

Water's Organizational Ecosystem: Changing attitudes and culture to achieve collaborative approaches to water crises

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OUTLINE OF THE ARGUMENT

- Is it possible to solve the planet's water crises? Yes
- Will it be solved using current approaches? No
- What has to change? More actors, behavior, attitudes
- Is progress being made? Limited
- What is stopping progress? Water culture
- How can this be fixed? Leadership from water professionals

IS SOLVING THE CRISES POSSIBLE

- “... meeting all competing demands for water is in fact *possible at reasonable cost.*” (2030 WRG, 2009)
- BUT
- Business as usual will not mobilize required investment
- Efficiency improvement will meet only a fraction of the gap
- Supply measures face steep marginal costs
- Global trends impacting local catchments

FAST FORWARD ... IS ANYONE LISTENING?

- “Pressure on water is rising and action is urgent.”
- “Technical solutions alone cannot solve the world’s water challenges.”
- “... will require governments, societies and, the private sector to change the way they use and manage water.”

(HLPW, 2018)

CALLS FOR COLLABORATION NOT NEW

- Need a “*participatory approach involving users, planners and policy-makers at all levels*” (Principle 2, Dublin Statement on Water and Sustainable Development 1992)
- Corporations and investors “*unfamiliar with freshwater-related risks and unprepared to implement the suite of measures available to reduce them*” (Morrison and Gleik, 2004)
- Private sector “*critical to the transformation of water use*” government need to help align industrial behaviour with the broader objectives of the water sector (2030 WRG, 2009)

CHANGE IS TOO SLOW

- Little evolution by companies from business as usual ... philanthropy rather than business driven.
- Concern about water risks BUT companies struggle to create a business case for action (Newborne & Dalton 2016)
- Private sector progress on water too slow to mitigate the risks of population, rapid development and urbanisation (Orr 2018)

LIKE (NGS) WALLFLOWERS AT THE SCHOOL DANCE



LEADERSHIP REQUIRED

- “We call on all national leaders to initiate and guide a national water reform process and for others in leadership roles to support these efforts.” (HLPW, 2018)
- “We hope that the information presented ... gives policymakers, business executives and civil society leaders the tools they need ...” (2030 WRG, 2009)
- What needs to change? Deeply entrenched attitudes.

ENGINEERS INFLUENTIAL DECISION-MAKERS

- In Australia, 5/6 capital city water authorities headed by engineers
- The authority that isn't headed by an engineer is most engaged with water stewardship
- Engineering stuff: dams, pipes, channels, pumps etc.
- Behavioral change?
- In a constrained world do we perpetuate the myth of abundance?

DEEPLY ROOTED CULTURAL ATTITUDES

- Yu the Great, founder of China's Yellow River civilization was a 'water engineer' who mastered droughts and flood to make the Basin safe for habitation (Solomon 2010)
- "Heaven's Mandate" depended on controlling the water from droughts and flood ... it shaped the political organization of the State (Bell 2017)

REWARD SYSTEMS REINFORCES ENGINEERING FOCUS

- Performance goals set around time-based targets to deliver engineering projects or regulatory goals
- Changing management practices involves longer timeframes that don't fit water agency plans

ENGINEERS TAUGHT TO DO ENGINEERING

- “Too often universities are living monuments to boundary rigidity.” (Meadows 2008)
- Each discipline has its own language, culture and ways of looking at the world ... reductionist paradigm of academia (Costanza et. al 2015)
- “Every profession lives in a world of its own”. The language spoken ... landmarks ... customs & conventions “can only be learnt by those who reside there.” (Carr-Saunders & Wilson 1933)

PROFESSIONAL DEVELOPMENT

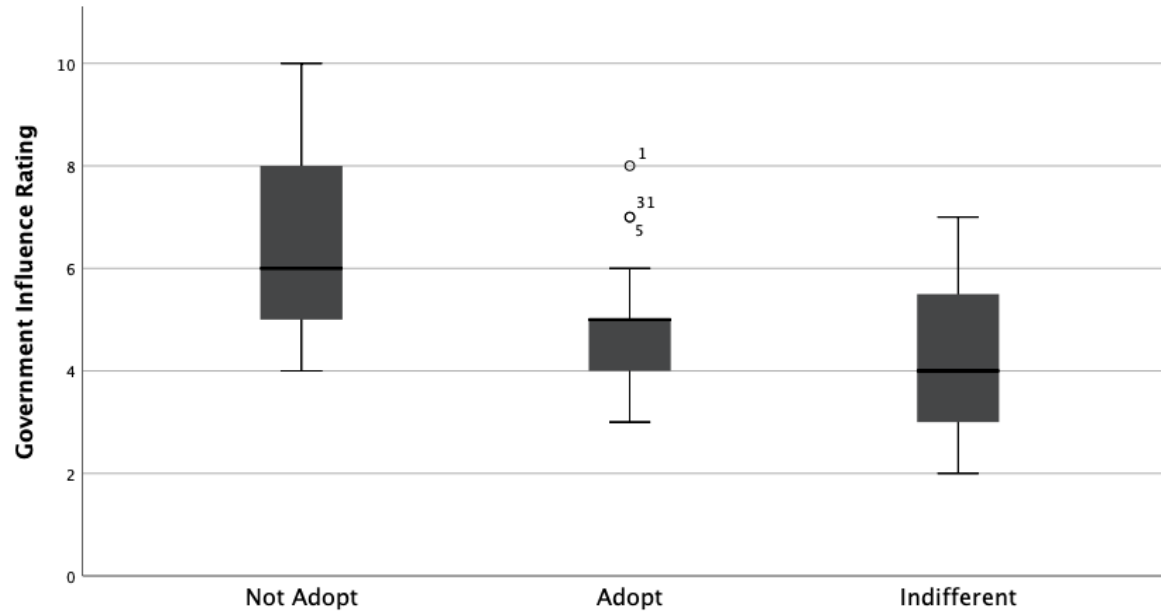
- For example, Ozwater 2019 – 5,000 water professionals
- 261 presentations, panels, workshops and poster sessions,
- Words such as “customers,” “partnership,” “collaboration” or “engagement” featured in less than 20 titles
- Fewer than 10 presentations appeared to actually discuss engaging customers in solving water problems
- Not sufficient interest for presentation on water stewardship

REGULATORY SOLUTIONS NOT WORKING

- Environmental regulation has grown, particularly for dealing with pollution, since Stockholm 1972
- despite a 38-fold increase in environmental laws over the past three decades
- weak implementation and enforcement is exacerbating environmental threats rather than mitigating those threats

(UNEP 2019)

BUSINESS ACCEPTS STATUS QUO

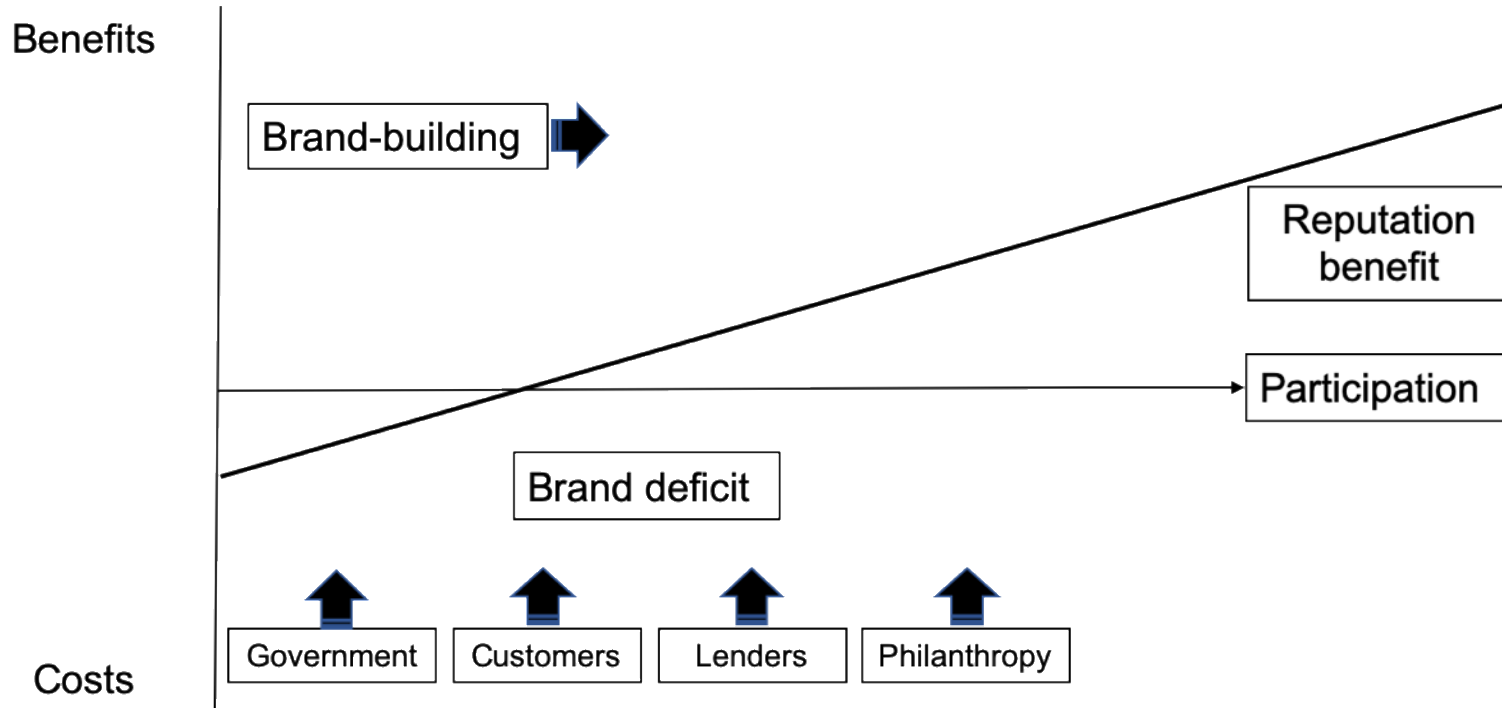


(Spencer & Stanley 2019)

GOVERNMENT-BUSINESS PARTNERSHIPS (LIN, 2019)

- Study 166 US firms, 192 alliances between 1985-2013
- Neither the state nor firms make satisfactory investments in mixed (public/private) goods leading to under-investment
- GBPs play a significant positive role in channeling public and private efforts toward transformative change
- Address daunting environmental problems that go beyond incremental aims ... enable sharing resources, risks and mutual benefits ... to transform environmental practices

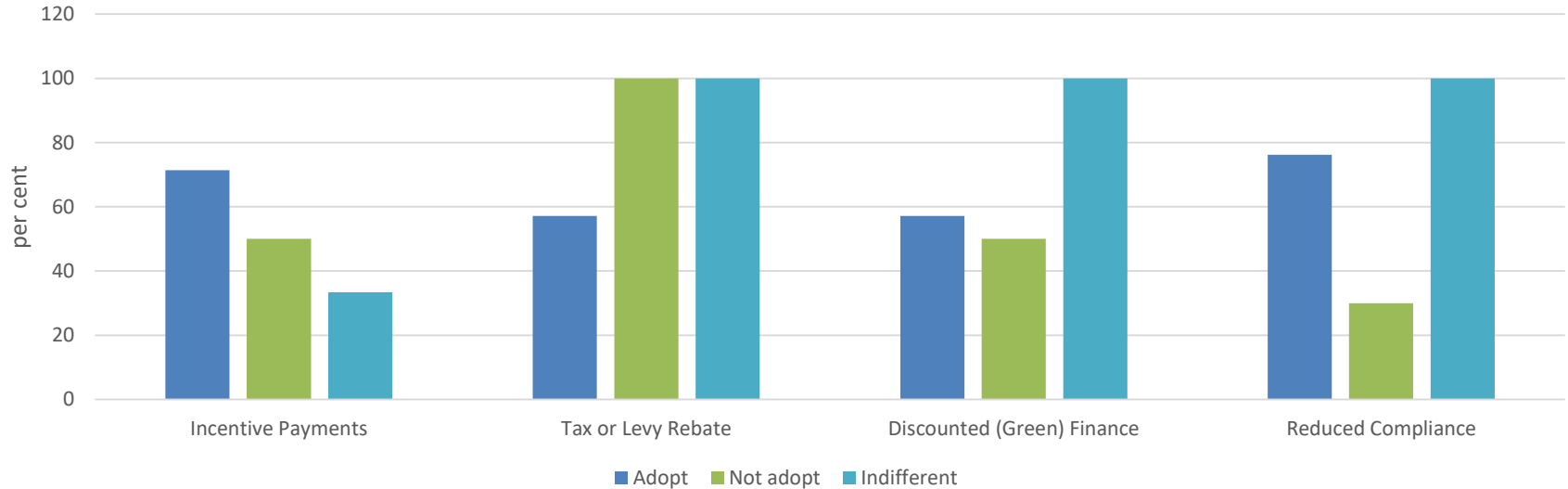
ENGAGING SHAREHOLDERS IN POSITIVE EXTERNALITIES



(Spencer & Stanley, 2019)

FIRMS INTERESTED IN MUTUALLY BENEFICIAL PARTNERSHIPS

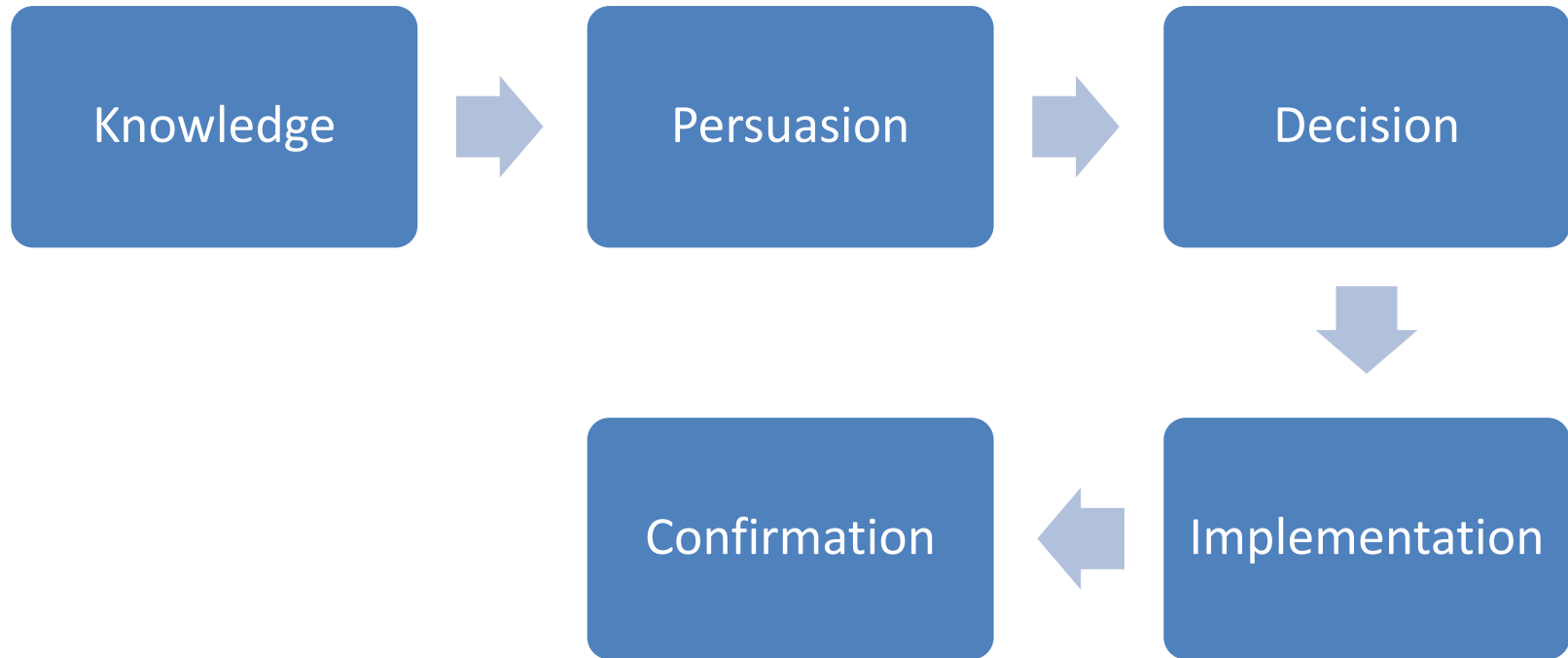
Interest in Benefit Sharing Program (n=34)
Industrial Facilities, China



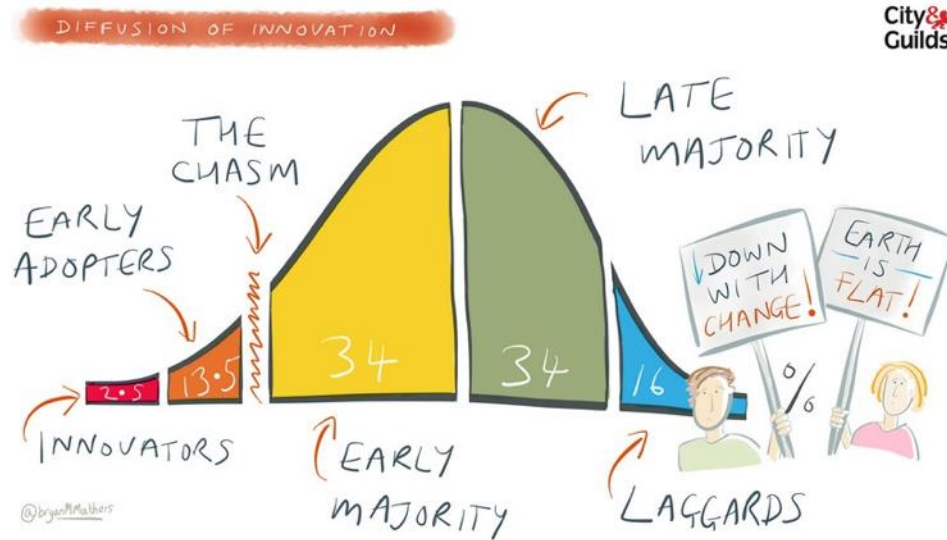
FEATURES OF GBPs (LIN 2019)

- Effective governance (flexible, non-contractual)
- Exploration learning (development of the new, unknown)
- Cognitive learning (different interpretations of known info)
- Rule-making (expedites transformation)

INNOVATION DECISION PROCESS (ROGERS 1962)



INNOVATION DIFFUSION THEORY (ROGERS 1962)



(Graphic: Interaction Design Foundation)

CHANGE ITSELF REQUIRES COLLABORATION

- Behavior change solutions will have to start with changing behavior of water professionals who need to value these solutions and want to engage business
- Destroy the myths and be upfront about water crisis
- Supply chain leaders are important to stimulate, guide and reward change from their suppliers
- NGOs play a role through pressure and providing the route map for change ... but they can't do it alone

SUMMARY

- Engage the wallflowers (professionals will have to lead)
- Promote culture change within the water professions
- Make behavioral solutions part of the water toolbox
- Build GBPs to facilitate change
- Recognize that it won't happen without different attitudes

FORTHCOMING PUBLICATIONS

- Spencer, M and Stanley, J (forthcoming 2019), "Business and the global water crises: an empirical study of motivations and constraints for corporate water stewardship in two industrial areas of China" (TBC)
- Spencer, M (forthcoming 2020), 'Attitudes, obstacles and incentives: why the culture of water needs to change to build participation and implement behaviour solutions to water crises' in *Sustainable Use of Water by Industry: Perspectives, Incentives, and Tools*, edited by Cheryl Davis and Erik Rosenblum (International Water Association)
- Spencer, M and Xu, Z (forthcoming 2020), 'Water stewardship; engaging business, civil society and government in collaborative solutions to China's freshwater challenges' in *Non-State Actors and Environmental Governance in China*, edited by Oran Young, Yijia Jing and Dan Guttman (Palgrave Macmillan)

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