Development of a Private Technical Standard for Leading Edge Toilet Technologies to Ensure Sustained Positive Impact

Global Standard Development
Private Foundation Sponsor

Client Issue

- Private foundation sponsor sought the commercialization of investments in **leading edge toilet technologies** for developing countries.
- Use of standards was seen as method to **pave the way** for commercialization and adoption while ensuring only **safe**, **sustainable** and **appropriate** solutions are deployed.





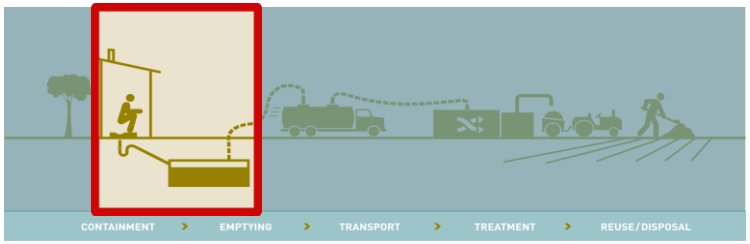
Development of a Private Technical Standard for Leading Edge Toilet Technologies to Ensure Sustained Positive Impact

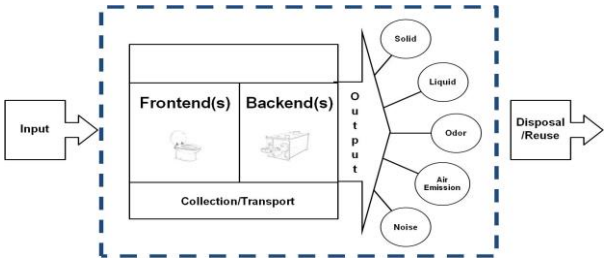
Approach / Services Provided

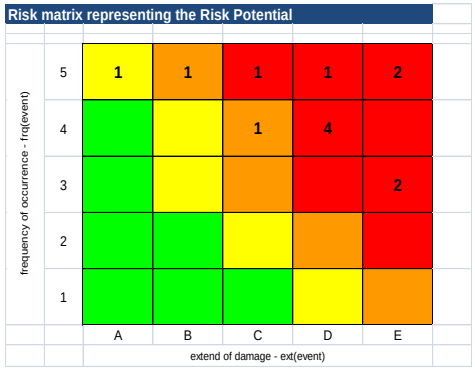
- Private Technical Standard development via: regular consultation of **stakeholders**, extensive **field visits** and use of leading **Risk Assessment** practices
- Private Technical Standard as basis for a full ISO standard; near term it is used for ISO International Workshop Agreement (IWA)

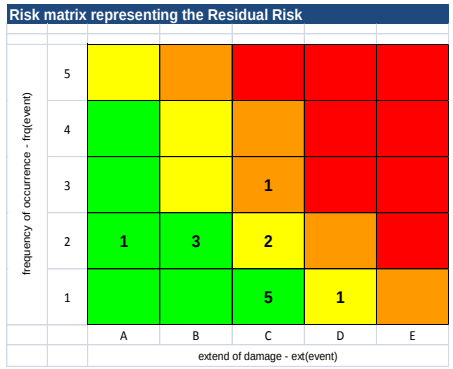
Solution / Benefit

- **Clear** development **requirements,** leading edge toilet **technologies can be qualified/certified** based on an IWA; accelerated achievement of ISO standard









Reinvented Toilet Case Study: Relevance for WASH Innovations and Good Practice

- Standard generated in **12 months,** international expert working group, different value chain actors < **speed**, requirements generated for under **development technologies** yet drawing upon leading practices, **private / public sector collaboration**

- **Single comprehensive document** with a common language, **clear parameters and thresholds**, focused yet considers key related elements < versus a mosaic of local, international, partially or possibly relevant standards

- ISO International Workshop Agreement (IWA) – fast track that can be used to develop / certify / select sustainable non-sewered sanitation systems < **practical, timely, broadly applicable**

- ISO Project Committee (PC) Approved – path to international standard started

Point of View: Perceptions of standards lead to missed opportunity in fostering safe, sustainable, novel WASH solutions

While standards are perceived as:

- Onerous and abstract
- Lagging the market, too little, too late…too restrictive
- Not relevant for new and novel solutions
- Little relevance to aid and development work

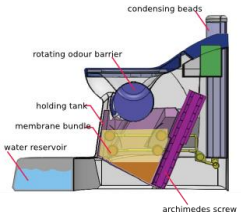
There is a role for actionable standards:

- ***Supporting technology development esp. for human health and environmentally relevant technologies by harnessing the market forces***
- ***Enabling collaboration resulting quicker, broader adoption / deployment of good fit solutions through transparency, comparability***
- ***Ensuring only safe, robust, appropriate technologies are selected…and ensuring their long term impact***

Good practices and standard approaches ensure evolving WASH solutions are safe, sustainable, reliable

Beneficiaries: Consumers and users

Standards provide information to make informed choices and purchases



Designers and manufacturers

Standards affirm their product quality and drive innovation

Countries, donors, investors, programs

Standards drive the market to products with higher performance, safety, inclusion of women, social and livelihood impacts

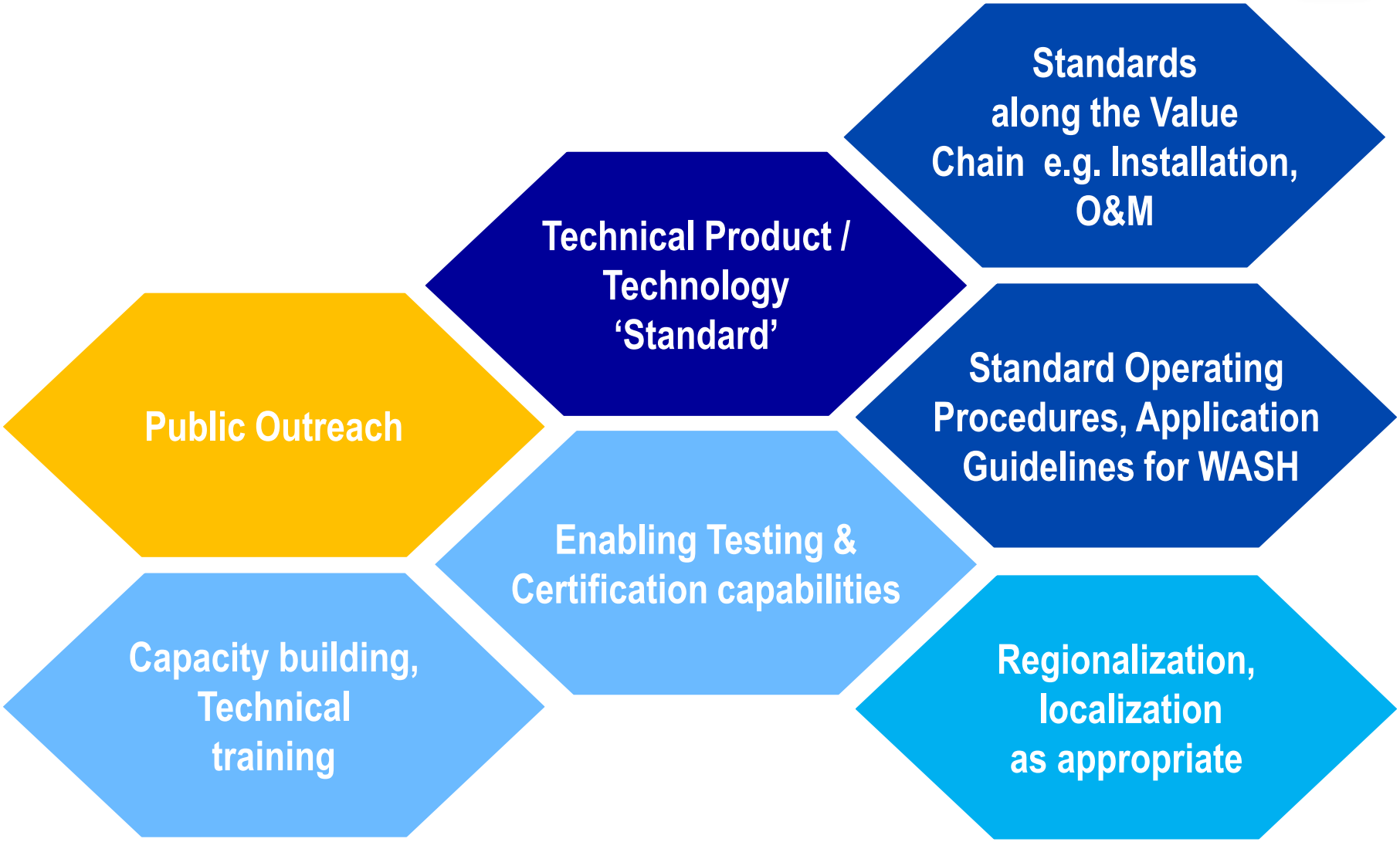
International stakeholders

Standards provide common terminology for expanding trade and flexibility for national priorities

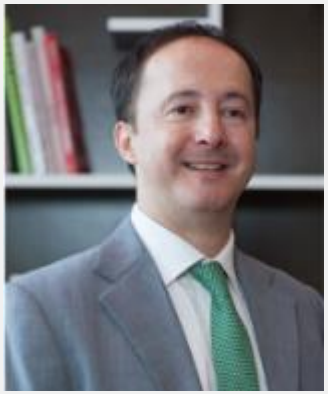
…inspiring trust in alternative solutions for a water stressed future

Source: Adapted from Clean Cookstoves Initiative presentation to RT Technical Committee 2 May 2016

WASH initiatives can benefit from drawing upon leading commercial practices up to and including full formal standards



Thank you for your attention



Gerald Kresta
Water Services
TÜV SÜD Asia Pacific
Singapore
gerald.kresta@tuv-sud.sg
+65 8685 8634