# THE TRIPLE-S PROJECT SENSEMAKER® EXPERIENCE

## A METHOD TESTED AND REJECTED

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an initiative of **IRC**

**triple-s**
WATER SERVICES THAT LAST

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# CONTENTS

# BOXES

# FIGURES

## TABLES

# EXECUTIVE SUMMARY

Between January 2011 and September 2012 Triple-S—an IRC International Water and Sanitation Centre (IRC) project—piloted the use of Cognitive Edge's[1] SenseMaker®[2] approach for its potential to monitor changes in policy, practice and discourse of water sector professionals and water users. Triple-S project work teams working in Ghana, Uganda and in the international arena[3] conducted the pilot project. The expectation was that SenseMaker® would enable the Triple-S teams to monitor how sector professionals embrace changes towards the uptake of a service delivery approach in terms of policy and water sector practices. Concomitantly, the expectation was to assess the satisfaction levels of users with their water services in the areas in which Triple-S was active. The project teams aspired to establish an innovative monitoring resource that other water sector actors could use to input and share their data for joint tracking of improvements in water service delivery over time and in diverse settings.

This report is an account of this experience with the intention to share the journey and explain what worked and what did not work. Following an 18-month period of adapting, pre-testing and conducting two rounds of data gathering and analysis, Triple-S discontinued using SenseMaker®. We provide an analysis of the reasons why SenseMaker® proved an unsuitable method. The discussions also address the elements that were required to ensure appropriateness and usage to continue using SenseMaker® as a monitoring method. Snapshots of analysed data and the visuals generated to communicate analysis to stakeholders are provided in annex 5.

In this report, the notion of appropriateness of a methodological innovation within the international development sector is examined and in so doing seeks to contribute to the intense international debate that centres on relevance and validity of monitoring and evaluation approaches.

## THE PILOT

The SenseMaker® method, supported by facilitating software, has its origins in complex adaptive systems thinking, cognitive science and anthropology (Snowden, 2010). The approach relies on the collection and analysis, over a set time period, of large numbers of story fragments, or micro-narratives, which capture people's diverse perspectives. Encouraging, though largely undocumented, results using the SenseMaker® method, were obtained in a range of fields such as military intelligence, the health sector and business management. At the start of the pilot process, the method had previously been applied to two initiatives in international development but never before in the rural or peri-urban water services development sub-sector.

IRC, through initiatives such as Triple-S, normally frames its approach to improving water service delivery using the perspectives of systems thinking and complexity sciences. The evidence shows that specific, outcomes-focused changes are required across the 'whole system' that comprises the water sector in order to achieve water services that last[4]. This system, or sector, comprises organisations, policies, people and practices spanning institutional echelons from the user through district/ commune, regional, national to international levels. Triple-S focuses on context-specific changes across these levels

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[1]  Cognitive Edge is a research network focusing on complexity theory and the 'development of the theory and practise of sense-making'.

[2]  SenseMaker® is a software suite developed by Cognitive Edge, which links micro-narratives (story fragments) with human sense-making for decision support, research and monitoring capability of organisations.

[3]  Triple-S is implemented through seven main 'work streams'. Three are designed to achieve the Triple-S outcomes in Ghana (Ghana work stream), Uganda (Uganda work stream) and internationally (the International work stream). Four additional work streams provide cross-cutting support to the outcomes-delivering work streams. These are: communications, monitoring and learning, research and management.

[4]  The Triple-S and IRC approach to supporting systemic change in the water services sector is laid out in Lockwood, H. and Smits, S., 2011. *Supporting rural water supply*. Rugby: Practical Action Publishing Ltd. and Schouten, T. and Moriarty, P., 2002. Community Water, Community Management. London: ITDG Publishing.

towards the uptake of a service delivery approach—an approach that signals a radical departure from current infrastructure-driven practices and policies.

Given the method's emphasis on understanding the present to reduce ineffective strategies, SenseMaker® was deemed to offer a suitable approach to identify and monitor changes in policy and practice of rural water services sector actors in Ghana, Uganda and in the international arena. With support from certified SenseMaker® practitioners, Triple-S staff designed and implemented story-collection campaigns at community, district, national and international levels. In practice, it entailed gathering large numbers of short stories (experiences). Story owners were then requested to answer supplementary questions to give added meaning and detail to their story.

The Triple-S SenseMaker® frameworks were developed and field-tested by the project team between January and April 2011. Following the testing and revision, two story collection rounds were conducted between April and October 2011 in Ghana and Uganda, with ongoing story collection for the international cohort over the same period. Various data collection modalities were tested: online web-based surveys, paper-based surveys with subsequent online data entry and offline web-based data collection. The efforts in Ghana and Uganda resulted in 1,256 (842 water users and 414 water professionals) and 390 (350 randomly selected water users and 40 from targeted professionals) stories being collected respectively. The international story cohort never grew beyond 120 stories.

While considerable effort was required to obtain a lower story-count than expected, a greater challenge emerged in the 'sense-making' (synthesis, collective analysis and ascribing meaning) stages of the pilot.

## 'NO SURPRISES!?'

Overall, the project team members and sector partners were of the view that SenseMaker® did not provide any unique or new insights and it only confirmed the existing state of affairs around policy and practice in the sector in Ghana and Uganda. In the international arena, the team determined that the story dataset was too limited in number and content to prompt meaningful reflection or pattern identification.

Enthusiasm for the experiment was strong throughout the different phases of method adaption, testing and data collection. This initial enthusiasm began to wane as doubts and frustration about the lack of new insights or meaningful patterns set in during the analysis phase in late 2011. Although the team started to suspect a mismatch between this ambiguity-oriented approach and the project's need for less vague data, they remained committed to conducting two full cycles of story collection in order to tease out possible flaws while improving upon the method and its application.

The Triple-S Ghana, Uganda and International teams held analysis workshops and sense-making sessions with project partners in 2011 and early 2012. The team encountered difficulties with pattern identification as well as with the dynamics of facilitating participatory sessions in which sector actors collectively interpreted emerging patterns. In parallel, analysis of the initial Triple-S datasets by a SenseMaker® expert consultant produced similar, 'unsurprising' results to those that the team had produced. Given the lack of confidence of Triple-S staff in identifying 'new' or emerging patterns and articulating key messages about any patterns identified, team members were increasingly reluctant to involve important sector partners in the sense-making process.

In early 2012, the method was discarded by the International team given the extreme difficulty in obtaining sufficient and relevant stories, which resulted in no meaningful information about international policy and practice.

When concern about the lack of unique or meaningful patterns grew, a final detailed analysis of all datasets was repeated by the same SenseMaker® expert consultant, as well as by the IRC learning team in separate sessions in mid-2012 to further probe the datasets in the hope of identifying unique or new patterns and messages. These extensive analysis rounds did not provide any additional insights that the Triple-S team found useful leading to a further loss of confidence in the method. By September 2012, the Ghana and Uganda teams discontinued the use of SenseMaker®.

## LESSONS

Throughout the pilot, the authors and wider Triple-S team members discussed factors affecting the pilot. The lack of unique data was not problematic in and of itself, although SenseMaker® was marketed in 2010 and 2011 in part on its ability to reveal unique patterns. The team could have refined their use of the method following discussion and joint sense-making of the initial datasets, but this possibility was hampered by several factors.

**Firstly**, Triple-S did not repeat the story collection campaigns in Ghana and Uganda with the requisite frequency and for long enough periods to ensure the scale of story collection, thereby making it impossible to capture patterns over time. Decisions to refine the method may have been based on meagre results from insufficient rounds of data collection.

**Secondly**, the Triple-S project activities at district level were not advanced enough at the time of the SenseMaker® pilot to meaningfully link with the stories collected. Hence, the test and first round of story collection were conducted with little clarity about the specific project activities and their intended outcomes in the two countries. While the team did not sufficiently grasp that SenseMaker® required sufficient scale of story collection that aligns with project scope, this problem was compounded by the lack of clarity in the first half of 2011 from CE about what constitutes 'mass collection'. In addition, the necessity of a sample framework was not clear until after the pre-testing and first round of collection was concluded. The team initially understood from CE that the lack of such a framework would not influence results. However, the lack of such a framework made it difficult to draw relevant and specific conclusions from the stories collected. Moreover, even though the importance of such a sample framework was agreed on in August 2011, the team did not act upon it in the subsequent round of data collection. The absence of a sample framework, coupled with the lack of massive, frequent and repeated data collection over time, meant that the team could not be expected to capture useful stories.

**Thirdly**, once an impasse was reached in the sense-making phase (early 2012); it was clear that the initial training did not sufficiently stress key issues such as sample frameworks and sizes, or the distinction between abductive and inductive reasoning. SenseMaker® was adopted with the understanding that Triple-S was experimenting with an 'as yet untested' method in the WASH services sector.

**Fourthly**, in the absence of a profound understanding of the methodology requirements at the start of the pilot, the team did not mobilise sufficient monitoring expertise to ensure meaningful results.

**Lastly**, the combination of the inadequate initial training, the turgid structure of the SenseMaker® software and insufficient in-house capacity to apply SenseMaker® resulted in an underestimation of the mind-set shift required from team members and sector actors to understand a different monitoring approach: one in which patterns are emergent and that would require joint sense-making processes in order to become meaningful.

Despite the unsuccessful attempt to apply SenseMaker® as a monitoring method for Triple-S, it is not dismissed as a useful method: it simply did not work within the Triple-S context and for the reasons already mentioned. Other development sector initiatives, including the water and sanitation sub-sector, have used SenseMaker® as a key diagnostic and research method with promising results emerging in relation to decision making.

# 1.  INTRODUCTION

This report outlines how Triple-S, an IRC project, piloted the SenseMaker® approach in 2011 and 2012. Triple-S was based on a set of systemic-change propositions relevant to a complex adaptive system—in this case the rural water services sector. Hence, programme staff felt that SenseMaker® might be a good and effective fit, capable of making the less tangible aspects of water service delivery visible, and in doing so with enough frequency to generate feedback for the water sector. The Triple-S management expected SenseMaker® to provide insights into progress towards stated outcomes and feed debates within the sector on how to shift the water sector towards better service delivery. SenseMaker® was seen as a key component in the project's monitoring and learning work, resulting in much energy and resources invested in its development.

However, after 18 months, the Triple-S teams decided to discontinue using SenseMaker®. Why? This report explains the process of developing, piloting, rolling out, seeking to use and, finally, rejecting SenseMaker® as an option for Triple-S monitoring and learning purposes. It focuses on the need to ensure appropriateness and utility to ensure continued use. In this report, the notion of methodological innovation appropriateness is examined within the international development sector and in so doing seeks to contribute to the international debate on efficacy of monitoring and evaluation approaches.

# 2.  TRIPLE-S: WATER SERVICES THAT LAST

Triple-S (Sustainable Services at Scale) is a six-year, multi-country learning initiative to improve water supply to the rural poor[5] led by IRC International Water and Sanitation Centre.

The Triple-S initiative currently operates in Ghana and Uganda and in the international WASH sector arena. Lessons learnt from country-level work are intended to feed into the international level, where Triple-S promotes a re-appraisal of how development assistance to the rural water supply sector is designed and implemented.

The core premise of Triple-S is that funding and technological options are not the main obstacle to sustained water services—instead the way in which resources and solutions are deployed is what needs to change. The programme works with partner organisations on rural water to:

- **Shift from building systems to building services** with attention to long-term sustainability and post-construction support, such as staff training, availability of spare parts and supply chains and markets for rural water supply goods and services.
- **Shift focus from projects for 'communities' at village level to services for populations within larger administrative units**, such as districts, which are much more effective for scaling up.
- **Improve coordination and harmonisation** within government-led processes, so that everyone follows the same rules and works towards the same goals.

In Ghana and Uganda, Triple-S works with local partners to:

- **Diagnose problems** such as what works and what does not work in terms of policies and practices.
- **Develop, test and implement new solutions** at district level.

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[5]  From 1990 to 2006, coverage rates in 19 countries in sub-Saharan Africa increased by just 10%, and the absolute numbers of people without reliable water have increased by 37 million, despite investments by governments, donors, and NGOs to meet the MDG target on water supply and sanitation. Of the billion people still without access to a reliable, close source of safe water, 90% live in rural areas.  Additionally, those who count as having been 'served' have systems that are not working properly or that have failed completely. The 2007 study by the Rural Water Supply Network found 36% of handpumps across 21 countries in sub-Saharan Africa were not functional (See page 2 of RWSN's *Myths of the Rural Water Supply Sector*, and Lockwood and Smits, 2011, p. 24).

- ■ **Scale up successful models.**
- ■ **Strengthen sector learning** and knowledge management.

Internationally, activities are designed to:

- ■ **Capture and share positive examples and learning** from organisations and governments that are making the shift to more sustainable approaches.
- ■ **Develop and promote tools and concepts** for sustainable service delivery.
- ■ Work with donors, international financial institutions, NGOs and development partners to **incorporate sustainability concerns into rural water sector programmes and improve harmonisation and alignment.**

Boxes 1 and 2 summarise the Ugandan and Ghanaian contexts, and Triple-S efforts in those two countries.

■ ■ ■ **BOX 1:** WATER AND TRIPLE-S IN UGANDA

Uganda has developed a relatively robust service delivery framework for the provision of new services. This has allowed Uganda to make important progress in improving access rates to rural water supply services over recent years. The process of decentralisation and transfer of responsibility for service provision to district authorities is well structured and relatively advanced, despite suffering from a number of challenges, including insufficient financial resources and capacity and logistical constraints.

The present continuous access to rural water in Uganda is estimated to be 65% with a functionality rate of 81%. For more than 20 years, the sole model for the rural drinking water service has been the community management model, both for piped schemes and point sources. The Uganda water sector is well developed in terms of policies, organisational structure and guidelines and is following a SWAP approach where government and donors jointly plan and review progress and action. Uganda has a fairly decentralised government model with the district as the main coordination and implementation body—which has recently seen a rapid growth in numbers. There is a comprehensive water information system—the Water Supply Database (WATSUP) of the Ministry of Water and Environment—which published the updated Water Atlas of Uganda in 2011.

Uganda appears to have almost all the ingredients for a successful rural water sector in place. But still only 65% of the population has access to a reliable service. For the past five years, access has stagnated around 60% to 65% while functionality remained between 81% and 83%. For the Ugandan rural water sector, the standard strategies and solutions are not helping to improve performance. So there are 'second-generation' issues to be confronted in water supply. New thinking is needed, out-of-the-box, at least the Uganda box, and this is ever more pressing as sector investment is declining. Furthermore, as the population increases there will be an exponential growth in rural towns and growth centres, with demands for higher service levels, such as piped systems. Meeting these challenges will mean building on the recent work of the Directorate of Water Development (DWD) in delegated management models for operation and maintenance of small town systems.

In addition, there is wide consensus in Uganda that the community based management model (CBMS) has flaws that need addressing. Regarding leadership and accountability, in many cases the different stakeholders do not adequately fulfill their roles and they are rarely held accountable. In terms of coordination, there are still many different actors active in the WASH sector in the districts that continue to carry out interventions without coordinating with the District Water Office (DWO), which in turn lacks capacity to be on top of the situation in their area. Key actors, and in particular DWOs, lack capacities, both in staff numbers and qualifications, to be able to carry out their work as stipulated in the guidelines. The growing number of districts, the rapid growing population and declining budget for WASH aggravates this problem.

The supply-driven focus has led to marginalisation of software components of community mobilisation, demand creation and post-construction support. This finds its causes in the relatively small percentage of the grant dedicated to software and post-construction support, the institutional gap between the county and village level, and the undermining of developmental attitudes of communities, technocrats and politicians alike. In spite of good coordination with NGOs in the sector in many areas, this has not been without difficulties and has often led to conflicting policies for community contributions causing confusion amongst stakeholders. As a result of these trends, there is an increasing concern about the functionality and sustainability of services, even at senior

policy levels.

Triple-S in Uganda is hosted by The Netherlands Development Organization (SNV) Uganda and is working within a consortium arrangement comprised of the Ministry of Water and Environment/ Directorate of Water Development (MWE/ DWD), SNV Uganda, Network of Water and Sanitation (NETWAS) Uganda and the Uganda Water and Sanitation NGO Network (UWASNET). The keys areas of focus for Triple-S in Uganda are: DWD), Sand Sanitation NGO Network (UWASNET). The keys areas of focus for Trip are:

a. Conducting action research as a basis for testing approaches and rural water service delivery models at district level.

b. Promoting action learning to ensure information sharing on rural water services delivery.

c. Strengthening WASH harmonisation and coordination of water service delivery.

d. Enhancing sector performance monitoring.

e. Strengthening institutional capacity to support operations and maintenance and improve functionality of water sources.

f. Improving transparency and accountability in rural water service delivery.

g. Communicating the service delivery approach and how to improve sustainability of rural water services.

## BOX 2: WATER AND TRIPLE-S IN GHANA

Ghana has an economic growth rate, HDI and corruption indices that far-outstrip its neighbours, and a GDP per capita of US$ 1,551 (IMF, 2010). Just over half of the population lives in rural areas. In the last five to ten years the focus in rural water supply has shifted from point sources towards simple piped networks for small towns, with a reported average coverage rate in 2009 of 57% in rural areas. However, according to the 2008 Demographic and Health Survey (GSS, GHS and ICF Macro, 2009), the percentage of the rural population with sustainable access to an improved water source was 76.6%. Since the late 1990s Ghana has been implementing comprehensive local government and decentralisation reforms.

Ghana has a four-tier structure: national, regional, district and sub-district. There are ten administrative regions, which were, at time of writing, divided into 173 Metropolitan, Municipal, and District Assemblies (MMDAs). Key organisations and actors in the Ghana water sector are illustrated by Abby and Dzansi (2012) on the next page.

There are four broad groups of Service Delivery Models:

1. **Community Based Management** models, with a number of different types in operation, dependent on population size and technology, and employed mainly in rural and small town contexts.

2. **Utility managed**, including those managed through public private partnerships (PPPs), with a management contract and community partnerships with a utility for bulk supply of water.

3. **Private providers**, including a broad group of largely unofficial models that have emerged more or less spontaneously to meet the demand for services not met by the two official models.

4. **Self-supply**, which has evolved in response to inadequate formal water service delivery systems. It is, however, not officially positioned as a model in policy or strategy papers.

Sector support remains almost entirely a bilateral affair between sector agencies and development partners and, while most players express strong verbal support for harmonisation, progress appears to be mixed, with only an ad-hoc sector working group which essentially serves as a platform for information sharing between government and donors. A critical issue in pushing the harmonisation agenda has been the past level of government commitment. However, there now appears to be a genuine desire on behalf of government and at least some donors to move towards a more harmonised approach. A sector-wide approach (SWAP) roadmap was established in 2009 to build towards sector-wide planning and coordination.

Rural water supply is the responsibility of the **Minister of Water Resources Works and Housing** (MWRWH). The ministry has the primary responsibility for the formulation of policies for the water sector.

The **Water Directorate**, established in 2004 as a division within the MWRWH, is expected to coordinate the activities of all key sector institutions operating under the auspices of MWRWH.

The **Ministry of Local Government and Rural Development** (MLGRD) is the main actor responsible for overseeing local government in the form of MMDAs.

The **Community Water and Sanitation Agency** (CWSA) is responsible for rural water: namely, water supply to scattered rural communities and small towns, while the **Ghana Water Company Ltd** and **Aqua Vitens Rand Limited** (AVRL) are responsible for urban watersupply.

**Regional Coordinating Councils** (RCCs) have the mandate to monitor, coordinate and evaluate the performance of all MMDAs.

**MMDAs** exercise deliberative, legislative and executive functions, and are responsible for the overall development of the districts.

Within every District Assembly (DA) there is a **District Water and Sanitation Team** (DWST) which is a technical unit to support the delivery of water and sanitation services. In small town contexts the DA normally delegates responsibility to **Water and Sanitation Development Boards** (WSDBs) to manage and hold the water systems in trust.

**Water and Sanitation (WATSAN) Committees** are set up around point sources, such as a handpump. They set water user fees (with approval from the DA), maintain accounts, and manage day-to-day operations of these water points.

# 3. MONITORING AND LEARNING FOR CHANGE IN TRIPLE-S

## 3.1    LEARNING AS THEORY OF CHANGE

Learning is central in the theory of change of Triple-S; a key mechanism for systems-wide change in the rural water sector. The theory of change can be summarised as follows: joint learning, informed by accurate, credible and timely information, should enable individual and organisational stakeholders to reflect on problems or challenges, such as sustainable rural water service delivery.

Following joint problem analysis, Triple-S assumes that stakeholders can and will jointly identify possible solutions and relevant adaptations for testing or implementing in line with local needs and circumstances. Through systematic information gathering, reflection and sense-making, lessons about what works or does not work can be directly fed into the planning of outcomes and strategies to improve rural water service delivery.

Clearly, such a theory of change makes a range of assumptions about the motivation to learn, ability to gather and share information, and capacities and opportunities for collective reflection. Some of the assumptions are unclear or contested—and, indeed, the work with SenseMaker® as discussed below has revealed that much is needed for such a learning process to be generated and sustained. Hence, since late 2012, Triple-S has approached its theory of change as an adaptive experiment, assessing whether or not and with which effect, learning occurs and acts as a catalyst for change.

As an action research project, monitoring and learning in Triple-S are organised along two domains of the programme's theory of change, known as 'narratives', and further articulated in the Triple-S learning framework[6]:

- Achieving **sector change** towards sustainable services at scale; and
- **Enabling change** and improving performance of Triple-S.

Information and data are gathered around these two domains of change are used to inform the joint reflection and 'sense-making' processes that are integrated in the project cycle. Lessons learnt through this process are used to confirm outcomes, identify required adaptations to strategies, and inform decisions about adaptive actions to improve upon methods and outcomes of the research, or more broadly, the way the WASH services sector is currently operating. This constitutes a 'double-loop' learning approach and is conducted to immediately link results from information collection and sense-making to short cycles of action and forward planning.

### BOX 3: DEFINING SENSE-MAKING AND LESSONS LEARNT

Triple-S defines *sense-making* as a collective process of giving meaning to information on the state of rural water, problems and opportunities, in ways that make it possible to identify lessons learnt and key action areas for the different stakeholders. *Lessons learnt* are the insights, ideas and solutions identified by joint examination and reflection about the meaning of information.

Learning needs to be resourced. Therefore, Triple-S has dedicated activities and functions to support this learning approach that create opportunities for the project teams and collaborating stakeholders to critically reflect, analyse and draw conclusions.

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[6]    See: Bostoen, K., Schouten, T. and Casella, D., 2011. *Learning principles and practice: Triple-S monitoring & learning framework*. [pdf] The Hague: IRC International Water and Sanitation Centre. Available at: <http://www.waterservicesthatlast.org/about_us/triple_s_learning> [Accessed 22 January 2014].

- **Learning retreats** are key events in the annual learning cycles that allow teams and stakeholders to pause and look back on daily implementation.
- **External learning facilitators** guide and challenge learning retreat participants to look critically at research and monitoring information about the (intermediate) outcomes of project strategies, action plans and performance.
- **Data is gathered** using various methods including baseline studies on sector policy and practice, electronic water services monitoring data, SenseMaker®, key sector stakeholder interviews, and more. If additional information, collected by other sector actors, is available, this is also examined.

The learning process described above was adopted by Triple-S to support systems-wide change in three ways:

### Systemic but realistic
Creating water services that last requires coordinated changes at multiple levels, such as whole-systems change. Triple-S has developed concepts and tools to give rural water professionals an overview of the changes required, such as its principles framework and the service delivery approach, but also to help them look realistically at how and where incremental change is possible using building blocks.

### Engendering a focus on learning
The Triple-S approach goes beyond fixing current problems to building a stronger rural water sector because of its ability to learn about and respond effectively to new challenges.

### Emphasis on legacy
Conventional methods of technical assistance have limits in terms of ownership: once the project ends so too do the benefits. Triple-S operates as catalyst through engaging with and facilitating (existing) platforms and initiatives to test and learn about options for improving rural water services. By working in this manner to build upon processes, energy and interest, the outcomes are expected to have a broader base of support and thereby a more relevant and longer lifespan.

## 3.2 COMPLEXITY, EMERGENCE AND ADAPTIVE MANAGEMENT AS METHODOLOGICAL REQUIREMENTS

In the Ghana, Uganda and international[7] level work, staff identified three questions as central for Triple-S:

1. Is there a shift from focusing only on infrastructure to emphasising service, post-construction support and general sector support in the rural water sector?

2. What are the opportunities and barriers for adopting a service delivery approach for different types of development partners?

3. Where change has occurred to improve sustainability, and how it was done?

The team continually sought to understand these questions at country and international levels in a sub-sector which has the characteristics of a complex adaptive system. Such as system has to be emergent, consequently difficult to plan and predict, highly dynamic, rapidly changing and with interdependent and non-linear relations rather than simple and linear ones in terms of the cause-effect models.

In reflecting on these distinct characteristics of interventions that generally take place in a complex-adaptive space, Dr Michael Quinn Patton, former President of the American Evaluation Association and

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[7]    The Triple-S International work stream implements action research efforts at international level. Its target audience includes policymakers, financial decision makers and implementing staff at international headquarters of organisations.

an organisational development and programme evaluation specialist, calls for evaluation studies to focus on development rather than accountability or summative judgement (Patton, 2011). He urges the development sector to look further than summative and formative evaluations and to go beyond simply testing models. Patton (2011, p. 2) poses that developmental evaluation is useful when there is not a fixed model being improved (as in formative evaluations) or tested (as in summative evaluations). In cases where there is no clear model, or where the environment is too complex and changing too fast for the practiced model ever to be fixed, assessment (either monitoring or evaluation studies) can help people articulate their hunches and hopes, do "vision-directed reality testing", track emergent and changing realities, and "feeding back meaningful findings in real time so that reality testing facilitates and supports the dynamics of innovation" (Patton, 2011, p. 7).

Rather than assessing a programme to determine whether outputs are being achieved according to plan and budget, Patton (2011, p. 13) proposes learning-focused questions such as:

> Are we walking the talk? Are we being true to our vision? Are we dealing with reality? Are we connecting the dots between here-and-now reality and our vision? And how do we know? What are we observing that's different, that's emerging?

Applying the same notion to monitoring and learning approaches implies that monitoring frameworks must be designed to capture the dynamics and interdependencies of the system in question in order to see what is changing, and more importantly why. This also implies that people and organisations "need to learn to respond to a lack of total control, yet stay in tune with what is unfolding...and thereby respond *strategically*" (Patton, 2011, p. 2).

In designing the project's monitoring learning framework, Triple-S went in search of methods to conduct this type of ongoing inquiry to feed the double-loop learning cycles mentioned above. With the encouragement of its grant donor, Triple-S set out to pilot new (at least to the WASH sector) methods that offered possibilities—such as quantifying qualitative data—that are grounded in complexity thinking and which could serve a wider purpose than the Triple-S project alone by becoming a sector information resource.

Given Triple-S' vision on learning to drive change in a sector, SenseMaker® was selected for testing as an innovative and potentially valuable method for accessing the views of various actors about changes taking place in the sector.

In late 2009 Triple-S learnt about SenseMaker® through various symposia and training workshops. Triple-S' use of SenseMaker® was encouraged by enthusiasm about the method from the project grant donor, coupled with the general buzz in monitoring, evaluation and learning sub sectors. At that time, it seemed to offer a way to make explicit the emergent interconnections and context-specific understandings about what is changing and why. In 2010, IRC deliberated on the use of the method, and after deciding that SenseMaker® would be suitable, the organisation commenced with the pilot.

# 4. PILOTING SENSEMAKER® FOR MONITORING AND LEARNING WITHIN TRIPLE-S

## 4.1 WHAT IS SENSEMAKER®?

SenseMaker® is a methodological approach that is supported by facilitating software. It has its origins in complex adaptive systems thinking, cognitive science and anthropology (Snowden, 2010). The approach relies on large amounts of micro-narratives, small 'fragments' of peoples' diverse perspectives and experiences. Rather than looking back and extrapolating into the future, SenseMaker® as an approach puts greater emphasis on understanding the present and reducing pattern entrainment that results from past failures. This methodological core feature is based on the observation that some situations and change processes exhibit 'complex' behaviour and can therefore only be understood in the process of acting (see 3.2 above).

The simplified process in SenseMaker® is illustrated in figure 1 below. The process starts with a prompting question or image to trigger the respondent to share an experience or outcome that is significant for the topic being researched. After sharing the story, the respondent is asked to code their own story by categorising the story in relation to specific questions. These questions and categories form the 'signification' (or question) framework and are predefined—drawing on concepts, theories and programme intentions. Once many micro-narratives are collected, the software aids the users through the analysis of the complexity and diversity of people's lives which are shared in their stories. The software is used to filter and analyse micro-narratives to identify patterns and trends that may be significant for action. This helps people identify patterns across the many story fragments that merit further scrutiny. These patterns and the related stories are the basis for 'sense-making' by key stakeholders.

**FIGURE 1: SIMPLIFIED PROCESS OF SENSE-MAKING IN SENSEMAKER®**



**Source:** Guijt, 2011.

Several features are central to the SenseMaker® approach.

**Micro-narratives.** The approach is based on the idea that people create identities, share, and give meaning to their lives via narratives. Narratives in this context are micro-narratives, and not extensive stories or life stories or composite interpretations that contain all insights needed. Instead, they are fragments, short stories shared by people that form the basis for subsequently probing with specific questions.

These micro-narratives can be captured as text in the form of original experiences, but also as fragments from existing documents, video clips or photographs. See Box 4 for an example of a narrative shared on paper through a face-to-face interview. These stories can be elicited through a simple prompting question about, for example, experiences with rural water supply, or through images about the subject around which knowledge and monitoring is required. In other applications, prompts have been more focused around specific outcomes or changes. The choice of prompt depends on the knowledge need.

The approach is based on large numbers of such micro-narratives; a form of distributed ethnography, in recognition of the idea that a system consists of a multitude of ever-changing interactions between many 'agents'. Understanding the range of experiences, perspectives, motivations, and values around the topic of inquiry requires sensing this multitude. A basic assumption of the approach is that, from an organisational view, all actors and stakeholders in a given context or interaction experience the problem of *information asymmetry*. That is, each of the actors involved may be privy to different segments of information about the matter at hand. An (implementing) organisation has to understand that multiple interactions and decisions from large populations cannot be predicted or controlled by that organisation. Therefore, SenseMaker® applications lend themselves best to efforts where, at minimum, multiple hundreds of micro-narratives are collected.

**Self-tagging to generate quantitative data.** Traditionally, qualitative data (i.e., in text form) is coded by researchers, either through pre-defined categories or emerging categories (grounded theory). SenseMaker®

■ ■ ■ **BOX 4:** STORY FROM WATER USER IN KABAROLE, UGANDA

We used to have an open well. When children could go to fetch water, they could swim and urinate in the water. Local leaders could call meetings so as to solve the situation but all in vain. Most of the people drink unboiled water and a few who boil the water contaminate it before drinking it. So we held a health and sanitation meeting where bi-laws were made for the keep-clean campaign and as a result they constructed us a shallow well and the community members were asked to drink clean boiled water.

asks people to give meaning to their own stories by tagging the stories *themselves,* against pre-defined concepts or topics of interest (the so-called 'signification framework'). By signifying, or giving meaning to their own stories, the basis for statistical analysis that is contextualised in relation to significant experiences is formed—this strongly reduces researcher biases from the initial interpretation. The respondent decides on what their own stories mean, hence the notion of a 'self-signified micro-narrative'. People add layers of meaning to their experience, not just summarising the story content. In so doing, they open the door to the world through the eyes of programme constituents, intended beneficiaries or other key stakeholders related to the programme of work.

**Shared sense-making facilitated by software for pattern detection.** Due to the hundreds or thousands of micro-narratives needed (depending on the application, sample size and recurrence of collection), the human brain needs facilitating software to make sense of the data. The software provides a platform for gathering, processing, and visualising information told in story form and is self-tagged. The SenseMaker® Collector™ tool is used to collect sense-making items (information or data) in the form of stories or information fragments, with self-tagged answers to questions about the fragments. Each answer is converted into quantitative data, which can then be explored by using several functions that allow the users to look at the stories and variables from different angles.

The visualisation tools in SenseMaker® enable users to view patterns and anomalies not otherwise visible through conventional methods for analysis of narrative information. At any time during the analysis the individual stories can be consulted.

In practice, sense-making becomes an iteration between a visual pattern and a set of stories. The patterns are analysed and changes can be identified, or individual stories reviewed to understand whether they are significant or not and what is needed to reduce undesirable trends and stimulate more of the positive trends (see figure 2).

**FIGURE 2: MONITORING AND CHANGE**
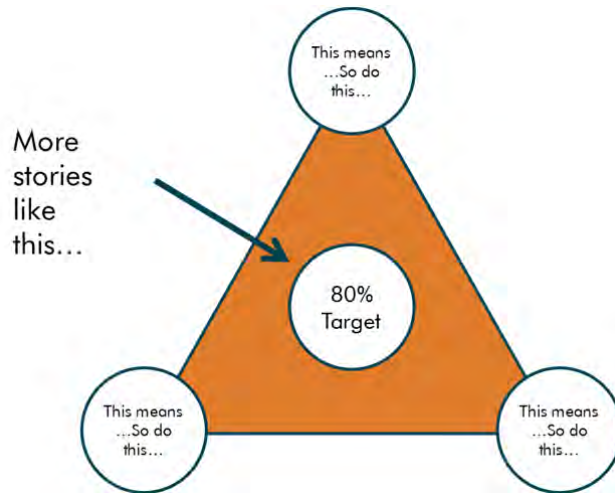


When there is continuous and regular story capturing and analysis, it can help to understand change as it emerges and make real-time adjustments to move a system towards desirable stories (and numbers of those stories (see figure 3 for a water-focused example): quick feedback and rapid responsiveness becomes possible. In the same process, it can be used to detect weak signals, outliers, and small clusters of stories that may represent hidden and emerging opportunities or obstacles for systems change. As SenseMaker® was developed for dealing in complex systems with human motivations and attitudes, the day-to-day micro-narratives of peoples' existence best reveal these.

**FIGURE 3: EXAMPLE ANALYSIS OF QUESTION 10: YOUR STORY INVOLVES FINANCING**
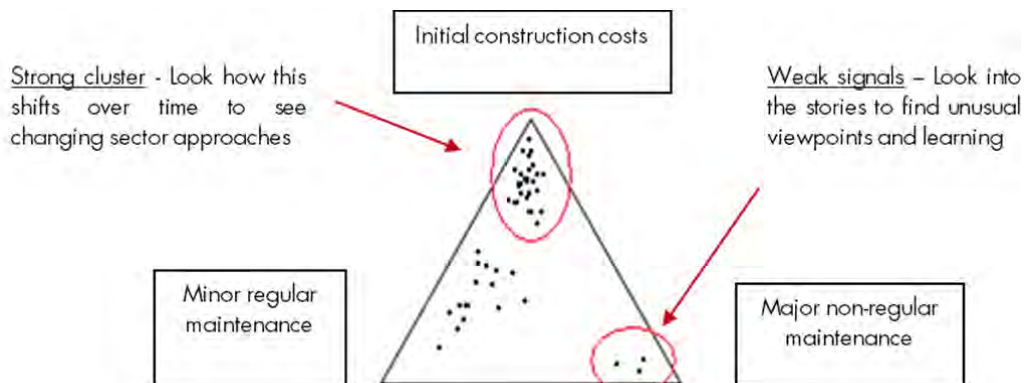
***Comparisons with other approaches to monitoring and measuring.*** All sense-making items—'stories' in the case of Triple-S—in a given dataset are analysed, not for an average effect but to detect patterns in the stories and compare different perspectives. In contrast, traditional survey methods provide statistics from a series of basic questions[8]. Particularly unique about SenseMaker® is its *conscious ambiguity*, which recognises the complexity of people's experiences. In other words, questions are deliberately indirect and neutral to encourage honest and nuanced perceptions.

Furthermore, 'success' or 'good' is viewed in terms of loose goals around trends towards certain kinds of experiences, rather than precise objectives. This is quite distinct from approaches based on project plans with milestone targets, incentives for target achievement, and party mission statements.

In summary, the approach has the potential to:

1. Access the collective experiences of stakeholders and to hear what really matters to people;

2. 'Monitor' weak signals that can alert users to the need for possible adaptive action;

3. Monitor complex issues while reducing the likelihood of gaming of answers;

4. Generate comparative data through a unifying signification framework;

5. Merge the merits of quantitative and qualitative data by iterating between the statistics about experiences and individual stories;

6. Unanticipated discovery of phenomena through pattern visualisation; and

7. Reduce researcher bias through self-signification.

## 4.2 TAILORING A SENSEMAKER® APPROACH FOR USE BY THE COUNTRY TEAMS

Triple-S staff and management from the Ghana, Uganda and international work stream teams were introduced to the SenseMaker® method and process in November 2010. Work on designing a pilot application started in January 2011. The first stage involved designing the signification framework. In January 2011, key Triple-S staff met for three days to draft the framework, based on the vision, strategies and principles articulated in the Triple-S principles framework[9].

Following an introduction by Dave Snowden of Cognitive Edge for senior management of Triple-S, SenseMaker® was introduced through an orientation meeting for the Triple-S learning work stream in The Netherlands facilitated by Dr Irene Guijt—one of the only consultants at that time with some SenseMaker® experience in international development. During this meeting, she presented an overview of the methodology highlighting principles, value addition of the methodology, and application in the sector. The meeting was also used to develop signification frameworks for water users, and national and international professionals. The Ugandan and Ghanaian work streams were represented by the National Learning Facilitators who later oriented the in-country teams on the method. The teams appreciated SenseMaker® as a method that would add value in tracking changes in perception of water users and professionals towards rural water services delivery, and in generating advocacy messages. Discussions also centred on its potential utility for mapping values (such as user attitudes to services provision) across broad populations and associated benchmarking.

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[8]   Appendix 4 summarises how the SenseMaker®-based approach compares to two common approaches used in research and monitoring. See: *Understanding SenseMaker®'s Niche in Evaluation: A Summary.*

[9]   Triple-S identifies three core strategies for achieving sustainable rural water services at scale and, under these, eight principles describe the essential conditions that need to be put in place, see:
www.waterservicesthatlast.org/resources/concepts_tools/principles_for_sustainable_services

The drafting process involved making explicit and synthesising the overarching programme objectives and intended changes. These formed the basis for concept mapping on which the signification framework was based[10].

SenseMaker® was intended to be used in Uganda and Ghana to assess the following milestones (as set in the contract with Triple-S' funding agency):

1.  Increase satisfaction of users with water services in pilot districts.

2.  Increase in government adoption of SDA principles.

3.  Increase in development partner adoption of SDA principles.

A process map, describing the various activities towards the overall milestone of Triple-S having a signification framework 'finished and operational' by 1 June 2011, guided the learning team in designing and pre-testing the signification framework. In weekly Skype call meetings the team discussed progress in planning and organised human resources capacity to conduct the pre-testing and collection of stories: how many stories to collect for the analysis, where to collect stories, how to invite people to contribute their stories, time period for collection, transcribing paper-based stories to the collector's website, and defining questions for Cognitive Edge for analysis of the collected stories.

## 4.3    TAILORING SENSEMAKER® FOR THE INTERNATIONAL WORK STREAM

During the pilot, the Triple-S team concluded that a separate signification framework and distinct story collection process were required to gather stories from water professionals working at international level in development banks/ finance institutions, (I)NGOs, bilateral aid agencies, philanthropic organisations, academic institutions, etc. A new version of this framework was therefore developed based on the original 'professionals framework'. This was because of the inherently different nature of the type of work undertaken at international level and therefore its types of outcomes.

In January 2011, the Triple-S team started the design of the prompting questions for: 1) the international and national water professionals, and 2) the national user level. As prompting questions should be generic enough in relevance to people from different levels within the water services sector to allow the sharing of an experience, separate 'user level' and 'professional level' prompting questions and signification frameworks were developed. In addition, the prompting question was meant to be non-normative: it was carefully phrased to avoid questions such as 'what went well?'.

The domain of information Triple-S was seeking information about from the professional perspective (such as government departments, NGO staff, multilateral and bilateral aid agency staff) related to moments of change. This led to the initial prompting question for the professional level:

> *Reflecting on your professional experience, please describe a specific moment or event that has had a significant impact on rural water supply.*

The domain of information that Triple-S was seeking information about from the user perspective related to the 'service criteria', meaning: reliability, access, distance to the source, affordability, quality, etc. This led to the initial prompting question for the user level:

> *Tell us about a moment when you were dissatisfied or satisfied with your water supply.*

At the same time as drafting the prompting questions, the signification frameworks for the professional and user levels were drafted based on the Triple-S principles framework. It was very important to get the prompting question right, therefore pre-testing the prompting questions and its signification questions were considered essential.

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[10]    See annexes 1-3: The Triple-S SenseMaker Signification Frameworks for 1. International Professionals, 2. National Professionals and 3. Water User Signification Framework.

# 5. EXPERIENCES IN PILOTING SENSEMAKER®

This section presents how the Triple-S project team piloted and then applied SenseMaker® in-country and in the international arena during 2011 and 2012.

## 5.1 PRE-TESTING

Pre-testing consisted of a short internal feedback process and a more extensive field-based process.

The first draft of the 'water sector professionals' (including both national and international professionals; see annexes 1 and 2 for comparison) signification framework was sent to selected IRC colleagues to provide feedback for an *internal feedback round*. IRC colleagues were asked to focus their feedback on the relevance of the questions, its formulation, time required to respond to the question framework, and overall impression of the method. Based on the feedback received, the signification framework for the professional level was adapted and sent for a further iteration by an *external* group of 15 water professionals.

In both Uganda and Ghana, a test round of story collection was conducted between February and April 2011. The purpose was to test the signification frameworks devised to collect stories from water users and professionals before the implementation of the method was scaled up, as intended, for use over a multi-annual period.

| TABLE 1: PRE-TESTING THE STORY COLLECTION FRAMEWORKS IN UGANDA AND GHANA | |
|---|---|
| **UGANDA** | **GHANA** |
| The signification framework was sent out to 45 respondents, 20 at national/ district level and 25 at water user level. Feedback was received from 32 respondents, 12 from national/ district level and 20 from water user level. For professionals, the signification framework was sent out with an email request to share an experience in rural water services delivery, while for water users, interviews were used to collect their stories. | In Ghana, a total of 300 stories were collected during the pre-testing from water users in Akatsi, East Gonja and Sunyani West District Assemblies, and from water professionals from government and NGOs at central and decentralised levels. |

In Uganda, collecting stories from national and district level water sector professionals was not easy as many people were not motivated to answer the questions. Story collection at user level was relatively easy as many were willing to share an experience, hoping that their issues would be addressed. Professional respondents felt that there was need for more guidance and structure in relation to the prompting question. Some respondents, especially at district level, shared stories about general problems and provided recommendations, instead of stories, about a particular situation. Being a new kind of survey that had not been clearly introduced to the respondents, respondents found it 'strange'. This limited the number of comments shared on the tool. Respondents did not provide recommendations about the question framework (but rather about their water supply). This feedback gave us important insights into how to improve both the prompt and the way stories were collected in the field.

### BOX 5: PRE-TEST COMMENTS IN UGANDA AND GHANA

**From professionals in Uganda**

- Am not sure whether I should state the event or tell a story about the event.
- It was difficult to decide whether to share a practice in rural water supply or an event.
- The orientation did not directly show that one needed to give a story on the event that took place. It was like one had to imagine a story.

## 5.2 'PRE-POPULATING' THE TRIPLE-S SENSEMAKER® SYSTEM FOR GLOBAL ANALYSIS

In addition to the collection of stories from users and professionals, a 'pre-population' exercise conducted by staff members working for the international team consisted of feeding the system (SenseMaker® Collector) with relevant fragments of text from policy documents or emails. A system was created on the project WIKI where team members could save fragments copied from policy documents, emails, etc. These fragments needed to be cut and pasted into the system by the person who would then signify each fragment by using the question framework that was developed. This person needed to be as objective as possible and a colleague not working on Triple-S at the time, was asked to conduct this work. A total of 37 fragments were entered. While it was agreed that this pre-population would be an ongoing activity, the practice was not continued following the first round of collection. The IWS team, together with the liaison person, concluded that this approach to finding a 'fragment' in a large policy document was hard and very time consuming and that simpler means to ascertain shifts in policy should be found to replace this laborious approach[11].

## 5.3 FIRST STORY COLLECTION ROUND IN UGANDA AND GHANA

**Uganda**
The first round of story collection in Uganda immediately followed the pre-test in April 2011. Out of a target of 400 stories, 580 stories were collected from both rounds; 505 from water users and 75 from water professionals. The water users targeted were people from rural areas who access water from communal point sources (springs, deep wells and shallow wells). The water professionals included: district water office staff, extension workers at sub county level (lower local governments) and staff of NGOs implementing water and sanitation activities at district level, and technocrats at national level.

**Ghana**
In Ghana, a total of 1,256 stories were collected over a one-month period in September 2011. The strategy employed was not statistically significant, as there was neither a sample size nor a sample framework. The aim was to collect as many user and professional stories possible with story collectors deployed to all area councils in each Triple-S pilot district to ensure a spread of stories and representativeness.

User stories were collected through interviews and were possible based on the willingness of a story teller to give a story in districts in which Triple-S was active at the time. A total of 22 story collectors from the three pilot districts were recruited and trained to use the Triple-S signification framework. They included:

■ young unemployed graduates or national service personnel;

■ teachers;

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[11] The Qualitative Document Assessment (QDA) method was adopted instead for this purpose by IWS in late 2011. Results from the 2012 QDA study on changes in policy and practice documents be reviewed here:
http://www.waterservicesthatlast.org/about_us/triple_s_learning/qualitative_document_analysis.

- assembly men;
- environmental health officers;
- community development officers; and
- social welfare officers.

Stories from water professionals were collected through interviews (in offices of water professionals and sector events) and through a web-based collector website. Lunch and transport allowances were provided to story collectors who were paid based on the number of questionnaires they administered and completed.

## 5.3.1 Scale and approach to story collection in Uganda and Ghana

### Uganda

In Uganda, during the first round in April 2011, 215 stories were collected: 180 from water users and 35 from water professionals. The story collection exercise started with an orientation for Triple-S district learning facilitators on the SenseMaker® methodology and the signification frameworks for water users and professionals. The orientation was conducted by the Triple-S national learning facilitator who had been oriented in the methodology and tools during a learning work stream meeting in November 2010 in The Netherlands. The district facilitators identified six research assistants in the pilot districts who were also introduced to the signification frameworks and received transportation support to reach the target sub counties to collect stories.

Two methods were used for collecting stories: face-to-face interviews and email. Interviews were used for collecting all the water users' stories; for water professionals, both interviews and emails were used. The methods were chosen to enable professionals who did not have internet access to share their stories. The email option mainly targeted professionals at the national level. A standard email was used across the Triple-S work streams to introduce the methodology and request professionals to share an experience with rural water supply that either encouraged or frustrated them. Over 100 professionals received the email requests, though less than 10% responded. The professionals targeted at national level were mainly staff from the Ministry of Water and Environment and NGOs implementing WASH initiatives. At the district level, professionals were more responsive since interviews were used for story collection.

Story collection from water users was conducted in two sub counties in each of the Triple-S Uganda pilot districts.  In Kabarole, interviews were conducted in Buheesi and Hakibaale sub counties while in Lira, interviews were conducted in Bar and Lira sub counties. The selection of the sub counties was based on geographical areas where Triple-S had planned to have interventions. In target sub counties, six parishes were randomly selected from which 180 water users were randomly identified and interviewed. All interviews conducted with water users were recorded on paper and later uploaded on the SenseMaker® Collector website. Important to note, is that the sampling was not based on a sampling framework or size that aligned with the scope of Triple-S activities as these had not yet commenced at the district level.

### Ghana

In Ghana, user stories were collected through interviews conducted as story collectors were deployed to all area councils in each pilot district to ensure the spread of stories and representativeness. Stories from water professionals were collected through interviews (in offices of water professionals and sector events) and through a web-based collector website.

## 5.3.2 Analysis of first round of stories from Uganda and Ghana

Two levels of analysis were used in both countries:

1.  Preliminary analysis by Triple-S team on basic statistics[12], demographics, and key highlights and trends.

2.  In mid-2011, national-level learning retreats were organised in Ghana and Uganda for Triple-S stakeholders to make sense of the preliminary analysis of the stories collected.

In Uganda, the meeting attracted 25 participants; district water officers, staff of Ministry of Water and Environment, Triple-S Uganda staff, IRC and staff from three partner organisations (NETWAS, UWASNET and WaterAid).

Following is a summary to illustrate how the stories were analysed and the approach taken in Uganda. It was based on a very similar approach taken in Ghana that took place prior to that, which was based on 100 stories.

The stakeholders were divided into five groups and each was given a theme. All the themes were in relation to stories provided by water users on one of the following aspects:

1.  Time it takes to get water;

2.  Quality of water;

3.  Cost of water supply;

4.  Amount of water; and

5.  Repair of broken water supply.

The groups were provided with an initial analysis on each of these themes (which had been prepared by Triple-S and IRC staff), presented as triads alongside clusters of stories that related to potentially interesting patterns. The teams were then asked to identify any tendencies among the stories and the visual patterns, as well as identify key messages for the sector.

Key messages were generated (see boxes 6 and 7) in both Uganda and Ghana. The participants concluded that the key messages identified were not new to the sector but were a validation of the ongoing debate on how to improve rural water service delivery (Triple-S, 2012):

> The participants concluded that the key hypotheses identified may not be new to sector professionals. However, these professionals base these on their own experience. Having users that were independent from each other, highlighting the exact same issue, is a strong validation of the right priorities discussed in the ongoing debate on how to improve rural water service delivery.

In Ghana, Triple-S staff reported from the sense-making workshop (Triple-S, 2012):

> Participants were excited to read the stories on the Ghanaian context, which resonated with their own experiences with rural water supply. It seemed as if the water users were in the room talking to the people responsible for planning of sustainable rural water supply. Some of the stories were initially unbelievable for water professionals. For example, representatives of the Community Water and Sanitation Association (CWSA) were offended when they heard that a borehole was being sited at a cemetery. Other participants who came from the region where the story originated corroborated it. The story raised discussions on the sound implementation of rural water policies. Discussions like the above resulted in several recommendations to take into account during planning for the following year, being: to consult water users more frequently and to take note of the enabling role of government at district level.

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[12]  'Basic statistics' on the story origin and its respondent included sex, location, relationship to the story, etc.

1.  The performance of a community based management system (CBMS) as a service delivery model was questioned. Analysis of user stories showed that Water User Committees (WUCs) required technical and resource mobilisation support to enable them to function well. The approach of leaving communities to manage water sources on their own had in most cases not worked. The link between the WUCs and the decentralised local government structures is important for technical and management support.

2.  Dynamics related to multiple use of water are a cause of tension and lead to conflicts. WUCs and their respective communities had not managed to come up with local solutions. Some external intervention was required to address the dynamics.

3.  The challenges around continuous access to water were mainly related to water source management issues. The technology related issues seem to be less of a concern.

4.  In cases where WUCs have active leaders, water points were in good condition. Reward and motivation of people involved in the management of sources is an important issue that has not been well addressed especially under the CBMS model.

5.  In cases where users were happy with WUCs, extensive consultation had been done with users and local government authorities on the appropriate management structure; this motivated the users to honour their role of paying user fees.

6.  There is a good level of user satisfaction when water user committees are transparent in their operations and have mechanisms for consulting users.

Some examples of key messages related to 'Harmonisation and Alignment sub-theme 'Finance for Water services' from Ghana (generated by sub-group) include:

1.   Messages emerging
■   District Assemblies should know it is their responsibility to provide funding for WASH Services.
■   Communities should insist on this right to improved WASH services and demand it from District Assemblies.
■   There is heavy reliance on Development Partners to finance the sector: this is not sustainable. Sector actors should work towards reversing this situation.
■   Provision should be made for Capital Maintenance Expenditure (CapManEx) in planning and designing of the systems.

2.   Odd, or unexpected, patterns
■   Over reliance of the WASH sector on external funding.

3.   Recognisable patterns
■   All stories were familiar to group members and they reflect the realities of local circumstances.

4.   New issues to be addressed
■   CapManEx should be an integral pattern of WASH planning and financing.

### 5.3.3 Lessons from the first round of story collection in Uganda and Ghana

**Uganda**

Notwithstanding the interest expressed by water professionals in both countries in the potential of SenseMaker®, the following concerns were raised during the Ugandan learning retreat session.

- In some cases there was a missing link between the story and the way it was reflected in the analysis. This was attributed to the story teller going off the story and signification using his/ her own experience or knowledge on an issue. This disconnect is actually part of the approach—the signification is not a summary of the story but provides additional layers of information; an aspect that was not fully understood by Triples-S in its application of SenseMaker®.

- Participants were keen to know exactly how SenseMaker® works. An overview was given on the basic operation that steered discussions away from the outputs of SenseMaker® to the methodological details or the superiority of other qualitative methods such as NVivo of QSR International[13].

- Prior to sense-making with Triple-S partners, the team found it essential to first distil a number of messages following analysis of SenseMaker® stories, in order to be able to share it with the sector. This step was anticipated.

- The Triple-S team recognised that SenseMaker® was well introduced to the sector. Practitioners only received an email that briefly described the SenseMaker® methodology and were requested to share an experience in rural water services delivery. The result was that practitioners had more questions on what SenseMaker® is and how it works. This negatively affected their motivation to share experiences.

**Ghana**

The total number of stories collected in *Ghana* was 1,256: a total of 842 water users' stories and 414 water professionals' stories were gathered.

Dr Irene Guijt, the SenseMaker® pilot liaison person and lead consultant, was in Ghana in January 2012 to take the Triple-S team through the analysis of the SenseMaker® data. Jointly, this group developed an agenda for an upcoming sector learning event: the National Level Learning Alliance Platform (NLLAP) meeting. The group also articulated relevant probing and sense-making questions which were linked back to the set of questions that would or could usefully be discussed at this platform. Data was analysed using SenseMaker® software to construct triads and dyads[14], and Microsoft Excel was used to create tables and figures.

The concept of SenseMaker® and the analysed results were presented at the NLLAP meeting on 26 January 2012, and yet problems arose when people expected to have practical, hands-on work analysing the SenseMaker® data using computers to manipulate the data.

The lessons distilled by the Ghana team from their experience included (Abby and Dzansi, 2012):

- Water users liked to be interviewed and freely shared their stories but the use of the word 'story' prompted respondents to share long narratives with multiple messages as they associated it with 'traditional stories'.

- Water professionals were reluctant to share stories as several of them thought that one had to be 'knowledgeable' and had to share a 'rich experience'. The use of direct story entries and answers to

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[13]   NVivo and QSR International are two different qualitative data analysis software packages.

[14]   Relevant variables are depicted in dyad and triad representations. In a dyad, two variables are presented as opposites in a polarity. In triads, three variables comprise the points of a triangle and represent evenly balanced labels with the centre representing a balance where all three variables are equally present. In both dyads and triads, story tellers select the point on the polarity, or in the triangle, to indicate how the story relates to the labels.

the signification framework via the 'Collector' website did not work well as practitioners felt no motivation to respond. They preferred speaking about their experiences rather than writing about them.

- There were concerns within the Triple-S team about the payment structure undermining the sustainability and quality of the work. Payment-per-story as an incentive is designed to encourage maximising the number of stories gathered per day and may lead to enumerators rushing the collection process as opposed to ensuring quality 'artefact' gathering.

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**BOX 7: FEEDBACK FROM STAKEHOLDERS IN GHANA NLLAP, JANUARY 2012**

- Stakeholders wanted to know how different SenseMaker® was from the conventional monitoring and evaluation (M&E) tools. They were curious to find out if SenseMaker® was a replacement of conventional M&E practices.

- There were concerns about how the body of data was cleaned by the SenseMaker® software and the team to ensure that the data analysed was accurate and there was capability to reduce the error margin as much as possible.

- How frequent stories will be collected in a year for the purpose of tracking and building on the baseline data that has been collected already.

- What informed the decision to collect as many stories as was the case? How was the total stories collected representative of the sample size?

- Were story collectors trained to ensure that stories collected were stories that addressed the prompting questions, and not because this was the story the storyteller told even if it was totally irrelevant and did not address the prompting questions?

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## 5.4 SECOND STORY COLLECTION ROUND IN UGANDA

The lessons from the first round of story collection in the two countries showed that the introduction of SenseMaker® in the sector had to be reconsidered to enable stakeholders appreciate more of its added value rather than how it works.

### 5.4.1 Scale and approach to story collection in Uganda

The second round of story collection took place in Uganda in November 2011. Prior to this round, the Triple-S Uganda team rebranded SenseMaker® as an accountability initiative that seeks to influence rural water services delivery by capturing the voices of water users and experiences of professionals. In the rebranding process, Triple-S and UWASNET developed a strategy for story collection from professionals. UWASNET is a membership organisation with over 150 membership organisations active in the Uganda WASH sector and has representation at regional level.

In a bid to motivate sector professionals to share their experiences on a quarterly basis, Triple-S in partnership with UWASNET, started an accountability initiative through which professionals were asked to share their experiences every quarter. To motivate professionals to share their experiences, quarterly raffles, or drawings, were planned that provided opportunity for contributors to win android phones pre-installed with sector monitoring applications. The phones were valued between US$ 70 and US$ 100 per phone.

In September 2011, an article on the Triple-S/ UWASNET accountability initiative was published in the UWASNET quarterly newsletter to encourage professionals to share their experiences. Information on the quarterly raffle drawings was communicated. In order to guide professionals in filling the signification framework, a guide was developed and sent as part of the UWASNET newsletter. The

guide and the signification framework for professionals were also uploaded on the UWASNET website for easy access.

To complement the story collection process with UWASNET, Triple-S Uganda planned to collect stories during sector events at the national level. At the water user level, Triple-S Uganda planned to continue using trained research assistants to collect stories from the water users.

### 5.4.2 Results from second round of story collection in Uganda

For round two, 390 stories were collected: 350 from arbitrarily selected water users (400 was the original target) and 40 from targeted professionals (300 was the original target). The story collection strategy developed together with UWASNET did not work as required. Despite weekly email reminders to UWASNET member organisations, only two stories were submitted. Interviews had to be conducted with professionals in order to get stories. Collection of stories from the planned 80 national events also did not work due to delayed response from the Ministry of Water and Environment on the request to conduct interviews.

Collection of stories from water users went well, 350 stories were collected from Kabarole and Lira districts. The same data collection strategy used in the first round was adopted. Six research assistants were identified, oriented on the use of the signification frameworks and received logistical and financial support to collect stories. In each of the districts two sub counties (same as in round one) were selected. At parish level, the water users were randomly selected.

## 5.5    STORY COLLECTION FROM ACTORS IN THE INTERNATIONAL ARENA

In the first round of story collection from the international arena, 'professional's level' stories were collected through several collection methods:

1.  The Triple-S international team (IWS) designed business cards, inviting stakeholders to go to the website to share a story. These cards were distributed at events and meetings.

2.  An invitation e-mail was sent by Harold Lockwood, head of the international team, to people in WASHCost's database and personal network of Triple-S staff.

3.  Fragments from policy documents and emails were entered into the SenseMaker® system by an external signifier (See section 5.2).

There was about a 50% return following three prompting e-mail 'shots' to people that Triple-S and WASHCost projects knew well and/ or who was part of the Triple-S network.

The issue of incentives was, however, a recurring topic. Encouraging a range of sector professionals to share a short experience and answer the signification questions remained the biggest challenge for water professionals.

The team repeatedly found that professionals approached for story contribution felt the need for more detailed guidance on the purpose of SenseMaker®. In retrospect, this framework was seen as just another survey randomly sent to people's inboxes. This could have been improved on by providing a better explanation on what the Triple-S SenseMaker® campaign was about and why people were asked to take part. In retrospect, a more promising manner could have been for the well-known public faces of Triple-S to individually address and send the email requests with the link to the signification framework to this audience.

Of the stories collected, many talked about the latest policy finding instead of describing an experience. The team decided to ask story tellers to write their stories as if they were telling them to a friend/ colleague at dinner, for example.

Based on the feedback and the lessons learnt, the prompting question was changed to:
> *Can you tell us about one specific moment or situation when you most recently felt hopeful or discouraged about rural water supply and why this situation or moment made you feel this way?*

Overall, the pre-testing and first round of story collection achieved its initial goal in terms of story numbers, as it was envisaged to collect 100 stories of professionals. In the end a total of 180 stories were collected. Some 77 stories from water professionals were about Ghana; 35 about Uganda; and 68 from other countries/ global. Of this last category, a much smaller number of stories were, in fact, found to be relevant in terms of story content and signification—around 20[15].

Sense-making of the analysed story patterns was undertaken during a team learning retreat in Brighton together with an external learning facilitator, based on a report prepared by Cognitive Edge in April 2011. Meeting participants further acknowledged that the quality of stories and their use was critical.

Participants at this gathering determined that the usability of the story sets was unsatisfactory as stories were too dispersed geographically and not focused enough on international water policy level. Another problem was that the stories did not seem to relate to the responses story tellers gave in the signification framework; the IWS interpretation of some of the answers were completely different than the story tellers' interpretation. This could be related to the fact that too much Triple-S jargon was being used in the signification framework.

Due to the small number of relevant stories and apparent inconsistencies between visual clusters and what related story sets seemed to tell, team members could not do a proper analysis of the stories collected.

Discussions during the April 2011 learning retreat and the following Annual Review and Planning Meeting of Triple-S concluded that more targeted story collection strategies and a more focused set of questions (with less jargon) was needed before continuing the international-level story collection. It was also acknowledged that a system of ongoing story collection needed to be created.

Following these discussions, two changes were made:

1.  Separate the international water professionals from the national water professionals, meaning that two different (but linked) frameworks would have to be developed suitable for both groups.

2.  Integrate the Triple-S building blocks into the international and national professionals' signification frameworks[16]. These discussions and decisions led to two new signification frameworks[17]—one for international water professionals and one for national water professionals—with the same adapted prompting question:
    *Imagine that you bump into a former colleague in the corridor who asks 'How are your rural water programmes going these days? Are things improving or getting worse?'. You remember a specific moment, experience or process that made you feel encouraged or frustrated. What would you share?*

### 5.5.1 Continuous flow of story collection from international professionals

Following the first collection round it was acknowledged that a system of ongoing story collection needed to be created. To stimulate a continuous flow of story collection for the international water professionals, three new strategies were considered over the summer of 2011:

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[15]  The original Water Professional's Framework used for the first round of story collection in March and April 2011 was revised into two separate Signification Frameworks— for International and National Water Professionals. See annexes 1 and 2 respectively.

[16]  Triple-S has identified a number of key actions in the shift towards the sustainable delivery of water services. These 'building blocks' are described on the following webpage: www.waterservicesthatlast.org/Resources/Building-blocks

[17]  See annexes 1 and 2 International and National Water Professionals, respectively.

1. To create a calendar of main events or moments where international water professionals meet and use these moments to collect stories.

2. To collect stories from Triple-S and IRC staff members. (It was considered very important to develop a system of sending monthly reminders to team members to contribute stories and experiences in an ongoing manner.

3. To source fragments from the travel reports of IRC and Triple-S colleagues to feed into the SenseMaker® Collector.

While the third strategy was never operationalised, a significant effort was made to operationalise the first two strategies.

## 5.5.2 Story collection at international events

In addition to the email campaign and interviews, the team made a significant effort to collect stories from international water professionals at a range of WASH sector events in 2011 and 2012.

**Stockholm World Water Week (August 2011)**
The Stockholm World Water Week was the first event where international water professionals were asked to contribute their story to the Triple-S SenseMaker® initiative; in a trial run of story collection at an event.

Triple-S postcards were circulated inviting people to write and submit their story either on the postcard or via direct entry on the Collector website in a laptop at the Triple-S exhibition stand. The incentive for story contribution was a daily drawing in which participants could win a copy of the recently published *Supporting Rural Water Supply* book by Lockwood and Smits (2011). A disappointing total of 27 stories were collected over the course of the week. The main reason for people choosing not to contribute and signify a story was that doing so would have required too much of their time (+/ - 15 minutes).

**Kampala RWSN Forum (November 2011)**
During the Sixth RWSN Forum (29 November – 1 December 2011) IRC International Water and Sanitation Centre, Triple-S, NETWAS Uganda and RWSN joined efforts to collect video interviews with signification through SenseMaker® using a story booth format. The story booth was set up in double-sized exhibition stand conveniently located near the refreshment stand of the exhibition tent hall.

The story booth at RWSN 2011 was set up as an inviting venue that welcomed forum participants to use seating spaces to meet, relax and enjoy refreshments; story telling was optional. A team of six interviewers with journalism training actively recruited and captured the stories of story tellers using handheld 'flipcam' video recorders in nearby reasonably sound proofed story booths. Following recording of their story, the story owners were supported to immediately use an offline version of the signification framework at a bank of laptops next to the story booths. Enthusiastic story owners started to return with additional stories and some specifically requested the digital file of their story for sharing with colleagues and posting on their organisations' website. Triple-S provided the RWSN Forum organisers with a professionally edited, daily re-cap video compiled from interviews gathered the previous day. These were shown daily at the Forum's opening session.

A total of 109 stories were collected over the three-day gathering and with story owners' permission, these were made available on an IRC-managed YouTube playlist. While this was a satisfactory result in terms of the target the team had set for itself (between 80 and 100 stories), the team gleaned two lessons from the story booth format for story collection:

**Firstly**, the costs of preparing and operating the story booth were fully accounted to ascertain the cost per story of such an extensive collection strategy. A conservative costing indicated that € 165.92 was required to collect each of the 109 stories during the test-run of the story booth and offline collection modality. Costs that could be avoided or reduced in a similar repeat exercise were also identified and it

was determined that the total cost per story could be brought down to approximately € 108 per story in future.

**Secondly**, despite the expectation that the story booth would result in a significant increase in the number of relevant stories for IWS's purposes, the stories gathered were from local, national and international levels. While this was not a problem since coding was used to be able to disaggregate across these levels for analysis purposes at a later stage, the content of many of the stories across each of these levels—while extremely interesting—was of little additional analytical value for the purposes of the IWS. This further reduced the affordability or value for money aspect of the exercise from an IWS perspective.

### London learning event (January 2012)

Around 50 stakeholders participated in the London Sustainable WASH learning event held on 31 January 2012. This workshop built on activities from previous learning events in 2010 and 2011 to expand the dialogue and learning about WASH sustainability to more European-based organisations. The event was co-organised by IRC, Aguaconsult, Water for People, WaterAid and Global Water Challenge, and hosted by the international consultancy Arup.

SenseMaker® was presented in plenary and participants were invited to share their stories either by recording a brief story on video or paper. A total of 15 stories were gathered. As this one-day event had targeted a specific audience, it was less challenging to get the 'right' people to contribute.

### Marseille World Water Forum (March 2012)

Following these experiences of gathering water professionals' stories at global events, the Triple-S team, together with Dave Snowden (Cognitive Edge) and Irene Guijt (CE liaison person), held a strategy re-think at the end of February 2012. A seeming impasse in the analysis and sense-making phase had been reached. To reduce the story collection effort for the international water professionals input, Dave Snowdon suggested that Triple-S recruits an expert reference group. Members of the proposed reference group would be exposed to the emerging findings of the national professionals' and users' datasets. The intent was to harness their ideas on the emerging issues at several moments during the year in the hopes of breaking the sense-making impasse. This meant that the main SenseMaker® ambition for the Marseille World Water Forum (WWF) shifted in focus to the recruitment of this panel of experts.

To support the recruitment, IWS developed a series of postcards with key messages about the preliminary findings and to obtain email addresses of interested professionals—both national and international—to be contacted after the WWF to obtain their analysis and opinions about the data.

Senior programme officers of the IRC that attended the Marseille WWF supported expert recruitment by networking with their personal contacts. Nevertheless, this activity was not as successful as hoped for since:

1. it was hard to target the 'right' people for recruitment as the WWF normally welcomes a broad variety of water sector actors;

2. the 'potential experts' were not interested to commit to this kind of activity due to lack of clear costs and benefits to their domains of interest or responsibility;

3. the incentive to participate in this kind of panel was unclear; and

4. the findings on the postcards did not trigger an immediate reaction, etc.

### Lessons learnt on story collection at events

1. SenseMaker® activities should take place at more targeted rural water events, such as symposia, or smaller sector meetings to reach the right audience, for instance the London learning event.

2. The types of stories required to capture and understand changes at the international level are distinct from the types of stories from water users. There are particular challenges for reaching the targeted

actors in the 'professional' community; both nationally and internationally. There are simply fewer sector actors in this 'professional' group, which therefore requires a strategy to collect multiple stories from the same professionals on a recurrent basis.

3. It is hard to find incentives for people to contribute stories. The team gathering stories from the global level devised three incentives.

■ Access to the stories, to be used in some of the actors communications outputs, such as newsletters.
■ Direct involvement in the analysis.
■ A chance to win a copy of the Supporting Rural Water Supply (2011) book.

These incentives did not prove momentous enough to generate the desired response.

## 5.5.3 Collection from IRC staff members

As representatives of the international arena, IRC colleagues were also approached to start contributing micro-narratives in an ongoing manner for the SenseMaker® collection. In the autumn of 2011 a series of 15-minute meetings with IRC and Triple-S staff were organised. Given the interest in the way the SenseMaker® method works, the prompting question was provided in the meeting invitation to provide colleagues with time to reflect on the type of story we were interested for them to provide. Meeting time could then be spent on providing details on the 'how' questions about the method, while story owners conducted signification.

Staff's micro-narratives were gathered into the Triple-S Collector interface and staff received individual instruction on use of the signification framework. A total of 25 stories were collected through this exercise. This was a helpful means of introducing staff members to the SenseMaker® method to the IRC staff. However, while Triple-S staff felt that it should be a regular practice of staff members to contribute stories/ fragments to the SenseMaker® this embedding of the practice by staff in their routine monitoring tasks never materialised. This was partly due to the lack of immediate potential link of the input (stories by IRC staff) to an institutionalised IRC monitoring approach, but also due to Triple-S' discontinuation of the method within the following year.

The Triple-S IWS decided to discontinue use of SenseMaker® as one of its activities by early 2012. The results from the first year of collection and the high costs involved in gathering worthwhile datasets were found to yield insufficient results to justify its continuation.

# 6.   MAKING SENSE OF METHOD REJECTION

How then does one assess the merits of an approach? This section outlines three criteria levels to assess the merits of the Triple-S SenseMaker® pilot. These are the professional American Evaluation Association (AEA) evaluation standards, the organisational conditions for success or failure, and the claims of SenseMaker® in terms of complexity and utility.

## 6.1   THE FIVE EVALUATION STANDARDS

When is a monitoring or evaluation process good enough? According to the AEA (JCSEE, 2013), five evaluation standards should be used to guide evaluation professionals in designing and implementing their approach. These standards are: utility, feasibility, propriety, accuracy and accountability.

This section draws on Patton's use of the standards[18] to assess the Triple-S application of SenseMaker®.

1.  **An evaluation approach that has utility is one in which programme stakeholders value evaluation processes and products for meeting their needs.**

This standard raises the question of who uses the information, in which way, and for what purpose? And is this considered useful to the users?

During the design phase in January 2011, one of the first exercises undertaken was to outline who Triple-S hoped would be using the stories and in what way.

In summary, in Ghana water policy makers and Triple-S staff attended two sessions of story analysis: the first more elaborate than the second. During the first, there was considerable enthusiasm after the session, while the second left people with more questions about the methodology than useful insights.

In Uganda, water implementation and Triple-S staff attended two story analysis sessions. For the IWS, Triple-S staff and the IWS external learning facilitation team from the Institute of Development Studies, University of Sussex in Brighton, United Kingdom, were involved in two sense-making sessions, neither of which left team members convinced that they were looking at useful or even accurate patterns.

In hindsight, the key impediments were:

■  Specifically, the lack of capacity to analyse the material in relation to the questions that were most relevant at the time of the sense-making sessions led to a lack of conviction that SenseMaker® added value.

■  No clarity of what vision of 'learning with partners' was driving Triple-S in-country and how different kinds of evidence were put to use in debates and planning.

■  There was a data quality aspect that influenced the use of the tool. People simply did not feel that the data was revealing new insights or that that they were looking at reliably valid information. In other words, the prompting question did not lead to stories that added value.

■  Sample sizes were not large enough and story collection was not repeated frequently enough to be able to detect changes.

■  Better use of the tool could have been derived by adding a set of targets to particular story patterns and developing a process of judgement against such targets. This would have required clearer targets (not an aspect embedded in the Triple-S vision of system change which was more adaptive and emergent), and recurrent and comparable story sets over time. Such an approach could have been the basis for making judgements—an essential aspect of evaluative practice—about what was

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[18]   This section is strongly inspired by a meta-commentary (internal document only) written by Dr M.Q. Patton on how GlobalGiving was using SenseMaker® in their 'Story Process'. Dr Patton uses the five standards to assess overall merit of the GG story process and discusses the interwoven nature of these standards.

shifting or not, opening the door for discussions about possible causes. To be evaluative, the data needed to be subjected to rigorous sense-making and judgments.

- Data emerging from the framework could not answer the overarching programme questions easily or convincingly according to programme participants.

## 2. An evaluation approach that is feasible is one that contributes to the effectiveness and efficiency of evaluations.

Feasibility in this case encompasses collection, storage and access, and sharing. It is intertwined with use; ultimately the lack of feasibility made it not useful. Initially, it appeared as if Triple-S did not or would not experience major problems with 'feasibility'. Over time, the anticipated large volume of data would have been usefully stored and shared via a safe and accessible location. The common frameworks would have also facilitated sense-making from a diverse range of contexts, experiences and users and professionals. A range of incentives were tried to reduce the cost of data collection, with much brainstorming about how people whose experiences the team was keen to hear about could be encouraged to share stories in an ongoing manner.

However, these processes never took off, in particular failing for the international policy perspective. The team therefore, never had the volume of stories that justified a secure and accessible storage online. Furthermore, the technological sophistication of SenseMaker® software on the one hand, and its turgid structure on the other, proved a barrier for anticipated users in terms of analysis (also see below under section 6.4.1 *Software applications and functionalities*). Even those who received considerable training (see box 9 below), felt unsure about how to look at the data, know what it was they were looking at, and then know how to use it for sense-making. The aspects of low cost and low threshold analysis to ensure efficient use were not delivered during the course of this experiment.

## 3. An evaluation approach that meets propriety standards is one that is proper, fair, legal, right and just in the evaluative process.

One of the prime motivations behind the choice for SenseMaker® was its potential to bring people's voices into the room. Indeed the water users' stories proved to be the most valued for longest in the process. First to be dropped were the international policy perspective; too much effort for too few stories that gave useful insights. Then the professionals, again due to difficulty to obtain sufficient stories over a longer time period, were dropped. And in the end, also the water users were dropped.

The process did give a *platform for the voices* of hundreds of local water users' experiences with their rural water supply; and there were a few professionals *listening* to these voices in sense-making sessions. But they were *not heard* in ways that led to different or better ways of bringing water to rural peoples' homes. Giving a platform to voices does not mean these voices inform decisions that lead to improved development efforts. Not a single decision was taken within Triple-S that emanated from the analysis of the self-signified water stories. Hence, while propriety standards were met in a strict sense, the cycle of listening to the voices and acting upon them was not completed given the lack of confidence in the validity of the emerging results.

## 4. An evaluation approach that is accurate is one that leads to dependable and truthfulness of representations, propositions and findings, especially those that support interpretations and judgements about quality.

Accuracy can be seen as truthfulness of a story, which was discussed during the pilot phase but leading to a general appreciation of their truth. But accuracy goes much further and touches on consistent information—information that one felt confident about in terms of what it was showing, justified conclusions in relation to the aims and intended beneficiaries of Triple-S, made explicit evaluative reasoning, and was accurate in communicating and reporting results.

As with any data collection and interpretation approach, the quality of a SenseMaker® process is affected by what happens during framing, collecting, transcription, analysis, sense-making and feedback. In brief, here is where quality assurance was sought or unclear.

- *Framing*: The key principles and aims of Triple-S (themselves based on the latest thinking in the rural water sector) were used to guide the question framework. The draft framework was tested internally

and then externally with a diverse group of critical allies in the water sector, before being field-tested in all three contexts of intended application, revised, and piloted more extensively; prior to the framework's implementation at scale. So far, so good. However, despite the extensive pilot testing, the limitations of the prompt were not revealed, which during the analysis phase led to limited use. In part this was due to limited critical reflection during the field-test itself. Those responsible for the field-test may well not have known how to assess if the question prompt was leading to the kinds of stories that were going to be useful.

- *Collection*. What is unclear is the care with which sample sizes and frameworks, training of enumerators, implementation of the sample framework, and documentation of stories were undertaken in the countries. It is unclear how respondents reacted to the unique triads, although field guides were produced to guide enumerators in explaining these.

- *Transcription*. It is unclear whether error, if any, occurred in transferring answers from paper collection formats to the database.

- *Analysis*. It is clear that Triple-S staff had varying capacities to make the most of the data. However, Triple-S staff found the analysis undertaken by an external consultant and produced an extensive report to be inaccessible. This was due to the opaque nature of the analytical steps taken by the consultant and the lack of rootedness of the 'findings' in the contextual detail of the project. The explicit ambiguity of the question framework made research staff familiar with other approaches (standard surveys or in-depth qualitative work) lack confidence about how to interpret what they were seeing. Snapshots from the analysis of the story sets and the associated visualisations of the data are presented in annex 5. Besides pilot testing the questions (see under 'Framing'), what might have been useful would have been a simulation of an analysis and a sense-making session with fictitious data. This may have helped in terms of the capacity to undertake the analysis with a sense-making intention. Some capacity building on analysis was undertaken (see box 9), however, potential pitfalls in the design of the signification frameworks were not teased out in advance. For instance, due to the formulation of the signification frameworks, analysis between triads did not lead to useful or meaningful results. It was only possible to do analysis of triads together with the multiple choice questions. This shortcoming would have been spotted and remedied had the team been guided to run a simulation analysis and sense-making session.

- *Sense-making*. The events in which the patterns and story clusters were used varied in terms of their preparation, participation and length (not more than half a day though). Overall, with one exception (the first session in Ghana), water sector professionals did not consider the actual insights useful, interesting or surprising enough. Too much confirmation of the known led to the 'insufficient value for effort' conclusion. More importantly, Triple-S staff and water professionals in the learning sessions never fully understood the SenseMaker® approach well enough in order to feel confident about the signals or patterns they were presented.

- *Feedback*. Little to no feedback of summarised data and conclusions was given to the water users. The intended water professionals were offered feedback, but many did not take the opportunity to participate when the presentations were scheduled.

In the case of Triple-S, the team concluded that the lack of credibility and confidence in the data by intended users, notably by Triple-S staff, was a strong factor in rejecting the approach.

5. **An evaluation approach that is accountable is one that is documented well and scrutinised with an intention to improvement and account for the evaluation process and outputs.**

Throughout the 18 months, many lengthy discussions, several working sessions, pilots and process documentation were undertaken to critically look at the process and identify areas for improvement. This working paper summarises this process with the intention to share the journey and explain what worked and what did not work. It is the embodiment of this standard, and has been met well by Triple-S.

## 6.2 CAPACITY, CONTINUITY AND CULTURE: THE ORGANISATIONAL CONDITIONS FOR SUCCESS

Meeting these standards requires an organisational investment. But what factors seem critical for success? During the Triple-S process, whenever the team hit another hiccup, informal discussions led

them to identify a series of conditions that seemed to be lacking. With hindsight, three conditions seemed to be consistently inadequate, which contributed to the demise of SenseMaker®: capacities, culture and continuity.

## SenseMaker® demands very specific and sophisticated capacities

- In the *design* phase, stakeholders involved in shaping the question framework were asked to let go of the notion of standardised indicators and shift to embracing the notion of 'intentional ambiguity'. Concepts and principles were used to guide the design process, rather than targets and milestones. The Triple-S staff involved at the first stage in design quickly grasped the notion at the design level. The implications of such ambiguity for analysis only became apparent later.

- In the *collection* phase, staff needed several capacities, many of which applied to any kind of survey approach: to design a solid sample frame, to ensure enough data sources are contacted and surveyed, to train enumerators adequately, to devise incentives to ensure ongoing data collection and to ensure adequate compilation. However, as SenseMaker® seemed to require a different data-collection process to organise than a standard survey, the team did not apply the required collection design capacities in time to make a difference.

- In the *sense-making* phase, skills were needed to convene the right people and to select relevant angles of analysis to present and discuss. Skills were also needed to facilitate critical reflections that confirmed existing activities and identify those that those that were new from those that needed to be stopped. None of these requirements were unique to SenseMaker®. In particular, the process lacked capacity, people lacked confidence and there was inadequate external guidance from Cognitive Edge and the liaison consultant around sense-making based on story patterns and clusters, notwithstanding targeted training efforts and offers of coaching (see box 9). Interpretation did not take place. Without in-depth and focused sense-making 'what is this telling us about our strategy?', the tagged stories did not add value to Triple-S's work.

It is also important to raise the question of whether SenseMaker® has the sensitivity to detect useful kinds of changes. The team designed the process more as a widely-cast diagnostic tool, rather than a more focused approach to signal emerging needs requiring immediate attention.

## BOX 8: CAPACITY BUILDING – NOT ENOUGH AND NOT APPROPRIATE ENOUGH

In January 2011 Cognitive Edge piloted an online course on *Designing and delivering a SenseMaker® project*. This course was open to individuals working with Cognitive Edge practitioners on active projects. From Triple-S it was decided that the learning team members would follow this course to build their capacity. This online course focused on narrative research: basic instrument design, configuration, reporting, and selling a project. After completing the online course all participants were to have a deeper understanding of the process of designing and executing a SenseMaker® project and the basics of generating insights and report outputs with SenseMaker® Explorer.

Following the course (not fully participated in by all Triple-S staff), participants still felt uncomfortable with presenting the method and doing analysis on their own. During a meeting in February 2012 Dave Snowden recognised that, indeed, the training materials used for the online training did not present the difference between inductive and abductive reasoning as they relate to design and data analysis. Another issue is that the online SenseMaker® training focused on use of the Explorer software, not on skills related to conducting analysis and sense-making of patterns that Explorer helps illuminate. This training and capacity deficit was evident only once we reached the analysis stage.

Subsequently, a *face-to-face two-day training* was undertaken in May 2012 for the learning team members. Participants' needs were assessed prior to this workshop and Triple-S staff helped shape the content. Nevertheless, this proved insufficient for increasing Triple-S staff confidence with making the most of the data. It is unclear why this was the case.

Mid-way through the process, *regular coaching sessions* were suggested but Triple-S staff never responded to this option.

**Continuity to ensure progressive improvements as capacities improved**
Given the capacities needed, continuity is a valuable asset. During the 18-month pilot period, there was a turnover of almost 90% of staff involved with SenseMaker®. The liaison person/ lead consultant interacted with four different lead people from the Triple-S team during this period. Inevitably, much time was needed for communication, time delays ensued and it was not possible to ensure an accumulation of capacity for a group of dedicated staff. The lack of continuity contributed to a lack of confidence in the data and thus lack of motivation to pursue the work.

**The role of organisational culture and communication**
Triple-S sits in an organisation that conducts action research. The IRC has a Netherlands-based office that has traditionally guided vision and approach, ensured funding and administration and facilitated in-country work. However, in the late 'noughties' (2000s) IRC commenced with a process of internationalisation and decentralisation based upon the principle of subsidiarity. This means that where relevant, authority over operational and programming tasks and decisions is located within IRC's country-based teams and programmes. This structure had several practical implications, notably a very indirect relationship between the lead consultant/ CE liaison and in-country coordinators of the Triple-S SenseMaker® exercise. This contributed to lack of clarity, time lags and eventually lack of strong ownership over the process in-country.

## 6.3      POTENTIAL AND REALITY

Section 4.1 lists the potential positive characteristics of SenseMaker® as considered interesting by Triple-S. Revisiting these characteristics shows that, overall, SenseMaker® did not work well for Triple-S in relation to its potential positive characteristics.

**Access the collective experiences of stakeholders and to hear what really matters to people.**
The experiences collected were perceived as too fragmented and not always relevant to be useful in all cases. The prompt and scope/ scale of seeking voices about rural water could have been improved for greater focus and therefore relevance.

**'Monitor' weak signals that can alert users to the need for possible adaptive action.**
One can only monitor for adaptive action if there are regular moments of story collection and analysis, plus sense-making. The process was terminated prior to having several cycles of story collection at a scale that could have helped detect shifts in story patterns. Very quickly in the process, in-country teams shifted to an annual collection/ analysis cycle given the time needed to undertake the work. The idea of recurrent analysis was not considered feasible, nor did we work out what data might be useful to store in a dashboard and help us keep a finger on the pulse of Triple-S' work. Finally, it was not clear what a 'weak signal' was and who would decide when 'weak' was indeed weak.

**Monitor complex issues while reducing the likelihood of gaming of answers.**
Answers were probably not 'gamed', that is formulated to a story teller's advantage in some way. The framework itself was neutrally formulated. However, the scale, scope and sampling of story sources are unlikely to have led to a full enough picture of the complexity of issues. Furthermore, it is likely that the net was cast too wide with the prompting question to make detection of systemic changes unlikely.

**Generate comparative data through a unifying signification framework.**
The unifying framework existed to some extent; however comparative data across regions, countries or time was not possible due to small numbers and lack of clarity between the countries about comparability of respondents. With hindsight, use for international policy level was inappropriate. There was a mismatch between the unit of analysis (a story of what is good/ bad about the rural water sector), the rate of change (slow), the scale (global and therefore vast) and therefore the way the system

was being described. A handful of stories could clearly never be used to describe global views on shifts in rural water.

**Merge the merits of quantitative and qualitative data by iterating between the statistics about experiences and individual stories.**
This was and remains technically possible. However, the merits of this iterative process did not add value to Triple-S as no sense-making was undertaken by Triple-S staff.

**Unanticipated discovery through pattern visualisation.**
Triple-S project team members claimed that no surprises emerged from the data. As a result they felt daunted by the prospect of presenting the analysed findings in a public forum.

**Reduce researcher bias through self-signification.**
While researcher bias was reduced, it is unclear what other biases might have been introduced via the 'triad' form of questioning or the sample framework.

## 6.4    CONCLUSIONS AND RECOMMENDATIONS

This section deals with general conclusions as well as selected specifics pertaining to the three geographical sectors where the pilot was conducted, being Uganda, Ghana and in the international arena.

### 6.4.1  General conclusions

The main conclusions that the team came to were that the Triple-S pilot with the SenseMaker® method was not useful. This was mainly due to a lack of feasibility and the perceived inaccuracy of the data. SenseMaker® was oversold for its potential to serve the project as our key monitoring tool when in fact it was under-developed and promised functions were not available in beta form at the time when the project would have benefited from them. In addition, while propriety standards and evaluation accountability standards were met, training efforts were not well suited to our monitoring and action research needs and we did not succeed to mobilise sufficient capacity.

Problems that contributed to the lack of feasibility of the method included:

**Software applications and functionalities**
The SenseMaker® software suite was at an earlier beta-level stage of development than initially realised. It did not enable the simple analysis that the team assumed would be possible. Triple-S was told that certain kinds of technology and data collection modalities were already available and easy to implement. However, offline data collection, use of smart pens, smart phones and tablets for data collection were not available as CE had initially indicated. It became evident that the decision to take up these modalities would require that CE create the functionalities at a cost to Triple-S, while these costs were not specified.

**Analytical framing by CE**
CE did not articulate the importance of the difference between abductive and inductive approaches until after all the data collection rounds were completed. This distinction was not included in the initial training and not addressed during the framing of the questions and analysis steps. This oversight was only noted after the Triple-S team's enthusiasm waned. The relevance of the distinction between these approaches remained beyond the realms of the monitoring and learning practice accessible to the field teams for translation into their work in engaging with sector actors. Ironically this insight would have reduced the expectation of data 'surprises' and would have helped to explore assumptions underpinning Triple-S.

## Expectations

CE set very high expectations and the Triple-S SenseMaker® design team, in turn, expected that the method would serve as both a project monitoring tool and an innovative means to track changes in perception of water users and professionals regarding rural water service delivery. The expectation was to use the SenseMaker®-derived information for its potential use to generate advocacy messages, to map values (such as user attitudes to services provision) across broad populations and establish relevant benchmarks. A satisfactory match between the expectations raised and the expectations to use the results was never successfully achieved.

## Relationships and communication

Contact with different CE staff created confusion about process steps, method expertise and technical support that the team could count on. Communication gaps created a space in which agreed-upon inputs could not be effectively mobilised or managed by Triple-S. For example, ten months into the pilot we learned that CE did not maintain a client-relationship management system for tracking and sharing details of contact between their team and the Triple-S team. The Triple-S liaison person/ lead consultant was not consistently updated by CE on interactions between CE and Triple-S, and this resulted in frustration when problems arose requiring intervention from the Triple-S liaison at a later stage.

## Staff and capacities

Turnover of Triple-S staff at all levels meant that there was no consistent team composition involved during the 18-month pilot. There was also no constant champion with the convening power to ensure that the Triple-S SenseMaker® team followed the training, conducted quality collections and were confident in the analysis and sense-making activities. Furthermore, in both Ghana and Uganda, the human resources capacity was limited in terms of facilitating the learning processes that dealt with vague datasets.

## Change of mind set

Triple-S underestimated what was required to achieve a mind-set shift from the team members and sector stakeholders in order to experiment with an innovative method as a means to probe patterns and jointly seek solutions.

## Learning through action research

As a proponent of action research, Triple-S was 'learning by doing'. To support the team, Triple-S entered into a support-arrangement with the lead consultant/ liaison person who herself was also learning while doing, and who had, in turn, a support arrangement with CE. On reflection, the team and liaison person concurred that the liaison person's level of understanding at the time of the pilot— about some of the critical issues mentioned above — reflected the way SenseMaker® unfolded in

Triple-S.

Overall, in 'cost-benefit analysis' terms, the Triple-S teams did not feel that the results warranted the heavy investment of time and resources, preferring instead to revert to familiar data collection methods such as surveys.

The above resulted in:

1. Strong resistance from field teams to continue once they found the benefits to their daily work and interactions with stakeholders to be disproportionate to the effort required to obtain the results.

2. Insufficient buy-in from the project management to see the pilot through subsequent rounds of data collection.

## 6.4.2 Uganda and Ghana: specific conclusions

From the rounds of story collection conducted in Ghana and Uganda, more questions than answers remained on how to take SenseMaker® forward in Triple-S. The issues we grappled with ranged from

motivation of water professionals to share their stories to the development of messages from analysis of stories.

In Uganda in particular, the strong recommendation came forth that the story collection strategy for professionals required reconsideration. UWASNET provided a good platform for gathering experiences from professionals however previous rounds of story collection did not fully exploit the potential of the network. Means for exploiting the network and clarifying the motivation of UWASNET to participate in the initiative needed more thought.

The two rounds of analysis generated issues that were simply 'not new' to the sector from the perspective of our teams and stakeholders. Moreover, shifts in discourse and mind set can only realistically be expected following a period of time longer than the average project lifespan of five or so years. In time, patterns of change may have been detected had the story collection been repeated frequently enough over a longer period. However, the team had reached a point in the pilot at which stakeholders had started to dwell solely on the value addition of the tool, yet had become reluctant to share their experiences as they had not seen outcomes from the effort. By mid-2012 the country teams had reached a point at which they had to call for an overhaul of our application of the SenseMaker® method, in particular to gain clarity on what it could provide. An important question that needed addressing was whether changes could be made to the story analysis process in order to generate messages that could input to useful reflection processes with stakeholders.

Following the rounds of story collection in Ghana, a number of particularly problematic aspects of the method were identified.

1.  The use of the word 'story' prompted respondents to share long narratives and sometimes fiction.

2.  The use of the SenseMaker® Collector website did not work as well as water sector professionals expected; this demotivated them to respond with the desired frequency, if at all.

3.  Professionals preferred speaking about their experiences rather than writing them down.

4.  The lack of sample sizes and a framework meant that the total population varied per pilot district and the results were not representative.

5.  The fact that story collectors were paid/ incentivised based on the total number of stories collected—in their quest to administer as many as possible—undermined the quality of the story collection process in Ghana.

6.  Respondents could select two or more options when signifying stories, for example a water user could select *angry/ sad*, *frustrated* and *indifferent* in response to a single signification question. If, during analysis, there was need to find out how many people were *only* angry or sad, then the challenge was how to handle three-option responses. Responses with more than one option were grouped as one, and only the first response option retained, which certainly affected the reflection of the results. This pitfall was not signalled in a timely manner and made analysis unnecessarily laborious and more cumbersome than we had been led to expect in our introduction to SenseMaker®.

7.  Ghana data entry was outsourced and cost GHc 2.00 per questionnaire. There was a major challenge with reading some of the story collectors' handwriting as they had worked in such haste. Transcription of stories was thus not as accurate as desirable.

8.  In using the SenseMaker® software, one of the challenges encountered was in the triads that had been created—it became impossible to save results either in sms document format or in the SenseMaker® software. It could only be saved in JPEG format. As a result, each time stories had to be reviewed triads had to be constructed from scratch by filtering for country, region, district etc. which was not made known in advance and proved frustratingly time consuming.

9.  Exporting triads as visuals to Microsoft Word was a laborious task. Saving a triad in JPEG format and exporting the entire window to Microsoft Word, and thereafter cropping the figure to obtain only the triad was one solution, but was time consuming and cumbersome. This was achieved more easily when using Apple Mac systems. However, Triple-S and its host organisation, IRC, use Windows operating systems and applications.

On the one hand, Triple-S struggled with the need for increased in-country capacity to own and drive the application of the method and use of its outputs. On the other hand, guidance from Triple-S monitoring and learning team members and from the Cognitive Edge liaison was lacking in clarity, consistency and timeliness.

## 6.4.3 Recommendations

Recommendations emerging from the experience of piloting SenseMaker® are classified under two aspects of the piloting experience, namely that of process management and that of monitoring method application; including adaptation, implementation and analysis.

The following recommendations pertain to the **process management** aspect of the piloting experience.

1. Obtaining useful insights from SenseMaker® requires significant experience and sophisticated skills in research and data analysis methods, as well as demonstrated experience using a range of software applications for data analysis. **Form, or recruit, a qualified team accordingly**.

2. Piloting the adaptation and use of a method in a new context inevitably entails some 'scope creep' as unanticipated costs, activities or limitations reveal themselves once the work gets into full swing. **Design realistic work plans and budgets to accommodate unanticipated changes (increases)** in scope, effort and budget, as the reality of implementation makes the necessity for such adjustments evident. Request examples of work plans and budgets from previous experiences if this will help to reduce any ambiguity of what to expect in the process.

3. Prior to entering a pilot experiment with multiple partners—with diverse motivations for taking part in the experience—**make explicit contractual agreements** about the expected process, roles of individuals and organisations, responsibilities of entities, and options for recourse should problems arise. In particular, in a situation with several parties who are 'learning while doing', the levels and types of support to be provided, exact costs for this support, and what constitutes as 'extras' that fall outside the service agreement must be as explicit as possible upfront.

4. **Establish clear lines of communication** with **designated points of contact** between the different parties, including who holds the power  'sign off' to indicate that each process step is satisfactorily completed, and that final products have been delivered to specifications.

5. As with any research and monitoring method: **document, document, document**. A record of some form that captures the critical *decisions taken, when, by whom and why* is an essential element of any experiment. Possibly even more interesting issues to capture over time are responses to the question: *What was the outcome of the process (or sub-step in a process) and what changes of course were required to move forward and why?*

A dedicated effort to document the implementation pathway of a pilot experience will help the team to learn, to understand how results are being obtained, to identify changes required to keep the pilot on track, and to take corrective action in a timely manner.  Documentation also forms the basis for communicating experience, lessons and findings to the public.

On **tailoring the SenseMaker® method** to suit the monitoring needs of Triple-S, the following specific recommendations are elicited from the conclusions in section 6.4.2 above:

1. Implement a sampling strategy (size and framework to be introduced) for subsequent story collection cycles. For example, a stratified random sampling strategy that is representative of the population size and gender distribution in the areas in which Triple-S works.

2. Rethink how to conduct analysis and sense-making to obtain useful key messages for feeding into stakeholder discussions and reflections.

3. Increase team capacity to conduct analysis and to ensure data representativeness.

4. Adjust how to engage sector actors and partners in the sense-making step.

5. Recruitment and payment of story collectors:

- More careful recruitment and training of experienced collectors is desired.
- Payment according to an agreed daily rate for a set number of (relevant) stories gathered and signified with, for instance, the potential for increased earnings for a greater number of (relevant) quality stories as opposed to payment for the total number of stories gathered and signified (in reference to point 5 in section 6.4.2)

6. Reduce possibility of selecting more than one response on signification frameworks to reduce unnecessarily complex analysis.

7. For purposes of arriving at meaningful analysis, a more precise means to obtain disaggregated results by region is required. In the case of Ghana for instance, water professionals working in multiple regions in the country were difficult to group under a single region.

8. The SenseMaker® software should be made more 'user friendly' to enable data synthesis, analysis and visualisation functions in fewer steps, with the ability to examine individual data points on stored visualisations (triads) without having to employ additional analysis or visualisation software (in reference to points 8 and 9 in section 6.4.2).

In conclusion, despite the unsuccessful attempt to apply SenseMaker® as a monitoring approach in the context of the Triple-S project, the team does not argue for its complete dismissal as an exciting or promising approach. SenseMaker® did not work for the Triple-S project for the reasons stated in this report. Other development sector and water and sanitation sub-sector initiatives are undertaking the application of SenseMaker® as a key diagnostic and research approach, with promising results emerging in relation to decision making.

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# ANNEXES

## ANNEX 1: THE SIGNIFICATION FRAMEWORK FOR (INTERNATIONAL) WATER PROFESSIONALS

### Making Sense of Rural Water: The Triple-S Story Initiative
*Thank you for wanting to contribute your experience.*

## A. Describe one specific moment or situation

1. **Imagine that you bump into a former colleague in the corridor who asks 'How are your rural water programmes going these days? Are things improving or getting worse?'. You remember a specific moment, experience or process that made you feel encouraged or frustrated. What would you share?**

2. **Please give your story a title.**

3. **The answers to your story will be analysed anonymously along with all the other stories we receive. We may also want to share your specific story with others, but we would like your permission to do so first.**

   My story can be (pick 1):

   ____ shared and read by anyone (e.g. shared in learning meetings, included in documentation)

   ____ used only for analysis by Triple S staff.

4. **Please indicate what type of organisations were directly involved in your story. Pick as many as necessary.**

| Public sector/ authorities | |
|---|---|
| | National |
| | Intermediate |
| | Local |
| Private sector | |
| | International company |
| | National company |
| | Local company/ operator |
| Non-government organisation | |
| | International |
| | National |
| | Local |
| Others | |
| | Bilateral aid agency |
| | Multilateral aid agency e.g. UNICEF |
| | International finance institution e.g. World Bank |
| | Foundation |
| | Research institution |
| | Other |

## B. Understanding your story

\*\*For each question, draw a cross within each triangle where you feel it best describes your story. The position should reflect the **balance** between the three options at each point. You are not being asked to choose between one or another of the three options. Placing your cross in the middle means it is an equal balance between the three options. If a question does not relate to your story, then tick the box 'no answer'.\*\*

### 5. In general, your story describes...

a common challenge

☐ no answer

a specific problem

a solution

### 6. The story has to do with...

policy

☐ no answer

implementation

financing
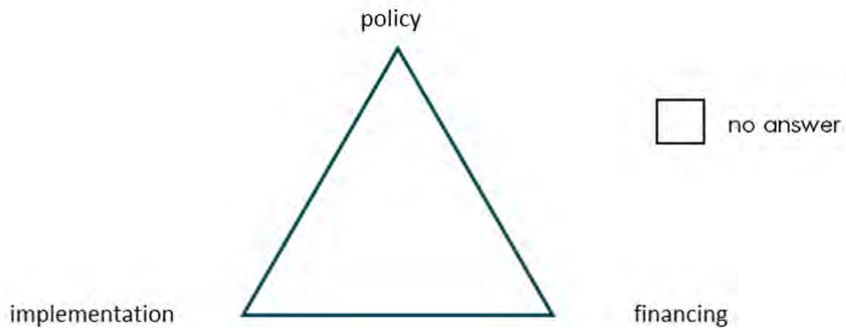
### 7a. Your story affects the following stakeholders...

water users

☐ no answer

intermediaries concerned with the issue

government
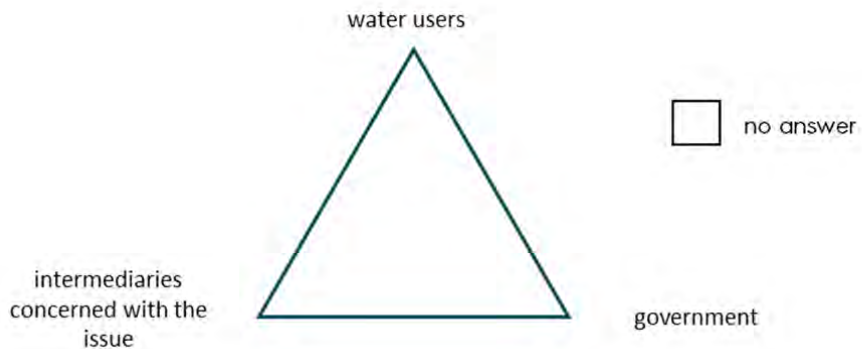
**7b. If intermediaries are affected, please specify them by ticking the relevant boxes.**

| | |
|---|---|
| | Bilateral aid agency |
| | Multilateral aid agency e.g., UNICEF |
| | International finance institution e.g., World Bank |
| | Foundation |
| | Research institution |
| | International NGO |
| | National NGO |
| | Water provider |
| | Other _____ (please specify) |

**8. Your story relates to policies and practices about... (pick maximum 3)**

| | |
|---|---|
| | Private sector involvement |
| | Delegated management of water supply services |
| | Post-construction support |
| | Capacity support to service authorities/local government |
| | Financial planning |
| | Learning and improving by sharing experiences |
| | Monitoring sustainability, indicators and targets |
| | (Professionalisation of) community management |
| | Self-supply |
| | Water resources management |
| | Regulation and accountability |
| | Planning for asset management |
| | Aid harmonisation and coordination |
| | Other (please specify) _____ |

**9. Your story is about...**

(new) infrastructure

☐ no answer

post-construction (incl. maintenance and replacement)

general sector support (governance, capacity building, policy design and implementation)

**10. Your story involves financing...**

initial construction costs

☐ no answer

minor regular maintenance

major non-regular maintenance

**11. In your story, organisations...**

work independently

no answer ☐

coordinate their actions
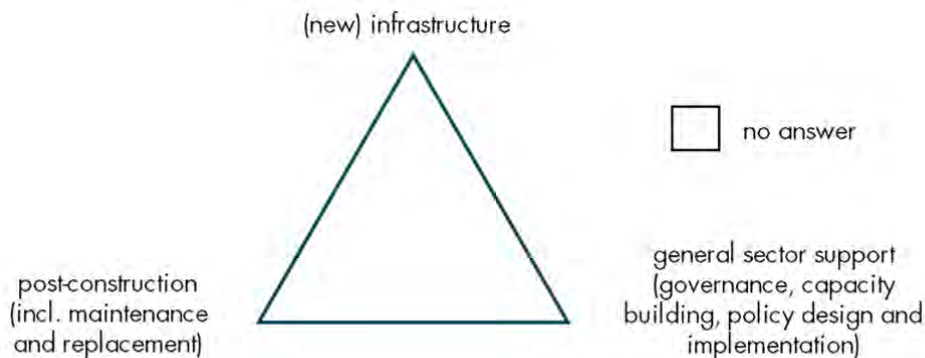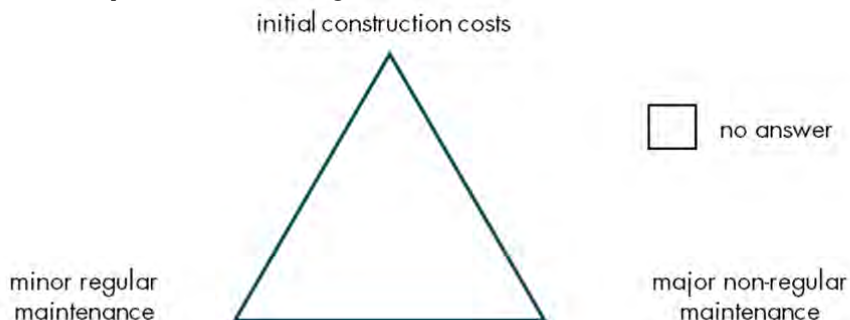
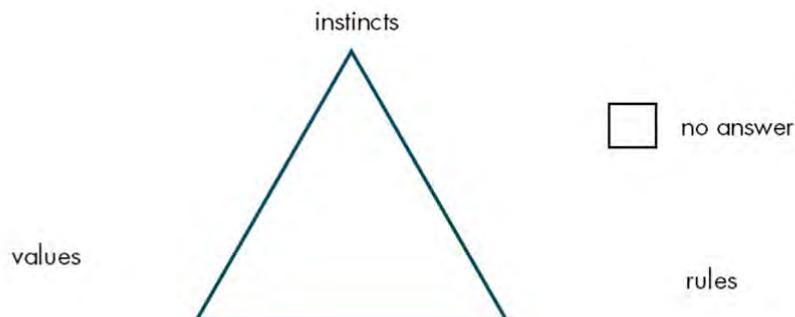fully harmonise and align their approaches

**Draw a cross at the position between the two extremes that best reflects the story. If a question does not relate to your story, then tick the box 'no answer'.**

**12. In your story, organisations...**

no answer ☐

align completely with national government policies

follow own idea of good water policy and implementation

**13. The story is about a situation in which the organisation(s)/people involved do...**

the same as always

no answer ☐

the same things but in a better way

fundamentally different things

**14a. In your story, long term responsibilities for water supply are ...**

not clear

no answer ☐

clear for intermediaries and taken seriously by them

clear for and enforced by (local) government
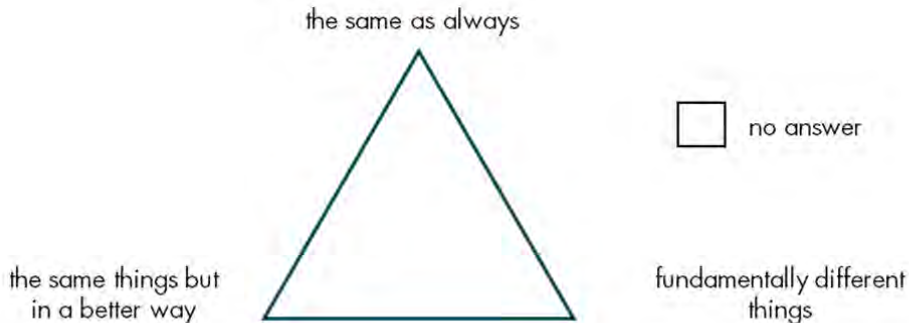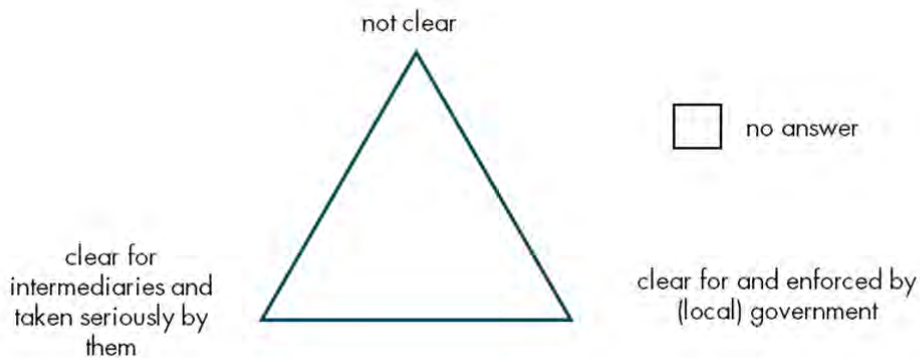
**14b. If intermediaries have been indicated to some extent above, please specify them by ticking the relevant boxes.**

|  | Bilateral aid agency |
|---|---|
|  | Multilateral aid agency e.g. UNICEF |
|  | International finance institution e.g. World Bank |
|  | Foundation |
|  | Research institution |
|  | International NGO |
|  | National NGO |
|  | Water provider |
|  | Other _____ (please specify) |

**15. In your story, the following is needed:**
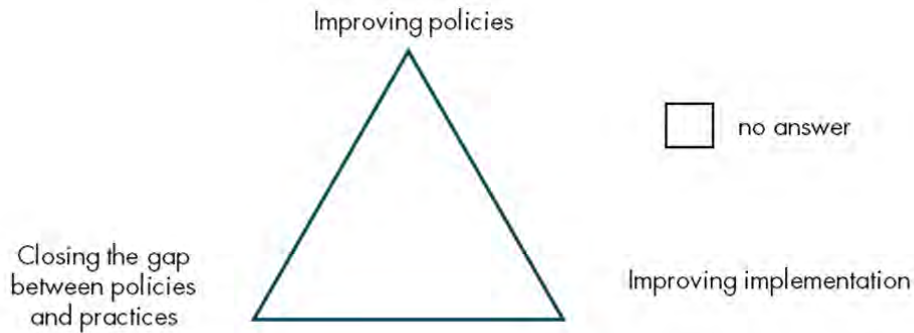
Improving policies

Closing the gap between policies and practices

Improving implementation

☐ no answer

**Draw a cross at the position between the two extremes that best reflects the story. If a question does not relate to your story, then tick the box 'no answer'.**

**16.  Your story is:**

☐ no answer

common, happens very often

a rare exception

**17.  Events in your story were influenced by...**

instincts

values

rules

☐ no answer

## C. About you and locating the story

**18. What country or region does your story relate to?**

___Ghana                     ___Africa

___Uganda               ___Asia

___Burkina Faso        ___Latin America

___Mozambique         ___Global

___Ethiopia             ___Other

___India

**19. When did the moment or event you describe take place?**

| Year | Month |
|------|-------|
|      |       |

**20. What is your connection to what happened in the story? (pick 1)**

|   | I was part of it |
|---|---|
|   | I saw it happen |
|   | I heard about it |
|   | I read about it |

**21. How do you feel about your story? (pick max 2)**

|   | proud/happy |
|---|---|
|   | encouraged |
|   | indifferent |
|   | angry/sad |
|   | frustrated |
|   | don't know |

**22. What type of organisation do you work for yourself? (tick 1)**

| *Public sector/authorities* | |
|---|---|
|   | National |
|   | Intermediate |
|   | Local |
| *Private sector* | |
|   | International company |
|   | National company |
|   | Local company/provider |
| *Non-government organisation* | |
|   | International |
|   | National |
|   | Local |
| *Others* | |
|   | Bilateral aid agency |
|   | Multilateral aid agency e.g. UNICEF |
|   | International finance institution e.g. World Bank |
|   | Foundation |
|   | Research institution |
|   | Triple-S programme member |
|   | Other |

**23. Your sex**

|   | Female |
|---|---|
|   | Male |

**24. What is your relation to Triple-S?**

| | |
|---|---|
| | I had not heard about Triple-S before |
| | I know of Triple-S but don't work with them |
| | I collaborate with Triple-S |
| | I work for Triple-S |
| | I am an external signifier working for Triple-S |

Welcome!

*Tell us a story about rural water supply.*

*By analyzing hundreds of stories using the SenseMaker® software, we are gaining insights
into the processes of change in the rural water sector – insights we will feed back to you.
The SenseMaker® approach allows you to tell us what your story means and allows us to
analyse patterns in the stories and understand progress in the sector.*

## A. Describe one specific moment or situation

1. **Imagine that you bump into a former colleague in the corridor who asks 'How are your
rural water programmes going these days? Are things improving or getting worse?'.
You remember a specific moment, experience or process that made you feel encouraged
or frustrated. What would you share?   Please tell us your story.**

2. **Please give the experience or moment you have just shared a title, or list a few
keywords that are central in your story that we can refer to as the title.**

3. **The answers to your story will be analysed anonymously alongside all the other stories
we receive. We may also want to share your specific story with others, but we would
like your permission to do so first.**

| My story can be (pick 1): | |
|---|---|
| | **shared and read by anyone (e.g., shared in learning meetings, included in documentation)** |
| | used only for analysis by Triple S staff |

4. **Please indicate what type of organisations were directly involved in your story.
Pick as many as necessary.**

| Public sector/authorities | | Private sector | | Non-government organisation | | Others |
|---|---|---|---|---|---|---|
| | National | | International company | | International | Bilateral aid agency |
| | Intermediate | | National company | | National | Multilateral aid agency e.g. UNICEF |
| | Local | | Local company/ operator | | Local | International finance institution e.g. World Bank |
| | | | | | | Foundation |
| | | | | | | Research institution |
| | | | | | | Other |

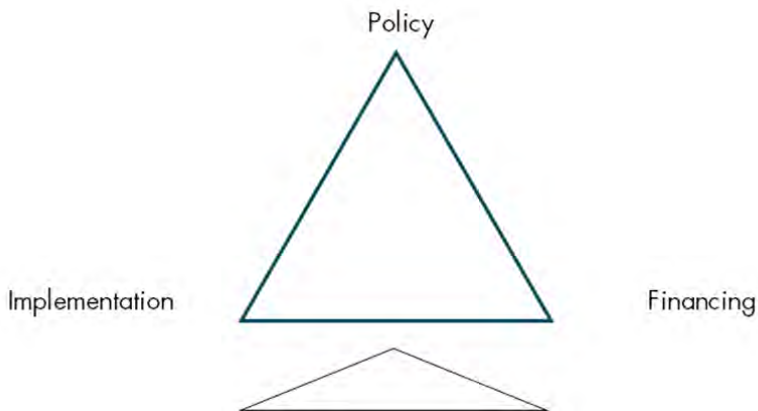## B. Understanding your story

For the questions with triangles, draw an X or a dot in the position that you feel best describes your
story. The position should reflect a balance between the three choices. You are not being asked to

choose only one of three of the options unless your story really is only about one of the choices. Putting an X in the middle means that your story reflects all three options equally. If a question does not relate to your story, then tick the box 'no answer'.
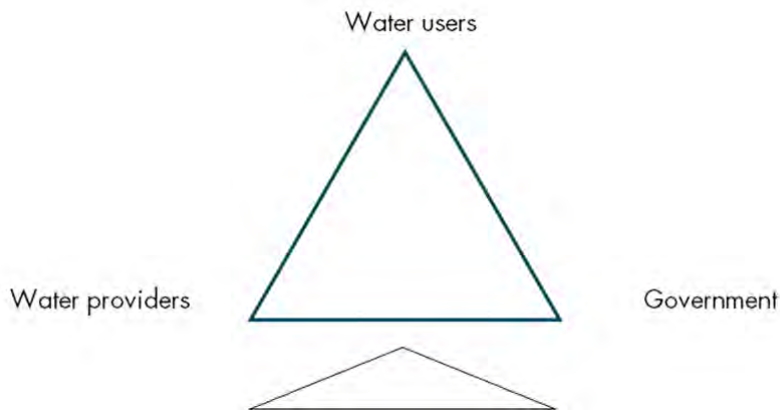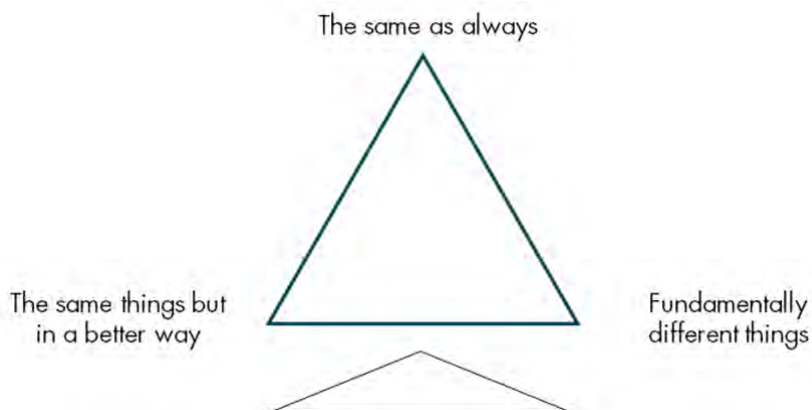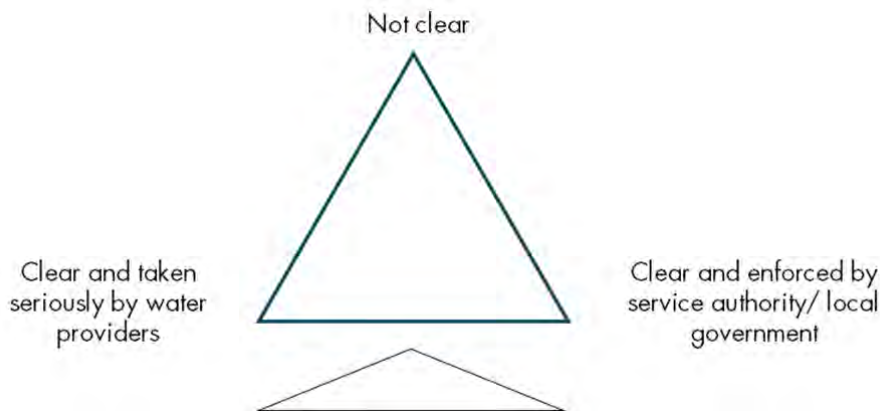
**5. In general, your story describes...**

A common challenge

☐ no answer

A specific problem

A solution

**6. The story has to do with..**

Policy

Implementation

Financing

**7. The following groups are affected by what happened in your story...**

Water users

Water providers

Government

**8. Your story relates to … (pick as many as related to the experience you share)**

|  |  |
|---|---|
|  | Private sector involvement |
|  | Delegated management of water supply services |
|  | Post-construction support |
|  | Capacity support to service authorities/local government |
|  | Financial planning |
|  | Learning and improving by sharing experiences |
|  | Monitoring sustainability, indicators and targets |
|  | (Professionalization of) community management |
|  | Self-supply |
|  | Water resources management |
|  | Regulation and accountability |
|  | Planning for asset management |
|  | Aid harmonisation and coordination |
|  | Other (please name) |

**9. The story is about a situation in which organisations/people do …**

The same as always

The same things but in a better way

Fundamentally different things

**10. Your story is about …**

New infrastructure

Post-construction (incl. maintenance and replacement)

General sector support (governance, capacity building, policy design and implementation)

Work independently

Coordinate their
activities

Fully align their
approaches)
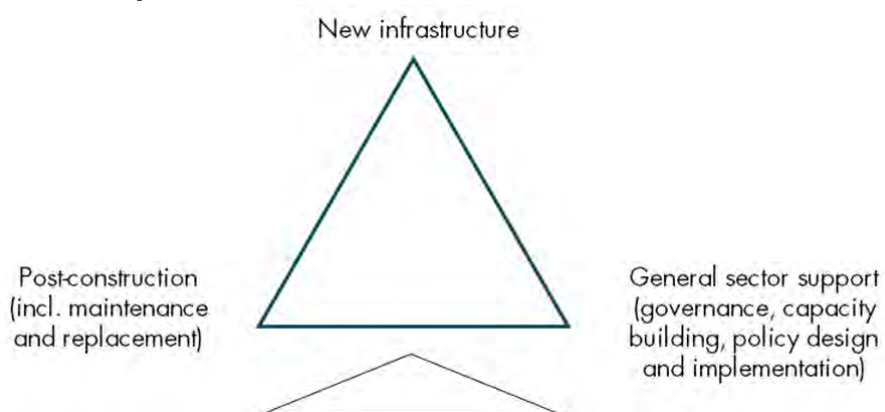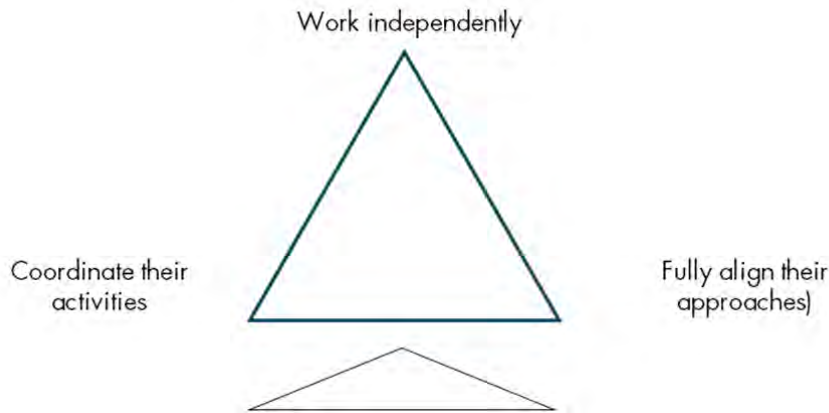
For the sliding scale questions, put an 'X' in the position that you feel best describes your story. The position should reflect a balance between the two choices. You are not being asked to choose one or the other option, unless your story really is only about one of the choices. Putting an X in the middle means that your story reflects both options equally. If a question does not relate to your story, then tick the box 'no answer.

## 11. In your story, organisations ...

☐ no answer

Align completely
with national
government policies

Follow own idea of good
water policy and
implementation

## 12. In your story, long term responsibilities for water supply are ...

Not clear

Clear and taken
seriously by water
providers

Clear and enforced by
service authority/ local
government

**13. Your story is:**

no answer ☐

Very common, happens often

A rare exception

**14. In your story, the following is needed:**

Improving policies

Closing the gap between policies and practices

Improving implementation
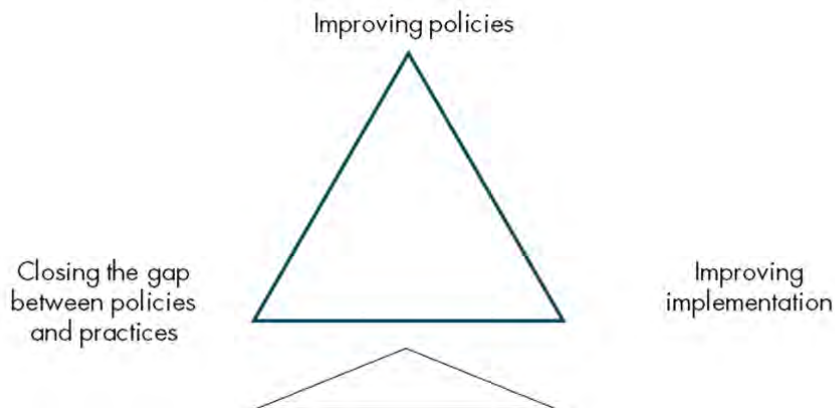
**15. Any changes mentioned in your story were triggered by .... (tick max 3)**

|  | Pressure from donors |
| --- | --- |
|  | Learning about other's experiences |
|  | Participation in networks, alliances or working groups |
|  | Experimenting with local water supply |
|  | Research findings |
|  | Enforcement of rules/policies |
|  | None of the above |

**16. People in my story mainly acted by following...**

Instincts

Values

Rules
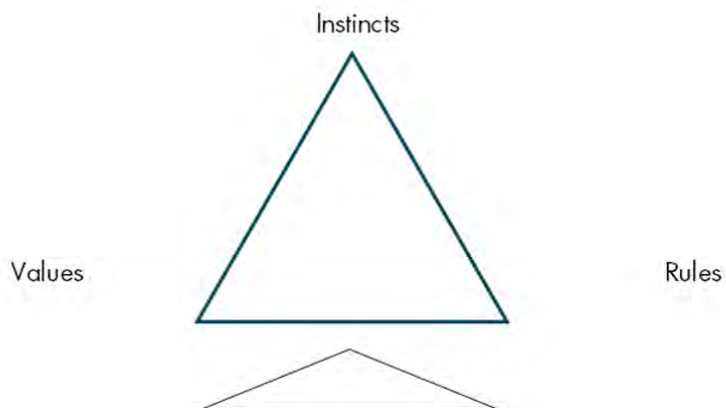
## C. Locating the story

**17. Where did the story take place?**

| | |
|---|---|
| Country | |
| **District** | |
| **City/Village/Neighbourhood** | |

**18. When did the moment or event you describe take place? (Identify 1 year and 1 month)**

| Year | | Month | | |
|---|---|---|---|---|
| | *Before* 2008 | | January | July |
| | 2008 | | February | August |
| | 2009 | | March | September |
| | 2010 | | April | October |
| | 2011 | | May | November |
| | 2012 | | June | December |
| | 2013 | | | |
| | 2014 | | | |

**19. What is your connection to what happened in the story? (pick 1)**

| | |
|---|---|
| | I was part of it |
| | I saw it happen |
| | I heard about it |
| | I read about it |

**20. How do you feel about your story? (pick max 2)**

| | |
|---|---|
| | Proud/happy |
| | Encouraged |
| | Indifferent |
| | Angry/sad |
| | Frustrated |
| | I don't know |

**21. What type of organisation do you work for yourself? (tick 1)**

| Public sector/ authorities | | Private sector | | Non-government organisation | | Others | |
|---|---|---|---|---|---|---|---|
| | National | | International company | | International | | Bilateral aid agency |
| | Intermediate | | National company | | National | | Multilateral aid agency e.g. UNICEF |
| | Local | | Local company/ operator | | Local | | International finance institution |
| | | | | | | | Foundation |
| | | | | | | | Research institution |
| | | | | | | | Triple-S programme member |
| | | | | | | | Other |

**22. Your sex**

| | |
|---|---|
| | Female |
| | Male |

**23. What is your relation to Triple S?**

| | |
|---|---|
| | I had not heard about Triple-S before |
| | I know of Triple-S but don't work with them |
| | I collaborate with Triple-S |
| | I work for Triple S |

## ANNEX 3. THE SIGNIFICATION FRAMEWORK FOR WATER USERS

Welcome!

*We are asking many water users about their water supply. Please help us understand more about your water supply, so other people may also benefit from your experience. With the information, we want to understand how organizations can improve the water supply in your country. Can you share an experience with your water supply and then answer some additional questions? We will not ask your name or any other personal details so no one will know that this was your story. We keep your story confidential.*

## A. Share an experience

1. **Imagine that you meet some family members who live in another village and start talking about water. What would you tell them about one recent moment or event when you felt either hopeful or discouraged about rural water supply? Please tell us your story. OR Think about your water supply. Are you satisfied with it or not? Please tell us about a recent specific experience or event about your water supply that can help us understand your satisfaction or dissatisfaction**

2. **Give your story a title.**

3. **The answers to your story will be analysed anonymously alongside all the other stories we receive. We may also want to share your specific story with others. Will you give us permission to do this?**

My story can be (pick 1):

|  |  |
|---|---|
|  | shared and read by anyone (e.g., shared in learning meetings, included in documentation) |
|  | used only for analysis by Triple S staff |

## B. Understanding your story

For each question, draw an 'X' in each triangle where you feel it best describes your story. The position should reflect the balance between the three options. You are not being asked to choose between one and another of the three options. Placing your cross in the middle means it is an equal balance between the three options. If a question does not relate to your story, then tick the box 'no answer'.

4. **In general, your story describes...**



Widely shared challenge

A local shared problem

A solution
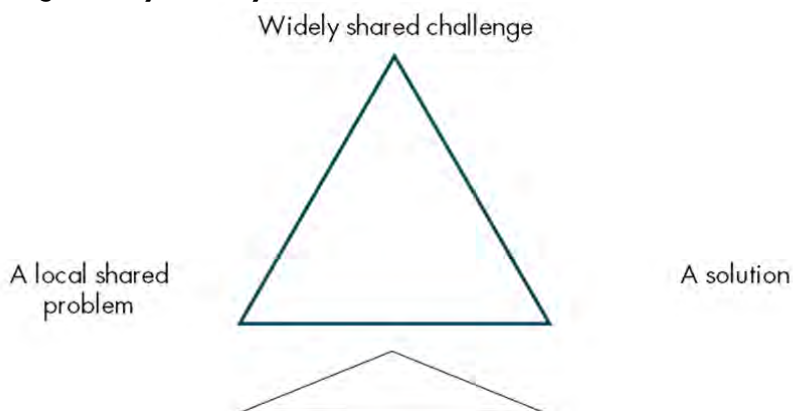
**5. The water supply in your story relates to ( select one):**

| | |
|---|---|
| | Broken water supply |
| | The time it takes to get water |
| | Money and costs of water supply |
| | Good or bad quality of the water |
| | Amount of water |
| | Who uses water and for what reason |
| | No answer |

**6. Who is responsible for ensuring that any problem faced by your water supply is addressed?**

| | |
|---|---|
| | No one |
| | My local water organisation or board |
| | My local leaders/traditional authorities |
| | Your water supplier |
| | National government |
| | Local government |
| | Non-government organisation/charity/aid organisation |
| | I don't know |
| | Other (Please name) |

**7. Your story is about what kind of water supply? (Pick 1)**

| | |
|---|---|
| | Surface water (river, pond, etc.) |
| | Well |
| | Hand/animal driven pump |
| | Communal tap (distribution network) |
| | Household tap (distribution network) |
| | Don't know/no answer |

**8. In my story about water, I**



play no role

I was involved in decision-making

I liaised with someone who participated in decision-making

**9.  The people responsible for my water supply ...**

Consult with water users

Make sure water
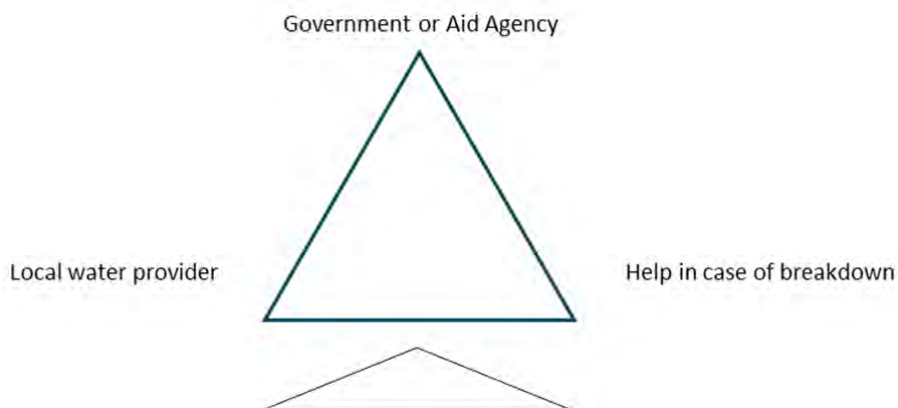points are there

Help in case of
breakdown
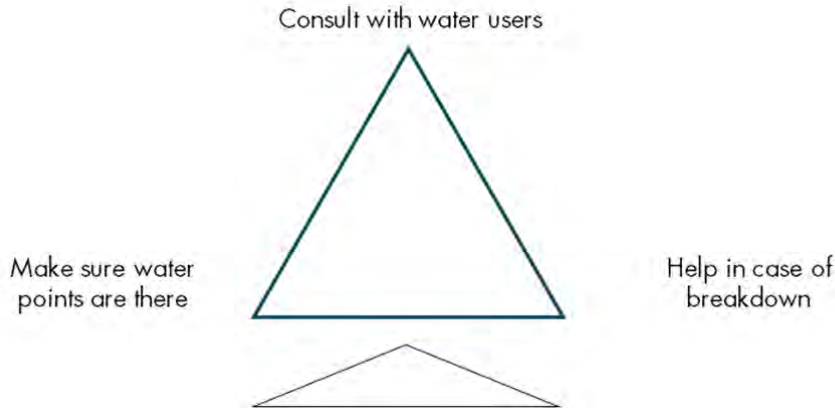
**10. What two aspects of your water supply are you happiest with (pick 1)**
- o   Affordability
- o   Distance
- o   Reliability
- o   Quality
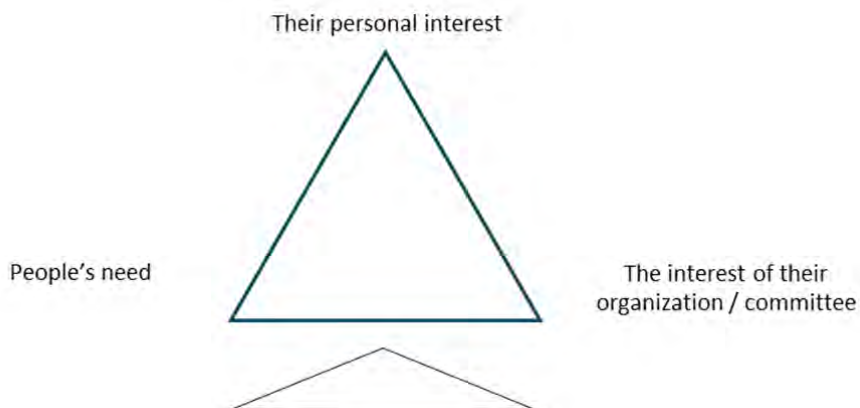- o   Quantity
- o   Waiting time at the water point

**11. What do you most want to improve (pick 1)**
- o   Affordability
- o   Distance
- o   Reliability
- o   Quality
- o   Quantity
- o   Waiting time at the water point

**12. In your story, who should pay if the water system breaks down?**

Government or Aid Agency

Local water provider

Help in case of breakdown

**13. Water providers in my story are focused on:**

Their personal interest

People's need

The interest of their organization / committee

## C. About you and locating the story

**14. Where did the story take place?**

| Country | Dropdown list |
|---|---|
| District | |
| City/Village/Neighbourhood | |

**15. Your story is about what kind of water supply? → Move this question to follow current number**

| | |
|---|---|
| | Surface water (river, pond, etc.) |
| | Unprotected spring |
| | Unprotected well |
| | Protected spring |
| | Hand/animal driven pump |
| | Engine driven pump |
| | Communal tap (distribution network) |
| | Household tap (distribution network) |
| | Don't know/no answer |

**16. When did the situation or event you describe take place? (Identify 1 year)**

| Year | |
|---|---|
| | *Before* 2008 |
| | 2008 |
| | 2009 |
| | 2010 |
| | 2011 |
| | 2012 |
| | 2013 |
| | 2014 |

**17. What is your connection to what happened in the story? (Pick 1)**

| | |
|---|---|
| | I was part of it |
| | I saw it happen |
| | I heard about it |
| | I read about it |

**18. How does the story make you feel? (Pick 1)**

|  |  |
|---|---|
|  | Proud/happy |
|  | Encouraged |
|  | Indifferent |
|  | Angry/sad |
|  | Frustrated |
|  | I don't know |

**19. Your sex**

|  |  |
|---|---|
|  | Female |
|  | Male |

**20. Your age**

|  |  |
|---|---|
|  | Under 15 |
|  | 16-20 |
|  | 21-30 |
|  | 31-45 |
|  | 46-60 |
|  | Over 60 |

**Irene Guijt, Kristof Bostoen and Anna Le Gouais**

### *Different ways of knowing*

Comparing evaluation methods is no straightforward endeavour as evaluation practice consists of a range of tasks, with many options for each. Furthermore, any generalization about a method is a simplification and therefore limited. However, in the field of evaluation, there is consensus about the strengths and limitations of methods based on the type of data collected and the type of intervention they assess, plus the output.

Data collection usually focuses on hypothsis confirmation, i.e. the information we need to know to show a desired change, so analysis focuses on the question 'did X work'. Some forms of evaluation also seek to explain why 'things' have worked or not. Hence evaluation practice is largely focused on seeking information that we define ahead of time in precise terms. Evaluation practice is based on reasoning that assumes that: (a) the interventions have been well identified and are worthwhile enough to invest much evaluation money in; (b) that because X worked in the past, that X will work in the future; and (c) that some generalized truth with wider relevance can be derived from that process.

Therefore, mainstream evaluation practice is inadequate for development interventions with clear goals but less certainty about the pathway(s) for change, and which need feedback on what is working to enable important readjusting over time.

Furthermore, mainstream evaluation practice is based on outsiders determining the issues that need investigating. The 'emic' perspective (and its diversity) is oftentimes ignored, though a good participatory evaluation will surface these perspectives. There is also excessive focus on an 'average effect' or a single 'extreme effect' (as for the MSC method), with few options for detecting weak signals that can help identify early change or identify problems. And where open-ended narratives are collected, these are not easily analyzed. Methods such as Most Significant Change can only deal with a limited number of stories, and discard most narratives.

### *SenseMaker® and unique features*

SenseMaker® has been developed to deal with the need for real time insights to detect trends towards or away from desired values, beliefs or behaviours. To do this, it requires many different fragments of information about the context in which change is being influenced.

Whilst traditional survey methods can provide statistics from a series of basic questions, SenseMaker® asks people to share narratives about concrete experiences and signify their own stories in ways that allow for statistical analysis. So numbers are contextualised in relation to significant experiences. All stories are analysed, not for an average effect but to detect patterns in the stories and compare different perspectives. The table below summarises how SenseMaker-based approach compares to two common approaches used in evaluation. Particularly unique about SenseMaker is its conscious ambiguity, which recognises the complexity of people's experiences. Questions are deliberately indirect and neutral to encourage more honest and nuanced perceptions than a predictable and, therefore, gameable, questionnaire.

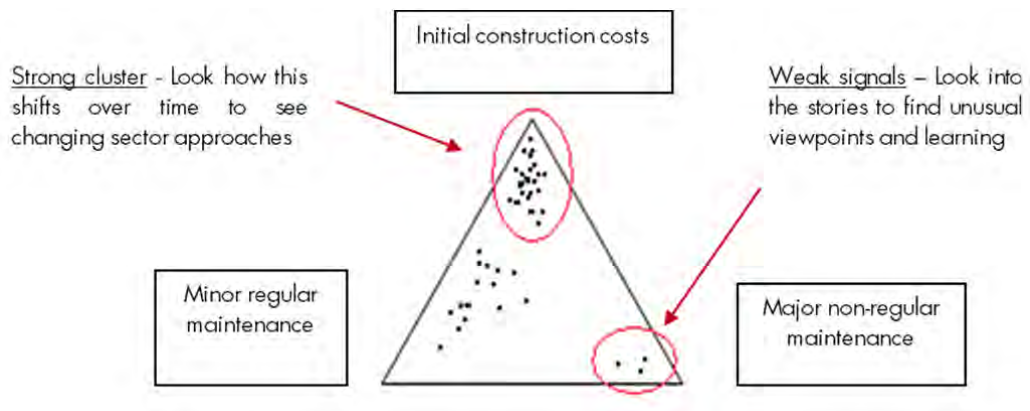| | (quasi) experimental methods | narratives (case studies, MSC) | SenseMaker® based |
|---|---|---|---|
| **1. outputs** | answer about which intervention changed which variables most in a particular context | in-depth experiences that explains a change process | how different people experience change process; type of changes /behaviours/ values |
| **2. type of study and frequency** | one-off comparison; usually no intermediate data points | process analysis; one-off study or ongoing | one-off study or ongoing monitoring of emerging patterns (with feedback loops) |
| **3. organising principle for question focus** | comparing specific interventions, anticipated observable change variables – before/after and with/without | change process, context, specific changes and their value (not pre-determined) | values, behaviours, beliefs that are the focus of change |
| **4. type of data on which analysis is based** | quantitative variables that either count or are relative score (0 to 10); sometimes qualitative studies to explain why | selection of in-depth experiences in context; usually no quantitative comparisons | quantified narratives from people (nuanced knowledge); context provides meaning; numbers enable seeing of trends |
| **5. numbers** | summaries people's opinions or measurable variables; strong focus on average effect; no focus on context-specific insights | no averaging; few if any quantities; sometimes limited cases assumed representative | identifies emerging patterns based on fragments of people's experiences; moving between numbers and stories gives contextualised statistics |
| **6. rigour defined by** | statistically validated causal attribution; counterfactual | quality of in-depth study; probing; explaining | diversity and number of stories; ability to infer from nuanced analysis; utility of patterns for action |
| **7. aggregation** | easy via standardised responses | rare as low 'n' to aggregate; very time-consuming, external interpretation | easy through relative positioning on triads/dyads |

**How SenseMaker® works**

1. The SenseMaker® approach starts with *a prompting question* that encourages the 'interviewee' to share a short narrative about an event or situation that is meaningful in relation to the intervention.
2. Then the storyteller is asked to *self-signify* their narrative in terms of a limited set of questions about the core issues that need to be understood better (see Box on the left) – this removes researcher biases from the initial interpretation.
3. Statistical analysis takes place using SenseMaker® software that views all the stories together and helps identify potentially significant visual patterns.
4. People then look at patterns to see whether they are significant or not and what is needed to reduce undesirable trends and stimulate more of the positive trends.

**◼ ◼ ◼ BOX 9: WHAT TRIPLE-S WANTS TO UNDERSTAND ABOUT GHANA, UGANDA AND GLOBAL POLICY PROCESSES**

- ◼ Is there a shift from focusing only on infrastructure to emphasising service, post-construction support and general sector support in the rural water sector?
- ◼ What are the opportunities and barriers for adopting a service delivery approach for different types of development partner?
- ◼ Where change has occurred to improve sustainability, how has this been done?

e.g. (10) Your story involves financing...

Initial construction costs

<u>Strong cluster</u> - Look how this shifts over time to see changing sector approaches

<u>Weak signals</u> – Look into the stories to find unusual viewpoints and learning

Minor regular maintenance

Major non-regular maintenance

**Dr. Irene Guijt, Learning by Design**

This annex contains a series of snapshots that illustrate how SenseMaker works analytically, using evaluation questions central to the case of Triple-S. Three datasets were used to derive these snapshots: water professionals in Ghana and Uganda, water users in Ghana and water users in Uganda (see Table 1). The datasets were not based on a rigorous sampling framework, and hence are only illustrative. All examples are based on the joint Ghana and Uganda datasets.

Much of monitoring and evaluation focuses on verifying what people know they need to know. That is the function of predefined indicators. SenseMaker can include that perspective, but importantly seeks to bring people to insights by challenging them to not reach conclusions too quickly and not focus only on the familiar. So in a full application of SenseMaker, such 'snapshots' become the basis of discussions with stakeholders. The interrogation of patterns, as presented in these snapshots, is a critical stage of the analysis.

Generating patterns for discussion has several steps, based on two pathways of investigation: (1) seeking insights to pre-defined evaluation questions or hypotheses; and (2) blank-page analysis of patterns.

The first form of analysis looks at a specific evaluation question and identifies the combinations of variables that are relevant to understand. For example, the simple question of 'Are users satisfied with their water supply according to the different service criteria?' would lead one to look at questions 6, 15 and 18 from the User Signification Framework. Triple-S had identified a range of evaluation questions, ranging from the simpler ones such as 'What are the implementation challenges associated with sustainable provision of new water facilities?' to more complicated and open-ended questions such as "What are the opportunities and barriers for adopting a service delivery approach for different types of development partners?".

Alternatively, it is possible to look at a specific hypothesis. For example, "Continuous water supply makes water users happy. User satisfaction is also based on expectations. Those expectations are that the higher the service levels, the greater the satisfaction levels. Although this will vary independent of type of infrastructure because perceived level of service is more important." This hypothesis could be validated/challenged by focusing mainly on question 18, and then filtering for time (recent 2010 and 2011), for relationship to the story (was part of it or saw it), for emotion (proud/happy versus angry/frustrated), clustered geographically, and then compare conclusions with waterpoint functionality data from the FLOW data.

The second form of analysis, starting with a blank page, would mean going through the data, looking at all the triads and dyads, and parsing them with the different MCQ variables, to seek patterns with very high/low density of answers, and those that seem to be surprising and merit further discussion. This analytical route takes longer as it means systematically looking for correlations as a starting point but can also lead to more surprises and challenging of assumptions than the first option.

Whichever route is taken, and most applications mix both, the preparatory steps are similar for analyzing one dataset. If comparing two datasets ($T_0$ and $T_1$), then

1. identify and prioritise selection patterns of interest (seeming to confirm strategies, challenge strategies, unexpected patterns)
2. produce a visual (triad, dyad or pie chart of a multi-choice question)
3. for that pattern, export the set of stories that can be read to deepen the discussion
4. discuss the visual and the stories, using the following questions as guidance:

---

From your own experience and considering these patterns:

a. What does this message mean in your local context?
b. What element(s) do you recognise? Why?
c. What element(s) are unexpected? Why?
d. From your discussion, have you identified activities, strategies or issues that: require investment, no longer require attention, decrease in priority?

This process was piloted in both Ghana and Uganda but discontinued as discussed in the main report. The decision to discontinue use did not allow for a robust demonstration of the impact-oriented monitoring use of the approach, after Triple-S started, as this would have required more than one dataset over time to enable comparisons. We can only illustrate how SenseMaker could respond to questions about 'shifts' or changes, such as "Is there a shift from focusing only on infrastructure to emphasising service, post-construction support and general sector support in the rural water sector?" by using the stories told about the water sector prior to 2008 and those stories that occurred after 2008. Any shifts identified would require additional data to explain the changes and the contribution of Triple S.

## Example 1. Demographics: Understanding whose perspectives are generating patterns

Knowing whose voices are underpinning the patterns one is looking at is crucial to generate meaning. SenseMaker includes multi-choice questions about the story sharers from which demographic data can be derived and used to debate patterns in the data. Why are certain kinds of problems noted more often than others? How do women's experiences of water service providers differ from men? Figure 4[20], for example, shows that the professional perspective is largely national—this perspective might well differ from professionals operating at the district-level.

Some applications of SenseMaker have used such demographics to ensure representative samples by seeking underrepresented perspectives.

| TABLE 2: FINAL DATASET (JAN 2012) | | | |
|---|---|---|---|
| | **Ghana water users** | **Uganda water users** | **Water professionals** |
| | **n=1364** | | **n=492** |
| **Female** | 563 | 219 | 174 |
| **Male** | 374 | 207 | 318 |
| **First hand account versus 'heard about'** | 900 | 404 | 406 |

**FIGURE 4: TYPE OF ORGANIZATION WHERE STORY SOURCES WORK**



- Public National and Public Local comprise 44% of the stories shared

## Example 2. What are the main problems that users experience with different kinds of water supply?

This question is critical to understanding if resource allocation matches users' needs, and if capacities and efforts are in place to deal with priority problems per water supply type. If tracked over time in the same geographic area, with the same water user sample size, then trends in problems per water supply

---

[20] Figure 1 is based on an earlier data set than final counts in Table 1, hence difference in numbers.

type can be tracked. It can also be matched with changes in resources and capacities invested in and activities undertaken in each geographic area.

First though, Figures 5 and 6 show what kind of water supplies are most present in stories (handpumps overwhelmingly) and what types of issues are most shared (access and quality). Figure 7 shows which issues are most commonly linked to which types of supply.

FIGURE 5: TYPES OF WATER SUPPLY FEATURED IN SENSEMAKER STORIES

FIGURE 6: TYPES OF PROBLEMS REPORTE
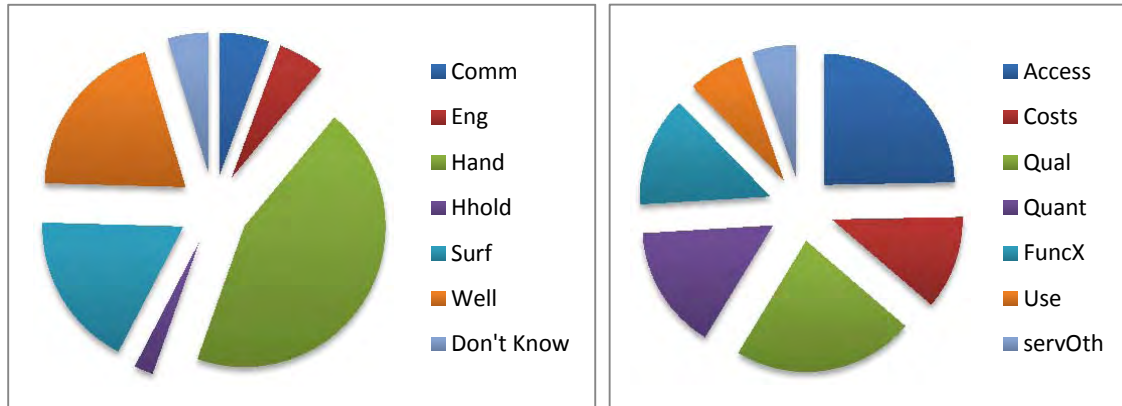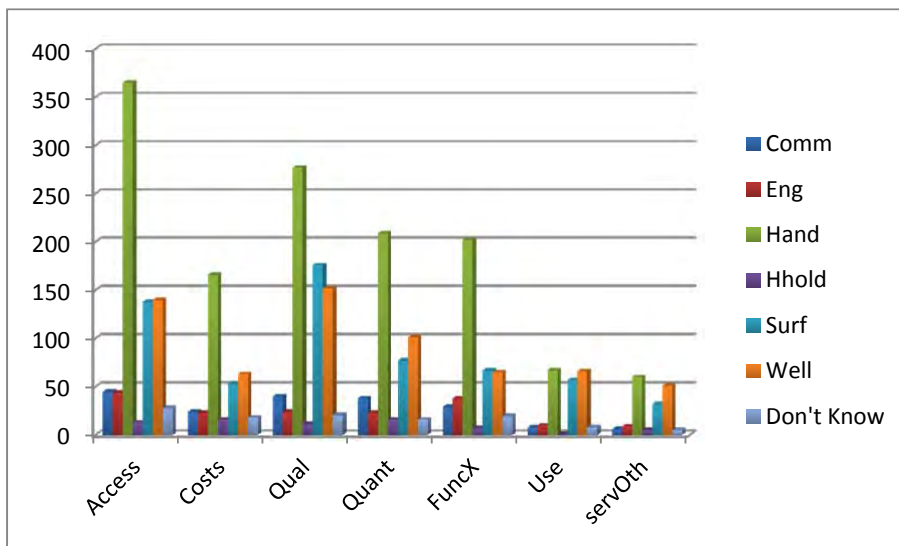
Figure 8 and 9 summarise the total number of negative emotional tone stories per type of water supply and per type of issue. Not surprisingly, due to the sheer number of stories, handpumps figure strongly in negative emotional tone stories, as do stories on access and quality-related stories. By working on negative emotional story clusters per type of water supply and per issue, insights can be gained on type-specific problems experienced by water users.
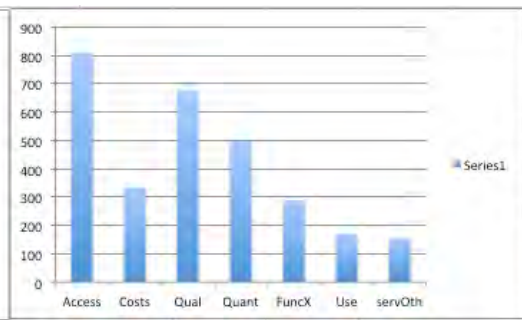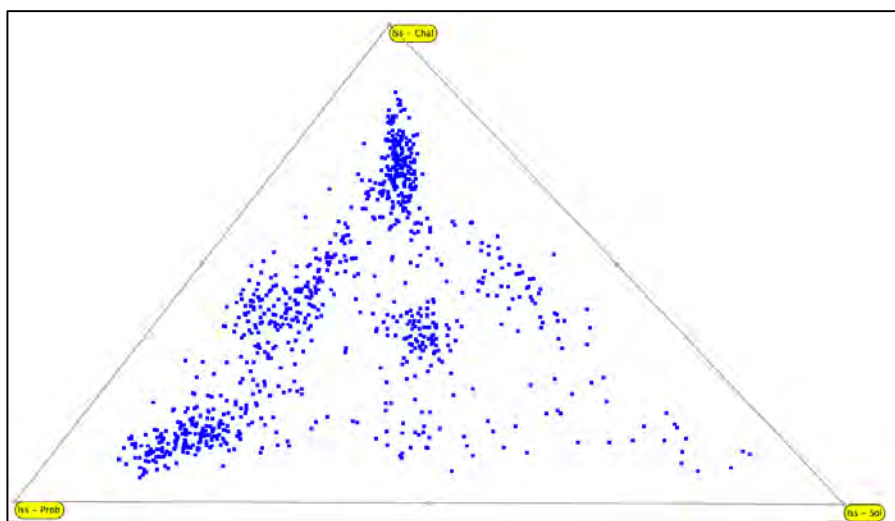
**FIGURE 10: TRIAD SHOWING GROUPING OF STORIES AROUND SPECIFIC PROBLEMS, GENERAL CHALLENGES AND SOLUTIONS**



Another way to obtain more insight is to access problems via the triad on whether the 1364 water user stories are specific problems, general challenges, or solutions (see Figure 10). In the example triad visual, the stories have been narrowed down to those with a negative emotional tone (angry/sad; frustrated), bringing the story set to 897. The Figure confirms that stories are concentrated on the left, along the 'problem' to 'challenge' spectrum. This needs to be narrowed further for analysis to be possible by type of water supply – requiring seven triads, one for each type of water supply.

**Example 3. What implementation challenges are associated with sustainable provision of new water facilities?**

Water professionals dealing with new infrastructure can report on the obstacles they encounter in ensuring the sustainability of these facilities. This would combine the triad on story focus (see below) with different kinds of topics related to implementation challenges. Such a pattern, with related stories, could form the basis for a problem-solving workshop in which professionals share ideas on how to deal with, for example, capacity support to service authorities or planning for asset management. It could also trigger national agency level investment in new solutions related to these problem areas.

Figure 11 shows the triad that locates stories in relation to 'new infrastructure', 'post construction, including maintenance and replacement', and 'general sector support (governance, capacity building, policy design and implementation'). Of the 492 professional stories, 261 are about one or more of the following implementation challenges: 'post-construction support', 'capacity support to service

authorities/local government', 'monitoring sustainability, indicators and targets', 'regulation and accountability' and 'planning for asset management'. Narrowing this further for emotional tone (angry/sad or frustrated) brings the dataset to 154 stories spread across the triad, and 23 focused more towards the top corner of 'new infrastructure'.

One example of a story (anonymised) in that cluster is: "I have met community members connected to XX gravity flow scheme in XX sub-county, XX district whose water has stopped flowing. The water board of their sub-county and handpumps mechanic can't intervene because the contractor has not handed over to them. The District Engineer is trying to get in touch with the contractor but it has taken over two weeks. The community is worried as they hear the scheme has a number of problems even before completion yet they had many expectations. WUCs are not in place."

**FIGURE 11: NEGATIVE TONE STORIES RELATED TO FIVE KEY IMPLEMENTATION CHALLENGES**
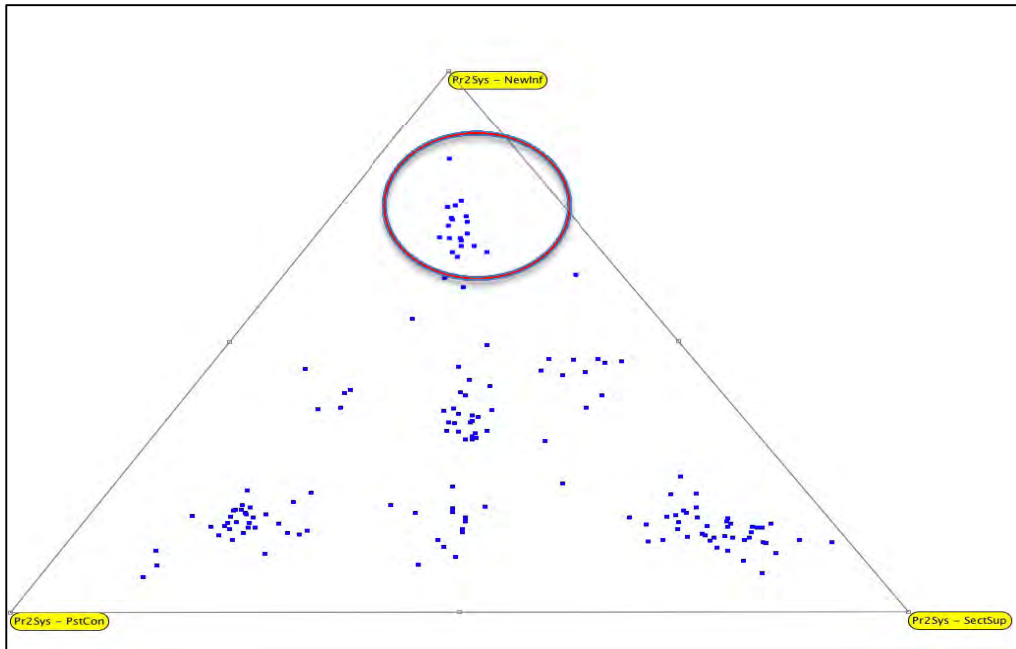


## Example 4. Credibility of different water service providers

The sequence from Figure 12 to Figure 13 illustrates why simple data can be misleading and the importance of being able to parse the data in several ways.

To track user satisfaction with water service providers, and to encourage water professionals to examine their own professional standards, the data could be analysed in terms of who water users turn to when there is a problem (differentiated by gender and by water supply issue). This could trigger debates and goals for professional improvement areas.

Figure 12 shows simply who people go to when there are problems. The largest percentage indicate they would go to their local water organisation/local leaders/traditional authorities. Figure 13 disentangles this in terms of positive and negative tone of the stories. Besides clarifying the largely negative nature of experiences shared, it suggests that negative experiences are linked mainly to national and local government and stories are more likely to be positive for local water organizations or boards. The stories related to the 'Other' category would be interesting to look at for positive examples of resolution of water supply problems.
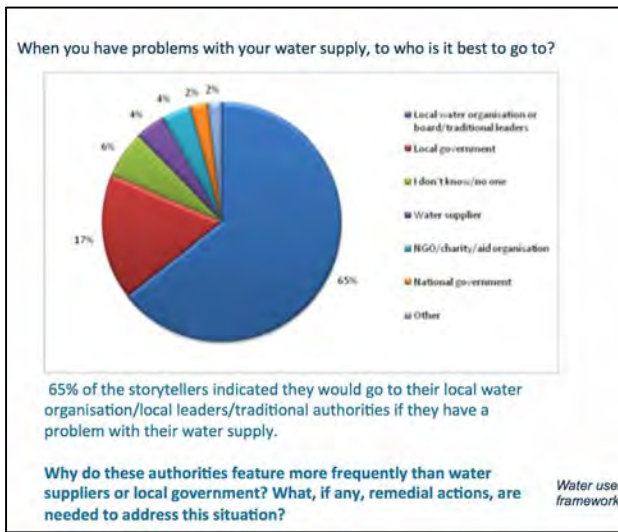
When you have problems with your water supply, to who is it best to go to?

- Local water organisation or board/traditional leaders
- Local government
- I don't know/no one
- Water supplier
- NGO/charity/aid organisation
- National government
- Other

65% of the storytellers indicated they would go to their local water organisation/local leaders/traditional authorities if they have a problem with their water supply.

Why do these authorities feature more frequently than water suppliers or local government? What, if any, remedial actions, are needed to address this situation?

*Water user framework*



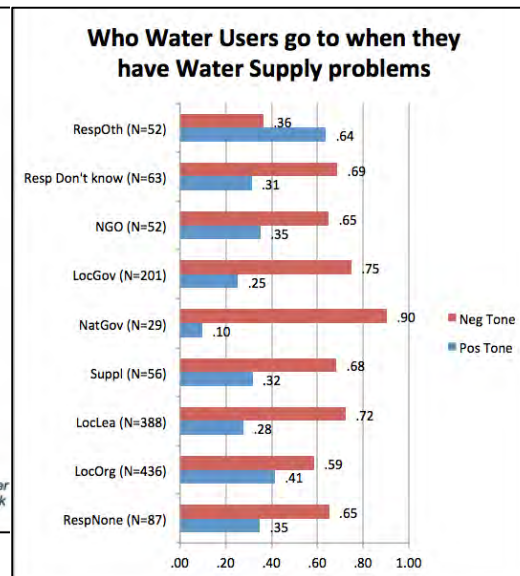Who Water Users go to when they have Water Supply problems

Figure 14 is a more detailed combined analysis of to whom women and men water users turn for different kinds of water-related problems. Note that this includes positive and negative stories that could need to be parsed further to detect useful patterns.

**FIGURE 14:** DISTRIBUTION OF STORIES BY WOMEN AND MEN WATER USERS, PER TYPE OF ACTOR AND IN RELATION TO DIFFERENT ASPECTS OF WATER SUPPLY (FUNCTIONALITY, ACCESS, COSTS, WATER QUALITY, WATER QUANTITY, USES AND USERS, OTHER)
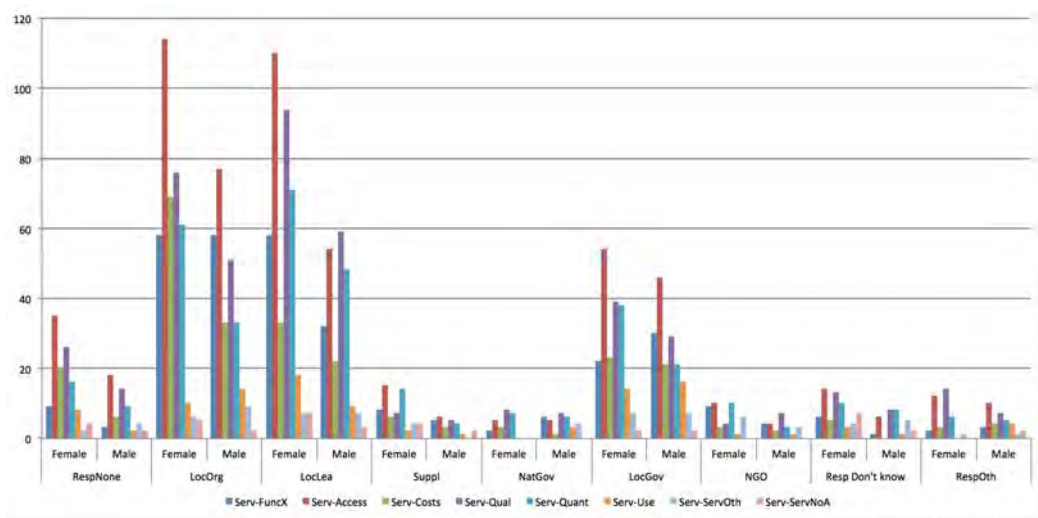


Digging deeper into the finer detail of why people go to certain actors for specific types of problems leads one to Figure 15, linking the positive (local water organisations) and three negatively associated actors of national government, local government, local leaders/traditional authorities. Local water organizations (blue line) in general have more positive emotional tone, with larger focus on the topics of: 1) time to get water, 2) cost of water, 3) quality of water, and 4) Other.
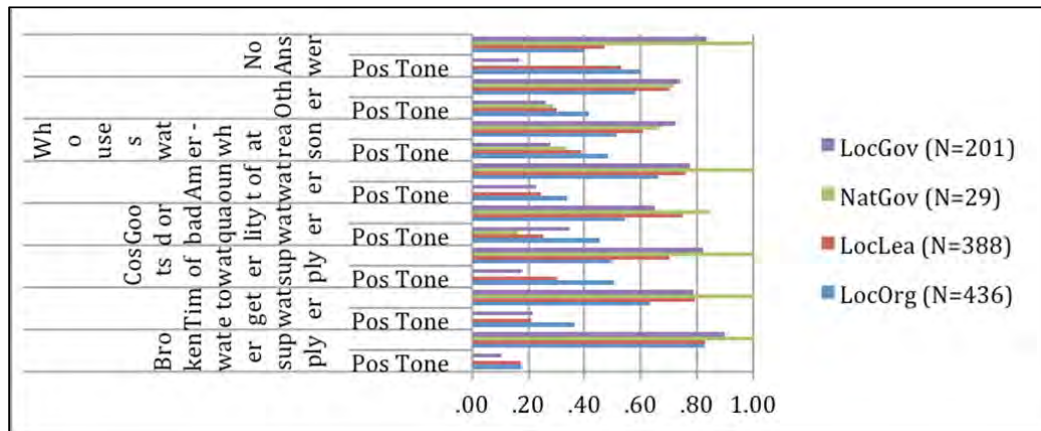
## Example 5. What success story of non-technical / infrastructure can the sector build on?

There are two ways to progressing a sector – fixing problems (see Example 3) or learning from what works. Parsing the dataset for positive emotional tone can inspire professionals to emulate good practice and agencies to invest in conducive conditions.

Figure 16 shows the national professional dataset of 492 stories that has been narrowed in four ways.

Let's assume that you are interested in how relationships and responsibilities are represented in positive stories. The relevant triad is created related to the question: "In your story, long term responsibilities for water supply are: clear and taken seriously by water providers (bottom left), not clear (top), clear and enforced by service authority/local government".

Then the dataset has been narrowed to include only stories where people felt 'proud/happy' or 'encouraged'. This narrows it down to 148 stories.

Next let's suppose that you are keen to focus on four topics which appear to be where policies are focusing or interest is growing: private sector involvement (58 stories), financial planning (60 stories), learning and improving by sharing experiences (45 stories) and professionalisation of community management (33 stories). The Figure now shows 120 stories that refer to one or more of these topics.

Finally, you can now zoom in on positive stories related to the four types of situations with respect to responsibilities for water supply: bottom left, 36 stories, top corner, 25 stories, bottom right, 18 stories). There is also a set of stories between the two bottom corners, which refers to stories where there are clear responsibilities taken seriously by water providers and enforced by service authority/local government (28 stories). It is now easy to read these four subsets of stories to spot trends that could give insights about success stories on which to build.