

External evaluation

Akvo Data to Decision (22961)

DGIS / IGG

Ministry of Foreign Affairs (DGIS)





Rijksoverheid



Final Report

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Edburgh consultants

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EXECUTIVE SUMMARY

1 Introduction

This report covers the results of the evaluation of the Akvo D2D programme as commissioned by the Inclusive Green Growth (IGG) department of the Directorate-General for International Cooperation (DGIS) of the Netherlands Ministry of Foreign Affairs. It comprised two objectives. The first objective looks back at the performance and success of Akvo's Data to Development (D2D) programme, funded by DGIS between 2016 and 2020. The second objective looks forward towards future cooperation between DGIS and Akvo. More specifically, the objectives comprised:

1. An independent evaluation of Akvo's D2D programme (2016-2020), with €3.5 million in waiver (direct) funding from DGIS (with a top-up of €750,000 in 2020). The aim was to support DGIS in its WASH and agriculture activities and to implement, boost and support other activities to reach the objectives in DGIS's WASH Strategy. Akvo's D2D programme activities comprised:

- Maintaining existing and developing new partnerships (10.3% of budget) in target countries and regions with regard to sustainable WASH services.
- Creating enabling environments (31.8% of budget) that support organisations to effectively use digital tools and data.
- Continuation and scaling of Akvo's data collection and management operations with its partners (45% of budget) channelled through the six Akvo hubs.
- Outreach and dissemination (12.5% of budget) comprising advocacy for data-based management and the use of open data standards.

The D2D programme supports Akvo to develop and promote its data journey model. Akvo developed a Theory of Change (ToC) with nine key outcomes that are also used for the D2D programme outcomes. Evaluation questions for objective 1 included:

No	Evaluation questions (EQs): Objective 1 'Perform an evaluation of the D2D project'
1	How well designed is the D2D programme to achieve its objectives?
2	Has Akvo appropriately identified the demand in the region; does Akvo work demand-driven?
3	How effective is the Akvo data journey approach (design > capture > understand > act) at the level of local implementing organisations, and to what extent does this contribute to improved sustainability and service delivery in targeted communities? How/to what extent has this been strengthened by the D2D project?
4	What is the key result at (intermediate) outcome level according to the agreed results framework and how do they relate to the original targets?
5	What evidence is there to demonstrate that Akvo has scaled up its operations in WASH as well as sustainably broadened the scope of its operations to other sectors such as IWRM and sustainable agriculture?
6	To what extent has Akvo expanded its partnerships with implementing organisations and governments worldwide? Are these partnerships sustainable? How are partners and initiatives within partnerships identified?

2. The formulation of recommendations regarding further cooperation between DGIS and AKVO in the context of digital WASH monitoring.

Evaluation questions for objective 2 included:

No	Evaluation questions (EQ): Objective 2 'Formulate recommendations regarding further cooperation between DGIS and Akvo'
7	As an international organisation, is Akvo unique in the field of digital WASH monitoring, in the context of its software and tools as well as its activities (e.g. outreach, lobbying and partnerships)?
8	Does DGIS's support to Akvo distort the level playing field of other parties with similar activities?
9	Is there a high risk of dependency on DGIS if cooperation were to be extended in the future?
10	What scope is there for cooperation with other relevant parties in the digitalisation sector to avoid the duplication of activities in targeted regions?

2 Approach and methodology

Data collection was done through literature reviews and semi-structured interviews with carefully (partly random and partly purposeful) selected representatives of different types of Akvo stakeholders, largely through digital means (mainly Skype) as a result of the Covid crisis. In addition, a functionality assessment of Akvo Flow+Lumen versus mWater was carried out.

Data analysis and synthesis was done by structuring all relevant information from the literature, interviews and the functionality assessment per evaluation question (EQ), per subject under the EQ and per type of stakeholder in a findings template in an Excel file. Data was synthesised in an iterative and cumulative process from the findings template to generate findings for each of the EQs, with the consultants constantly cross-checking and discussing the results with each other. The process also provided evidence in the form of a 'paper trail'. Based on the findings, the consultants developed conclusions and recommendations. Draft findings were discussed with Akvo, while Edinburgh Consultants conducted a quality assessment of the whole report. Finally, a draft report was submitted to DGIS. DGIS's feedback will be processed into a final evaluation report.

3 Findings and conclusions – objective 1

3.1 Main findings

EQ1. Design of D2D: The D2D programme has enabled Akvo to transform from a software tool provider to a data service provider based on a Theory of Change (ToC) guiding the intended outcomes among assisted partners. Akvo implemented the D2D programme well, achieving activities and outputs. The monitoring framework did not make the transition to measure and assess the intended (intermediate) outcomes with outcome indicators. Learning was well embedded in the programme.

EQ2. Demand driven: Akvo has several ways of identifying the demand for new concepts and proposals around data-driven development but not around all the needs of a (potential) partner or sector. Partners perceive Akvo as a demand-driven organisation, especially when they contracted Akvo themselves. Local partners in consortiums are not always involved in programme design, which may in cases leads to sustainability issues.

EQ3. Effectiveness of the data journey approach: Akvo is regarded widely as a key advocate of data-driven development, using D2D to invest in internal capacity building and staff recruitment to institutionalise its data journey model. This transition is not yet complete. The model helps Akvo become involved earlier during the design of a programme and assist partners better to become data driven. Sustainability is not embedded as a separate element during the design phase yet. The capture phase focuses on Akvo's use of software tools, not always on the software tools best suited for a partner. Although Akvo tools are open source, partners do not use them independently of Akvo. They can download the software from GitHub, but big partners prefer to outsource this to Akvo to include hosting, data privacy (GDPR) and data security. Akvo's train-the-trainer model is seen as effective. Small partners are often unable to sustain data-driven management (software, data collection) without grant money, however.

EQ4 Key achieved results D2D: Eight of the nine D2D intermediate outcomes was achieved, while one was partially achieved. The D2D programme did a good job of achieving the intermediate outcomes. None of the outcomes was quantified, making it difficult to determine their actual degree of achievement. In addition, the evidence base is limited largely to the findings of qualitative assessments (AQOAs) among 15 purposefully selected partners and the interviews of the evaluation. Akvo systematically measures output indicators. The AQOA tool is still under development but provides rich information about the progress of partners, though this information is not always quantifiable or verifiable, nor can it always be attributed to Akvo's inputs. Akvo lacks a tracking system to measure its partners' progress on their data journeys, and it does not systematically measure its own contribution to achieved outcomes.

EQ5 Scaling up operations: Akvo has expanded its implementation services globally. The strategic focus for new programmes is on Eastern and especially West Africa. Akvo has changed to a matrix organisation to consolidate expertise beyond hubs and strengthen its data journey expertise. Akvo has expertise in WASH but not enough in agriculture yet. Different partnerships provide opportunities to develop that further. Akvo has a diverse, strong portfolio of projects with different partner types, mainly in WASH though agriculture is growing fast. The data journey steps are similar in WASH and agriculture, but the context is different. In-depth sector expertise is needed to understand and act on this.

EQ6 Partnerships: Akvo has found new partners and customers from different stakeholder types. Akvo identifies new partners in different ways, with its network and partner engagement model centred around its software tools. Akvo does not focus on potential customers that use other software tools to improve their data-driven decision-making. Several traditional Akvo partners have set up their own data departments. Most partners (87%) are satisfied with Akvo.

Evaluation question	Rating	Rating explanation
EQ1 How well designed is the D2D programme to achieve its objectives?	3	Adequate
EQ2 Has Akvo appropriately identified the demand in the region; Does Akvo work demand-driven?	4	Comprehensively covered
EQ3 How effective is the Akvo data journey approach (design > capture > understand > act) at the level of local implementing organisations, and to what extent does this contribute to improved sustainability and service delivery in targeted communities? How/to what extent has this been strengthened by the D2D project?	3	Adequate
EQ4 What is the key result at the (intermediate) outcome level?	4	Comprehensively covered
EQ5 What evidence is there to demonstrate that Akvo has scaled up its operations?	4	Comprehensively covered
EQ6 To what extent has Akvo expanded its partnerships?	5	Excels at all subjects
Total assessment	23	

3.2 Conclusions

D2D was properly implemented. It enabled Akvo to boost its transition from a software tool provider to a data journey service provider, building capacity among its staff and awareness among its partners. The programme also contributed to relevant commitments, policies and goals of the Dutch government. Limitations in the programme design included: (a) output indicators attached to outcomes, (b) limited measurement of outcomes, and (c) reporting of overall Akvo (not D2D specific) outputs and outcomes. These limitations in particular have complicated the evaluation of the outcomes of the programme and the degree of attribution of D2D to the reported outcomes. Nevertheless, the consultants conclude that Akvo achieved most of the D2D intermediate outcomes and the final outcome.

Akvo properly identifies the demand, though often local partners of consortiums are not involved in programme design, which can affect the accurate identification of needs. The data journey model needs more time to mature. The capture phase focuses more on Akvo software tools and less on data collection in general. The train-the-trainer model is successful. A concern is the sustainable institutionalisation of data-driven processes in partner organisations, though this is not the full responsibility of Akvo. Local partners are often unable to pay SaaS after a project ends.

4 Findings and conclusions – objective 2

4.1 Main findings

EQ7 Uniqueness. Akvo's package of software tools, services, networking, understanding local contexts, hub infrastructure and funding sources is unique and valued by many. Akvo's survey software is not unique, however, and Akvo's separate services are not always unique either

(exceptions: in West Africa and different fragile areas, the water part of Caddisfly and Akvo's TechConsultancy for its own software). Akvo's data journey has much market potential. Despite its intention to focus on fewer regions, Akvo still indicates it desires to work in Africa, South-east Asia and the Pacific, Europe and the Americas.

The consortiums in which Akvo takes part may be unique, but that is not necessarily true of their interventions. Akvo is and can become even more unique and important in its role as sector catalyst (e.g. ToT training of local consultancy bureaus and government agencies, creating awareness and assisting governments to develop digitalisation policies). Akvo does not (yet) have sufficient methodology, expertise or will to offer independent advisory services separately from its own software.

EQ8 Market distortion. DGIS funding to Akvo results in market distortion at first- and/or lower tier levels in several situations and circumstances. First-tier distortions relate to grant funding used by Akvo to develop part of its services and infrastructure, which contributes to its services being better, more comprehensive and/or cheaper than what competing parties, who receive smaller subsidies or none at all, can offer. Lower tier distortions are more difficult to predict and can happen in many different ways. The risk of market distortion by Akvo is much smaller in areas where there are no local parties (yet) that can offer Akvo's services, especially in West and partly in Eastern Africa and also often in fragile areas. However, even if such parties are not present, Akvo's partially (cross-)subsidised services can prevent local parties from developing competing services. In such cases, Akvo (already as part of D2D) provides ToT capacity-building services to local parties to enable them to develop such services and even potentially take over from Akvo (e.g. in Mali). Grant funding to enhance (social) businesses is a fine line to walk, as there is the danger of some kind of market distortion.

EQ9 Future dependency on DGIS. There is some discrepancy within Akvo about its future role and business model. Akvo aims to focus more on the data journey and less on its software (costly, increasing competition, reducing revenues), but still tends to hang on to its software, while expecting the importance of its Techconsultancy (customising Akvo software to the specific needs of customers) to increase. In 2019, Akvo needed to cut costs as some of its hubs were too expensive. Consequently, Akvo closed hubs in Stockholm and India, and placed local managers in other hubs. Twenty-two percent of Akvo's total revenue is direct funding from DGIS (all D2D waiver funding), while 18% of its total revenue is DGIS funding obtained through open tenders. Akvo also uses DGIS funds as co-funding in proposals to other donors.

EQ10 Sector cooperation. Akvo's cooperation efforts focus mostly on generating impact through partnerships and programmes, and in the process these efforts help to fill gaps and avoid the duplication of activities. Akvo's survey software can be seen as a case of duplication as there are many similar software tools available. Akvo provides substantial inputs in sector-catalysing actions and events (funded with D2D money), which enhance coordination, cooperation and avoidance of the duplication of efforts in the sectors, types of work and areas in which Akvo operates. Akvo is also well-embedded and has a vast and expanding network in the water sector in the Netherlands and abroad. In developing countries, Akvo is still often regarded as a software tool provider. Akvo sees its future as a facilitator and driver of digitalisation and data-driven development in the WASH and agriculture sectors in developing countries (notably in West Africa). As a result of its expertise, Akvo has a unique chance to develop strategic partnerships with large Dutch and/or international organisations. Connecting Caddisfly (and possibly RSR) to

other software while selling services around it would likely create options for new partnerships, cooperation and coordination, avoid the duplication of activities and better contribute to DGIS's goals.

4.2 Conclusions

The Akvo package of infrastructure, networks, services and human resources is unique but not always completely needed by customers. Akvo's separate fee-based services, including its software, are not unique (exceptions: in West Africa and several fragile areas, the water-testing part of Caddisfly and Akvo's Tech-Consultancy). Consortiums in which Akvo takes part may be unique, but that is not necessarily true of their interventions. Akvo is and can become more unique and important in its role as sector catalyst, especially in West Africa.

DGIS' funding to Akvo often results in market distortions, although the specifics and severity are difficult to predict. Open tenders as an alternative to direct funding is a way of avoiding several first-tier market distortions. Akvo can be expected to perform well in open tenders if they are suited to its core business. In areas where there are no competitors, e.g. West Africa (and to a lesser degree Eastern Africa) and some fragile areas, subsidised Akvo services are unique and do not cause market distortions, unless parties are withheld from developing similar services as a result.

Akvo can grow towards a business model with:

- A focus on long-term sector-catalysing services (which also enhance coordination, cooperation and avoidance of duplication of efforts).
- More mature, fee-based data journey services with more sustainable outcomes among Akvo's customers, and in some cases making these services redundant by enabling other parties to take over.
- Cooperation with local consultants.
- More focus on areas where Akvo's services are not (yet) available, such as West Africa and some fragile areas.

Akvo currently still lacks the methodology, expertise and will to carry out the required changes but is moving forward and making progress in the way it views its future direction.

Akvo depends on DGIS funding but can survive without direct (waiver) funding if it is given bridge funding to cover the transition period during which DGIS ends direct funding to Akvo and introduces digitalisation in open calls for proposals, which would safeguard Akvo's expertise and reach, as these are crucial for DGIS's digitalisation agenda and goals.

Akvo actively cooperates with many parties and is widely appreciated for it. This probably contributes to the avoidance of duplication of activities. Local parties often still see Akvo as a software tool provider.

Akvo has a unique chance to develop strategic partnerships with one or more international organisations. This could increase its expertise, financial security, reach and customer base, and yield advantages of scale for the involved parties. It would also increase Akvo's options for cooperation with other parties.

5 Recommendations

5.1 Recommendations for DGIS

1. **Enhance sustainable digitalisation and data-driven management among beneficiary organisations of DGIS-funded programmes** by always introducing in DGIS's calls for proposals (a) digitalisation, (b) a sustainability clause for digital solutions, (c) the development of a digitalisation sustainability plan and (d) a programme exit strategy for beneficiary organisations.
2. **Enhance data-driven and evidence-based programmes** by introducing in DGIS's calls for proposals clear conditions and methodologies for the design of the PMEL structure of proposed programmes and higher PMEL budgets. Also generate more PMEL expertise within DGIS.
3. **Prior to open calls for proposals, carry out general context, need and priority assessments in targeted countries**, executed by independent experts who have no interest in the outcomes of the assessments.
4. **Discontinue direct (waiver) funding while providing bridge funding to Akvo** to cover the period between the end of the direct funding and the start of open calls for proposals that always include digitalisation.
5. **Avoid funding interventions with a negative market distortion effect.**

5.2 Recommendations for Akvo

1. **Grow towards a more sustainable data journey model**, among others by: (a) developing a data journey tracking system, (b) catalysing agriculture and WASH sectors in target countries with regard to digitalisation and data-driven management, (c) assisting customers to develop and implement a digitalisation and data-driven management sustainability plan and exit strategy, and (d) increasing expertise at the senior level, combining in-depth sector and data journey expertise.
2. **Consider changing the SAAS fee system (e.g. into a reduced or no-fee system for local organisations and governments) and connecting Caddisfly and RSR to other survey software tools** with the services around the software offered to customers on a fee basis.
3. **Consider phasing out Akvo Flow + Lumen in the longer term.**

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ABBREVIATIONS / ACRONYMS

AQOA	Annual qualitative outcome assessments
BHOS	Buitenlandse Handel en Ontwikkelingssamenwerking (Foreign Trade and Development Cooperation)
CSIS	Centre for Strategic and International Studies
CSO	Civil society organisation
D2D	Data to Decision
D4Ag	Data for Agriculture
DAC	Development Assistance Committee
DGIS	Directorate-General for International Cooperation
EM	Evaluation matrix
EQ	Evaluation question
EU	European Union
EUTF	European Union Emergency Trust Fund
FGD	Focus group discussion
FIETS	Financial Institutional Environmental Technological and Social Sustainability
G4AW	Geodata for Agriculture and Water
GDPR	General Data Protection Regulation
GODAN	Global Open Data for Agriculture & Nutrition
HQ	Headquarters
I	Interview
IATI	International Aid Transparency Initiative
ICT	Information and communications technology
ICT4D	ICT for Development
IDH	The sustainable trade initiative
IGG	Inclusive Green Growth department
IICD	International Institute for Communication and Development
iNGO	International non-governmental organisation
IR	Inception report
IWRM	Integrated water resources management
KfW	German Development Bank
KII	Key informant interview
L	Literature resource
MEP	Minimum evaluation procedure
M&E	Monitoring and evaluation
N.A.	Not available
NABU	Naturschutzbund Deutschland
NGO	Non-governmental organisation
NWP	Netherlands Water Partnership
OECD	Organisation for Economic Co-operation and Development
PME	Planning, monitoring and evaluation
PMEL	Planning, monitoring, evaluation and learning

PPP	Public-private partnership
PUM	Netherlands Senior Experts
PwC	PricewaterhouseCoopers
ODK	Open data kit
Q&Q	Quantitative and qualitative analysis
RSR	Really simple reporting
RVO	Netherlands Enterprise Agency
SaaS	Software as a service
SDG	Sustainable development goals
SMART	Specific, measurable, attainable, relevant and time-bound
SSI	Semi-structured interview
SWOT	Strengths, weaknesses, opportunities and threats
ToC	Theory of Change
ToR	Terms of Reference
UN	United Nations
UNICEF	United Nations International Children's Emergency Fund
WASH	Water, sanitation and hygiene
WHO	World Health Organization
WPDx	Water Point Data Exchange
YEP	Young Expert Programme

1 CONTEXT

1.1 The policy context

This report covers the results of the evaluation of the Akvo D2D programme carried out by Edinburgh Consultants for the Inclusive Green Growth (IGG) department of the Directorate-General for International Cooperation (DGIS) of the Netherlands Ministry of Foreign Affairs). IGG is responsible for Dutch foreign policy on climate, water, food security and energy, raw materials, and the polar regions. Particularly relevant for this evaluation are the WASH strategy (L52) and the policy brief 'Towards a World without Hunger in 2030: the Dutch contribution' (L91). At DGIS level, the "Digital Agenda for Foreign Trade and Development" (L51) is important because of its focus on digitalisation and data-driven development remaining at the forefront of digital innovations and the development of new technological applications and more in general the overall DGIS Policy "Investing in Global Prospects" (L117).

1.2 Akvo and the D2D programme

Akvo (akvo.org) is a Dutch not-for-profit foundation (or social business) that was established in 2008. Akvo provides tools and services to help organisations collect accurate and high-quality data, use and understand this data and transform the data into credible and actionable evidence. For this purpose, Akvo has developed and operates several integrated, open-source software systems and complements this with a range of support services to help organisations improve data-driven decision-making and act upon that data.

Akvo has a global structure and implementation model, which it claims is unique in the international development sector. It combines (a) the creation of software tools designed to meet the data needs of the sector, (b) a focus on people and capacity building, and (c) a physical presence in different parts of the world through local offices called 'hubs'.

Akvo has 70 employees worldwide, some of whom work at the headquarters in Amsterdam, the Netherlands, and some of whom work in one of the six local hubs: Americas hub, South Asia hub, South-east Asia hub, Eastern Africa hub, West Africa Burkina Faso hub and West Africa Mali hub.

In 2007, Akvo received a start-up subsidy from the Schokland Fund, initiated by DGIS. The aim of the Schokland Fund was to enhance the Dutch contribution towards the Millennium Development Goals (MDGs) by stimulating partnerships and innovation. The Akvo Schokland project, which was a public-private partnership (called PPP1), started in 2007 and ended in 2010.

In the second PPP project, Akvo received financial support from DGIS (called PPP2) from 2011 until 2014.

The third period of financial support by DGIS to Akvo (PPP3), from 2015 until 2017, was built on the results of PPP1 and PPP2. Akvo's role was to assist non-governmental and private partners in sharing knowledge, bringing projects online and simplifying reporting to speed up development and increase transparency. Investment in Akvo tools was leveraged by other donors in the partnership, duplication the overall budget. PPP3 was evaluated by PwC. Recommendations and lessons learnt from this evaluation report are important for the present assignment and discussed under EQ1 in Chapter 3 of this report.

The fourth period of DGIS support did not take the shape of a public-private partnership and, therefore, was not referred to as PPP4, but rather Data to Decision (D2D). D2D runs from 1st May 2017 until the 31st December 2020 and its total budget is €3,500,000. It focuses on the development of the 'data journey', representing what organisations do when they adopt data as a strategy to improve their effectiveness and impact. The data journey consists of roughly four stages: design, capture, understand and act. More will be discussed about the data journey model under EQ4. In 2019, a top-up proposal was submitted and approved for the amount of €750,000.

The D2D programme responds to DGIS's new water sanitation and hygiene (WASH) strategy 2016-2030 (L52) and focuses on the transition period (2016-2020) described in this strategy. The overall objectives of D2D are:

1. to support DGIS in its WASH activities; and
2. to implement, boost and support other activities to achieve the objectives laid out in the WASH strategy.

D2D advances WASH's existing monitoring efforts, including the move from single mappings to continuous monitoring and the improvement of the access and actionability of the data, and includes other sectors, specifically agriculture.

As described in the Terms of Reference (ToR), the key elements of D2D include:

- Maintaining existing and developing new partnerships (10.3% of budget) in target countries and regions with regard to sustainable WASH services.
- Creating enabling environments (31.8% of budget) that support organisations to effectively use digital tools and data.
- Continuation and scaling of Akvo's data collection and management operations with its partners (45% of budget) channelled through the six Akvo hubs.
- Outreach and dissemination (12.5% of budget) comprising advocacy for data-based management and the use of open data standards.

2 APPROACH AND METHODOLOGY

2.1 Evaluation objectives and questions

The objectives of the evaluation are:

1. Perform an independent evaluation of the D2D programme; and
2. Formulate recommendations regarding further cooperation between DGIS and Akvo in the context of digital WASH monitoring.

The first objective looks back at the D2D programme and how it performed. The second objective looks forward, looking into DGIS's support to Akvo in the future. For each objective, evaluation questions were formulated in the inception phase. They were structured in two evaluation matrices (one for each objective, see following pages) in line with the OECD/DAC criteria of relevance, effectiveness, efficiency, impact, sustainability and coherence (L1). The evaluation matrices consist of the evaluation questions, indicative areas to cover, indicators on which information is required to be able to answer the evaluation questions, information sources, data collection methods and data analysis methods. For each evaluation question, relevant sub-questions are formulated for the semi-structured interviews per interviewee type (see Annex 7).

Six evaluation questions are formulated for objective 1. The findings for each of these evaluation questions are presented in Chapter 3, including a rating (on a scale of 1 to 5) per question of the performance in the areas covered by the question, which the consultants based on all the information they found and the insights they developed regarding the question. This ultimately yielded a comprehensive rating and a short description of the overall performance of the D2D programme. Compared with the inception phase, the consultants have changed the order of evaluation questions 3 and 4.

Table 1 Rating system for evaluation questions for objective 1

Rate	Description
5	Excels at all subjects
4	Comprehensively covered
3	Adequate
2	Problematic
1	Inadequate

Four evaluation questions were formulated for objective 2. The findings for each of these evaluation questions are presented in Chapter 4, without ratings, however, because the questions under this objective do not assess the performance level but rather a potential level (for future collaboration between Akvo and DGIS).

Chapter 5 provides the conclusions and recommendations by the consultants for the two objectives, based on the findings and insights obtained during the evaluation. The conclusions are structured per objective and evaluation question, while the recommendations are structured per objective and divided between recommendations for DGIS and recommendations for Akvo.

Table 2 Evaluation matrix 1 'Perform an evaluation of the data to decision project'

EQ No	Evaluation question (EQ)	Indicative areas to cover (sub-topics)	Indicator	Information sources	Data collection methods
Relevance: Is the D2D programme doing the right thing?					
1	How well designed is the D2D programme to achieve its objectives?	<ul style="list-style-type: none"> The implementation of recommendations PwC PPP3 in design D2D Design process ToC process and its assumptions Monitoring framework process Quality of monitoring and evaluation Support to WASH strategy Design of learning process 	<ul style="list-style-type: none"> On a scale of 1 to 5, how well were the D2D programme intervention logic and monitoring framework designed? 	<ul style="list-style-type: none"> Project reports and other key documents PwC evaluation report Monitoring framework M&E data Planning documents Notes from stakeholder interviews 	<ul style="list-style-type: none"> Document review Semi-structured interviews with key stakeholders
2	Has Akvo appropriately identified the demand in the region; does Akvo work demand-driven?	<ul style="list-style-type: none"> Demand identification process Demand-driven 	<ul style="list-style-type: none"> On a scale of 1 to 5, how demand-driven is Akvo's approach? 	<ul style="list-style-type: none"> Project reports and other key documents Notes from stakeholder interviews 	<ul style="list-style-type: none"> Document review Semi-structured interviews with key stakeholders
Effectiveness: Is D2D achieving its objectives and envisaged results (outputs, outcomes and impacts)?					
3	How effective is the Akvo data journey approach (design > capture > understand > act) at the level of local implementing organisations, and to what extent does this contribute to improved sustainability and service delivery in targeted communities? How/to what extent has this been strengthened by the D2D project?	<ul style="list-style-type: none"> Data journey model and suitability of tools and services Link sector – data journey model Dependency on Akvo Effectiveness of capacity building model with train-the-trainers Institutionalisation of data journey model 	<ul style="list-style-type: none"> Scale of 1 to 5 on the effectiveness of data journey model 	<ul style="list-style-type: none"> AQOA Project reports and other key documents M&E data Notes from stakeholder interviews 	<ul style="list-style-type: none"> Document review Semi-structured interviews with key stakeholders M&E data collection and analysis

EQ No	Evaluation question (EQ)	Indicative areas to cover (sub-topics)	Indicator	Information sources	Data collection methods
4	What is the key result at (intermediate) outcome level according to the agreed results framework and how do they relate to the original targets?	<ul style="list-style-type: none"> Monitoring framework > target vs achieved result Objectives of four pillars: target vs achieved Relation ToC and monitoring framework Quality of the framework 	<ul style="list-style-type: none"> Scale of 1 to 5 on achieving (intermediate) outcomes 	<ul style="list-style-type: none"> Project reports + key documents M&E data Planning documents Notes from stakeholder interviews 	<ul style="list-style-type: none"> Document review Semi-structured interviews with key stakeholders M&E data collection and analysis
Sustainability: Will the benefits last?					
5	What evidence is there to demonstrate that Akvo has scaled up its operations in WASH as well as sustainably broadened the scope of its operations to other sectors such as IWRM and sustainable agriculture?	<ul style="list-style-type: none"> Support to hubs Portfolio mapping Differences between sectors 	<ul style="list-style-type: none"> Scale of 1 to 5 on scaling up its operations in WASH, IWRM and sustainable agriculture 	<ul style="list-style-type: none"> Project portfolio Annual plans, monitoring reports and data Notes from stakeholder interviews 	<ul style="list-style-type: none"> Document review Semi-structured interviews
Coherence: How well does the intervention fit?					
6	To what extent has Akvo expanded its partnerships with implementing organisations and governments worldwide? Are these partnerships sustainable? How are partners and initiatives within partnerships identified?	<ul style="list-style-type: none"> Partnership identification, partnership engagement model Partnership satisfaction 	<ul style="list-style-type: none"> Scale of 1 to 5 on expanding partnerships 	<ul style="list-style-type: none"> Annual plans, monitoring reports and data Notes from stakeholder interviews 	<ul style="list-style-type: none"> Document review Semi-structured interviews

Table 3 Evaluation Matrix 2 'Formulate recommendations regarding further cooperation between DGIS and Akvo'

EQ No	Evaluation question (EQ)	Indicative areas to cover (sub-topics)	Indicator	Information sources	Data collection methods
Relevance: Is the intervention doing the right thing? The extent to which the intervention objectives and design respond to beneficiaries'* global, country and partner/institution needs, policies and priorities.					
7	As an international organisation, is Akvo unique in the field of digital WASH monitoring, in the context of its software and tools as well as its activities (e.g. outreach, lobbying and partnerships)?	<ul style="list-style-type: none"> • Uniqueness • Software functionality 	<ul style="list-style-type: none"> • Functionality of Akvo tools compared with tools of one other relevant software provider • Contents (quality, effectiveness) and appreciation of Akvo's services, lobbying, partnerships and outreach 	<ul style="list-style-type: none"> • Software tools and databases • Notes from interviews and meetings • Relevant literature 	<ul style="list-style-type: none"> • Software functionality comparison • Interviews • Meetings • Analysis of relevant literature
Sustainability: Will the benefits last?					
8	Does DGIS's support to Akvo distort the level playing field of other parties with similar activities?	<ul style="list-style-type: none"> • Market distortion theory • Competition of Akvo • Future business models 	<ul style="list-style-type: none"> • Potential market distortions 	<ul style="list-style-type: none"> • Notes from interviews and meetings • Relevant literature 	<ul style="list-style-type: none"> • Interviews • Meetings • Analysis of relevant literature
Coherence: How suitable is the intervention?					
9	Is there a high risk of dependency on DGIS if cooperation were to be extended in the future?	<ul style="list-style-type: none"> • Akvo's business model (current and future) • Akvo's financial overviews of paying customers and donors 	<ul style="list-style-type: none"> • # of funds required from DGIS in the short and long term • Dependency on grant funding • Risks related to retaining different customers 	<ul style="list-style-type: none"> • Akvo's financial reports • Notes from interviews and meetings • Relevant literature 	<ul style="list-style-type: none"> • Business and finance analysis • Interviews • Meetings • Analysis of relevant literature
10	What scope is there for cooperation with other relevant parties in the digitalisation sector to avoid the duplication of activities in targeted regions?	<ul style="list-style-type: none"> • Sector coordination • Business collaboration • Avoidance of duplication 	<ul style="list-style-type: none"> • # parties interested and/or suitable for further collaboration and contents of these options • Scale 1-5 on sector collaboration 	<ul style="list-style-type: none"> • Feedback from other parties and from Akvo • Business models and other relevant documents from such parties 	<ul style="list-style-type: none"> • Stakeholder engagement meetings • Interviews • Relevant literature

2.2 Akvo's ToC and the intervention logic of the D2D programme

2.2.1 Akvo's Theory of Change

Akvo has developed a Theory of Change (ToC) for the behaviour changes (outcomes) it aims to effectuate in the partners and other stakeholders it assists, as well as the impacts it hopes to contribute to. This ToC is not restricted to the D2D programme but covers all of Akvo's interventions. Akvo has formulated 27 outcomes in its ToC. Assumptions and risks have not been formulated in the ToC. In L34, Akvo explains that the final (highest-level) outcome for Akvo is to ensure that 'Partners and other stakeholders are more effective in delivering inclusive and sustainable services' (see Figure 1).

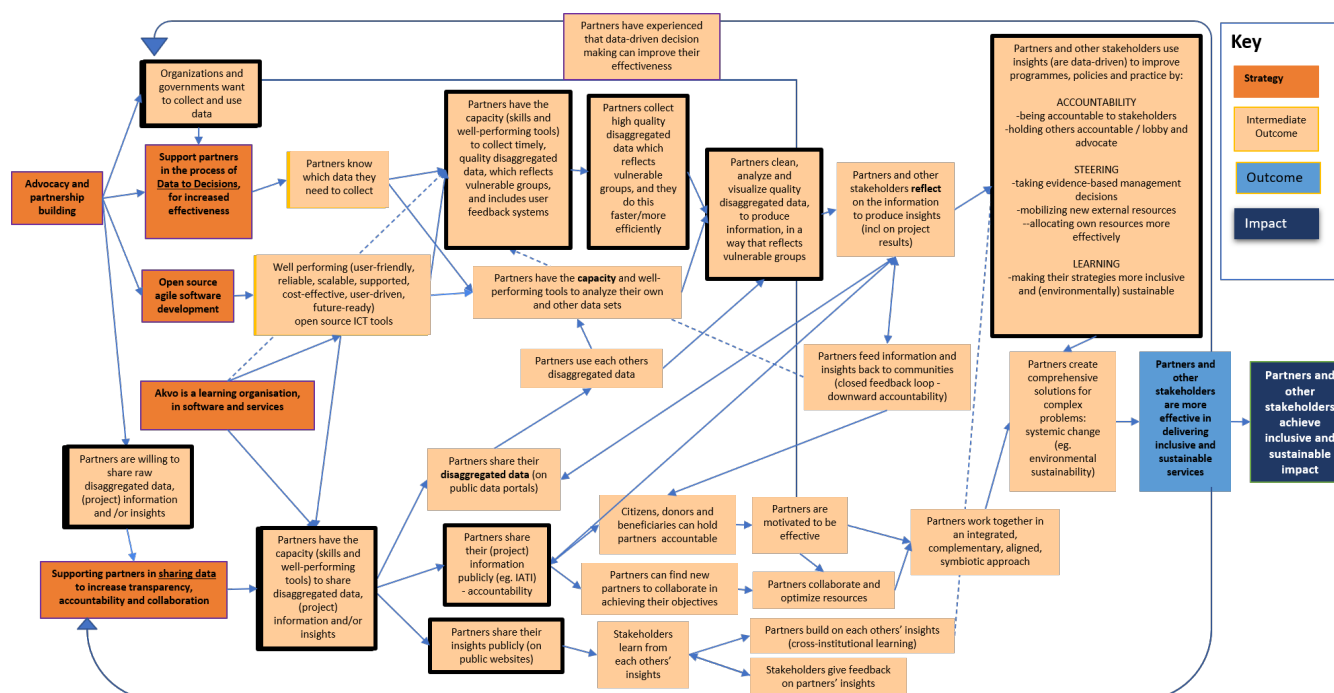


Figure 1 Adjusted ToC of Akvo

2.2.2 Intervention logic of the D2D programme

The inception report developed a reconstructed intervention logic based on an initial document review. The consultants further adapted this intervention logic during the evaluation phase based on the additional reading of Akvo documents and on interviews with Akvo staff (I5 and I77). The adapted intervention logic is presented on the following page (Figure 2). The nine intermediate outcomes in the intervention logic were selected by Akvo for monitoring during the inception phase of the D2D programme. This was approved by DGIS. These intermediate outcomes match nine key outcomes formulated in Akvo's ToC (hence the relation between the two). These intermediate outcomes, therefore, also formed the basis of the D2D monitoring framework, which was subsequently approved by DGIS (L16). The results of each of these intermediate outcomes (called 'outcomes' in the D2D monitoring framework but reformulated to intermediate outcomes in this report) are evaluated as part of EQ3. The findings regarding this question also assess to what extent the combined results of the D2D programme have affected the final outcome

formulated in Akvo's ToC and the D2D intervention logic. In this regard, it is important to note that under the D2D programme, Akvo has reported results for its whole organisation, not only the results and outcomes realised and effectuated with D2D funding. The findings regarding EQ1 highlight how well the D2D programme, including its ToC, intervention logic and monitoring framework, was designed.

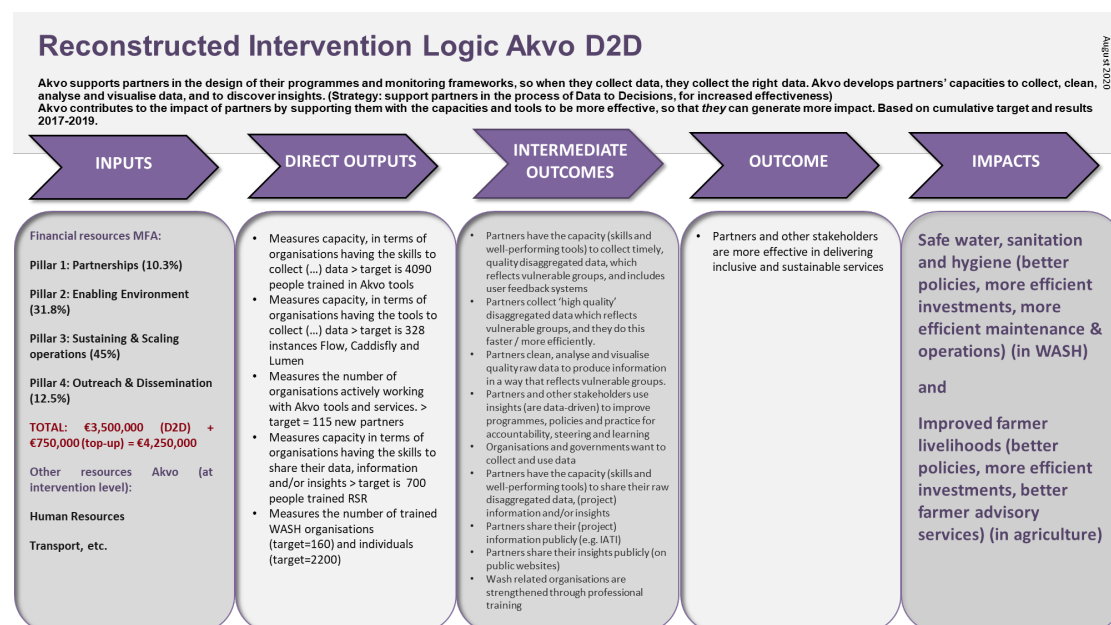


Figure 2 Reconstructed intervention logic

2.3 Data collection, analysis and synthesis methods

2.3.1 Data collection

Data collection consisted of:

- 1) **Literature reviews** of 116 relevant documents (see the Bibliography in Annex 10), largely provided by Akvo (a variety of D2D programme documents, other relevant Akvo documents and several relevant sector documents) and partly selected by the consultants themselves from other sources (mainly on the internet). This evaluation report refers to this Bibliography by mentioning the number of the source, e.g. L1 refers to Literature Resource 1 – OECD DAC Criteria, in the Bibliography.
- 2) **Semi-structured interviews** through digital means (mainly Skype) with interviewees representing different types of Akvo stakeholder in a multitude of countries where Akvo is or has been active (including Akvo staff members at Akvo HQ and the Akvo hubs).¹ Some interviews were conducted with a single individual, while others were held with small

¹ The consultants' team originally planned to interview Akvo stakeholders during visits to two countries where Akvo operates. However, due to the Covid crisis already during the inception phase, it became clear that it would not be possible to visit countries. It was, therefore, proposed to change the strategy and conduct online interviews. This has worked well and made it possible to interview many more people.

groups of people (in the latter case, the interviews were often in the form of digital group meetings). A limited number of interviews were conducted by both consultants together, whereas most were conducted by one of the consultants. Notes were taken during all interviews. Interviews were conducted based on the promise that the interviewees remain anonymous, to provide a safe environment to express their views. Annexes 5 and 6 provide the full lists of interviewees (one list shows the interviewees in alphabetical order, while the other is a coded anonymous list based on stakeholder types). Reference is made in this report to this coded list, e.g. *DGIS I1* or *Local NGO I20*. Indicative semi-structured interview (SSI) checklists had already been developed and tested in the inception phase for each stakeholder category (Akvo, DGIS, Government, (Local) NGO, Private organisation, Multilateral and Knowledge partner). These checklists were tailored to each actual interviewee in the evaluation phase, based on the information already gained from document reviews and prior interviews. Annex 7 provides the basic stakeholder question lists. Each selected partner was introduced by Akvo and gave consent to take part in the evaluation before the interview.

- 3) **Functionality assessment of Akvo Flow+Lumen compared with mWater (L116)**, the main competing survey software tool in the WASH development sector, executed by two experts who have experience with both tools and combine digital expertise with WASH development expertise. The functionality assessment comprised data collection (regarding the functionality of both software tools) and data analysis (see next sub-section).

As part of the literature reviews, the consultants also received an overview from Akvo of the project portfolio of 80 of Akvo's projects larger than €50,000, with detailed information per project about the lead organisation, the value of the project, the sector, the hub under which the project falls, the type of organisation and the phases of the data journey covered in the project. This project overview formed the basis for the portfolio mapping used to answer EQ5 in the evaluation phase and was also used in the process of selecting partners and other stakeholders to be interviewed.

The selection of interviewees to be interviewed was partly a random procedure and partly a purposeful selection. Per partner type (NGOs, both iNGOs at HQ and country level and Local NGOs, Governments, Multilaterals, Private organisations) the consultants randomly selected interviewees involved in projects that covered different stages of Akvo's data journey, both from the WASH and agriculture sectors and covering all the Akvo hubs in a clustered approach.

The clusters were too small to use a scientific representative sample method, but an effort was made to cover the whole portfolio as representative as possible without a bias on how individual projects were performing. Purposeful selection of interviewees comprised a number of Akvo HQ and hub staff, several DGIS staff and several stakeholders, who were expected to provide very specific information (e.g. mWater, a foundation funding Akvo with grants for software development and several knowledge partners with a specific relation with Akvo). This added up to 87 interviews in the evaluation phase and 10 in the inception phase (see Figure 3). Together, the interviews provided the consultants with imperative information about and insights into Akvo and its D2D programme, and prevented bias from being formed, which is crucial to answer the ten evaluation questions in an informed way.

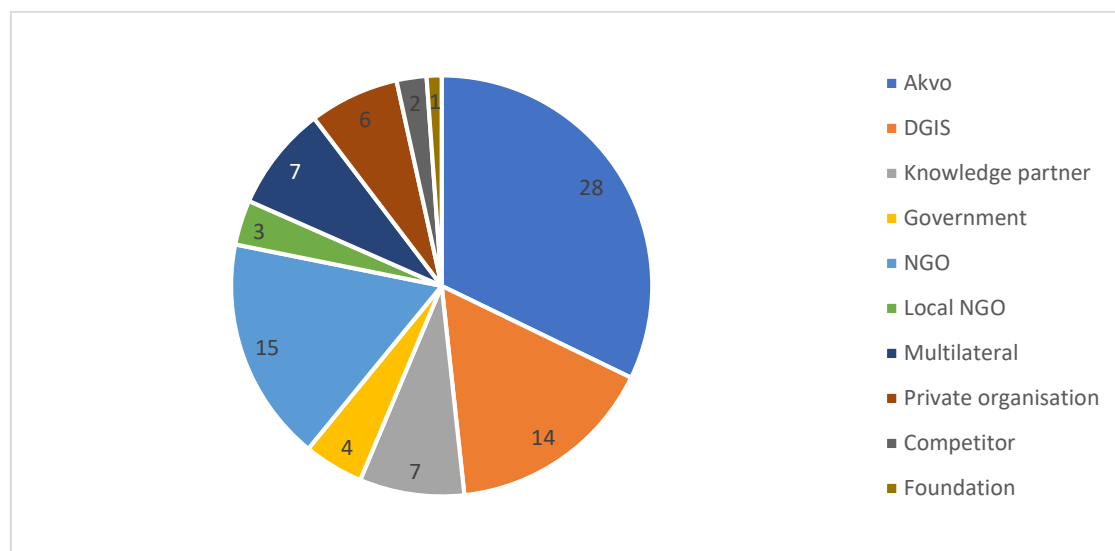


Figure 3 Number of interviews by type of organisation

Annex 2 presents a more detailed explanation of which organisations have been selected, how and why.

2.3.2 Data analysis and synthesis methods

To analyse and synthesise the data, all relevant findings from the literature reviews and from the interview and group meeting notes were structured per evaluation question (EQ), per subject under the EQ and per type of stakeholder, and put in a findings template in Excel (an overview per EQ of all relevant literature findings and interview notes).

Data was synthesised in an iterative and cumulative process from the findings template to generate findings for each of the EQs. For EQ4, to determine whether (intermediate) outcomes were achieved, the quantitative information from the monitoring framework was combined with qualitative information from the Annual Qualitative Outcome Assessments (AQOAs) and the interviews.

For EQ7, in addition to findings from interviews and literature reviews, the key findings from a functionality assessment of Akvo Flow+Lumen compared with mWater (L116), conducted as part of the evaluation, were also used and outlined in a SWOT analysis of Akvo Flow+Lumen (see Annex 9). The software tools were assessed in eight categories (Analysis, App Features, Collaboration, Data Management, Reporting, Survey Management, User Experience and Visualisation) by two experts who were familiar with both software tools. One of the experts focused on the functionality of Akvo Flow+Lumen, while the other focused on the functionality of mWater. Both experts assessed all categories during the review and testing of the software and discussed the results with each other.

All findings of all evaluation questions were cross-checked between the consultants to verify whether there was a need for further clarification and/or adaptations. A final round of collation and review of the findings yielded the key findings per EQ.

The entire process made it possible to:

- consolidate both quantitative and qualitative findings per EQ, based (where available) on the findings of interviews and literature reviews;
- identify gaps; and
- cross-check findings from different sources.

The above process also provided an (Excel-based) 'paper trail' so sources of evidence for each finding can be traced back to the source.

The key findings of the evaluation questions were used to generate answers to the evaluation questions in the two evaluation matrices. Based on the findings and the answers to the evaluation questions, the consultants developed conclusions and recommendations as presented in Chapter 5 of this report. The recommendations are separated into recommendations for DGIS IGG and for Akvo, to provide learning and insights for both the contracting party and the organisation under evaluation.

After an initial draft report was ready, a face-to-face meeting was held with key Akvo staff to share the findings from this report and discuss the facts and possible contradictory findings. Akvo later also responded to the report's findings. In addition, Edinburgh Consultants conducted a quality assessment of the report and provided feedback. For the final draft, the text was also edited by a professional editor. The consultants propose organising a shared meeting between DGIS, Akvo and the consultants to present and discuss the final report.

2.4 Overview risks and mitigation measures

Table 2 presents an overview of potential risks regarding the evaluation, determined during the inception phase, and how these could be mitigated. The two columns on the far right reveal whether these risks materialised during the evaluation and, if so, how they were mitigated. Fortunately, no other unexpected problems emerged during the evaluation.

Table 4 Risks and mitigation measures

Risk	Severity level	Mitigation plan	Has the risk materialised?	Mitigation realisation
Difficulty accessing key data (documents, databases)	Low	Coordination between consultants, Akvo and Akvo stakeholders and collaboration with these parties will probably yield sufficient key data and information.	No	N.A.
Limited availability of information regarding Akvo's data journey services	Medium	Interviews with a limited number of stakeholders who have already been supported by Akvo about their data journeys in combination with stakeholder engagement meetings during which the relevance and effectiveness of Akvo's data journey services can be discussed.	To some extent. Only a few documents provided tangible information on the results and effects of the data journey, while relatively few organisations	Several organisations were interviewed that received support from Akvo during their data journey (with the exception of the data collection part of this journey, as this part has been well documented and was discussed in many interviews), the few documents with tangible

Risk	Severity level	Mitigation plan	Has the risk materialised?	Mitigation realisation
			have been supported by Akvo on parts of the data journey to date, with the exception of the data collection part.	information were intensively reviewed, Akvo staff were interviewed several times specifically regarding data journey subjects.
Difficulty visiting countries and difficulty working with local consultants in Akvo's target countries due to the corona crisis	High	This has become virtually impossible, with many countries under lockdown and the risk of contamination still high. The consultants will, therefore, conduct all interviews and discussions digitally.	Yes	See section 2.4.
Low participation or availability for interviews of stakeholders	Low to medium	Most stakeholders will be ready and make time for an interview as Akvo is, in most cases, a respected service deliverer. However, some stakeholders, notably Akvo's competitors and other stakeholders who do not or only partly or indirectly work with Akvo (e.g. local partners of customers of Akvo) may not prioritise or appreciate such interviews. This will be mitigated by then contacting other, similar stakeholders. Now that we are working digitally, it is much easier and less time-consuming to conduct interviews and even shift to similar stakeholders in other countries if necessary.	No	N.A.
The scale of the task	Medium	As it is virtually impossible to review all literature in sufficient depth, conduct interviews with sufficient numbers of different stakeholders, investigate all the different software tools and their database structures in the limited amount of time available for the assignment, the consultants will divide tasks between them in a	Yes	Stakeholder engagement meetings as envisaged have hardly materialised. Only some were held with different Akvo staff. This has reduced the amount of work slightly. The consultants have divided the interviews between them, with limited numbers of interviews conducted together. In addition, they divided the

Risk	Severity level	Mitigation plan	Has the risk materialised?	Mitigation realisation
		smart way, and focus on limited key stakeholders, documents and software tools. Also, the stakeholder engagement meeting will bring together a variety of stakeholders each time within one meeting, reducing the time needed to contact each of them separately.		writing of the sections between them and proofread each other's texts and provided feedback, which was not only time-efficient but also generated high-quality results. Nevertheless, the amount of work was substantial, and as a result, both consultants spent significantly more time on the assignment than they were supposed to. They were able to do so because DGIS agreed, during the process, to extend the deadline by one month until the end of August.

2.5 Limitations of the study

Since the monitoring framework of the D2D programme had many outputs and few to no outcome indicators, only a limited amount of data was available for assessing the outcomes. This was mitigated by conducting a relatively high number of interviews in which outcomes of the programme were discussed, while two documents with qualitative information regarding the outcomes of the D2D programme have been reviewed extensively.

2.6 Terminology

In this report, several terms are used that require some further explanation regarding what the consultants mean when using them in the context of this report:

- Fee-based services of Akvo (also called 'income-generating' services by Akvo). These are services to customers for which Akvo receives some form of fee. Examples include the licence and hosting fees customers pay for using Akvo's software, data collection (e.g. through local parties that are authorised to do so and supervised by Akvo) and/or other parts of the data journey for a customer.
- Public or sector-catalysing services of Akvo. These are services for which Akvo does not get any form of fee, or at least not a fee covering (a large part of) the actual costs and which are usually subsidised or fully covered by grant funding, and which benefit a whole sector (or several sectors) in a country or region, and which do not compete with similar services of other parties. Examples are training of trainers regarding generic data journey services (not focused on Akvo software) among local consultancy bureaus and/or government agencies, assisting and creating awareness among governments and government agencies regarding digitalisation, including assistance with digitalisation policy development.

- Grants. Non-repayable funds or products disbursed or given by one party (grant-makers), often a government department, corporation, foundation or trust, to a recipient, often (but not always) a non-profit entity, educational institution, business or individual. To receive a grant, some form of 'grant writing', often referred to as either a proposal or an application, is required (source: Wikipedia).

3 FINDINGS – OBJECTIVE 1

The findings presented in this chapter are based on all findings obtained about evaluation objective 1 ('Perform an evaluation of the D2D programme').

3.1 EQ1 Design of the D2D programme

The full evaluation question addressed in this section is: 'EQ1 How well designed is the D2D programme to achieve its objectives?' Section 5.1.1 provides a conclusion and assessment about this EQ.

3.1.1 The implementation of recommendations PwC PPP3 in the design of D2D

DGIS asked the consultants to take the evaluation report (L10a) of the preceding project, PPP3, from PwC as a base and determine whether conclusions and recommendations were implemented in the D2D programme. The conclusions of the PwC report are as follows:

- Akvo Flow can help create conditions for optimal targeting of beneficiaries, but Akvo does not contribute directly to improved WASH service delivery within the time span of PPP3.
- The use of Akvo's tools does not contribute to the sustainability of WASH services within the timespan of PPP3.
- Akvo contributed to IATI compliance before and during PPP3, while alternative solutions have also become available.
- The scope of information in Akvopedia was significantly broadened during PPP3.
- Akvo's software development process follows modern standards and is considered efficient.
- Some observations show that efficiency of PPP3 from a funder's perspective could have been better.

This resulted in recommendations to DGIS:

- Carefully assess the added value of continued co-funding of Akvo activities.
- Limit future support to the development of tools whose functionality will add to the effectiveness and sustainability of development projects.
- Recommendations on software development. The goals of the PPP are not specific about Akvo's software development activities. We advise making these more specific or explicitly removing this from the KPIs and allowing Akvo to develop according to its vision and the needs of its stakeholders, economic buyers and users.
- In future cooperation's, the Ministry of Foreign Affairs (MFA) should define proper and adequate objectives, results, indicators and targets, including objectives to capture MFA's contribution to the PPP.

Based on these recommendations, DGIS decided to change the set-up of the support to Akvo into a grant for the D2D programme and did not continue with the programme as a PPP4. Akvo was asked to address the conclusions and recommendations in the design of the D2D programme. To address conclusion 1, Akvo included in the design of D2D the intention to develop a methodology with Water Point Data Exchange (WPDx) (L8) to calculate the number of people who can benefit from data and increase the efficiency of WASH investments through data-informed decision-making. This will provide a clearer picture of Akvo's contribution towards improved WASH delivery. Akvo addressed conclusion 2 in the further development of the data journey model. Conclusions 3, 4 and 6 are not relevant for this evaluation. Recommendation 1 will be assessed again in this evaluation. Recommendations 2 and 3 are related to software development. Based on the recommendation, Akvo decided not to include software development in the D2D proposal.

To address recommendation 4, Akvo created the ToC and a monitoring framework with SMART indicators and worked out in annual plans what it was going to do with continuous approval from DGIS (Akvo I75).

Under the design of the programme and the monitoring framework, the consultants will assess whether the objectives and indicators are indeed SMART.

3.1.2 Design process and organisation of D2D programme

The Data to Decision (D2D) programme runs from April 2017 until the end of 2020. This evaluation will be completed before the end of the programme (December 2020).

Akvo is transitioning from a software tool provider (including training services on how to work with the software) to a data service provider focusing on the entire data journey to help organisations become more data driven. The ToC presents Akvo's new course. It is introduced as part of the D2D programme during the inception phase with all Akvo staff involved in it (Akvo I11) (more details about the ToC later in this chapter).

The D2D proposal is partly designed to support Akvo in its transition from a software supplier to a data service provider with solid underlying methodologies, scalable tools backed up with a team of tech consultants and a sustainable partner base. The transition will help Akvo facilitate partners to take data-driven decisions to improve their sustainable WASH activities, which will contribute to DGIS's objectives in the WASH sector. Other sectors like sustainable agriculture and IWRM were briefly mentioned in the proposal but are more elaborated in the inception report.

In L8, Akvo describes the objective as follows: *'The Data to Decision (D2D) programme (2017-2020) was created to support the implementation of the Dutch WASH strategy 2016-2030. By harnessing the potential of data to drive decision-making, the programme aims to build the data systems, improve data processes and boost data skills of our partners with the main objective of accelerating progress towards Sustainable Development Goals 6.1 and 6.2.'*

Based on Akvo reports (L34) and interviews with Akvo staff (I5, I77), it was clear that the design process of the D2D project was done in a participative way with Akvo staff from HQ and from the hubs and conducted after PwC's evaluation of PPP3. The hubs appear to know the demand in their regions and they provided input for the proposal and the inception phase. Other stakeholders were not involved directly (either in the planning or the validation). A similar process happened

with the ToC. It was a participatory, bottom-up process (L34) with staff involvement, though other stakeholders were not involved.

The D2D programme was designed along 5 pillars with 10 sub-projects and 31 budget lines. In total, Akvo defined 38 project objectives for these 10 projects.

The consultants note that the D2D programme (in the inception report) lacks a clear overall objective and has a lot of smaller sub-project objectives formulated at different levels (in total, 38 project objectives were formulated for the 10 projects). Some of these objectives are at the outcome level, some are at the output level and some are at the activity level. And, unfortunately, only half of them are formulated in line with the SMART concept. For example, under partnerships: *'To maintain old and develop new partnerships with national and regional governments, the private sector, NGOs and knowledge institutes'* is not formulated according to SMART at the objective level. It is not measurable, because there is no indication of how many partners to maintain or develop. Only new partnerships are measured in the indicators.

Akvo set up the D2D organisation in a well-structured way. Each project has a project manager, who reports to the programme manager. Each of them is responsible for achieving defined objectives and deliverables within the specified time frame and budget. There is also an operational meeting every month between the operations manager and the hub managers (Akvo I75). All staff working on D2D book their time in a time registration system.

The programme is designed along annual plans based on input from the project managers and annual reports to show the achievements of that year. Whether an activity/annual plan dovetails with D2D's requirements is determined by the programme manager and the Akvo management team. If it is suitable, the project manager receives the resources to implement the intervention. There is no checklist for this; each plan is checked against the sub-project objectives or budget lines. Each annual plan was approved by DGIS. Each project has its own Akvo 'really simple reporting' (RSR) project page, where regular updates of activities conducted in the project are presented. The five activity pillars are well developed in Akvo's project documents.

The annual plan outlines the planned activities to achieve the annual objectives (the link between inputs and outputs of the intervention logic). The annual report is at a different level, it outlines results at intermediate outcome level (if indicators have achieved the agreed targets) and gives an aggregated overview of the ten sub projects.

3.1.3 ToC process

During the inception phase of D2D, a ToC with intermediate outcomes and indicators was developed in a participative process with all Akvo staff. Other stakeholders were not involved in the design process, but Akvo shared and discussed the ToC with many stakeholders afterwards.

The ToC was developed for Akvo as a whole and not specific for the D2D programme alone. The consultants will call the D2D ToC or just ToC in this report.

The ToC shows the impact D2D is aiming for, what partners and stakeholders need to do differently (outcomes) and what D2D will do to make the intended outcomes happen (strategies). In section 2.2, we already presented an adjusted ToC and the intervention logic.

According to the document 'From Data to Decision – context for the 2017-2019 report and evaluation (L8)': *'With a good ToC, a sound monitoring framework focused on selected outcomes,*

clear milestones and an effective monitoring system in place, we are now in a much stronger position to demonstrate which outcomes we influence, and how we contribute to the impact of our partners.'

The narrative of the ToC presents a clearer story than the visual representation of the ToC, which is somewhat confusing with the many intermediate outcomes and lines. Akvo agrees (Akvo I77) that the visualisation of the ToC could be further developed.

The ToC is not phrased in a sector-specific way, but if focused on WASH the final objective could be phrased as 'achieving inclusive and sustainable WASH services' (Akvo L5). Therefore, the ToC shows how, in theory, Akvo contributes to partners achieving the points raised in the PwC evaluation: improved WASH services delivery and the sustainability of these services.

The Akvo ToC shows the strategies, intermediate outcomes and impact.

The link between the project objectives of the 10 sub-projects with the monitoring framework was not clear for DGIS (DGIS I72). During the inception phase, DGIS asked for an overview explaining how the outcomes and indicators in the monitoring framework contributed to the objectives in the D2D sub-projects. This resulted in a complex overview (L16f). Akvo was not asked to create a log frame that could have established this link to create the full intervention logic to link input > interventions > outputs > outcome for planning purposes.

Based on the connection of the D2D sub-projects and the outcomes in the ToC, the consultants linked the sub-projects to the intermediate outcomes (looking at the darkest green fields in L16f):

- Partner development contributes most to intermediate outcomes 1 and 5
- Partner services contributes most to intermediate outcomes 1, 3, 6 and 7
- Software tools contribute most to intermediate outcomes 1, 2, 4 and 7
- The hubs contribute most to intermediate outcomes 3 and 5, but certainly also to intermediate outcomes 1, 2 and 3
- Outreach & dissemination contributes most to intermediate outcomes 5, 6, 7 and 8

3.1.4 Monitoring framework process

Akvo's ToC is translated into a monitoring framework for the D2D programme with results indicators and targets. As mentioned in section 2.2, the outcomes that Akvo measured are intermediate outcomes in the intervention logic. The ToR in Annex 1 provides the full monitoring framework, including the targets. During the D2D programme, the targets were somewhat adapted due to some changes in definition. But these were minor changes. In the original monitoring framework, 'Partners share their insights publicly' was initially also included as a key intermediate outcome. This was adapted based on changes in the AQOA approach with DGIS's approval. In 2018, DGIS requested adding another intermediate outcome: 'WASH-related organisations are strengthened through professional training'. This was done.

As mentioned before the Theory of Change and the monitoring framework are not specific to D2D but are designed for Akvo as an organisation. This was agreed between DGIS and Akvo in the inception report. Nine selected outcomes of the ToC were measured in the monitoring framework to determine the outcomes for the programme, although the outcomes are not only achieved with D2D funding

The consultants noticed that the intermediate outcomes are well formulated. Three intermediate outcomes are formulated as outputs (from Akvo) because they focus on capacity building (intermediate outcomes 1, 6 and 10) and not on the intended behaviour of the partner (use of that capacity). Intermediate outcome 1 also measures the use as an indicator, however. The indicators are a mix of outputs and outcomes, while they intend to measure outcomes. This may make it difficult to determine whether the intermediate outcome has been achieved. They are formulated according to the SMART concept, with a baseline and targets. DGIS approved this monitoring framework for D2D. According to the consultants, the indicators and targets are not a good reflection of Akvo's transition towards becoming a service provider along the data journey. The indicators are formulated around Akvo products at the output level (# training events and # people trained in Akvo products), while the ToC and intermediate outcomes reflect this transition better. This is a missed opportunity. During the period of the D2D programme, a revised monitoring framework was developed that reflected the data journey better, but due to a discussion at the time about topping up/extending D2D, this change never materialised.

3.1.5 Quality of monitoring and evaluation

According to the inception report, 'Akvo and DGIS agreed to monitor the effects of the D2D activities by monitoring the outcomes of the activities based on the D2D ToC, not by monitoring individual objectives. This means that the above-mentioned deliverables, even though they would be measurable, will not be measured individually. Instead, the deliverables contribute to outcomes in our ToC, and these outcomes are monitored.' The link between Akvo's interventions in the D2D programme and achievement at outcome level are, therefore, lost.

The quantitative indicators were measured in the Akvo systems and reported to the programme manager in quarterly reports. The product managers of Akvo Flow and RSR (Akvo I57 and Akvo I58) have demonstrated to the consultants how data for indicators was reported from the different systems.

Akvo designed an Annual Qualitative Outcome Assessment (AQOA) to determine the achievement at outcome level in a more qualitative way. This was piloted with a small sample of large NGO partners in 2018 and 2019. This was developed to provide information on the progress of the qualitative indicators and intermediate outcomes. The AQOAs are rich in information about individual organisations and their progress. The AQOA would be stronger, however, if there were also an analysis at the outcome level and if Akvo could have determined what role it played in the changes implemented by its partners.

After the first annual report, DGIS requested a summary report so it could make a clear analysis of why certain outcomes/indicators were not achieved. Akvo added this to the annual reports of 2018 and 2019, but with a clear focus on explaining progress the output indicators rather than an analysis at the level of outcomes.

3.1.6 Support to the WASH strategy

Chapter 1.2 outlined the Dutch policy context. The D2D programme is aligned to all four policies and strategies:

To the general policy Investing in Global prospects due to the focus on digitalisation. To the Digital Agenda for Foreign Trade & Development Cooperation (BHOS) (DGIS, 2019, L51): Akvo

contributes to data-driven development and the responsible use of data; it endorses the principles of digital development to promote access to reliable, up-to-date information on food, water, energy and climate change. It plays an important role in supporting the WASH and agriculture sector to become more data driven.

- The WASH strategy (DGIS, 2016-2030, L52): Akvo contributes to the WASH strategy by supporting partners to become more efficient and effective in service delivery; it supports the capacity building of organisations and governments in the WASH sector; it builds innovative WASH solutions, such as WASH dashboards at the national level; it offers tools to partners to report according to the IATI standard (which it also does itself); and it offers solutions to many of DGIS's partner countries, including fragile states.
- Policy brief: 'Towards a World without Hunger in 2030: the Dutch contribution' (DGIS, 2019, L91): Akvo contributes data collection solutions for the agriculture sector that could become the catalyst for higher productivity and incomes, climate resilience and reaching young people, and it has the same geographical focus areas: the Sahel, the Horn of Africa, and the Middle East and North Africa (MENA)

Akvo is a key player and its work is in line with DGIS's digital inclusion policy (leave no one behind, digital divide, open and responsible data, and dealing with data).

Akvo introduced the data journey approach to strengthen the Dutch development sector, including Blue Deal, PUM, YEP, the NWP NGO Platform, the 2scale programme, the SDG Consortium partners, Partos and its members, and the WaterWorX partners. Several of these partners involved Akvo to enlist its support in the design of their ToC. This contributes to DGIS's policy objectives, but certainly helps to promote Akvo's services in the sector as well.

3.1.7 Design of learning process

In the inception report, it described in detail how it plans to implement the learning. It schedules several moments to reflect on its work and makes the necessary changes in the following annual plan. Learning was designed in the D2D programme both internally and externally and both on the level of content sharing and shared learning. Indeed, Akvo has set up an advisory committee of partner organisations that reflects Akvo's products as input for product development roadmaps (L38). Knowledge generated in D2D contributes to Akvo's internal expertise and is shared actively with their partners, according to the inception report (L16). Akvo participates in international learning events such as the Stockholm Water Week or Grow Asia's learning session to share lessons learnt from projects (which also helps to identify new partners and promote their services) and in events with partners to reflect on the project. Akvo invests in internal learning, which is key for its rather young staff. For example, it supports learning by doing, in which a less experienced colleague supports an experienced colleague in facilitating ToC workshops (L16a). Akvo sees itself as a learning organisation and invests in staff development (training and workshops). This is done by training AQOA-nauts (AQOA facilitators) in qualitative analysis. Subsequently, they can do a similar session in their own teams. Akvo also organised monthly learning sessions to increase awareness and visibility of various TechConsultancy products among the hubs (L24).

3.1.8 Summary of findings

- The D2D programme has supported Akvo's transformation from a software tool provider (including training services on how to work with the software) to a data service provider that provides partners with better support in their efforts to become data driven.
- The ToC helps Akvo better demonstrate how its strategies will influence the intended change and how that contributes to the intended effects and impacts at its partners' organisations. Akvo did not develop a log frame for the D2D programme adjacent to or in combination with the ToC to link the programme activities, outputs and expected results to the programme outcomes described in the intervention logic.
- The D2D programme with the 10 sub-projects is designed to effectively achieve the outputs of the intervention logic, and the D2D organisation is set up in a well-structured way to implement the interventions to support the desired outcomes.
- The ToC is designed to effectively achieve the outcome of the D2D programme. The underlying monitoring framework at the quantitative indicator level does not reflect the intended (intermediate) outcomes of the project well, because they are measured more at the output level than at the outcome level.
- Learning in the programme is well designed both internally and externally; this will help to achieve the objectives of the programme.

3.2 EQ 2 Does Akvo work demand-driven?

The full evaluation question to address in this section is: 'EQ2 Has Akvo appropriately identified the demand in the region; does Akvo work demand-driven?' Section 5.1.2 provides a conclusion and assessment of this EQ.

3.2.1 Has Akvo appropriately identified the demand in the region?

In the inception report of the D2D programme (L16), Akvo mentions that it has systems in place to determine demand: 'Akvo also interviews regular citizens on the status of water service levels, access and their perceptions of water quality in Nepal.' Akvo uses sector reports from the World Bank, for example, according to Akvo I75. 'We use the World Bank report on data-driven development in 2018' and conversations with existing partners about new developments. The Annual Qualitative Outcome Assessment (AQOA) also reviews the demands of existing partners. Akvo's business is the data journey in WASH and agriculture, so obviously its focus is on (potential) identification of the needs around that topic. In West Africa, Akvo works closely with UNICEF, which discusses with governments what their needs are within WASH, creates new projects and attempts to finance these projects. Akvo also organises regional country events to showcase other, more advanced countries. This triggers demand in other countries as well (Multilateral I45).

3.2.2 Does Akvo use a demand-driven approach?

A demand-driven approach could be looked at from different angles. First, it is important to define whose demand we are talking about.

- At the donor level?
- At the developing country level?
- At the organisational level (government and NGO)?
- At the individual beneficiary level?
- At the existing partner level?

A good model to investigate demand-driven opportunities in development cooperation is the report 'A Demand-Driven Approach to Development' by the Center for Strategic and International Studies (CSIS) (L103). In terms of operationalising the abstract concept of demand-driven development, it looks at three levels of the policymaking and project cycles:

- at the strategic design and planning stage;
- at the delivery (or implementation) stage; and
- at the outcomes stage.

This could be applied to Akvo:

At the strategic design and planning stage: Akvo works demand driven in projects based on request for proposals with governments and NGO's (NGO I43, NGO I55 or Multilateral I52) like The Sustainable Trade Initiative (IDH), the European Union Emergency Trust Fund (EUTF) and Naturschutzbund Deutschland (NABU).

In the implementation phase: Partners state that the solutions provided by Akvo are demand-driven. They feel ownership: users are included, local actors are involved, and roles and responsibilities are clear. For example, (NGO I22) *'The communities are involved in the design to create a locally owned solution'* or (NGO I43) that they selected Akvo based on a European tender for the highest-quality and most economical solution. *'They are extremely flexible and fast, and they are able to think globally and deliver locally'*. Or Government I50: *'In 2014, we did a pilot with Akvo. We wanted to upscale. We asked UNICEF to initiate a project for a National Inventory of Hydraulic Works in Mali through support from KfW. A ToR for Consultancy Services for support to the inventory of modern water points in Mali was elaborated in May 2015. Based on the services to be carried out and the experiences at the technical level, as well as the geographical area, Akvo was selected.'*

Akvo also supports emerging challenges (Multilateral I45): *'We have created with IRC and Akvo a proposal for a Covid response in West Africa based on our services on the requests of governments.'* Two interviewees expressed concerns in their feedback, such as Multilateral I71: *'The driving force was more technology and not the administrative capacity to go beyond the pilot. That should be addressed. Akvo is not to blame for this but mainly the ministry itself. Akvo should have a balance in driving technology and driving the process to institutionalise the technology. So far, you see a nice design and platform but no administrative processes around. No routine monitoring. Only when there is a programme. That is not sustainable'*. Or Multilateral I60: *'Governments have difficulties with maintenance budgets and Akvo should know that. SaaS is a difficult concept even for \$5,000 per year. Maintain the solution for a much longer period after the project stops.'* When Akvo is part of a consortium that works with local partners, the latter feel less ownership. These local partners are not always involved in the selection of Akvo as a partner; rather, Akvo comes with the consortium. Local NGO I20 noticed that Akvo recently became more

demand driven. *'The solutions were not based on standard Akvo tools anymore. Solutions are now based on our requirements. Now we are so much into data that we will continue even if we have to pay for a licence.'* Partners also see that Akvo does not focus on short-term product sales but supports them with a lasting relationship.

At outcome level: Akvo developed an AQOA to discuss with partners their progress and to provide feedback to Akvo.

3.2.3 Summary of findings

- Akvo uses several ways in the D2D programme to identify the demand: sector reports, global and regional events, regional staff in hubs, discussions with existing and potential partners, knowledge institutes and donors, and uses this to identify the demand for new concepts and proposals for data-driven development.
- Akvo identifies demand based on its own expertise (what are the needs to become a data-driven organisation in WASH or agriculture) and that of the partner based on a need's analysis
- Akvo works demand driven in D2D, especially for partners that selected Akvo themselves through a careful selection process based on a term of reference.
- If local NGOs are selected through a consortium it is less clear that the Akvo tools and services are based on the demand of these local partners. The tool selection is then done by the consortium.

3.3 EQ3 Effectiveness of the Akvo data journey

The full evaluation question addressed in this section is: 'EQ3 How effective is the Akvo Data Journey Approach (Design > Capture > Understand > Act) and do the services and tools support the partners well along their journey to achieve *"Partners and other stakeholders are more effective in delivering inclusive & sustainable services"*?' This is a strategy Akvo uses to support its partners to achieve the desired outcomes. In section 5.1.3, a conclusion and assessment will be given about this EQ.

3.3.1 Data journey model and suitability of tools and services

In the past, Akvo was involved as a software tools provider in the implementation and capacity building for data collection with Akvo Flow and RSR. Often, the partners had already determined which data should be collected.

This data collection design was not always optimal. In the D2D proposal (L13), Akvo mentioned: *'While more and more organisations are becoming aware of the need for data collection, collecting high-quality data that can be used for decision-making proves to be difficult. Akvo's aim is to build capacity within organisations to ask the right questions and determine what data they need.'* Akvo decided to transition into a service provider with a broader service portfolio around data services: L8: *'The majority of Akvo's work in D2D focuses on supporting partners in what we call their "data journey". Over the last few years, we have invested in broadening our expertise and support to partners in areas such as Theory of Change (ToC), planning, monitoring, evaluation and learning (PMEL) and data science. In 2019, we implemented this methodology in 146 programmes.'* It

explains it in proposals in the following way (L44): ‘Akvo has a two-pronged approach to help organisations capture, understand and use data. First, we act as facilitators to ensure people have the necessary knowledge and skills to effectively use data. The services we offer are targeted to partners’ needs and may involve defining theories of change, indicators, frameworks, data collection tools (i.e. surveys and questionnaires), sampling methodologies and field data collection protocols. Second, we have developed a solid, stable, secure and scalable software platform that helps capture, transform, visualise and share data. This two-pronged approach is the basis for what we call the data journey, a process where we help partners design, capture, understand and act on data.’

If you map the different phases of the data journey model and the tools along the ToC, Akvo covers the entire data journey (see figure 4).

Akvo Tools mapped on the Theory of Change

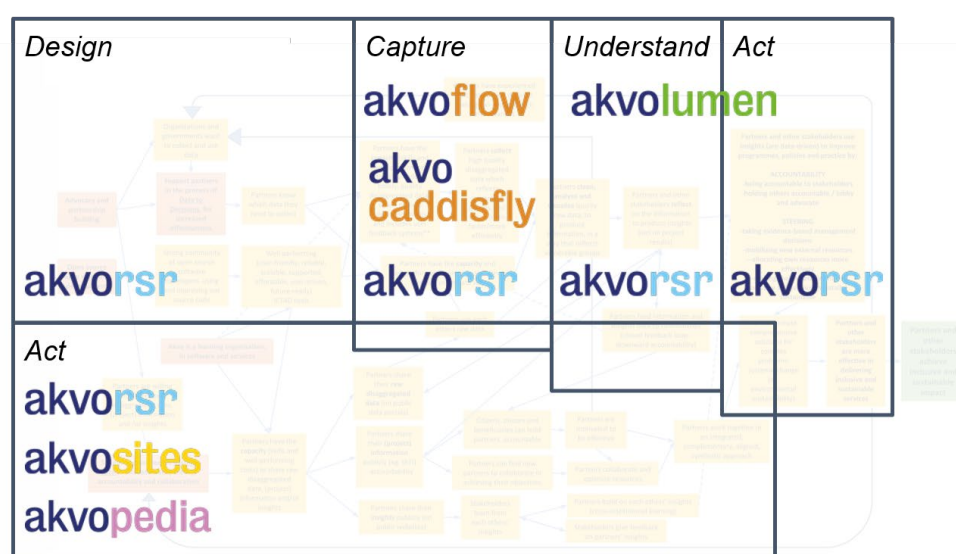


Figure 4 Mapping the Akvo tools along the ToC

The data journey strategy combines data services (1st) and data tools (2nd). Akvo developed internal (Safari facilitation guides) and external documentation (e-books). The focus is still largely on Akvo's own data tools. L10, the Capture Safari guide already states on page 1: 'Data management with Akvo Flow, Data collection with Akvo Flow, Using Akvo Caddisfly and Project data management with Akvo RSR.' The Capture Safari guide focuses on capacity building with the Akvo software tools.

Not all partners contract Akvo to do the entire data journey. Some partners contract Akvo only for one step in the journey (usually Capture), but partners are increasingly contracting Akvo for two or three steps in the journey or the full journey to become more data driven.

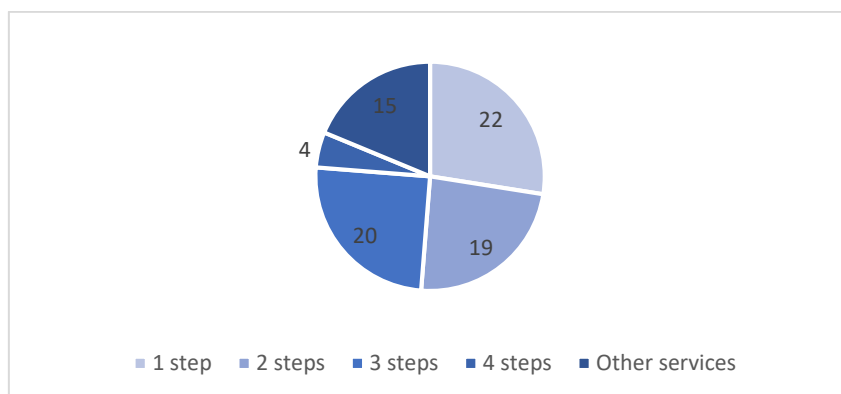


Figure 5 Partners and the steps in the data journey covered in project

Akvo staff understand that the transition is a process that will take time. For example, Akvo I14 says: *'The data journey is a complex concept; we are still internalising to understand what it means. Legacy partners (IRC, SNV) do not see the data journey, they just see us as a tool provider.'*

One of the knowledge partners is more critical (Knowledge partner I39): *'The data journey itself is fine but designed internally. They could have asked partners for their view on how to improve the data journey model. At least one workshop in each hub to validate that you have developed the right model. The data journey could work for NGOs, but universities are more advanced. They should focus on their strength, which is implementation on the ground and local capacity building. For the research component and innovation, they should link up more with universities.'*

Design

The design phase aims to design data-driven programmes that deliver results effectively. In Akvo I15, the whole facilitation process of the design phase is presented²: This guide provides guidance for Akvo staff to facilitate the whole process with partners. A summary is provided in the e-book 'Designing data-driven programmes that deliver results effectively' (L55). The design process will support partners in the process to create a ToC and monitoring framework of their programme.

The consultants are concerned that the methodology may be too limited to design the full WASH or Agriculture programme including the appropriate interventions. The focus is on outcome and strategies and concentrates less on designing the right interventions to achieve these goals, including proper indicators for the works/activities to be done and the outputs and expected results to be achieved, the methodologies to measure the indicators, schedules indicating when and where they need to be measured and by whom.

Sustainability is not integrated in the design phase as a separate element. The cost for the software tools and services during the projects are covered by the programme. If sustainability is included already in the design phase partners will be more aware of cost involved to continue after the project and how they would like to embed it in their own processes. Multilateral I71: "It is very important to factor sustainability into the design phase. Governments need to be aware that routine monitoring has to be embedded in their administrative processes and which costs are involved to continue. This needs to be part of the national budget. This is not happening at the

² a Safari guide, which is considered an internal document was presented in an interview to the consultants

moment.” Government I50 mentioned that as well “Ensure from the start that data collection becomes routine monitoring with budgets at national, regional and district level”. Some of the consortium partners (NGO I20, I22 and knowledge partner I26) were during the programme not aware of the costs for Akvo tools and services. An independent analysis of the right tools for the programme monitoring (independent of Akvo’s software) is not included either, although Akvo does conduct a needs assessment to determine whether other tools are already being used (L46).

An independent analysis of the right tools for the programme monitoring (independent of Akvo’s software) is not included either, although Akvo does conduct a needs assessment to determine whether other tools are already being used (L46).

In the case of tenders, Akvo is often selected based on the combination of a solid data collection platform, services, local presence and sector expertise (such as NGO I43). Akvo is contracted for programme design support with WASH partners, such as WASTE, the Blue Deal Programme of the Dutch Water Authorities, Dutch SDG WASH Consortium, and the Watershed strategic partnership (L19). Others, such as NGO I55, involved Akvo after the design of the ToC (done by another organisation) to translate this into a monitoring framework. Akvo has three senior and two medior staff with the expertise to facilitate ToC processes.

Capture

The aim of this phase is to support partners to capture reliable, high-quality data from the start and monitor data collection to ensure accuracy and track progress. This is mostly based on the RSR and Flow with the water quality module Caddisfly tools. The capture Safari guide (L6) is a facilitation tool for trainers to train partners in Akvo software tools. NGO I29: *‘We collect quantitative and qualitative data from the farmers. We use Akvo Flow to collect data. The quality of the collected data is good. Manipulation/analyses are easy to do. We use them to monitor all the activities we do with farmers in the field.’* And Multilateral I52: *‘Akvo Really Simple Reporting is a web-based system that makes it easy for us to capture our global projects and instantly share progress with all parties involved.’* Akvo has set up support services and published documentation on its products and services on its website. Akvo’s partners receive remote online support when they face challenges using Akvo tools (L107). Partners are happy with the support and response time. EQ4 intermediate outcome 1 describes more examples of organisations that are better able to capture their data.

Understand

The e-book *‘Understand your data and extract the insights that matter’* (I74) provides partners with a way to explore their data, discover hidden patterns, extract valuable insights and translate those insights into information and knowledge. Akvo is investing in this phase through expertise in data analytics. Akvo also developed a Safari manual for this phase. EQ4 intermediate outcome 3 describes examples of organisations that are better able to clean, analyse and visualise their data.

Act

The aim is to support partners in sharing insights with the relevant people, generate dialogue, encourage decision-making and continuously improve partners’ work. In the act phase, partners share their data to influence change. For the last phase of the data journey, there is no e-book or Safari guide yet, as this is still under development. This is partly because it takes time to reach this stage as you follow the data journey. When partners start to become data-driven, it

takes time to collect the data properly to arrive at insights that will change the way you make decisions. Tools and services focus on sharing data and insights like in AQOA 2019 (L26): *'Akvo has allowed us to gain a lot of insight and understanding regarding all the challenges and successes from each of our programmes, and it has allowed us to prove that to our donors. Akvo gives our donors more confidence through proof of our impact.'* It is difficult to estimate what Akvo's contribution is to this phase and what is done by the partners themselves (in combination with other partners). More examples are given under EQ4 intermediate outcomes 4, 7 and 8, showing how partners use the information and insights in practice.

3.3.2 Dependency on Akvo

Akvo's tools are all open source and the code is published at the GitHub. This means that Akvo does not charge a licence fee for the software as such. The software is hosted in the cloud. Most partners currently prefer Akvo to run the platform as software-as-a-service (SaaS) for them and scale it according to their needs, including data privacy and security measures such as GDPR (L7). They pay an annual service fee for this. Partners can move to other providers if they want and download all data saved in the system and import this into a new software tool or database. That is not easy to do for small NGO's and requires sufficient ICT skills. SaaS fees are a recurring income stream for Akvo to cover the cost of operating its own software tools. According to Akvo staff (Akvo I14), it is not that easy to operate on the platform independently of Akvo: *'Technically, Akvo could be used as an open-source tool independent of Akvo, but in practice it does not happen. There is no Akvo tool ecosystem. Local organisations choose free tools. More global organisations look at the quality of the overall system. International organisations see the value of paying for an integrated approach beyond the tools and they focus on their own interventions. Their programmes have a budget for that.'* Local NGO I54 mentioned *'Our donors pay for the Akvo fee; if that stops, we have a challenge.'* If compared with other open source data collection tools like ODK there are no local consultants that do have the skills to offer a similar service as Akvo. This means there is no local eco-system of Akvo software developers that could give local partners an opportunity to switch to a local service provider who could host and service the Akvo software for local fees. Under EQ7, the consultants will show that there is a lot of competition in data collection and visualisation tools: some are paid, while others are free for the user. Many have similar features to the Akvo software tools. NGO I22 was critical: *'We wanted Akvo to develop an application and hand over to us so we could work independently. We agreed to that in our contract. That is not yet the case, however, and we still rely on Akvo. Akvo owns the app. We need to pay Akvo for it. We can still use the app until next year. It is still our goal to be independent.'*

Akvo has started projects, especially in West Africa, to develop the local ecosystem for data collectors but also for local ICT companies to offer data service, this is piloted in Mali, (DGIS I70). In Mauretania (Multilateral I69): *"A local firm will be recruited to continue the services after receiving training from Akvo. This is planned for the next phase of the programme. This will make the government of Mauretania less dependent of Akvo"*.

3.3.3 Effectiveness of the capacity building model with train-the-trainers (ToT)

All partners are very satisfied with the way Akvo provides training. Some provide training together, with Akvo to NGO's such as Local NGO I20: *'The training of partners like the county government or community key informants was done by Akvo and us. Our training focused on the purpose of*

the programme and how we will use the data for lobbying and advocacy, while Akvo concentrated on the technical aspect.' And Government I50: *'They have set up a train-the-trainer programme to teach government staff at the national and regional levels about data collection. The regional staff then trains the staff in the districts. That works well.'* The trainers are well equipped to train more district staff. 'Several multilaterals acknowledge that Akvo is a good trainer-of-trainers, such as Multilateral I69: Akvo trained at the national level. These people were able to train new people in the field (implementing NGOs). In total, 115 facilitators were trained in 14 regions. With the ToT partners were able to scale up the programme faster. Government I61 & 80, NGO I37 and I22 were also satisfied with the training programme. The Akvo train-the-trainer programme works well at the local level, especially considering the limited budgets.

3.3.4 Institutionalisation of the data journey model

Not all of Akvo's partners have managed to institutionalise the data journey yet. This process will take time. That is why it is called the data journey. To become data-driven in all your processes, you need to grow. Both at Akvo's and its partners' level. Especially in the often-challenging remote areas where Akvo operates. Government I50, for example, commented as follows: *'The next stage is building more capacity in analysis and use in strategic planning purposes at the national and regional levels. Real institutionalisation of the monitoring process has not been achieved yet.'* Or Multilateral I69: *'We have talks with local companies. Akvo can do the technical oversight and give guidance. The idea is to cultivate the maintenance and support process. This should be done before the end of the year.'*

There are some concerns from interviewees: NGO I37: *'Governments see the value of data but do not want to pay for it. UNICEF, SNV and Akvo should invest more in making governments aware of embedding data in their budgets. In Sierra Leone, the government has invested in their own M&E capacity. But most governments need to incorporate it into their own processes. It would be good if governments were to invest in a SaaS contract with back-up support, but so far that has not happened. More awareness during the project in sustainability and internalisation is needed.'* Multilateral I45: *'Are governments able to include it in their own budget? The national monitoring plans are designed. How will they be funded by the countries? This is a big concern for us. Are the countries able to continue? The capacity is there in the countries. But we need to support the recurring cost of the tools for the moment, which is not sustainable.'* Government I80 confirms this notion: *'The inventory is a one-off exercise. It is not yet embedded in our processes. I would like to do continuous monitoring and not just an inventory.'*

Other bottlenecks hampering the institutionalisation of – in this case – data collection as part of the data journey are described in L58. The document, though quite old, found 'inconsistency in submissions (of digital data) that resulted from poor connectivity, changes in phone settings and lack of phone credit'. These issues still play an important role in many situations today. For instance, a current evaluation in Malawi of DFID-funded water systems found that a lack of phone credits resulted in district officers no longer uploading monitoring data of rural water points in the national database. The document also states: 'The technical and managerial challenges noted above had several consequences: managers were unable to rely completely on WQR for data collection; managers were unable to differentiate between technical failures and true lapses in monitoring; and field staff became frustrated with the system.' A further challenge is that even if the data journey is up and running, governments often find it difficult to finance and organise regular data collection (e.g. field officers monitoring each rural water system annually). This

challenge is still apparent and undermining several digitalisation initiatives, also in the WASH sectors in developing countries (L58).

3.3.5 Key findings EQ3

- Akvo is transitioning from a software tool provider (tools and training) to a data journey service provider with a broader set of services. New skills and expertise are required for this. The D2D programme has helped Akvo achieve this. Akvo uses D2D to invest in internal capacity building and recruitment of the right staff, but this transition is not yet complete and will still take some time to internalise at all levels.
- The data journey model helps Akvo become involved earlier during the design of a programme and provide more comprehensive support to partners to become data driven. This will enhance the data collection, analysis and visualisation process needed to use data in a responsible way.
- Akvo facilitates ToC processes in programmes and organisations. Akvo has a mix of senior, intermediate and junior staff with expertise in ToC design. Recently Akvo recruited 3 senior staff to scale up this expertise. They are trained and coached in these skills, but it will take time before they reach the same level of expertise as some of the senior staff.
- In the design phase, sustainability is not a separate element embedded in the approach
- Akvo is seen as a key player to make organisations aware of data-driven development.
- Although Akvo tools are open source, partners do not use it independently of Akvo. They could download the software from GitHub, but big partners prefer to outsource this to Akvo to include hosting, data privacy (GDPR) and data security, while small partners do not have the capacity to do it.
- There is not yet a local ecosystem of local service providers with sufficient skills available to support Akvo systems independently of Akvo and continue after the project with a local provider.
- It takes time to become data-driven and institutionalise the data journey.
- The train-the-trainer model is successful and seen as effective by partners.
- Small partners are not able to sustain the system without grant money.

3.4 EQ4 Key results at the outcome level

The full evaluation question addressed in this section is: 'EQ4 What are the key results at the outcome level according to the agreed results framework and how do they relate to the original targets?' Section 5.1.4 provides a conclusion and assessment about this EQ.

3.4.1 Monitoring framework > target vs achieved result

To assess if the outcome determined in the intervention logic in section 2.2 was achieved, the consultants will first assess whether the nine selected intermediate outcomes were achieved. Akvo reported on their progress to DGIS in the annual reports of 2017, 2018 and 2019 (L16a, L19 and L24). The last implementing year is under way and no progress report is yet available for

2020 (expected in early 2021). Akvo prepared a progress report following the agreed monitoring framework for the period 2017-2019 (L9). These results are similar (for almost all indicators) to what is reported in RSR. The results of the monitoring exercise indicate that most of the targets on the agreed quantitative output indicators have been achieved. The product manager of the different Akvo products (Akvo I57 and Akvo I58) explained how the actual results are measured. Akvo has different systems to get information on Akvo product statistics. Hub staff also report training numbers to the project manager each quarter. Akvo has demonstrated this to the consultants to prove they can reproduce the reported results, and the consultants have confirmed the evidence base.

As mentioned under EQ1, most of the indicators in the monitoring framework are at the output level rather than the outcome level. The consultants have analysed and tracked evidence showing that the reported results have indeed achieved. Of the 40 quantitative indicators, 77% were met in the programme period 2017-2019. The programme continues in 2020, although the Covid crisis might have delayed the execution of planned interventions.

Table 5 Achievements D2D at indicator level (cumulative 2017-2019)

Target category	Colour coding / % of indicators / (number of indicators)
Targets that were significantly overachieved >200%	3% (1)
Targets that were overachieved >120%	33% (13)
Targets that were achieved >85%	43% (17)
Targets that were almost achieved >50% but <85%	18% (7)
Targets that were not achieved <50%	5% (2)

Qualitative indicators were assessed in the AQOA. The AQOAs consist of guided interviews to get qualitative information from partners around the data journey. A few of the partners (15) interviewed focus on larger NGOs (with a good mix of older and newer partners in WASH and agriculture). Government partners will be part of the AQOA in 2020. The consultants see the AQOAs as a valuable instrument to illustrate the progress towards the six qualitative assessed intermediate outcomes that Akvo seeks to influence. The AQOA is not yet an instrument that measures the progress of all partners in a systematic way. Based on the existing Akvo documents (especially the two AQOAs L26 and L41) and the interviews, the consultants will assess whether the nine outcomes have been achieved.

The D2D programme is not finished yet. Akvo still has 2020 to achieve (intermediate) outcomes and assess whether these outcomes have been achieved.

Intermediate outcome 1: Partners have the capacity (skills and well-performing tools), including user feedback systems, to collect timely, quality disaggregated data about vulnerable groups

This intermediate outcome measures an organisation's capacity, in terms of skills and tools, to collect output and outcome data, respectively. The indicators (cumulative 2017-2019) look at the capacity building of individuals and the use of organisations regarding Akvo Flow (122% of target),

Caddisfly (138%) and Lumen (45%), but also for PMEL (197%) and Data Science (124%), which is more than just data collection. The instances of Akvo Flow use (110%), Caddisfly (91%) and Lumen (122%) were good. The training targets were achieved, except for Lumen. Akvo is considering including Lumen in the Data Science training.

The training efforts and the data collection in the field are currently hampered due to the Covid pandemic. Akvo is developing remote data collection tools and is supporting the capacity of partners in Mali and Burkina Faso, for example, to do this and to set up more digital training activities (Akvo I75 and I78 and Multilateral I71).

The annual reports (L16a, L19 and L24) describe the contribution of the D2D sub-projects Partner development (relation with existing partners), Partner services (training & support), Software tools (improve Akvo's products by tailoring them to partners' demands) and the Akvo hubs (in training and support) to achieve this intermediate outcome.

Finding: Intermediate outcome 1 was achieved, because all indicators are fulfilled.

Intermediate outcome 2: Partners collect high-quality disaggregated data about vulnerable groups and do this faster/more efficiently

According to the description, this outcome measures the amount of data collected using Akvo tools. Both indicators on the use of Akvo Flow and Akvo Caddisfly were achieved. This determines that data has been collected, not whether it is high-quality or disaggregated data, nor whether it is about vulnerable groups and whether partners use the tools to improve their efficiency.

All six partners (L41) who participated in the 2018 AQOA (L41) said their organisations collect data about their programmes/projects, and all indicated using Akvo Flow for that purpose, sometimes in combination with other tools such as CommCare, Excel and Word documents, depending on the data needs. Three of the six partners have also used Akvo Caddisfly to test water quality. All nine partners (L26) in the 2019 AQOA collected data; six use Akvo Flow, two combine Akvo Flow and Akvo Caddisfly and one uses Akvo RSR. Eight of the nine partners collect data that helps to unveil inequalities or reflect the condition of excluded groups.

Akvo's contribution towards improving the efficiency of partners is illustrated in several partner quotes in the 2018 AQOA. One NGO (L41) interviewee said: *'Akvo Flow is a tool that helps us to avoid paper-based data collection; the forms are designed in such a way that it helps us collect data faster.'* A Local NGO (I54) interviewee remarked the following: *'Really, it does allow us to be more operational and more efficient in the field.'* Finally, NGO I55 mentioned: *'Data on farmers' collective performance and credit history – which is essential for lenders – can be collected more efficiently now by using these tools rather than conventional and costly credit-scoring exercises.'*

The AQOA also asks partners to rate the quality of the data on a scale of 1 to 5, where 1 is very poor and 5 is excellent. In 2018 (L41), the average score for data quality reported by partners was 3.6. In 2019 (L26), it increased to 3.9. NGO I29 says: *'The quality of the collected data is good.'* Multilateral I69 agreed and mentioned why quality had improved: *'With everyone trained in the same way and using the same system, and with data validation processes implemented among all stakeholders, data quality can be ensured throughout the data collection process. This is a big improvement compared with the previous system of paper-based collection typed into Excel.'*

The annual reports (L16a, L19 and L24) describe the contribution of the D2D sub-projects Software tools (product improvement) and the Akvo hubs (in training and support) to achieve this outcome.

Finding: Intermediate outcome 2 was achieved based on the documentation and interviews.

Intermediate outcome 3: Partners clean, analyse and visualise quality raw data to produce information about vulnerable groups

In the monitoring framework, this intermediate outcome is based on two quantitative output indicators: it measures the number of times Akvo tools are used to clean and analyse data (outcome) and it measures the number of times Akvo tools are used to visualise data (outcome). Both indicators achieved the agreed target.

The 2018 AQOA (L41) mentions that 'all six partners indicated that they clean and analyse data, and five of the six indicated that they currently visualise data'. All partners indicate that they use Excel in the process for cleaning, analysing and/or visualising data. Other tools they mentioned were SPSS, RStudio, SPR, Buzz Radar, Limelight, MailChimp, Intercomms, DPB, ArcGIS and QGIS.

The 2019 AQOA (L26) mentions that 'eight of the nine partners clean data themselves'. Akvo cleans the data for the ninth partner. All nine indicated that they analyse and visualise data. The main tools they use for these tasks are Excel (for cleaning, analysing and visualising), Lumen (for analysing and visualising), Stata and SPSS (for analysing) and ArcGIS, Tableau, Power BI and PowerPoint for visualising.

The AQOA does not describe why partners use other tools, aside from Akvo tools, but it is certain that they clean, analyse and visualise data with other tools as well and that they have the capacity to do that. The partners respond that 'they integrate various tools in the process to clean, analyse and visualise data. The ability to use APIs and/or different types of Akvo Flow data exports is important and facilitates this process.' One interviewee in the AQOA said: 'We are analysing data with Lumen. *Additionally, we use other tools for more complex analyses such as R and Stata. The "Comprehensive Report" in Lumen is particularly useful for staff who do not know how to create charts and graphs in Excel, though the user is limited to what s/he can do with this report.*'

Six partners indicate that their analysis and visualisation help distinguish inequities among vulnerable groups, while the remaining three say they are working to improve the way they do this.

In the interviews NGOs mentioned they work with subsistence farmers (NGO I43), rural communities (NGO I20, I22 and I54). A good example of visualisation community data is a community scorecard (I20).

In the interviews, partners also refer to cleaning data in Akvo Flow and Lumen. NGO I29 and I55 and Multilateral I60 mention that administrators are trained to clean and visualise data, while Multilateral I69 uses an existing Access database. Government 61 uses Excel for data cleaning. 'It is difficult to do it in Flow. I export it to Excel, clean the data and upload it to Lumen, which is great for visualisation.' Other smaller partners like Government I61 and Local NGO I54 mention

that they have the capacity to analyse and visualise the data they have collected and use that in practice.

The annual reports (L16a, L19, L24) describe the contribution of the D2D sub-projects Software tools (product improvement) and the Akvo hubs (in training and support) to achieve this outcome.

Finding: Intermediate outcome 3 was achieved. Partners do clean, analyse and visualise their data and use it for vulnerable groups.

Intermediate outcome 4: Partners and other stakeholders use insights to improve programmes, policies and practices through accountability and steering

This intermediate outcome assesses the extent to which the collection and analysis of data leads to insights and informed decisions. This outcome was assessed in a qualitative way in the two AQOAs.

The 2018 AQOA (L41) states that five of the six partners indicated that someone in their team or organisation makes decisions based on the data they collect. The main purposes cited for data use are to steer programmes, for accountability, to expand knowledge, to contribute to the evidence base and to influence policy.

The 2019 AQOA (L26) states that all nine partners reported having processes in place to use insights, and all nine provided examples of how they use insights to improve their work. All partners noted the importance of data for accountability purposes. Moreover, they also provided examples of data use for learning, improving programmes, adjusting strategy, making management decisions, allocating budgets, and adjusting monitoring, evaluation and learning processes.

Some good examples are provided in the interviews, such as Local NGO I20: *'We could make a move to an evidence-based lobbying & advocacy network. We improved our programming based on data collected with Akvo Flow'* and Government I50: *'Open street maps is used in combination with Akvo Sites. We now show more than 45,000 water points visualised in a water atlas collected with Akvo Flow based on inventories collected in 2016 (southern regions) and 2018 (northern regions). The interactive maps help for internal planning purposes.'* Government I50 is also critical, however: *'The project still focuses heavily on one-off collection and visualisation and less on the monitoring or strategic planning of water point maintenance.'* Government 31 says: *'Akvo has also guided policymakers to develop a national plan, including the construction of new water points.'* NGO I55 has not reached that point yet: *'The objective is to use the data for reporting next year in a lean and simple way and to use the information to adjust the strategies and the partnership. It is being done in a more manual way now; the system is not yet where we would like it to be.'*

The annual reports (L16a, L19 and L24) describe the contribution of the D2D sub-projects Partner services (methodology improvement) and the Akvo hubs (in feedback and learning events) to achieve this outcome.

Finding: Intermediate outcome 4 was achieved based on the sample of 15 of Akvo's partners and examples mentioned in some of the interviews. Some partners have not reached this level yet. They have started to collect, analyse and visualise and want to move towards achieving this outcome.

Intermediate outcome 5: Organisations and governments want to collect and use data

This measures the number of organisations working with Akvo tools and services. It is measured with output indicators on new partner agreements for different types of partners (output). Figure 6 presents an overview of the new partner agreements between 2017 and 2019.

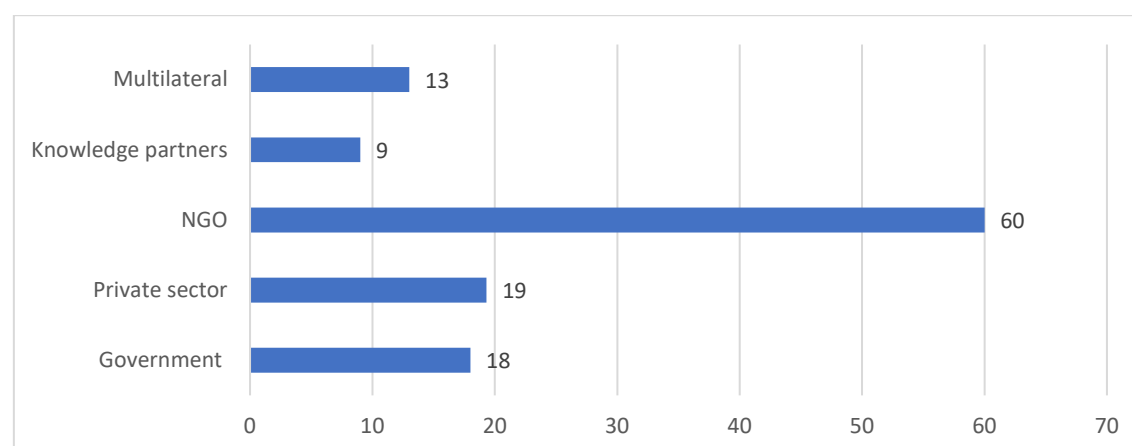


Figure 6 Number of new partner organisations of Akvo under D2D (2017-2019)

Akvo uses this output indicator as a proxy for the willingness to collect and use data (partners interested in data collection or use that close a partnership agreement with Akvo); otherwise no one would want to work with Akvo. For all partner types, the number of new contracts was above target. The annual reports describe the new partnership agreements.

The annual reports (L16a, L19 and L24) describe the contribution of the D2D sub-projects Partner development (business development), the Akvo hubs (in business development) and Outreach & dissemination (events) to achieve this outcome.

Finding: Intermediate outcome 5 was achieved.

Intermediate outcome 6: Partners have the capacity (skills and well-performing tools) to share their raw disaggregated data, (project) information and/or insights

This intermediate outcome measures an organisation's capacity, in terms of skills, to share its data, information and/or insights. Based on the output indicators, the number of training activities was achieved (103%) but the number of people trained in RSR was below target (78% of the 2019 target achieved). On a more positive note, the percentage of women trained was high (163%). L25 mentions that 'for RSR, 2019 showed the opposite trend for Flow and Caddisfly. The number of training events is on target, but the number of individuals trained per event is declining. We will analyse the cause and assess whether we need to take measures to reverse this trend.'

The annual reports (L16a, L19 and L24) describe the contribution of the D2D sub-projects Partner services (RSR training), and Outreach & dissemination (open-data promotion) to achieve this outcome. In the interviews, several organisations mentioned that they use RSR for reporting on their website, such as NGOs I55 and I44 and Multilateral I52.

Finding: Intermediate outcome 6 was partially achieved based on the main output indicator, which was below target. This intermediate outcome can still be achieved in 2020.

Intermediate outcome 7: Partners share their raw disaggregated data (on public data portals)

This intermediate outcome assesses how many partners share their raw data publicly. This outcome was assessed in the 2018 AQOA (L41). Four of the six partners indicated they share data in some form (raw or aggregated) on public portals. One mentioned sharing through newsletters, blogs, reports and videos, while another noted contributing to scientific journals and university libraries. All cited their websites as places where they share data.

The 2019 AQOA 2019 (L26) explored public data sharing at three levels: sharing raw data, consolidated project data and data insights. Two partners indicated sharing raw data publicly, while eight shared data on projects and seven shared data insights. The main ways in which these partners shared data included websites, publications such as annual reports and newsletters, conferences, by sharing with academia and through RSR and IATI.

In the interviews, NGO I22 mentioned the following: *'The website shows the change to the forest. We report on the biodiversity data. The data collected by the rangers and the communities is re-shared by the ranger in community meetings and we use the data in our lobbying and advocacy strategy.'*

The annual reports (L16a, L19 and L24) describe the contribution of the D2D sub-projects Partner services (methodology improvement), Software tools (RSR) and Outreach & dissemination (open-data promotion) to achieve this outcome.

Finding: Intermediate outcome 7 was achieved based on the qualitative assessment in the two AQOAs of 15 partners and examples mentioned in the interviews.

Intermediate outcome 8: Partners share their (project) information publicly (e.g. IATI)

This intermediate outcome measures how much partners share their information publicly using Akvo tools, as well as how many partners use IATI to share their information publicly. This outcome looks at the use of two Akvo tools: RSR and Akvopedia. The number of Akvopedia visitors has remained stable in recent years, varying between 190,000 and 200,000 visitors/year with 350,000 page-visits. The content of Akvopedia is not updated in line with the target (61%). The number of active partners using RSR is slightly behind target (91%). The number of RSR projects (136%) and projects with a result framework (103%) have achieved their targets. The number of updates in RSR was far above target (227%). In total, 20 organisations use RSR to report to IATI (124% of target, the number of projects published in IATI is behind target (80%)). The publishers in IATI that use RSR the most are EUTF with 542 projects, Aqua for All with 263 projects, UTZ with 136 projects and SNV with 54 projects. In total, there are 986 unique users of RSR. Multilateral I53 explained how they report on behalf of the partners: *'We have an M&E partner who collects the data in the field with Excel in remote and unsafe areas such as the Horn of Africa and Lake Chad. They import this into RSR. They use this construction because the partners there do not have the capacity or the internet access to upload themselves.'*

The annual reports (L16a, L19 and L24) describe the contribution of the D2D sub-projects Software tools (RSR), the Akvo hubs (RSR) and Outreach & dissemination (open-data promotion) to achieve this outcome.

Finding: Intermediate outcome 8 was achieved.

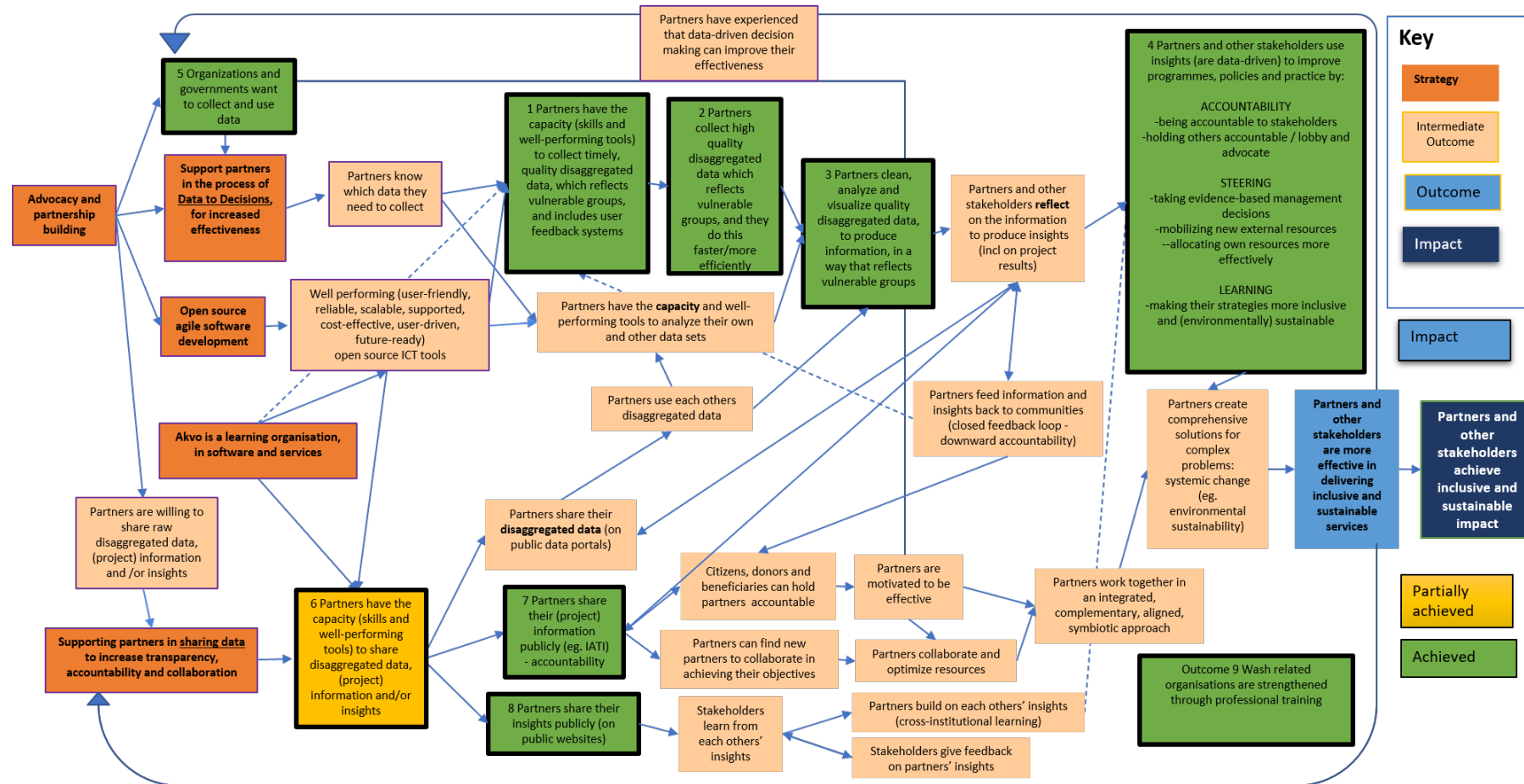
Intermediate outcome 9: WASH-related organisations are strengthened through professional training

This is an intermediate outcome (or more of an output) requested by DGIS in 2018 to measure the number of organisations in WASH that receives capacity building. This is an important indicator that DGIS reports on and where Akvo contributed to. Both output indicators were achieved. Akvo claims (L8): *'In the WASH sector, increasing the sharing and accessibility of data has had a wide range of positive outcomes to date. These benefits have already been seen by increasing data use for better targeting of new infrastructure, more efficient maintenance and operation and policy improvements.'* What WASH organisations that receive training do with the additional skills or how satisfied they are is not documented through these indicators. The effect of the training is extensively described for outcomes 1-8, through the AQOAs.

This intermediate outcome was not linked to the D2D objectives (L16f) but added later, nor was it linked to the ToC. The annual reports (L19 and L24) describe the contribution of D2D (trainings) to this outcome.

Finding: Outcome 9 was achieved.

In Figure 7, the consultants have mapped the different intermediate outcomes within the overall ToC.



Outcome: Partners and other stakeholders are more effective in delivering inclusive and sustainable services

Based on the assessment of the intermediate outcomes, eight of the nine were achieved. One was partially achieved because targets in RSR capacity building were not achieved and, therefore, fewer people developed the capacity to share disaggregated data. One example came from the interviews with NGO I43: 'Now we can use primary data at the farmer level. Whereas we used to rely on assumptions about the farmer, now we can actually measure the impact of what we do, which will improve the accuracy of our business modelling.'

It is more difficult to assess Akvo's contribution towards achieving the intermediate outcomes or the existence of alternative pathways used by the partners to achieve the intermediate outcomes. A more detailed assessment in the field (for example, with outcome harvesting) is necessary to determine this.

During D2D Water Point Data Exchange (WPDx) (L8), a partner of Akvo developed a methodology for Akvo to calculate the number of people who can benefit from data and increased the efficiency of WASH investments through data-informed decision-making. This method was piloted in 2019 in Sierra Leone (L9). In 2020, this will be further tested in Mali, Sierra Leone and Burkina Faso (quarterly report Q1 2020 L107). This could determine the added value of data to achieve the intended outcome and impact more directly.

Finding: Based on the achieved intermediate outcomes, the consultants believe that it is plausible that the outcome was achieved, but it is not possible to directly measure Akvo's contribution. It is also clear that there is still a long way to go before data-driven decision-making is fully embedded. This was already described under EQ3.

Impact: Partners and other stakeholders achieve an inclusive and sustainable impact

Impact is not measurable. For WASH impact can be made plausible based on the Minimum Evaluation Procedure (the MEP; see L5). The MEP presents a finding, based on extensive research in the 1980s, that if WASH hardware is functional and used effectively, which is usually the case if the hardware is properly placed, designed and constructed, it contributes to positive WASH-related health impacts and alleviates WASH-related burdens.

3.4.2 Key findings EQ4:

- Eight of the nine intermediate outcomes were achieved, and one was partially achieved. The D2D programme did a good job of achieving the intermediate outcomes and has time in 2020 to continue generating results.
- The final outcome could not be measured, but it is plausible that this outcome was achieved based on the intermediate outcomes that led to this outcome. One interviewee clearly mentioned that he/she could operate more effectively with the data collected and analysed through Akvo's interventions.
- Akvo has an internal system in place to measure systematically agreed indicators at the output level and assess qualitative indicators and intermediate outcomes to provide evidence of the intended intermediate outcomes.
- The AQOA tool is still under development; 15 partners were assessed in 2018 and 2019, but the tool provides rich information about the progress of partners. Akvo lacks a tracking

system for all partners to measure progress along the data journey and track its own contribution to achieved outcomes.

3.5 EQ5 Has Akvo scaled up its operations?

The full evaluation question addressed in this section is: 'EQ5 What evidence is there to demonstrate that Akvo has scaled up its operations in both existing initiatives (WASH), as well as sustainably broadened the scope of its operations to other sectors, such as agriculture?' This is a strategy to achieve Akvo's outcomes. Section 5.1.5 presents a conclusion and assessment of this EQ.

3.5.1 Support to hubs

Akvo continued to expand between 2017 and 2019, becoming a global organisation with seven regional entities. Its staff grew from 41 in 2017 to 74 in 2019, globally spread across the Netherlands, Mali, Burkina Faso, Kenya, Indonesia, India and the United States. In 2019, Akvo supported 146 active programmes and projects in 70 countries, for governments, companies, UN agencies, international NGOs and international development banks (L8).

Akvo offices / Satellites



Figure 8 Overview Akvo hubs and satellites

Akvo is working hard to transform itself into a data service provider. This is reflected in its operations. Akvo I75: 'Akvo is in transition: The course is clear. It follows the big picture from data to decision. We do not yet have the capacity in every hub to do the more complex consultancies. We are working on this. We have a sufficient number of seniors in Eastern Africa but not in West Africa yet. We are refocusing our business development in South Asia, otherwise we will spread too thin. We do not have the added value there anymore compared with local companies. We still implement global projects, but we are not engaging in business development there anymore.' Akvo I13: 'We have assessed the competences of our team members. Now we have decided to provide additional training to develop the necessary skills. We are also recruiting new people with

additional required expertise. We need to be sure we have all the required capacity, otherwise the customers will turn their back on Akvo.'

Akvo does invest clearly in internal capacity building. L19: *'Internal capacity development of colleagues by the senior PMEL expert consists of three interconnected steps: context analysis exercises (actor analysis and factor analysis), the theory of change and the monitoring framework. The training is held over a period of six weeks, with fifteen participants from the various hubs.'* Akvo has recently changed its organisational structure into a matrix team to consolidate the expertise. Akvo I46: *'A lot of internal capacity building is possible through D2D funding, such as the development of the Safari and e-books around the data journey'* and Akvo I77: *'Horizontal expert groups are being set up: PME, data science, tech consultancy. Internal capacity building on the job.'* L9: *'Caddisfly training was realised by organising Skype training sessions. For all Akvo hubs, Caddisfly contact persons have been appointed and communication channels have been created and intensified in which updates, experiences, potential improvements and other information related to Akvo Caddisfly is shared. This is implemented and rolled out via HubSpot in all our hubs.'* Another tool that builds expertise as part of the support to hubs is the AQOA. L26: *'In 2019, Akvo staff in the hubs in the Americas, Europe, South-east Asia and the Pacific, and West Africa were trained on the objectives of the assessment, on the interview guide and guidelines, and on qualitative data collection best practices.'* The Akvo hubs can submit proposals to get D2D funding from the project manager (Akvo I9).

3.5.2 Portfolio mapping

Akvo has an impressive portfolio of more than 80 larger projects (L68). This consist of projects closed in the period 2018-Q2 2020 that exceed €50,000. The implementation of projects will extend beyond 2020. In 2017 and 2018, Akvo also signed 75 contracts with a value of less than €25,000, totalling €683,000 (L48). These were not analysed. This project portfolio shows that Akvo works on many programmes with different partners and that Akvo is contracted by diverse partners for its services. The average value of the larger projects is €288,000. The total value of the portfolio is €26,941,132. If we look at the project's revenue in 2017, 2018 and 2019 and the actual work done in the hubs³ is the total revenue in that period €9.384.934. In figure 9 a division of work done over the hubs in these 3 years is provided.

³ Akvo Europe is inclusive of product and SaaS revenue

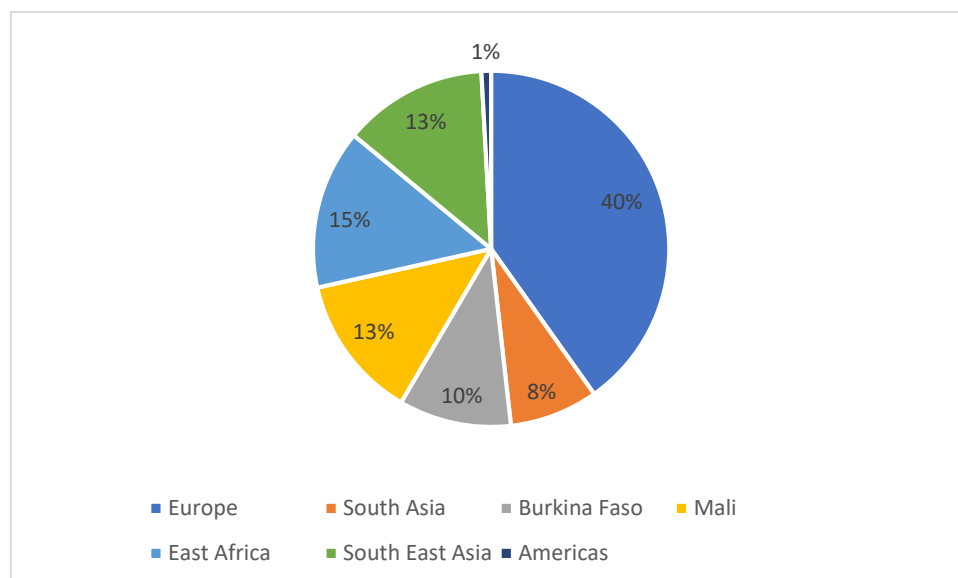


Figure 9 Percentage work done in the hubs (2017-2019)

In figure 10 the stakeholder division (based on the lead organisation in case of consortia) of the 80 large projects in the portfolio are provided to illustrate that Akvo has a broad portfolio with the largest partner the iNGO closely followed by multilaterals.

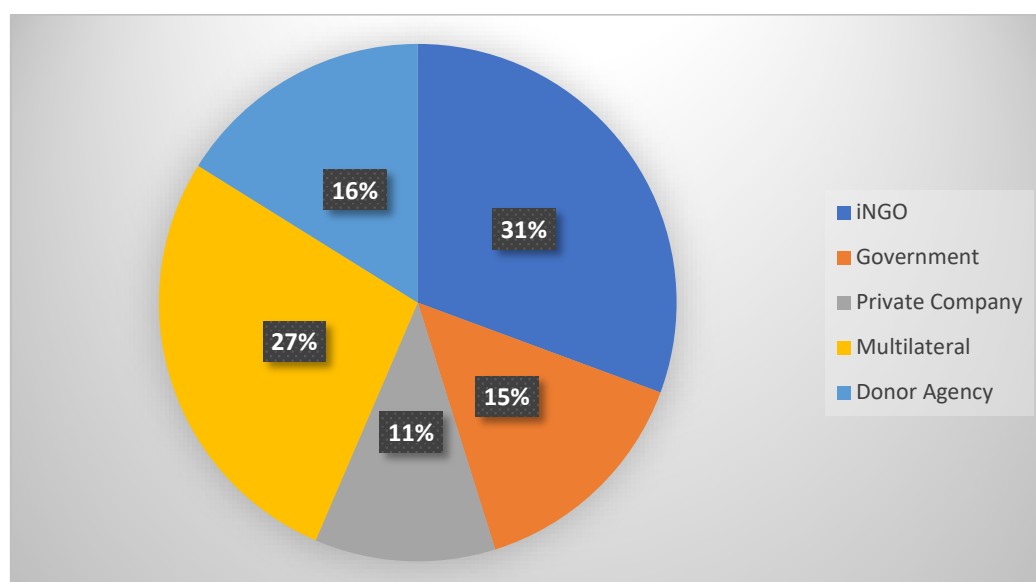


Figure 10 Division project portfolio (80 projects) to type of stakeholder

3.5.3 Differences between sectors

In the D2D proposal, Akvo recommended focusing on the WASH sector and broadening its scope to the sectors of sustainable agriculture & food security, climate change (disaster reduction) and resilient communities & mitigation (L13). This is reiterated in the inception report (L16). In 2019, Akvo changed its approach to get more focus on WASH and agriculture (L26). The WASH sector where Akvo is traditionally strong is still the largest sector. The importance of agriculture is growing. This is illustrated in figure 11 that shows the value of the portfolio between 2018-2019 and if 2020 is also added. In 2018-2019 the share of WASH was 59% of the project portfolio and if 2020 is

also included this was reduced to 51%. Agriculture is growing rapidly due to large new projects with IDH and Solidaridad from 24% to 33% of the total portfolio. The other projects remain the same (first 17% and with 2020 included 16%).

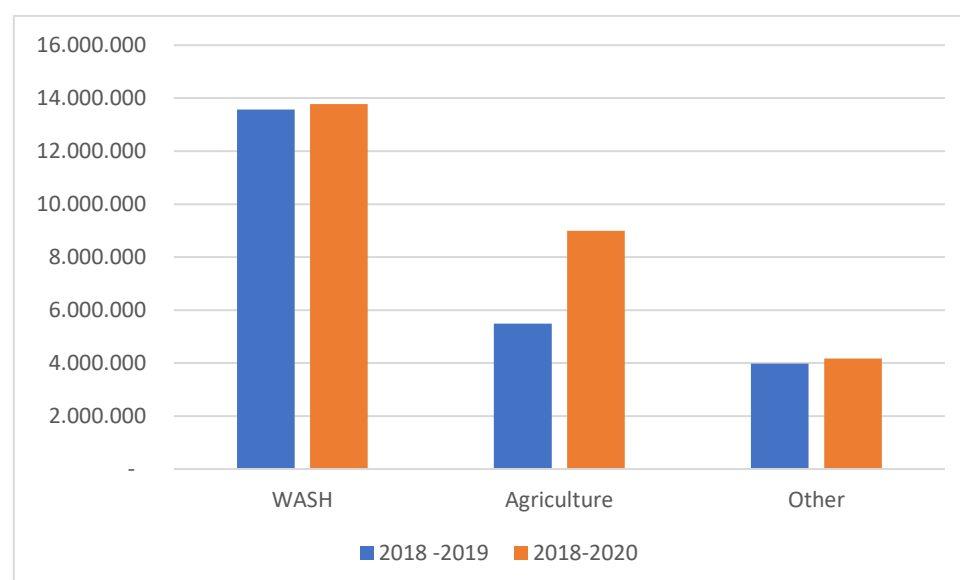


Figure 11 Value of portfolio per sector

The data journey process steps are similar for the WASH and agriculture sectors (Akvo I32) in terms of process. In both cases you move from Design > capture > Understand to Act. You also are able to use the same data collection and visualisation software (Akvo Flow and Akvo Lumen). The difference is the type of data you need and what kind of insights you want to produce with your data. (WASH field data vs farmer profile data/weather data/market price data, for example) you want to collect, which insights you create (country WASH database vs a data aggregation platform for farmers or a farmer database for traceability, for example) and what you do with it (more efficiently maintain WASH infrastructure vs digital advisory services for farmers, for example) is completely different and requires thorough knowledge of the sector that cannot be provided at the junior level. For Tech consultancy (customisation of Dashboards for example on top of standard Akvo tools) will also be different in both sectors based on requirements of the partners. In figure 12 the Data journey for the WASH sector is illustrated.

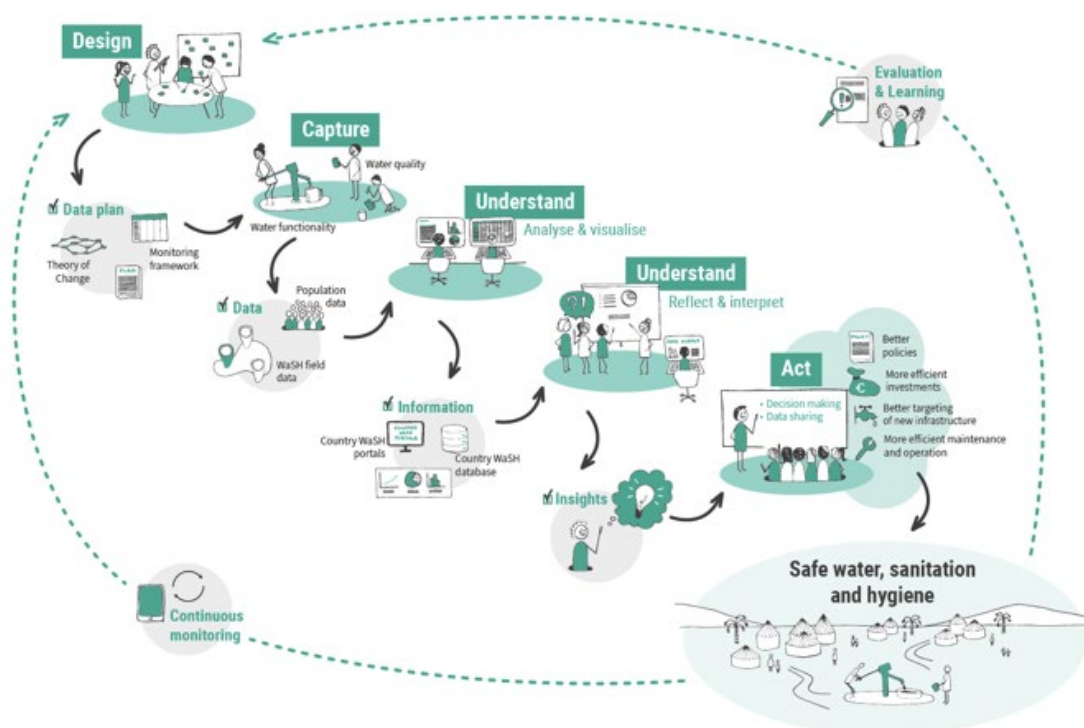


Figure 12 Data journey WASH

In the agriculture sector, digitalisation and access to accurate and real-time information can transform the livelihoods of small producers and value chain actors. Data solutions that provide more targeted and precise insights, for example in terms of price, weather and fertiliser use, can help farmers boost their productivity and income and increase their resilience in the context of climate change and insecurity. Akvo has developed a methodology that has been applied and proven in smallholder data collection and monitoring efforts to collect data of over 1 million smallholders across the globe till date. This has allowed us to expand activities resulting in global partnerships and ongoing programs with partners such as Mars Food, the World Bank, Welt Hunger Hilfe, IDH, SNV, ICCO, Fairtrade International, Rainforest Alliance and Solidaridad. Akvo is building more expertise in agriculture by recruiting senior agricultural experts. Akvo has developed and deployed two overarching solutions for the Agriculture sector, one that focusses on the development of advisory and information services for smallholders, and one on the provision of smallholder monitoring solutions that includes the new offering to partners to support actual data collection with enumerators worldwide as a service for them, by tapping into our local partner networks and over 15.000 enumerators Akvo has trained over the years. Akvo worked with UTZ and other bodies that develop sustainability standards to help digitise 5 commodity sustainability standards. Akvo participates in 5 G4AW programs and is active in rice, palm oil,

cotton, horticulture, coffee and recently secured several large agriculture programs with IDH. In figure 13 the Data journey for the agriculture sector.

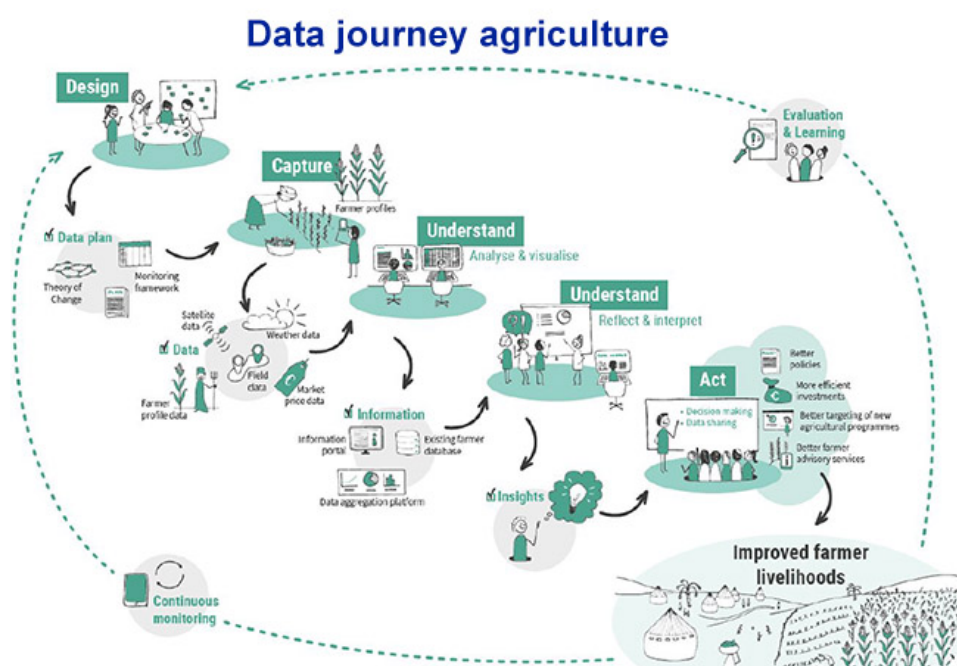


Figure 13 Data journey agriculture

3.5.4 Key findings EQ5

- Akvo has expanded its services globally. The key focus after a strategic shift for business development is on East and especially West Africa. To avoid that the staff is too thin spread in terms of geographical location and expertise. Akvo has changed its organisational structure to a matrix organisation to be able to consolidate expertise beyond hubs and strengthen the data journey expertise.
- Akvo has proven expertise in WASH and is expanding its expertise in the agriculture sector. A partnership with GODAN, IDH and Solidaridad is providing that opportunity.
- Akvo has a diverse, strong portfolio of projects with different partner types, mainly in WASH, though agriculture is growing rapidly and will overtake the WASH sector in 2020/21.
- The data journey steps are similar in WASH and agriculture, but the context is completely different. Good sector expertise is needed to understand this. In WASH, the services are public sector-oriented, while the agriculture sector is highly competitive, focusing more on the private sector and on the best value for a low price.

3.6 EQ6 Has Akvo expanded its partnerships?

The full question addressed in this section is: 'EQ6 To what extent has Akvo expanded its partnerships with implementing organisations and governments worldwide? Are these partnerships sustainable? How are partners and initiatives within partnerships identified?' This is

a strategy to achieve Akvo's outcomes. Section 5.1.6 presents a conclusion and assessment of this EQ.

3.6.1 Partnership identification

Akvo identifies new partnerships in different ways, at global and regional conferences, for example, to demonstrate its experiences and lessons learnt to other participants or to network at receptions, concept notes, regional and national meetings (by hubs), country visits by Akvo HQ staff to meet national partners and meetings with network partners (like NWP) (L19). In paragraph 3.4.1 figure 6 an overview was given of the new partnership agreements Akvo signed between 2017 and 2019. In total 118 new partners agreements were signed divided over governments, NGO's, multilaterals, private organisations and knowledge partners.

Partners also identified Akvo as a potential partner to collaborate with. Multilateral I45: *'The criteria to select a new partner is the capacity of the partner to do the work and its field experience in the countries where we work. Akvo fulfilled these criteria well. Not because we received DGIS money, but because Akvo was the right partner for this,'* or NGO I55: *'We evaluated eight systems from the user perspective, before we made a choice. We did a pilot with Akvo and were satisfied.'*

The annual report describes many meetings, conferences and acquisition trajectories with potential, but it is not always clear whether that led to new projects and partnerships.

3.6.2 Partnership engagement model

In order to help partners to become more data driven Akvo has developed a partner engagement framework with clear steps to follow). The framework is based on the data journey model with for each step the goal of the step, the role of Akvo, the role of the partner, the method used, the technology used and the deliverables. It could open new markets if Akvo's services to partners become more independent of their own software. If Akvo can build the capacity of organisations that use different data collection and visualisation tools, but also improve their data-driven decision-making (data journey), the impact of Akvo's interventions on the WASH and agriculture could become larger.

3.6.3 Partner satisfaction

The interviews in the evaluation phase generally provide a positive image of Akvo.

In the interviews with project partners in which partner satisfaction was discussed, 89% of the 27 project partners were satisfied with the collaboration with Akvo. The other 11% were not dissatisfied but endured some issues (around annual fees and handover of the software) during the project that affected the partnership.

All international NGOs (NGO I22, NGO I29, NGO I37, NGO I43, NGO I55 and NGO I83) were positive about the collaboration. NGO I37: *'Akvo is a very professional organisation to work with. They deliver what they promise.'*

Three out of four private organisations (I25, I51 and I65) were satisfied with the collaboration, while the other (I30) mentioned that Akvo could improve its profile to better determine how to collaborate.

Governments (I31, I50, I61 and I80) are positive about the relationship with Akvo, although they have some internal concerns about the approach and the embedding in their own organisation, which might affect the relation. Government I31: *'It is difficult to pay for Akvo's software tools, to include it in our budget. Therefore, we ask our development partners to pay for it. If we do not pay the annual fee of \$5,000, Akvo will not allow us to continue to use their software and database, which would present us with a major challenge. We are now comfortable with Akvo Flow as they have been using it for a long time and we now also use Caddisfly.'* Government I80: *'I am very satisfied with data collection. What does not work as well is the analysis phase after the data collection. I want to do that at a regional level, but that is more difficult than we thought. The inventory is also a one-off exercise. It is not yet embedded in our processes as routine monitoring.'* Multilaterals are positive (I32, I45 and I52, I60 and I71) about the relationship.

3.6.4 Key Findings EQ6:

- Akvo has extended its partnerships to a variety of new partners from different stakeholder types.
- In total 118 new partners agreements were signed divided over governments, NGO's, multilaterals, private organisations and knowledge partners Akvo uses a partnership engagement model as a tool for supporting organisations to become more data driven
- Partnership engagement is centred around Akvo tools. Akvo does not focus on potential partners that use other software tools to improve their data-driven decision-making.
- Traditional partners with whom Akvo works as a data software supplier have set up their own data departments. This is a positive development for the sector but could be a threat to Akvo's position. 87% of the 27 partners interviewed are satisfied with Akvo as a partner.

4 FINDINGS – OBJECTIVE 2

The findings presented in this chapter are based on all findings obtained regarding evaluation objective 2 (further cooperation between DGIS and Akvo).

4.1 EQ7 Uniqueness of Akvo

The full evaluation question addressed in this section is: 'EQ7 As an international organisation, is Akvo unique in the field of digital WASH monitoring, both in the context of its software and tools as well as its activities (outreach, lobbying and partnerships)?' The overall conclusion on EQ7 is provided in section 5.3.

4.1.1 Uniqueness

Akvo is regarded by many of its stakeholders and partners as unique due to its long-term local presence in many countries and regions, and its history of collaboration with sector stakeholders including governments at national and other levels.

This uniqueness is enhanced by Akvo's use of open-source software tools supported by a solid and scalable data platform, its ability to understand final beneficiaries and the development sector as a whole, and its flexibility, effective networking, professional staff, combined fee-based and sector-catalysing ways of working, and access to different funding sources. The Consultants call this the 'Akvo package'. The Akvo package enables Akvo to look and act beyond its immediate assignments and contracts (in time and scope), develop strong consortiums and partnerships, assist sector development and build awareness (with Akvo itself growing from a tool to a data journey service provider - L08, L24, L108, among others).

Akvo is valued and appreciated by many different stakeholders. They view Akvo as a dynamic, adaptive and fast-moving professional organisation with a local (office) presence in many countries and understanding of the local context. Moreover, they appreciate the organisation's ability to reach globally and deliver locally, as well as its friendly, motivated and competent staff's ability to understand, listen carefully and come up with new ideas and feedback, and assist in customers' thinking processes. They state that Akvo develops good, collaborative, flexible and long-term customer relationships, provides a wide package of related services, and goes beyond its contracted mandate to provide support and guidance where needed for the good of its customers and the sector (I34, 37, 39, 43, 45, 46, 52, GovI61, Akvo Mali I13, Knowledge partner I40 and Multilateral I67, among others). In addition, and adding to the unique image Akvo has among many of its stakeholders, Akvo's marketing skills are also perceived to be solid and intelligent, at least in the Netherlands. Interviewee I44 stated: 'Meetings are often at Akvo, which is good PR for Akvo. Akvo also links with other participating companies. Good acquisition because of that'. Akvo also works on expertise and career building among its often-young staff (I37).

Akvo's main value was often perceived to be in West Africa, where Akvo's software, local presence, context understanding, services and long-term engagement (the Akvo package) were regarded as unique. Stakeholders also indicated that if there are local parties that can deliver parts of the Akvo package, their level of quality is often lower and usually focuses on commercial short-term assignments (e.g. services of local start-up companies in West Africa, sometimes

assisted by Akvo, who even become competitors of Akvo) (DGIS I34, Knowledge partner I39, Multilateral I45, I52, Embassy I62 and Akvo I13, among others).

Some iNGOs can and also do provide services that overlap with Akvo's data journey. One interviewee for instance stated: 'In our organisation we were afraid that Akvo with its data journey would overlap too much with what we do. [...] In consortiums they [Akvo] were getting in our way with their data journey (NGO I83). On the next page a few organisations are presented with the different services and tools they have/provide as their core business that overlap with those of Akvo. This is merely a simple shortlisting of organisations and their tools and services that the consultant know of and/or came across during the evaluation, not the result of an elaborate market assessment, which presumably would yield many other organisations that have overlaps with Akvo. It also does not provide information on the quality of the services of these organisations.

Table 6 Overview of some organisations providing services and/or tools that overlap with those of Akvo

Organisation	Based in	Geographical focus	Target group focus	Sector focus	Software	Software customization	Data journey advisory and support services				Information source(s)
							Design	Capture	Understand	Act	
ICCO	NL	Worldwide, incl. Sahel Zone	NGOs, MSMEs, governments in dev. countries	Agri + MSME's	X		X	X	X	X	https://www.icco-cooperation.org/nl/
Baseflow	Malawi	Malawi	Governments, NGOs, companies, multilateral	WASH				X	X		Consultants network
AquaQuest	Zambia	Eastern Africa	Governments, NGOs, companies, multilateral	WASH			X	X	X		Consultants network
mWater	US	Worldwide	Governments, NGOs, companies, multilateral	WASH	X (survey + visualisation)	X					Company I23, L116
SurveyCTO	US	Worldwide	Companies, research institutes	Research	X (survey + visualisation)	X					Company I64
Agriterra	NL	Worldwide	Dutch iNGOs, Dutch government	Agri				X	X		https://www.agriterra.org/upload_directory/files/180222%20Courses%20overview%20Agriterra%202018.pdf
MDF	NL	NL	Dutch organisations	General			X		X		L119, L120
Mugamma consultants India	India	India	Governments, NGOs, companies, multilateral	WASH + Environment			X	X	X		https://mugammaconsultants.com/services#services-1
Nef Consulting	UK	Worldwide	Governments, NGOs, companies, multilateral	General			X (ToC)	X	X		https://www.nefconsulting.com/
CSR	USA	Worldwide	local CSOs, governments, companies	Agri			X (ToC)				https://www.crs.org/sites/default/files/tools-research/17os188_toc_brochure_update_online.pdf
Data4Development	NL	Worldwide	NGOs	General	X (IATI)		X		X	X	https://data4development.nl
Zimmerman and Zimmerman	NL	NL / worldwide	NGOs, multilateral	General	X (IATI, visualisation)						https://iatistandard.org/en/news/zimmerman-zimmerman-join-iat/

National governments in West Africa stand to benefit from Akvo's assistance in particular, for example to develop databases and water atlases⁴ that can be used to optimise investments in the construction and rehabilitation of rural water systems (e.g. L79). However, Akvo's uniqueness in West Africa is also perceived by some to be a risk as Akvo has some level of monopoly in this region with some of its services (Embassy I62). Several Akvo interviewees also said Akvo does not have a good customer data policy to ensure long-term access to data (e.g. 10-15 years), including for customers who no longer pay for the use of the software (Embassy I62; also informally stated by several other organisations). It must be stressed, however, that Akvo is not the owner of the data and keeps the data contractually up to one year after the software contract has expired. Before then, Akvo notifies the customers to download the data on their own systems.

Increasingly, there are good alternatives and competition in other regions (e.g. Asia, Latin America, parts of Africa). These alternatives do not always cover the entire 'Akvo package' but parts of it (see also the earlier presented table on this subject). As a standalone service or combined with services offered by other parties, these alternatives can fulfil customers' needs and are increasingly of good quality (e.g. NGO I41). This is especially true of the combination of competing software packages (e.g. mWater and Kobo) and local consultancy bureaus (e.g. Baseflow in Malawi, Aquaquest in Zambia, just to mention a few), but also international NGOs (e.g. MDF), which use such software to provide services such as data collection, processing and analysis, and IATI-compliant reporting (Akvo I12, Akvo I13, Embassy I62, among others; regarding Akvo software and its competitors, see the software functionality part of this section). Therefore, it is understandable that Akvo would focus its efforts on geographic areas where it still has a (largely) unique value proposition and importance.

However, although Akvo is beginning to head towards a more geographical focus (for instance, in its Sahel Data Initiative proposal; Akvo L88), it still struggles with the idea to limit its efforts to specific geographic areas. Akvo states that it still plans to focus on Africa, South-east Asia and the Pacific, Europe, and the Americas in the coming years, while on the other hand it says that 'its decisions regarding further investments [mentioning South America specifically] are to be based on future outlooks and clear growth plans' (L49). This raises the question of whether Akvo may want to change towards a system of preferred and skilled independent consultants (bureaus) in different countries instead of hubs (with the possible exception of hubs in West and Eastern Africa), a strategy Akvo has already put into place for IDH in Ghana, for instance, where a local consultant is increasingly coordinating data collection (NGO I21).

On the other hand, Akvo may have been unique in former years with its software, but is no longer so (Government I85, L116, company I23, company I64, knowledge partner I3, I4, I40, among others) and should find a new 'market niche' (Government I85). There is broad agreement that Akvo's data journey is the right direction in this regard (NGO I33, among others) while several interviewees stated that Akvo still needs to develop its expertise further for it (NGO I83, Akvo I16, NGO I37, among others). Interviewees also stated that Akvo will need to embrace its direction more emphatically (and separate itself in its advisory data journey role from its role as a software tool provider). Akvo claims that in its advisory services, it already objectively assesses its customers' software needs and adapts to the findings (Akvo I84). Akvo does so mainly in cases

⁴ Water atlases are also produced for Uganda by a commercial Ugandan consultancy bureau, which shows that Akvo is not unique in this respect in other areas (Company I88).

where customers already have software in place and want to continue using it (Akvo I46). When a customer does not yet have survey software, Akvo usually advises using its software, even if it is not optimal (which is usually related to the cost for a license after a project period, during which it was free; Government I31, NGO I41). Akvo, in anticipation on this, has already started to move from adding more features to its software to link to other software systems, and customise software to customers' needs. However, Akvo still mostly customises its own software products (I17). On the other hand, it is increasingly integrating Akvo tools with other software systems as well, mainly for specific customers and for software systems that do not directly compete with Akvo tools.

Also, once an organisation works with one of the Akvo tools, it is difficult for them to exchange this tool for non-Akvo software tools, so the organisation is bound to work with other Akvo software as well (Akvo I12). This may be smart from the perspective of expanding the organisation, but it may be counterproductive in terms of effectively developing organisations and sectors (one of DGIS's goals). Akvo responds to this as follows: *'Akvo will focus on the data journey, software support and customisation, but will maintain its software expertise and tools together with an open connectivity approach towards other tools'* (source: feedback on the findings by Akvo).

The above shows that Akvo is struggling with its future business model and the role of its software in it. However, there is a level of awareness about this at Akvo. Its 2018 business review (L42) states: *'Instead of competing with other existing products, we should find a way to connect with them to support our partners in using the full potential of the data,'* and *'the focus is now on "solutions" embedded in our regional presence and less on our own tools'* and *'the competition of other tools is growing and it is hard to keep up with the limited capacity we have.'* In this context, Akvo has already started to move from adding more features to developing APIs⁵ and offering services to customise software to customers' needs. As a result, customers can now enjoy the benefits of the core product base but customised to their needs. Akvo can offer this customised solution for a reasonable price because the basic layers are there. Akvo staff member Akvo I17 feels Akvo has an advantage in this regard compared with its competitors as *'we speak the language of the development sector. Unlike an Indian software company, we grow with our customers over time. We have a bridging role and talk the language of the developer, while most competitors only have standard products.'* Akvo still customises solutions around its own software products mainly because it does not have the expertise and capacity to do so with other software packages (Akvo I12, Akvo I17).

To further develop its data journey services, stakeholders say Akvo should also employ more agricultural and WASH expertise and start working with local organisations instead of competing with them. They also argue Akvo should function more emphatically as a catalyst for the digitalisation of the agriculture and WASH sectors in developing countries. It should also assist parties (e.g. local consultancy bureaus and national government agencies) to take up (parts of) the data journey advisory and support roles that Akvo is fulfilling itself (Knowledge partner I39, Company I19, NGO I43). Moreover, Akvo should consider that many other organisations are building infrastructure and capacity in data-driven systems and approaches in the agriculture and WASH sectors as well (NGO I43).

⁵ An API is software connecting Akvo software with other software tools, placed on GitHub or used in tech consultancy trajectories.

4.1.2 Software functionality

As also becomes clear from the above, Akvo's software must be regarded in combination with its total business model, because the software was and still is an important element of its business model, and most of Akvo's services are connected to the software. Like Akvo, many organisations have developed survey software tools (also called survey monkey tools), often driven partly or fully by grant funding from Western governments, multilateral organisations and commercial companies (L51). Many of these software tools have a similar functionality (I64, functionality assessment in Annex 9). In that sense, and reinforced by literature reviews, interviews and the assessment conducted to compare the functionality of Akvo Flow and Lumen with that of mWater (see Annex 9), Lumen and Flow, though they function well, were not found to be unique, compared to other, similar software packages, notably mWater⁶, SurveyCTO and Kobo. While Akvo senior staff feel that Akvo Flow and Lumen do (still) have advantages over competing software, the functionality assessment (L116) found that both packages are rather similar in their functionality and some interviewees claimed mWater outperforms Akvo Flow + Lumen (Knowledge partner I3, I4, I40). Each package has some strengths and weakness compared to the other and each has some differences in functionality and applications, but the packages do not differ much in most of the important functionalities, with mWater having some more advanced overall functionality and advantages and investing more in the development of its software, and Akvo tools (still) scoring slightly better on some aspects than mWater. Larger organisations particularly appreciate features such as the Akvo software structure related to roles and permissions and how data can be organised within projects, the simple and user-friendly app, data privacy and data security (Akvo I78, L38). Akvo senior staff, therefore, believe Flow and Lumen will survive at least in the coming years. However, they also indicate that there will be a shift from the software being central to Akvo's business model to the data journey and what partners do with the data, regardless of which software is used (Akvo I78).

In this context, it is important that competing software providers are copying strong features of Akvo's software (the reverse is also happening, according to Competitor I23). Therefore, it is conceivable that competing providers will, at some point, offer the same unique features that Akvo claims allows it to outweigh its competitors (Competitor I23), to the extent that the market continues to appreciate and demand these features. In addition, these providers develop promising new features in their software that Akvo software lacks, such as pipeline data and administrative bookkeeping for water utilities (Company I23). Also, the functionality assessment executed as part of this evaluation found that some of the benefits over other software claimed by senior staff members at Akvo are also present in mWater (e.g. data security, see Annex 9).

RSR has limited functionality and does not optimally target the market's needs, but it is GDPR- and IATI-compliant and can summarise in an automated way the reporting from multiple projects in a single report. However, much of the functionality, user-friendliness and needs coverage of

⁶ The functionality of mWater was compared with Akvo Flow+Lumen in a functionality assessment executed as part of this evaluation (L116). The aim was to compare Akvo Flow+Lumen with similar software to get further proof/indication of the level of uniqueness of these Akvo tools. Unfortunately, the budget and time was limited and only one software tool could be chosen for the comparison. mWater was found to be a logical choice as it has a similar scope (survey tool with visualisation functionality) and is the main competitor of Akvo Flow+Lumen in the water sector. The results of the assessment have been included in the SWOT analysis of the Akvo software tools in Annex 9 in this report.

RSR must improve if it is to fulfil its potential. Akvo responded to these findings as follows: *‘This has been done since then and the product has become a monitoring, evaluation and reporting tool with greater impact in the market: the Editor has been redesigned, including indicator reporting for both qualitative and quantitative indicators, API improvements, etc.’*

Caddisfly is relatively unique for its water quality tests⁷. Caddisfly features direct data upload in databases enabling direct visualisation and interpretation of the results. Though its functionality still has scope for improvement and not all tests are optimal yet (especially soil tests; Akvo I12, among others), especially the water testing part of Caddisfly has high market potential (see Annex 9). Although it is open software available on GitHub, and Akvo claims it can be connected relatively easily to other data collection tools with an available API, Caddisfly is integrated with Akvo Flow and Lumen and is in practice not often separated from this software. One organisation has connected Caddisfly to a competing survey software package (ODK), but without spreading it to the rest of the world.

Caddisfly is not free. It is part of the SaaS fee that Akvo charges for support and hosting. Caddisfly is developed with grants from Cisco (Knowledge partner I18, Akvo I13, NGO I54). This increases the risk for market distortion (see findings for EQ 8 next paragraph).

Akvopedia is unique in the sense that few other organisations present an information platform as complete as Akvopedia for the WASH sector. Akvopedia helps visitors find the information they need. Keeping the site up to date is a major challenge as it is a free service. Akvopedia is not discussed further in this report because it is not real software, and Akvo has already put Akvopedia in what it calls ‘maintenance mode’.

Akvo Flow is interoperable with the WPDx database, enabling easier sharing of water point data among organisations working with Akvo Flow (L16a, Company I19). WPDx also developed a model for Akvo to prioritise investments in the rural water sectors in different countries, based on the locations of water systems, population data and the functionality of water systems (company L104/105). This model is also used to determine the impact of data-driven, evidence-based decision-making regarding the construction and rehabilitation of rural water systems in terms of additional numbers of beneficiaries reached compared with when such a model is not used. mWater has a somewhat less sophisticated but similar functionality, but does not use it to determine the numbers of additional beneficiaries reached (Akvo I12, Competitor I23). An issue to consider in the Akvo/WPDx and the mWater models is the accuracy of the population data used (both models use large public population databases, the accuracy of which varies). Also, there are factors that may be, and often are, important that are not taken into account in the models (e.g. how actively a given village has maintained and paid for water systems historically, alternative water sources to which people have access, e.g. dug wells in people’s compounds).

The SWOT analyses made for Flow+Lumen and Caddisfly, based on Akvo’s AQOAs, other documents, interviews and the functionality assessment of Akvo Flow and Lumen compared with mWater, have yielded good overviews of the pros and cons of the Akvo software tools (see Annex 9). The Akvo-mWater assessment results have been outlined in a separate document (L116).

⁷ *This is much less so for the soil tests of Caddisfly. Although the soil tests of Caddisfly are still under development by Akvo, several alternatives were identified by the consultants that are further developed and covering a larger range of soil tests than what is currently covered by Caddisfly.*

4.1.3 Key findings EQ7

- The combination of 'Akvo's package' of software tools, services, networking, understanding of local contexts, hub infrastructure and funding sources is unique and valued by many.
- Customers' needs do not always require the full Akvo package.
- Akvo's separate fee-based services, including its software and data journey services, are not unique. Exceptions are:
 - Akvo's fee-based services in the West African (and possibly partly in the Eastern African) region, and probably also in several fragile areas, as there are no or only few competitors in these areas for these services (although a lack of competition is perceived as a risk by some interviewees), while some other iNGOs could fulfil (parts of) these services in these areas as well.
 - Caddisfly is largely unique in the water sector (much less so in the agriculture sector), although it already has competitors (especially in the agriculture sector); and
 - Software customisation services for customers already using Akvo software (TechConsultancy).
- There is broad acknowledgment that Akvo's data journey is a good direction to go in, with high market potential.
- Akvo still plans to focus on Africa, South-east Asia and the Pacific, Europe, and the Americas, but it is also aware that it may have to reduce the number of areas based on future outlooks, and/or change from its own country hubs towards collaboration with independent parties in countries.
- Consortiums in which Akvo takes part may be unique due to their combination of actors and factors, but the interventions they offer are not necessarily always unique.
- Several large current Akvo proposals are (still) too supply-driven, while the proposed Akvo software is not unique (the exception being Caddisfly's water testing feature).
- Akvo is and can become more unique and important in its role as sector catalyst, which includes sub-roles such as:
 - developing independent and sustainable train-the-trainer capacities about digitalisation and data-driven management among local parties, notably local consultancy bureaus and government agencies; and
 - stimulating, creating awareness, and helping countries to develop good data policies and standards, develop standard key (performance) indicators (KIs and KPIs), and align these within governments and sectors.
- Akvo is struggling with its future business model and how to make its data journey a central part of it and what role its software will have in it, but Akvo is building awareness and insights in this regard. Currently, however, it does not sufficiently have the methodology, expertise nor, to some extent, the will to offer fully independent advisory services separate from its software. Akvo is open to the idea of gradually transitioning into a changed business model, however, in which the data tool offered to partners can be either third-party tools and/or Akvo tools.
- Akvo Flow+Lumen and mWater are very similar in functionality.
- RSR and Akvopedia have some level of uniqueness but competition from RSR, including IATI compliance, is increasing, while the business cases of both tools are weak.

4.2 EQ8 Does Akvo distort the market?

The full evaluation question addressed in this section is: ‘EQ8 Does DGIS’s support to Akvo distort the level playing field of other parties with similar activities?’ The overall conclusion is provided in section 5.3.

4.2.1 Market distortion theory

Wikipedia defines a market distortion as ‘any event in which a market reaches a market clearing price for an item that is substantially different from the price that a market would achieve while operating under conditions of perfect competition and state enforcement of legal contracts and the ownership of private property’.

Market distortion is triggered by subsidies, sometimes by commercial companies (e.g. subsidising their own products to win the market or subsidising humanitarian organisations as part of their CSR policy), but more often by governments (for many reasons). Development aid provides funds to providers of aid, not to customers of aid. This makes development aid supply-driven (although different methods are used within the aid supply to try and connect to the demands of customers), often with a high risk of market distortion.

Market distortion risks can best be ‘mapped’ by following the subsidy pathways. A subsidy reaching its direct recipient(s), who use it to finance the development or pricing of their products or services, will probably distort the market for (potential) competitors of these products and services (first-tier distortion). But a subsidy recipient can also channel the subsidy to other organisations (in the form of money or goods, services or loans provided for free or against subsidised rates, for example), which may distort the market for (potential) competitors of these organisations (second-tier distortion). In the same way, there can be third-tier distortions, and so on. The further down the distortion happens, the more difficult it becomes to assess the distortion risk in advance by the subsidy provider, for instance, that will usually want to try to avoid market distortions with its subsidies. Therefore, it is not always relevant if an organisation does not have competitors, because it can then still distort the market: (a) for potential direct (first-tier) competitors that will, as a result, not try to develop their business, knowing they will never be able to compete with the already established business with its subsidised rates for its products and/or services, (b) for competitors further down the line (second, third tier, etc.) who do not compete with the first-tier organisation or consortium, but with lower-level (-tier) parties to which the subsidy trickles down (these parties are often not unique, even if the first-line organisation/consortium is).

The literature reviews, interviews and other information sources have identified several ways in which DGIS’s support to Akvo may, and sometimes does, distort the level playing field of other parties with similar activities. DGIS is aware of these dangers. For example, DGIS I35: *‘If developed with government funding, local organisations and governments should be able to continue on their own without having to pay for licenses. But DGIS should also look at itself and set the right conditions. Government funding means: open source (that could be continued without support [from the party that developed the software]), open data with access to the raw data, and open content of methods and approaches. The government should have this in their contracts. This is not the case’* (DGIS I34). And *‘In the future, DGIS does not want to fund product development but subsidise the promotion of more efficient value chains through data-driven decision-making, in certification and fair trade where traceability is important.’*

4.2.2 Akvo's competition

Discovering to what extent distortions happen and their level of severity in the case of Akvo (severity is covered in the 'Risk' column in the overview in the following pages) was more difficult. It was often stated that, although distortion can happen in theory, the absence of parties providing services similar or equal to those of Akvo means that, in practice, it often does not. Indeed, Akvo was said to often play an important role with its subsidised services in developing a basis for digitalisation in sectors while also enabling local parties to take over this role (in part or in full), which would not have happened in a commercial setting. The overview in the following pages provides a structured summary of our findings regarding this subject, while a more detailed overview of these issues, including reference to the information sources on which the findings are based, is presented in Annex 7.

Table 7 Summary of market distortion findings in the context of Akvo

Type of DGIS support	Possible types of level playing field distortion	Risk level
DGIS stimulating other parties it funds to work with Akvo and its software	<ul style="list-style-type: none"> DGIS asking parties to work with Akvo or parties feeling it is expected of them. Dutch embassies asking Akvo to train parties on their behalf 	Low to medium risk. Providers of similar services and software may lose market share as a result. Many parties indicate they were not influenced or also have other reasons to choose Akvo.
Direct or open tender grant funding for the development and provision of Akvo survey software and related services	<ul style="list-style-type: none"> Other parties developing similar software that do not get (as much) subsidy for it, suffer For its business, mWater depends on a few large customers that are, however, kind of subsidisers as well, as they pay a lot for their licenses, which enables mWater to offer most other customers the software for free (cross-subsidy mechanism) 	<p>High risk. Competition is increasing, especially for Akvo's survey software (Flow+Lumen). Also, the market for Akvo's software customisation services is under pressure, especially in Asia, where competitors offer similar services against lower rates. An exception is West Africa, where few parties have survey software and an overview of the options. Akvo often offers its software and data hosting for free during a project but requires payment afterwards, which customers are often not able (or willing) to do. Competitors are often subsidised as well. mWater has a few large customers who pay, so it can offer other customers the software + data hosting for free. Others (e.g. Kobo, SurveyCTO) built their software on top of the free open source software ODK, which was developed with grants. Hence, much duplication with aid money.</p> <p>Market distortion is not at stake when (usually) larger organisations make a well-informed choice to use Akvo software.</p> <p>Akvo markets its software as open source, but because of the complexities involved and the absence of an Akvo ecosystem, it cannot easily be copied and used by other parties.</p>
Direct or open tender grant funding for the development and provision of Akvo sector-specific software	<ul style="list-style-type: none"> Example: Caddisfly, Akvopedia, and (partly) RSR 	Medium to high risk. As a result of grants to develop the tools, there is a danger of market distortion. However, it is more likely that competing tools will outgrow the functionality of the Akvo tools in the coming years. With Caddisfly, this is the case for the agriculture and, to a lesser extent, WASH sectors. Also, mWater has limited water testing functionality. For IATI-compliant reporting, several tools compete with RSR (e.g. Zimmerman & Zimmerman and Data4Development). In addition, organisations that need an Akvo sector tool can only use it together with Akvo Flow+Lumen, while Akvo, in its turn, stands to lose its market share as a result. There is also some

		duplication of activities with aid money, e.g. in the case of RSR and its competitors.
Grant funding for developing and offering services not focused on Akvo's software development	<ul style="list-style-type: none"> Negative distortion where grant funding is used by Akvo to develop and/or offer cheap fee-based services while competing services are or could be present Negative distortion when Akvo's subsidised structure of hubs and services is reason to contract Akvo, while other parties could provide similar services. Non-distortions and positive distortions when there are no competitors. The distortion may become even more positive if Akvo (also) builds ToT capacity not focused on Akvo's software, not offered by any other party. 	<p>Medium risk of the negative distortions. No risk of non-distortions and positive distortions.</p> <p>No distortion – West Africa and fragile areas, where there are no competitors, although Akvo may withhold other parties from entering the market. Akvo should ideally develop ToT capacity in such areas among local consultancy bureaus and government agencies.</p> <p>Negative distortion – consultancy group with local associate companies finds it difficult to compete with Akvo due to its relations with and the low interest, or awareness, Dutch INGOs have regarding cost-effectiveness and longer-term relationships with and support to country-level parties, especially governments. However, these firms also realise they could benefit from Akvo's expertise and guiding tools, especially train-the-trainers capacity building regarding Akvo's data journey if not focused on Akvo's software.</p> <p>Negative distortion – for some international customers, e.g. IDH and W&B, Akvo's subsidised worldwide presence and partially subsidised services are an added value with which Akvo outperforms (potential) competitors.</p> <p>Dutch INGOs often indicate that the choice to use Akvo is also because of the 'Dutch connection', the like factor, Akvo's development expertise and insights in general, overview and flexibility and other factors.</p> <p>Non-distortion – Akvo's services and methods that are not and will not be developed by others, but the documentation (e.g. training manuals) should be generic, freely available and self-instructive.</p> <p>Negative distortion – grants used by Akvo to hire and develop expertise regarded as an added value by fee-based customers.</p> <p>Negative distortion – using grants to match grants, e.g. a consortium that needs 50% from other than the donor's grant, distorts competitors that do not have access to such funding (Akvo uses D2D money in this respect).</p> <p>Negative and positive distortion – Akvo supports IDH with data collection by building the capacity, contracting and controlling the quality of local companies that get 'free training', paid for by IDH. Akvo is more attractive because of co-funding provided by D2D for the development of a Farmer-Income Guidance Tool (e.g. partly from D2D). This is distorting its own competitors. However, it is also positive distortion because selected companies develop their capacities, which is important for sectors and countries and would not have happened without the intervention.</p>
Grant funding to consortiums through open tenders in which Akvo is a partner	<ul style="list-style-type: none"> Negative distortion where a consortium subsidises parties or value chains as a result of which one or a few parties benefit, making it hard or impossible for other similar parties to compete. Positive distortion where a consortium subsidises a value chain enabling commercial parties to become active where otherwise this would 	<p>No risk for the positive distortions, e.g. (a) G4AW assisting new social enterprises to work with satellite data in agriculture, subsidising them until they can continue commercially with poor local farmers and provide imperative services that would not have materialised without the support, and (b) a consortium developing an app providing objective advice to farmers and not connecting them to a single supplier's seeds or fertilizers.</p> <p>Medium risk for the negative distortions, e.g. (a) SpiceUp developing an app in which farmers can enter data about their crops and fields and get advice regarding seeds, fertilisers and other inputs, but only from a company involved in the initiative (although this company also makes investments by having field officers who assist the farmers), while Akvo argues that if there is market distortion, it is because of DGIS funding (for which Akvo cannot be held accountable), and (b) Akvo, through a consortium, assists a local NGO that, as a result, outperforms other local NGOs.</p>

	not have been possible (or very difficult).	Akvo states it is often part of a consortium funded by DGIS that distorts a market (negatively or, in some cases, positively), but in such cases Akvo is a sub-contractor or partner of low importance and influence.
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4.2.3 Akvo's current and potential business models for the future

Regarding Akvo's potential future business model(s), the findings have been used to capture Akvo's current and potential business cases in scenarios, presented below. They include the context, pros and cons, and issues important to each of them (following the methodology for the development of business models through scenarios in the Business Model Generation manual) (L115). The focus has been on understanding and mapping the differences between various business models in terms of uniqueness and market distortion.

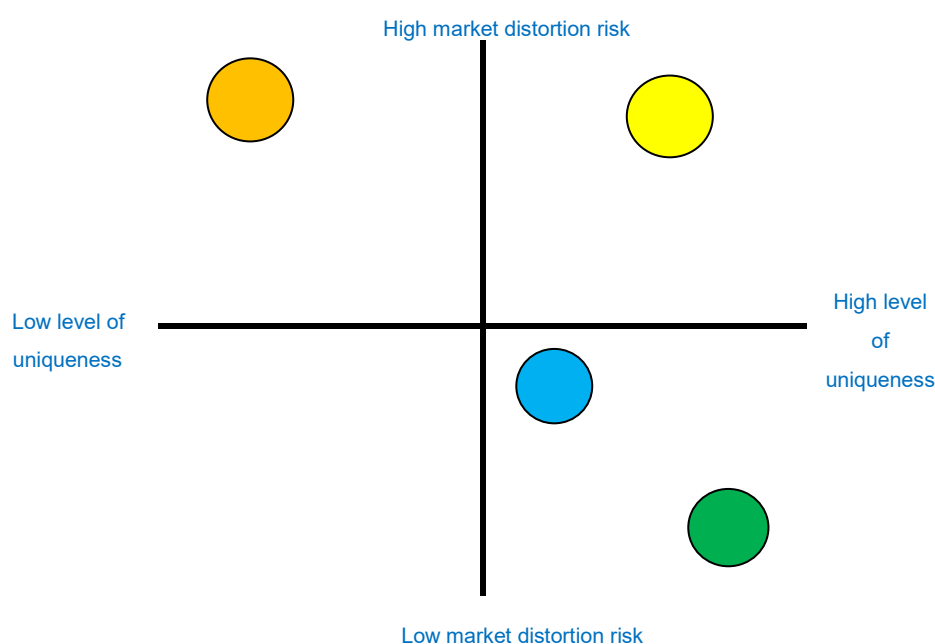
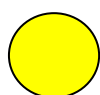


Figure 14 Future business model



Akvo's current business case where (increasingly) competitors offer (partly) similar services and/or software. Although Akvo's individual services are not unique, the combination of its services, infrastructure, expertise, attitude, and motivation (the Akvo package) is. The package, or parts of it, needed by a customer can increasingly be offered through local competitors combining efforts and services (e.g. a local consultancy bureau using mWater, being embedded in the country the customer focuses on, and trained by a commercial umbrella organisation). However, the Akvo package, which is partially built and sustained by grants, can still be more attractive for customers and consortiums in such cases.



Akvo as provider of survey software (Flow+Lumen). Because the software was developed with grant money, it distorts the market for competitors, though it should be added that the software developed by competitors is also often partially funded by grant money or based on software developed with grant funding.



Akvo as provider of sector specific software, including Caddisfly, RSR and Akvopedia. While Akvopedia has a higher level of uniqueness and a lower level of market distortion risk than indicated by the blue circle in the above chart, it does not have a proper revenue strategy. RSR is somewhat more general and is not limited to one or a few sectors. It was quite unique but is increasingly seeing competitors that are distorted due to the grant funding with which RSR is developed (although some of these competitors also receive some level of grant funding to develop their software). Caddisfly is highly sector-specific, but there are big competitors on the horizon. In fact, they are so large that the grant funding received by Caddisfly is probably not distorting them much. For the water quality testing functionality in mWater there probably is a level of distortion as customers may choose to use



the Akvo software because it is the only way they can use Caddisfly, which has much more functionality than the water quality testing functionality in mWater. A main issue to consider is that RSR and Caddisfly are likely to be surpassed soon by other initiatives.

Akvo solely provides sector-catalysing services, independently from its software, partly or fully developed and paid for with grant funding in areas in which there are no competitors, so it is unlikely to cause any serious market distortion. For example, Akvo offers generic data journey (not focused on Akvo software) ToT capacity building to government agencies and local consultancy bureaus, open to all and free of charge (or at very affordable rates), while there are no competing parties that could offer these services.

4.2.4 Key findings EQ8

- DGIS funding is intended to either not distort markets or distort them positively.
- Subsidies can distort markets and the level playing fields of parties in many ways, often in ways that cannot be detected. The chance that this is happening or will happen is substantial in many cases but difficult to predict, measure and quantify.
- Unique organisations or consortiums have a high chance of winning an open tender in their field.
- There are indications that DGIS funding to Akvo results in market distortion, either directly (among its direct competitors, because Akvo is no longer unique with its services in many cases) or indirectly (e.g. among competitors of parties supported by grant funding from Akvo) in several situations and circumstances. This is related to the fact that Akvo has developed and still finances part of its advisory services and organisation infrastructure with grant funding, which contributes to its services being better, more comprehensive and/or cheaper than what competing parties can offer that receive smaller subsidies or none at all. As a result, Akvo's customers may also distort their markets to some extent.
- Often, local competitors cannot yet offer the required services, especially in West Africa and parts of Eastern Africa, as well as fragile areas where there are no or few competitors (and those that exist are often of poor quality) and where Akvo's services are imperative for development. However, the grant funding Akvo receives can hamper local parties to develop competing services. It was found that in such cases Akvo sometimes provides (already as part of D2D) ToT capacity-building services to local parties to enable them to develop their services anyway and even potentially take over from Akvo (e.g. in Mali).
- DGIS is aware that grant funding to enhance (social) businesses that fulfil an important development role is a fine line to walk, which does not always work out, causing distortions of the level playing field of other (current or future) parties with similar activities.

4.3 EQ9 Is there a high risk that Akvo becomes dependent on DGIS in the future?

The full evaluation question addressed in this section is: 'EQ9 Is there a high risk of dependency on DGIS if cooperation is extended in the future?' The overall conclusion of EQ9 is provided in section 5.3.

The findings that can shed light on this question are divided into two categories:

- Akvo's business model (current and future). Insights into Akvo's past and future business models shed light on the kind of revenue versus the cost of the different services that were provided in the past and may be provided in the future (indicative profitability), which will create some level of understanding of the future dependency on DGIS funding.

- Financial developments of Akvo's paying customers and donors, to obtain insight in the importance of DGIS funding to date and how this relates to Akvo's business model (first point).

4.3.1 Akvo's business model (current and future)

Akvo is transforming from:

A globally active and established software tool provider that focuses mainly on the WASH sector, based in several developing countries worldwide with its own satellite offices (the hubs for local presence, marketing, networks and understanding), which focus on software development, sales and after-sales, software training and guidance, and the collection, processing and analysis of data for customers,

into

A provider of services and advice focused largely on West and Eastern Africa (and through local hubs) with regard to the data journeys that organisations and governments in these regions in both the WASH and the agriculture sectors need and a provider of software customisation services worldwide, but with several unknowns (including this new model's costs and revenue, customer segments and market potentials, which hubs to be closed down, and which fee-based services to keep, including Akvo's software tools and the execution of data journey parts, e.g. M&E, for customers or within consortiums).

There is some discrepancy about Akvo's future business model among its staff members and in documents. To summarise, some of Akvo's current ideas and considerations about its future ways of working include:

- Transform the value proposition towards consultancy ('data journey') and sector service packages around water and water quality and agriculture in a limited number of regions (mainly West and Eastern Africa) with less emphasis on the Akvo software tools (Akvo I73).
- An upcoming question is whether the costs to develop and maintain new tools (such as Lumen) are valued sufficiently by Akvo's customers to run a sustainable business model. Also, the costs associated with the sales and acquisition of (small) contracts (time-intensive, long lead times) are often not in balance.
- The hubs (Akvo's offices in developing countries) are expensive mainly due to the costs of expat managers and their families. The expat managers have been replaced in several hubs by local hub managers. Akvo also has been thinking about closing some of the non-profitable hubs. In response to this finding, Akvo says 'the hubs in Latin America and SEAP have been restructured'.
- Akvo's Lumen is built to provide field staff with a simple and relatively cheap tool to visualise and analyse the data they have collected. There are many powerful high-end tools on the market that require advanced skills to operate and, therefore, do not always fit the local context, such as PowerBI and Tableau, compared to which Lumen is not very advanced. Flow's monitoring functionality is still well positioned in the market (which is contradicted by others, however, who point out that tools such as SurveyCTO and mWater have similar functionality), which makes it more interesting and provides sufficient value for organisations, larger ones in particular, to pay for it (compared with the free tools). So, one priority is to 'integrate' Flow, Lumen and Caddisfly and enhance the user experience and make it

interoperable with other tools and databases, such as DHIS2. It will be a challenge, however, to take on increasingly sophisticated competing software tools (Akvo feedback on the findings).

- Former Akvo employee (Ex-Akvo I59) states that *‘organisations, especially the smaller ones, are scared off by Akvo’s software costs, with a minimum entry fee of €5,000 [per year] for small data collection. Why not freemium, but [the Akvo] software system is set up in such a way that support is needed? Does Akvo’s software have a lot of added value? Investments in the software might not be enough to keep up with competitors, but also Akvo has not made a firm decision to stop marketing its software. Gradually, the Akvo MT is opening more to this idea, but it still has a strong tendency to hang on to the Akvo software. Implicitly, the hubs still have targets regarding sold software. However, there are more possibilities for developing our own solutions outside of our [Akvo] software products.’* Akvo’s response to this finding is that it is outdated and things have changed, though it does not specify what has changed.
- Akvo is successful with open tenders, often in consortiums or partnerships with other organisations. It makes Akvo less dependent on direct (waiver) funding (closed tender) from DGIS. However, the open tenders result in restricted programme funding with stringent and specific objectives and results, not allowing for much flexibility or for fulfilling important public digitalisation needs and other digitalisation needs encountered and assessed along the way. The direct DGIS funding is less stringent and enables Akvo to fulfil its public role as a catalyst of digitalisation in the WASH and agriculture sectors in developing countries. However, Akvo believes that if the direct funding from DGIS is changed into an open tendering procedure/call for proposals, Akvo may have a high chance to win it (Akvo I73).
- Akvo employee Akvo I73: *‘Akvo can be an M&E partner in consortiums. But that is not what they want to achieve with the data journey.’*
- Tech consultancy (customising software in addition to Akvo’s standard tools) will increase (largely through its SEAP team, which has good programmers). This can partly result in the development of new standard Akvo software. Akvo will sustain and upgrade customised software as a service to its customers (Akvo I73).
- Local competitors (e.g. Field Buzz in Mali) cannot do everything Akvo can do. When a job is finished, they are no longer involved or interested (Akvo I13).
- Akvo should train more local consultancy companies to create local networks of local companies able to do data management works (DGIS I62).

Akvo partners also give differentiated feedback on how they see Akvo and DGIS’s support to Akvo in the future:

- Continue to expand collaboration with knowledge partners in the Netherlands, e.g. through PhD students collecting data with Caddisfly and conducting tests in the field to help improve them, mainly through closed budgets (Knowledge partner I4).
- Invest in the expertise required to train trainers and develop proposals (Knowledge partner I4, Knowledge partner I39).
- Give the hubs more freedom to run their business and embed in local ecosystems (Knowledge partner I4).

- DGIS needs to make a basic decision about whether to support Akvo to develop its data journey services, to support the development of its software or to support organisations to be able to buy such software and data services (Knowledge partner I39).
- There is a need for a data initiative in the Sahel Zone, but it will need a long-term commitment from donors, at least 10 years, in order to make sense (Knowledge partner I39).
- Have a regional focus in proposals in collaboration with large organisations to reach economies of scale and be competitive with bids on calls for proposals (multilateral I67).
- Become less reliant on the Dutch government through increased fee-based services to customers, including more M&E and impact evaluations, to increase revenue and reduce expat involvement to reduce costs (Private organisation I47, NGO I49, Government I85).
- Continue to be efficient (e.g. proper estimation of working hours and small error margins in proposals and planning) (NGO I49).
- Akvo is a hybrid organisation, partly operating as an NGO that collaborates with other NGOs to develop proposals together and partly as a (semi-) commercial consultancy bureau (NGO I49).
- Prevent organisations from obtaining software licenses through projects that they can no longer pay for after a project ends (Software provider I23).
- Do not let your own interests prevail above those of others or above development in general (e.g. some organisations indicated that Akvo tried to get involved in proposals developed by others but did not always return the favour, or tried to get exclusive contracts that would prevent other parties from getting involved, where such involvement and/or a more level playing field was important) (NGO I83, Multilateral I82, among others).
- Customers of Akvo should not be offered SaaS fee financed through project funding (supply driven) but should be stimulated to do proper data management (e.g. DGIS putting proper data management as a criterion to qualify for DGIS funding in its calls for proposals). Like with water infrastructure a digital sustainability clause and criterion could be attached to DGIS project funding. This would create a proper commercial market and level playing field for Akvo and its competitors. (Government I85).

4.3.2 Akvo's financial overviews of paying customers and donors

Between 2017 and 2019, Akvo's total income was slightly over €15.5 million. From 2011 until 2019, direct (waiver) DGIS funding comprised 22% of Akvo's overall income (Akvo L42). The total dependency on DGIS funding (direct and other funding) comprised 39% of Akvo's total income in 2019 and hovered between 30% and 40% between 2016 and 2020 (Akvo I73 and email communications with Akvo). Between 2017 and 2019, 80 new projects were funded with a total value of over €23 million, while D2D has a total value of €4.25 million (Akvo L03). Akvo has secured funding for several large new programmes through partnerships with different large international organisations, both NGOs and multilateral organisations (Akvo L24).

About 20% of Akvo's expenditures relate to software development and maintenance, mainly from service fees (80%) and a Cisco grant (10%). In D2D, most software costs are in-kind or done by third parties (Akvo L07).

Akvo's fees show that Akvo's business case mainly depends on larger organisations and funding sources (Akvo L27, Akvo L28), while these tariffs are considerably lower for smaller organisations and in the context of more severe competition.

Most contracts are with NGOs (103), with a total contract sum of €1,560,000 but with an average contract value of only €15,000, which is relevant as Akvo is considering setting a minimum value of €25,000 on contracts because the costs for getting these contracts are high compared with the bigger contracts. Donor contracts (35) amount to €4,000,000 (average €230,000). Multilateral organisation contracts are mainly UNICEF direct contracts (without DGIS programme involvement). Overall, in 2017 and 2018, 75 contracts were signed with a value under €25,000 (totalling €683,000).

Newer and follow-up contracts are being signed with governments and local authorities. This segment has its own dynamic and often requires a local presence.

Overall, interaction with the private sector is limited (€460,000 2017/18 in 20 contracts), mostly in SEAP (Cardno, Mars) and the EU. This is mostly a tender market; Akvo's services being used in programmes. There is large potential in tracking and tracing through the sustainable rice platform, palm oil, coffee, cotton and carbon credit with partners such as Mars, UTZ and Solidaridad. Often, contracts that started within a programme are prolonged with a contract directly with governments. It is an important segment, with a value of €1,030,000 in 2017 and 2018 in only 10 contracts. Single proposals to partners are the bulk of Akvo's contracts, entailing 94 contracts with a total value of €2,260,000 in 2017 and 2018 combined.

Although some sources indicate that the Akvo software tools largely run at a loss, Akvo, in a response to this finding, states that the software products achieved a break-even result in 2018, while in 2019 it made a positive result of €100,000, with revenue including SaaS, grants and billable hours.

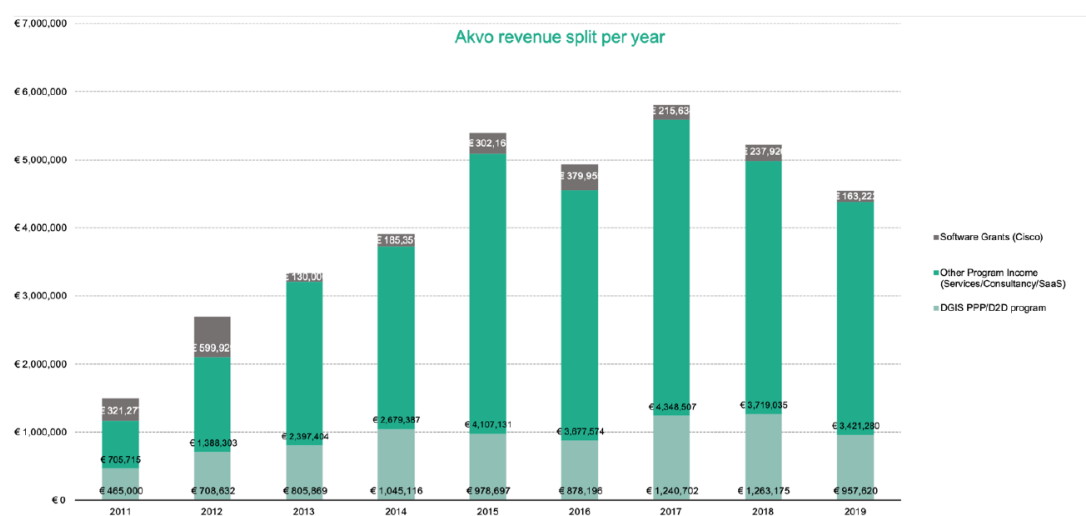


Figure 15 Akvo revenue 2011–2019 (source : L42)

Below is a list of DGIS-funded water and agriculture programmes (mainly through open calls for proposals) in which Akvo is currently involved:

- WCARO programme and ASWA 1 and 2, covering 12 countries
- G4AW with ICCO and Solidaridad (Ghana)
- Blue Deal overall with project office and individual water boards (Mali, Burkina Faso and Colombia)

- WaterWorX with Waternet (Mali)
- WAPOR conducting baselines with FAO to calibrate satellite imagery
- ViaWater programme support including individual proposals with local partners
- OMIDELTA programme (Benin)
- Watershed strategic partnership programme with IRC, Wetlands and Simavi (Mali)
- BAMGIRE with Wetlands (Mali)
- The Mali Data Initiative funded by the embassy in Mali
- PARISS programme with the World Bank and CILSS
- DryDev and 2Scale with SNV
- IATI reporting with the Dutch embassy (Benin, Mali, Ghana)
- EU-TRUST Fund for Africa and MADAD and
- UDUMA together with SNV, Aqua for All, Vergnet Hydro and financed by RVO (Akvo L89).

Other parties dependent on DGIS funding include:

- D2D money is partly used as co-financing to get contracts with organisations that are funded by a donor but require co-funding. Also, methodologies required by consortiums have sometimes been developed by Akvo with D2D funding. Akvo may lose access to such co-financing opportunities without DGIS funding (Akvo I14).
- Akvo's fee-based customers, notably Dutch NGOs contracting Akvo for specific work, often also depend (partly) on grant funding from DGIS – hence they pay for Akvo's services fully or partly with the grant funding they received from DGIS.
- Akvo customers may find Akvo's reliance on DGIS funding too large a risk to depend on Akvo (e.g. for co-financing or longer-term inputs in a programme). In this context, an employee of a multilateral organisation (multilateral I45) states: 'Akvo's operations are mainly funded by DGIS. Once DGIS funding ends, how does that affect us?' Multilateral I60, from the same organisation: 'Akvo probably can find other funders because they are doing their work well.'
- DGIS employee DGIS I72 states: 'Akvo is very dependent on DGIS subsidies.' A senior Akvo MT member, Akvo I75, states: 'If we lose position (the 22% D2D), this is unfortunate, and will make things difficult. It will be harder to achieve our mission'. If DGIS agrees to develop open tenders with a strong digitalisation focus and/or open tenders for digitalisation, this will be good for Akvo, but Akvo will need bridge funding from DGIS to overcome the period between the point at which direct funding is no longer provided and the point at which a new open tender system is introduced with more focus on digitalisation.

4.3.3 Key findings EQ9

- Akvo is divergent in its views on its future role and business model. It aims to focus on the data journey and less on its software (costly, increasing competition, reducing revenues), but 'still has a strong tendency to hang on to the Akvo software' while expecting its technology consultancy (customising software in addition to Akvo's standard tools) to increase (which would require Akvo to continue with its standard software).

- In 2019 there was a need to cut cost as some of Akvo's hubs were too expensive. Akvo management made the decision to scale down non-profitable hubs, placing local managers in the hubs and/or work with more local consultants.
- 22% of Akvo's total revenue is direct funding from DGIS (all D2D waiver funding), while 18% of its total revenue is DGIS funding obtained through open tenders. Akvo also generates additional funds with the DGIS funding, using it as co-funding in proposals to other donors. The dependency on DGIS funding is high, but this is also the case for many other Dutch NGOs (often with a much higher dependency).
- Akvo management rightfully indicates that: (a) Akvo can do without DGIS waiver funding if open tenders have more of a focus on digitalisation and/or open tenders for digitalisation are developed by DGIS, (b) between the point where direct funding end and open tenders with a focus on digitalisation starts, Akvo needs bridge funding from DGIS, and (c) Akvo will have a good chance to win such open tenders, because it has a successful history of open tendering, both on its own and as part of a consortium.
- Although currently Akvo Flow and RSR are modestly profitable this is a recent trend (in 2018 Akvo lost money on its software).
- Several stakeholders claim Akvo has a role in sector-catalysing services, including ToT training. Others (including some DGIS staff) feel Akvo should focus on fee-based activities.
- Stakeholders indicate a data initiative in the Sahel Zone is needed, but it will require a long-term commitment from donors, at least 10 years.
- One interviewee felt that, similar to water infrastructure, a digital sustainability clause could be attached by DGIS in its open calls for proposals, which would also provide a market for Akvo.

4.4 EQ10 Scope for cooperation with other parties

The full evaluation question addressed in this section is: 'EQ10 What scope is there for cooperating with other relevant parties, for example in the digitalisation sector, to avoid duplication of activities in targeted regions?' The overall conclusion of EQ10 is provided in section 5.1.10

As explained in the inception report, the consultants have extended this evaluation question to cover the full-service package of Akvo and not only its software tools, which was the focus of the original evaluation question.

Akvo is known and appreciated for its active networking, development of partnerships and cooperation with large numbers of stakeholders operating in its field of work. This ranges from parties working in various kinds of development initiatives to governments, parties specialised in digital services and donors, for example. Akvo is also appreciated for its long-term engagement with customers, even if this is outside the scope of the contracts and payments it receives. As part of the D2D programme, Akvo has expanded on these issues. For instance, Akvo participated in many conferences to contribute to knowledge sharing in the development sector. During these conferences, the organisation's staff met many stakeholders, enabling Akvo to develop insight into what is happening in its field of work and during which it also developed contacts with other parties for further cooperation (16a, L19 and L24). However, the direct and indirect effects of this

regarding collaboration and coordination with other parties and avoiding the duplication of activities are unknown.

Another approach Akvo implemented to cooperate with relevant parties was to provide input in the development of important relevant sector reports on digitalisation, such as the 'Digitalisation of African Agriculture' report (L93) (L24).

However, the majority of Akvo's initiatives for cooperation focus (directly or indirectly) on gaining programmes and funding. Responding to this finding, Akvo adds: *'we can make a difference and have an impact in the field of data for development (Godan I53), while some other collaborative efforts (e.g. with TU Delft and others) focus on further developing its tools and services with input from other parties (e.g. L19).'*

The question is, to what extent do these collaborations help to avoid the duplication of activities in targeted regions? The development of Akvo's software is a form of duplication, as argued before, because many similar software packages have been developed by competitors, many even (partially) with aid money. Also, Akvo's cooperation with WPDx would ideally build a bridge towards competitors such as mWater (which is also involved with WPDx), to prevent the duplication of activities, but this has not worked out as such (I19). However, when fee-based collaborative efforts focus on strengthening sector parties in digitalisation issues, it is likely that duplication in targeted regions is often prevented (e.g. if different parties plan similar activities for the same target organisations, it is likely they will find out quite soon and then change plans in coordination with each other). This may not materialise, however, if fee-based capacity building interventions target different parties in regions that do similar things in these regions. The extent to which this happens is unknown.

Akvo provides quite a lot of input for such actions and events, often merely for the good of development of the sectors in which it is generally active. Akvo's inputs in these actions and events are mostly covered by programme funding; D2D funding, in particular, is used to cover such costs (see further on). Examples are sector coordination meetings in the countries by Akvo's hubs and in the Netherlands (e.g. NWP) by Akvo HQ (NGO I33), the mentioned conferences in which Akvo participates at which higher-level coordination issues are also discussed, participation in sector stakeholder workshops and development of sector reports (L16, L19, L24 and NGO I33, among others). Especially these non- (or less) fee-oriented and more sector catalyser-oriented inputs by Akvo enhance coordination, cooperation and prevent duplication of these efforts in the sectors, types of work and areas in which Akvo operates. In the monitoring framework of the D2D programme (covering all Akvo's results, not only those achieved as part of D2D), however, there are no indicators for these aspects (L16e and L24). Akvo's efforts to stimulate partners to 'share their (project) information publicly' (e.g. IATI) as part of D2D can be regarded as a contribution to avoiding the duplication of activities in regions (e.g. at the level of DGIS and other donors) to some extent (L16e). In fact, Akvo is quite active about this overall coordination and cooperation role, often at the sector or government levels,⁸ and is widely appreciated by many parties,

⁸ *Within D2D, these activities fall partly under the partnerships project, although these activities are still often fee-based (e.g. L24). The majority falls under the 'Sustaining and scaling' projects for each of the Akvo hubs, e.g. the activities falling under Goal A3 for the West Africa hub (L24). Although here the focus is mostly on developing new or expanding existing initiatives as well, often together with national level parties (national governments, NGOs and companies), under the bonnet these initiatives originate from multitudes of sector meetings, formal and informal contacts and discussions, and networking events, in which the hubs participate or even initiate. Also, the initiatives include intensive*

including many current but also potential ‘income-generating customers’. Although the aim is often to develop fee-based initiatives, the effect of Akvo’s general efforts is also the creation of oversight, coordination, sector streamlining and as a result avoidance of duplication. These activities also often serve Akvo’s interests in a more indirect way as they allow fee-based customers to see the added benefits of Akvo’s more public collaborative and coordinating role for themselves.

Akvo is continually active in the water sector in the Netherlands, and through its vast network it can develop new and expand existing partnerships (NGO I33, among others). Important in this respect is that most Dutch partners of Akvo indicate that they are very satisfied with Akvo’s work (I25, Knowledge partner I18, NGO I41, Private partner I47, NGO I49) and that they also expect and will be happy to continue working and cooperating with Akvo in the future. Several of the reasons mentioned for cooperating with Akvo were: relationship with the MFA; proper software tools but especially the combination of good support; the ability to understand and adapt to local contexts and knowledge of what is happening in different countries in terms of digitalisation (and increasingly data journeys); the ability to understand and connect to the OS (development) sector; local presence and offices; being forward-looking; and the capacity to showcase projects (Government I85, Private organisation I47). As such, Akvo is regarded as a linchpin that partners like to join. The added value is that Akvo has in-depth insight in everything that is happening in its field in the Netherlands and increasingly in the international arena. In addition, many of Akvo’s Dutch partners indicate that Akvo’s new direction (data journey advisory services) has a huge and quickly expanding market, especially among larger NGOs, multilateral organisations and governments of developing countries, which they believe can be addressed by Akvo (Government I85, Knowledge partner I18). In contrast, several interviewees in developing countries indicated that Akvo is not always optimally successful in expanding relationships, cooperating with parties in those countries and marketing its services properly. A major issue is that many of Akvo’s partners and potential new partners in these countries still see Akvo as a tool provider, while other parties have simply never heard of Akvo, even in the hub countries (Embassy I66, NGO I41). On the other hand, Akvo tries to be part of and establish partnerships in developing countries through many initiatives, as described above. Beside the ones mentioned, Akvo is also a network member of Global Open Data for Agriculture and Nutrition (Godan ⁹), cooperates in the countries with ministries, embassies (mainly the Dutch embassy), country offices of multilateral organisations and large NGOs (NGO I53). A restriction for Akvo to cooperate and coordinate with parties is that Western governments tend to work mainly with organisations from their own countries, while coordination between them and their partner networks is hampered by that (DGIS I72).

Akvo increasingly sees itself in the future as a coordinator, facilitator and driver of digitalisation in the WASH and agriculture sectors in developing countries and data-driven sector development in general (Akvo I75). In this context, Akvo provides examples, such as in West Africa, where, not surprisingly, based on data, 70% of the wells will not make it and investments in rehabilitation, large maintenance and new construction need to be based on real-time data. This suggests Akvo will increase its focus on becoming a sector catalyst (coordination, advocacy and sector driving)

cooperation between all kinds of partners, as a result of which coordination is enhanced, sector insights and knowledge are increased and the duplication of activities avoided (e.g. L24).

⁹ Godan is a rapidly growing network of over 1,000 global innovators and change makers across national governments, non-governmental organisations, and international and private sector organisations (NGO I53, <https://www.godan.info/aboutgodan>).

and focus (much) less on the fee-based services it currently provides and emphasised in its 2018 business review (I48). Akvo is already advertising the need to accelerate and improve digitalisation in the agriculture and WASH sectors in West Africa and, as a result, donors and other stakeholders are contacting Akvo in this regard (Akvo I84 and Akvo L88).

Akvo also has a unique chance to develop more intensive strategic partnerships or even merge with one or more other international organisations, e.g. IRC or A4All (Knowledge partner I4).

Akvo is hesitant about what would happen if Caddisfly is offered by parties for free (Akvo I78). Connecting the Akvo software to other main software packages would probably create new options for new partnerships, cooperation and coordination of efforts, and would avoid the duplication of activities and better contribute to the DGIS goals (larger reach of the software and, therefore, more impact on the agriculture and WASH sectors in developing countries).

DGIS is also looking at digitalisation in other sectors (L83, DGIS I88). Possibly Akvo can fulfil a role in that as well.

4.4.1 Key findings EQ10

- Akvo's cooperation efforts (e.g. participation in conferences, input in sector reports, intensive and sometimes long-term engagement with partners, sometimes even beyond project funding, network member of Godan, general collaborations with key sector stakeholders) help to fill gaps and avoid the duplication of activities, because, as a result, Akvo is often well informed, appreciated and trusted by many parties.
- The further development of Akvo's survey software is a case of duplication of activities considering the many other similar software tools, many of which were also developed with aid funding.
- Most of Akvo's initiatives for cooperation focus (directly or indirectly) on creating impact with data for development and on creating funding while these initiatives often also help to avoid duplication of activities.
- When fee-based collaborative efforts focus on strengthening sector parties in digitalisation, this probably prevents duplication.
- Akvo provides substantial inputs in sector-catalysing actions and events (largely funded with D2D money), which enhance coordination, cooperation and avoidance of the duplication of efforts in the sectors, types of work and areas in which Akvo operates.
- Akvo's partners believe its new direction (data journey advisory services) has a huge and quickly expanding market, especially among larger NGOs, multilateral organisations and governments of developing countries.
- Akvo is also well embedded and has a vast and expanding network in the water sector in the Netherlands, with most Dutch partners being very satisfied with Akvo's work and regarding Akvo as a linchpin they like to join, providing Akvo with business and in-depth insight in everything happening in its fields of work in the Netherlands
- In developing countries, Akvo does not always cooperate as successfully, as many parties still see Akvo as a tool provider or have never heard of Akvo.
- Akvo sees its future as a coordinator, facilitator and driver of digitalisation and data-driven development in the WASH and agriculture sectors in developing countries (notably in West Africa).

- As a result of its expertise, Akvo has a unique chance to develop strategic partnerships with large Dutch and/or international organisations, which will make it less vulnerable and provide new opportunities to implement its mission and vision, streamline activities and better contribute to DGIS's goals.
- Several stakeholders mentioned that connecting Akvo software (especially Caddisfly) to other software while selling services around it would probably create new options for new partnerships, cooperation and coordination of efforts, and avoid the duplication of activities and better contribute to DGIS's goals.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions for objective 1 'Perform an evaluation of the D2D project'

5.1.1 EQ1 How well designed is D2D to achieve its objectives?

3	Adequate
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The consultants' overall grading for this objective is 'adequate'.

In general, the consultants observe a well-designed programme that supports Akvo's partners who want to make data-driven decisions and become more effective in their service delivery.

Akvo is in a transition phase from a software tool provider into a data journey service provider (helping partners become data-driven from the design > capture > understand to acting on the data). That is well reflected in the programme. Akvo invested in the capacity building of its staff to make this transition and in raising awareness among its partners about data-driven development and how Akvo could support them. The consultants find that the activities under the five pillars are effectively designed to contribute to DGIS's main commitment to water and food security. Akvo's ToC reflects the transition and the data journey model. The D2D programme is clearly aligned with Dutch policy and contributes towards the goals of the Digital Agenda for Foreign Trade & Development Cooperation, the WASH Strategy 2016-2030, and the policy brief 'Towards a World without Hunger in 2030: the Dutch contribution'. Akvo designed learning well in its plan. D2D was reported in RSR and to DGIS within the agreed timelines. These are all positive elements in the programme design. The consultants have concerns, however, that prevented a higher score. There is no log frame to connect Akvo's interventions in the D2D programme with the intended outputs and outcomes, although this was not required by DGIS. This makes it complicated to measure the attribution of Akvo's D2D interventions to the achieved (intermediate) outcomes. The monitoring framework did not make the transition to measure and assess the intended (intermediate) outcomes with outcome indicators. Most indicators are still at the output level, measuring Akvo's training efforts; this might hamper the assessment of the achieved outcomes. The AQOA that measures the progress on qualitative outcomes only assesses a limited number of partners to derive general conclusions about Akvo's outcome and attribution.

5.1.2 EQ2 Does Akvo work demand-driven?

4	Comprehensively covered
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Akvo uses several methods to identify demand for its expertise (what are the needs to become a data-driven organisation in WASH or agriculture?).

Partners perceive Akvo as a demand-driven organisation, especially partners that selected partners through a careful selection process based on Terms of Reference. Local partners of consortium partners involved in the project implementation are often not involved in the programme design. This might result in their needs not being clearly identified and not make it clear that they must work with Akvo as a service provider. This is more the consortium partner's responsibility, but Akvo should be aware of this.

Based on the findings, the consultants assess that Akvo uses a sufficiently demand-driven approach.

5.1.3 EQ3 Effectiveness of the Akvo data journey

3	Adequate
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The consultants' overall score on this question is 3 out of 5. This is not because the data journey model itself is not effective, but because it needs more time to mature.

Becoming data-driven is a process that needs a long-term approach. The e-books are good tools for making partners more aware of that process. The capture phase still focuses strongly on Akvo's software tools, and there could be more capacity building regarding data collection in general. The train-the-trainer model is successful and perceived as effective by partners. A concern is institutionalising data-driven processes into the partner organisations in a sustainable way within administrative processes and to help partners select the right tools along the data journey. This is not the responsibility of Akvo alone but is often done by implementing (consortium) partners. Akvo could create more awareness within the consortia that sustainability and embedding of data-driven working should be included as part of the implementation of the programme with a good exit plan. Data-driven processes takes time and costs money.

The assessment of 'adequate' is also based on concerns of dependency on Akvo and the lack of a clear exit strategy. Akvo has open-source tools, but partners do not use them without Akvo's support. This is partly because they select Akvo for this, and partly because they do not have the capacity to do it themselves. It may be difficult for local partners using Akvo's tools and services during a programme to keep paying the fees of the current SaaS model for their data collection.

5.1.4 EQ4 Key achieved results at the outcome level

4	Comprehensively covered
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Based on the findings, this EQ is 'comprehensively covered'. Akvo achieved most of its approved indicators and intermediate outcomes, and the implementation is still ongoing until December 2020. Many examples were cited in the interviews to support Akvo's reports. A concern is the assessment at the outcome level. The final outcome could not be measured, but it is plausible that this outcome was achieved based on the intermediate outcomes that lead to this outcome. The AQOA sample is time consuming and only a few partners are sampled. A good tracking system for each partner would improve the evidence at and beyond the intermediate outcome level.

5.1.5 EQ5 Has Akvo scaled up its operations?

4	Comprehensively covered
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Based on the key findings, the consultants' overall score on this question is 4 out of 5. Akvo did expand its service to the hub and used D2D funding to invest in internal capacity building and methodologies. It was able to build up a large, diverse project portfolio with WASH, and the agriculture portfolio is growing fast.

5.1.6 EQ6 Has Akvo expanded its partnerships?

5	Excels at all subjects
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Based on the findings, the consultants' overall score on this question is 5 out of 5.

Akvo was able to close new partnerships and maintain current partnerships with a variety of stakeholders. Akvo has systems in place and actively looks for new partners at HQ and in the hubs. Akvo identifies new partnerships in different ways, for example at conferences, regional and national meetings, country visits by Akvo HQ staff to meet national partners and meetings with network partners. Akvo uses a partnership engagement model as a tool for business development. Almost all partners are satisfied with Akvo.

5.1.7 Overall assessment of the performance of the D2D programme

Based on the assessment of the six evaluation questions in evaluation matrix 1 (see section 2.2) in the Chapter 3 findings, the consultants will provide an answer on how Akvo performed in the D2D project. Two evaluation questions were not comprehensively covered.

Table 8 Overall assessment performance D2D

Evaluation question	Rating	Rating explanation
EQ1 How well designed is the D2D programme to achieve its objectives?	3	Adequate
EQ2 Has Akvo appropriately identified the demand in the region; does Akvo work demand-driven?	4	Comprehensively covered
EQ3 How effective is the Akvo data journey approach?	3	Adequate
EQ4 What is the key achieved result at the (intermediate) outcome level?	4	Comprehensively covered
EQ5 What evidence is there to demonstrate that Akvo has scaled up its operations?	4	Comprehensively covered
EQ6 To what extent has Akvo expanded its partnerships?	5	Excels at all subjects
Total assessment	23	

5.1.8 Final score:

3.8	Comprehensively covered
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The D2D project did a good job of achieving its approved objectives. This does not mean there were no concerns or that nothing could be improved. The road to achieving data-driven decision-making at all levels in development is a long one and needs continuous support.

5.2 Conclusions for objective 2 ‘Formulate recommendations regarding further cooperation between DGIS and Akvo’

5.2.1 EQ7 Uniqueness

The combination of Akvo’s software tools, services, networking, understanding local contexts, hub infrastructure and funding sources (‘the Akvo package’) is unique. However, this unique combination is not always needed by customers. Separate parties, each delivering one or more parts of the Akvo package, can often do the job as well. Akvo’s fee-based services, including its software, are not unique. Possible exceptions, in the coming years at least, are Akvo’s fee-based services in the West African region and in fragile areas, the water testing part of Caddisfly, which has limited competition, and Akvo’s TechConsultancy for customising Akvo software.

Consortiums in which Akvo takes part may be unique, but that is not necessarily true of their interventions. However, Akvo is and can become more unique and important in its role as sector catalyst in countries or even regions, especially in West Africa, where the needs in this regard are high. This will not lead to market distortion if Akvo actively strives to make its fee-based services redundant by building the capacity, in its role as sector catalyst, of other parties to take over this market offering all potential parties in a country the same capacity-building services. For its fee-based software services, Akvo will objectively assist organisations in such a setting so they can choose the software best suited to their long-term needs and capabilities, but it does not yet have the methodology and only has some of the expertise and desire to do so.

5.2.2 EQ8 Market distortion

Unique services are not a guarantee against negative market distortions, because such services can disincentivise parties from developing similar services while market distortions may also occur further down the funding line (by second-, third- or further-tier customers). DGIS funding to Akvo can result in market distortions, although the specifics and severity are difficult to predict. DGIS is aware of this. The risks are related to the fact that Akvo’s services are often (a) not unique, especially when first-tier competitors are present or could evolve and (b) subsidised with grant funding. Open tenders as an alternative to direct funding is a way of at least avoiding several first-tier market distortions. Akvo can be expected to perform well in open tenders if there are open tenders suited to its core business.

In some cases, a relation was found between Dutch iNGOs that obtain DGIS funding and their choice to cooperate with and/or contract Akvo. This mainly stems from the period in which DGIS felt Akvo’s services were unique, however.

Caddisfly can only be used in combination with Akvo Flow+Lumen, which causes market distortions. But the market distortions will be considerably reduced if Akvo connects Caddisfly to other survey software (e.g. mWater and Kobo) with public funding while providing services around it on a fee basis.

Akvo often operates in complicated and remote areas where there are no competitors and where its services are imperative for development. There is no market distortion in these circumstances, even if fee-based services are (partly) based on grant funding, unless, as a result, parties are withheld from developing similar services because they know they cannot compete with Akvo due to its grant funding.

5.2.3 EQ9 Risk that Akvo becomes dependent on DGIS in the future

Akvo is currently dependent on DGIS funding, but not to the same extent as many other Dutch aid organisations.

Akvo can survive without direct funding from DGIS (based on the waiver for uniqueness), as it has a successful history of open tendering worldwide. However, if direct DGIS funding to Akvo were to stop, it is imperative that DGIS's digital agenda (in WASH and sustainable agriculture) is shaped in other ways to ensure this important topic is not 'lost' in the development arena.

What also needs to be prevented is a situation in which a sudden cessation of DGIS' funding destroys the expertise Akvo has built up, taking into account that Akvo's current and future role as a data journey service provider is important for the digitalisation and development of the WASH and agriculture sectors in developing countries.

Therefore, if direct funding to Akvo stops, Akvo will need other types of DGIS funding. The two can be harmonised if DGIS puts more focus in all its open tenders on digitalisation and/or develops open calls for proposals specifically for digitalisation. With Akvo's experience and track record, it will have a good chance to become the digitalisation partner in consortiums and/or even the lead party in a digitalisation consortium, while simultaneously ensuring these consortiums develop proposals with proper ToCs, intervention logics and data journeys. It takes time and expertise to develop these kinds of new tenders. A digital sustainability clause could be attached by DGIS in its open calls for proposals to improve the sustainability of digitalisation results, which would also provide a market for Akvo, but would probably increase first-tier market distortions. Akvo can and would very much be ready to support DGIS in developing the systematics required for open calls for digitalisation. In addition, Akvo would need funding to bridge the period between the end of direct DGIS funding and the introduction of new open tenders.

Meanwhile, Akvo is heading towards a mean and lean new future business model that is still being discussed at Akvo, but moving towards a greater focus on long-term sector-catalysing services combined with objective fee-based data journey services in the WASH and agriculture sectors, cooperation with independent consultancy bureaus and increasingly a focus on areas where Akvo's services are not (yet) offered by others, such as West Africa.

5.2.4 EQ10 Scope for cooperation with other parties

Akvo actively cooperates with a large number of parties and is widely appreciated for it.

It is likely that this helps prevent the duplication of activities because, as a result, Akvo is well informed, even though most of its efforts focus on gaining business. In contrast, Akvo's cooperation with local parties is not always optimal as they often still see Akvo as a software tool provider.

Akvo's data journey advisory services have huge potential in a quickly expanding market, especially among larger NGOs, multilateral organisations and governments of developing countries. Akvo also wishes to focus more on its role as a sector catalyst, which strongly enhances coordination, cooperation and the avoidance of duplication.

Akvo has a unique chance to develop more intensive strategic partnerships or even merge with one or more international organisations.

Akvo restricts cooperation with other parties due to its software-focused data journey service model and its sector-specific software tools (Caddisfly and RSR) that can only exchange with

Akvo Flow+Lumen and are fee-based. Akvo's focus on its own software contributes to the duplication of activities and may also block new markets for Akvo.

Akvo lacks staff who can combine sector (WASH and agricultural) and data journey, specifically ToC design, expertise.

5.3 Recommendations

The recommendations are based on the evaluation of Akvo and the D2D programme.

5.3.1 Recommendations for DGIS

1. **Enhance sustainable digitalisation and data driven management among beneficiary organisations of DGIS funded programmes.** This can be done by always introducing in DGIS calls for proposals:
 - digitalisation as a standard subject;
 - a sustainability clause for digital solutions conform the sustainability clause for WASH, for instance covering a period of 5 years (software changes at a faster pace than WASH hardware; a shorter sustainability clause is therefore acceptable);
 - a condition that programme proposals explain how beneficiary organisations will develop a digitalisation sustainability plan and programme exit strategy to feasibly sustain their digital infrastructure and data driven management after the programme has finalized.
2. **Enhance data driven and evidence-based programmes further** as follows:
 - Introduce in all DGIS' calls for proposals clear conditions and methodologies for the design of the PMEL structure of proposed programmes. This should include Theories of Change (ToCs), intervention logics and proper (SMART) indicators for each intervention logic level, especially for the activity, result, outcome and, where possible, the attributable impact levels.
 - Obtain more PMEL expertise within DGIS to better assess the quality of PMEL structures in programme proposals and of results, outcomes and impacts of DGIS funded programmes.
 - Introduce in all DGIS' calls for proposals higher budgets for PMEL to enable partners to measure the required level of outcome and impact.
 - Consortiums and organisations wishing to submit proposals for funding to DGIS can then select service provider(s) as contractor(s) or consortium partner(s), to fulfil the relevant requirements above in their programmes and programme proposals.
3. **Prior to open calls for proposals, carry out general context, need and priority assessments in targeted countries,** executed by independent experts who have no interest in the outcomes of the assessments. The assessments should, with proper participation of key stakeholders, develop overviews of and insights in all the different aspects, priority needs and challenges in the sectors to be targeted in countries on which the calls focus. This will enable DGIS to better prioritise investments in these countries per aspect in the target sectors and develop open calls for proposals based on that. This can be followed by further detailed investigations by consortiums with regard to the priority aspects included in calls for proposals, including, for as far as identified as a priority need in the

general DGIS assessment, digitalisation. Hence, needs and priorities in sectors and countries should be assessed by DGIS and not by organisations that have an interest in the outcome of such investigations.

4. **Discontinue direct (waiver) funding to Akvo** because most of the products and services of Akvo are not unique. **Provide bridge funding to Akvo** to cover the period between the end of the direct funding to Akvo and the start of open calls for proposals that standardly include digitalisation conditions (maximum of two years). The bridge funding should enable Akvo to prepare for: (a) its survival without direct DGIS funding, and (b) its future course, maturing its data journey services and its sector-catalysing role in areas where this is most required (notably ToT capacity building among local consultancy companies and sector government agencies) to enhance data driven management and strengthen local digitalisation ecosystems (advanced local skills in data collection, analysis and visualisation).
5. **Avoid funding interventions with a negative market distortion effect.**

5.3.2 Recommendations for Akvo

1. **Grow towards a more sustainable data journey model.** This could be realized by Akvo, among others, as follows:
 - Develop a data journey tracking system with which Akvo can determine the data journey progress of each customer and document Akvo's contribution to it in a systematic way, while collected data can be aggregated to assess achievements at the outcome level.
 - Catalyse agriculture and WASH sectors in target countries with regard to digitalisation and data-driven management, notably through ToT capacity building regarding digitalisation, software hosting and support services, and data journey services, among suitable organisations, especially local consultancy bureaus and national government sector agencies, in target areas where such capacities are insufficiently available yet. This will boost local ecosystems, create jobs and open a local market serviced by local data journey consultants, both in private and public organisations, with an independent practice. Akvo can then also cooperate with these data journey consultants in larger projects as a flexible layer.
 - Assist customers to develop and implement a digitalisation and data driven management sustainability plan and exit strategy, based on well-informed choices and decisions by customers about the software tools (either Akvo tools or tools from other providers) and other parts of the data journey best suited to their circumstances, wishes and long-term capabilities. It prevents data journey activities and tools from being implemented in organisations that cannot or do not want to afford their costs and implications after the project has finished.
 - Increase expertise at the senior level combining in-depth WASH and agricultural expertise with in-depth data journey expertise, especially regarding the design of agriculture and WASH sector programmes and the involved ToCs and intervention logics.
2. Consider changing the SAAS fee system (e.g. into a reduced or no-fee system for local organisations and governments) and connecting Caddisfly and RSR to other survey software tools with the services around the software, such as training, guidance and TechConsultancy

customisation offered to customers on a fee basis. This will better contribute to DGIS' goals, enabling Akvo to reach and assist many more relevant organisations in developing countries with its software tools and services.

3. **Consider phasing out Akvo Flow + Lumen in the longer term** as this combined survey software tool does not have a clear added value for the WASH, Agri or other sectors in developing countries compared with similar survey software tools.

6 ANNEXES

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Annex 1 Terms of Reference External Evaluation Akvo Data to Decision (22961)

Name of vacancy and no. of days

Expert on digitalization and WASH – 30 days

Expert in digital tool development – 30 days

Location:

The Netherlands (The Hague and Amsterdam mostly)

Field visits in two countries to be selected

Availability:

December 2019 – April 2020

1 Brief description consultancy

Since 2008, DGIS has supported Akvo in developing open source ICT-tools relevant to the development sector. After three phases of the DGIS-Akvo Public-Private-Partnership (PPP) (2008-2017), the new *Data to Decision* (D2D) project was launched in 2017. D2D builds on the legacy of the previous PPP's. On the one hand, it advances the existing monitoring efforts in WASH. Further steps in this field include the move from single mappings to continuous monitoring, as well as the improvement of the access and actionability of the data. On the other hand, it looks beyond WASH at other sectors, specifically agriculture.

D2D focuses on the development of the 'data journey'. The 'data journey' is a model designed in D2D by Akvo to represent what partner organizations and governments do when they adopt data as a strategy to improve their effectiveness and impact. It consists of roughly four stages: Design, Capture, Understand and Act. Akvo's tools and services are designed to support partners in each of the four stages.

DGIS is recruiting external experts for an independent review of Akvo's D2D project. This will be a combined qualitative and quantitative evaluation (Q&Q). As this evaluation will take place during and not after finalization of the project, the proposed outcomes cannot be expected to be met fully yet. This evaluation has two specific aims: 1) evaluate whether or not Akvo is on track to meet the outcomes proposed 2) provide recommendations on the basis of the evaluation of the D2D program for further collaboration between DGIS and Akvo.

2 Background

Akvo is a foundation operating on a 'not-for-profit, not-for-loss' basis to create sustainable change. Akvo focuses on supporting its partners in a 'data-journey' approach, enabling them to design their programs so that they can capture and understand reliable data which they can act upon.

Akvo's origins lie in the Schokland agreements of 2008, where Akvo was supported for its contribution towards aid effectiveness. After the Schokland funds, DGIS has supported several of Akvo's activities through a PPP since 2011. During the evaluation of PPP3 it was concluded that Akvo could no longer be considered a PPP.

In 2017, the Data to Decision project was started. This project will run until the end of 2020 with a budget of EUR 3.500.000. The previous Akvo project has been evaluated in 2017 by PWC (see Annex 2). Recommendations and lessons learned from this evaluation will be an important starting point for this evaluation. Key elements of D2D fall under four pillars (Theory of Change Annex 3):

Partnerships (10.3% of budget)

The activities within the Partnerships pillar focus on maintaining and building new partnerships with national governments, UN agencies, CSOs/NGOs and the private sectors that can support the delivery of sustainable WASH services in the target countries. Akvo will also engage in regional partnerships to improve data sharing and monitoring processes for sustainable development and will continue to collaborate, share and contribute to regional and global fora relating to open data and innovation in international development, disseminating the knowledge and expertise gained in its activities.

Enabling Environment (31.8% of budget)

Support to effectively use digital tools and data. This includes the integration of data and tools into existing processes and digital infrastructure of organisations, supporting organisations assessing representative data collection schemes, data quality, cross-system compatibility, and methodologies. This is done through: trainings; support in the use of Akvo tools; offering PMEL services and training; offering data science services and training; developing a survey library; supporting the improvement of data feedback systems; building an online knowledge platform and a 24/5 helpdesk. Furthermore, Akvo will continuously invest in the relevance and development of its software. These include tools for data collection such as FLOW (collection and monitoring), Caddisfly (smartphone-based drinking water system testing), Lumen (data transformation, analysis and visualisation platform) and RSR (Really Simple Reporting; content management platform).

Sustaining and Scaling Operations (45% of budget)

Continuation and scaling of Akvo's data collection and management operations with its partners. Operations include the expansion of the existing initiatives (UNICEF West-Africa WASH program, Niger IWRM Programme). The scope of the operations have a broader focus than WASH; IWRM, climate smart agriculture, and supply chain certification are focus areas too. Activities include in-field support to ministries in data collection, analysis and use, involving new WASH partners into data collection, setting up monitoring of irrigation in Mali and Burkina Faso, further development of WASH datasets in Ethiopia and Mozambique and outreach to partners in fragile states. The

focus of the work differs per hub as the sectors in which Akvo can have most added value and the partners Akvo supports differ per region.

Outreach and Dissemination (12,5% of budget)

This pillar refers to the advocacy for data-based management through organizing workshops for peer-to peer learning, providing insights and evidence to civil society organisations. As well as lobby for the use of open data standards including IATI and WPDx. Activities include outreach and visibility during international events and using the developed data use-cases to potential new partners in the water sector.

The software developed by Akvo is open source, meaning that the source code of the software can be obtained freely from the internet. Akvo provides the tools under a so-called 'software-as-a-service' model, meaning that Akvo will provide hosting, technical maintenance, support and trainings to participating parties. Moreover, organisations are free to use the open source code of Akvo's tools if they prefer to organize hosting and maintenance independently.

Data to decision will end on December 31st 2020.

3 Overall objectives

3.1 The independent evaluation of D2D:

Perform an evaluation of the D2D project, with a focus on (but not restricted to): The overall objectives of the evaluation are:

- 1) Perform an **evaluation of the D2D project**, with a focus on (but not restricted to) the following evaluation questions:
 - 1.1) What are the key achieved results according to the agreed results framework and how do they relate to the original targets?
 - 1.2) What is the quality of monitoring and evaluation – based on recommendations of the previous evaluation?
 - 1.3) To what extent has Akvo expanded its partnerships with implementing organisations and governments worldwide? Are these partnerships sustainable? How are partners and initiatives within partnerships identified?
 - 1.4) To what extent has Akvo scaled up its operations in both existing initiatives as well as sustainably broadened the scope of its operations to other sectors such as IWRM? Is Akvo's training of trainers effective? Can they help institutionalize data-management?
 - 1.5) To what extent and how are Akvo's tools and activities being implemented on a local level? Have the four pillars of the D2D program (partnerships, enabling environment, sustaining, and scaling operations, outreach and dissemination) improved sustainability and service delivery in targeted communities?
 - 1.6) Are organisations able to use Akvo's open source code without Akvo's active support, or is there an implicit need to rely on Akvo's service provision?
 - 1.7) What is the effectiveness of: capacity building through trainings; PMEL services and training; data science services and training; the survey library and the improvement of data feedback

systems; the online knowledge platform and the 24/5 helpdesk?

2) Formulate **recommendations regarding further cooperation between DGIS and Akvo in the context of digital WASH monitoring**, with a focus on the following evaluation questions:

- 2.1) Is Akvo as an (international) organisation unique in the field of digital WASH monitoring, both in the context of its software and tools as well as its activities (outreach, lobby, partnerships, etc.)?
- 2.2) Is there a high risk of dependency on DGIS if cooperation is to be extended in the future?
- 2.3) Does DGIS's support to Akvo distort the level playing field of other parties with similar activities?
- 2.4) What scope is there for collaboration and cooperation with other relevant parties in the digitalization sector to avoid duplication of activities in targeted regions?
- 2.5) Has Akvo appropriately identified the demand in the region; does Akvo work demand-driven?

4 Methodology

- Desk review of project documents, including proposal, monitoring framework, Theory of Change, annual plans, monitoring reports and any other supporting documentation.
- Mapping the entire portfolio of activities/partners/software to be able to make a well-founded choice for several specific cases to be evaluated as well as countries to be selected.
- Interviews with stakeholders at Akvo, DGIS, and participating partner organizations. This includes existing partners of Akvo, like UNICEF and IRC, potential new partners (NGO's, private sector, and government), the end-users of the Akvo tools and software in the field. Some interviews will be done during field visits to two of the target countries of the D2D project (to be selected).
- An analysis of Akvo's online resources and software.

5 Expected outcome and deliverables

The evaluation team will prepare in English:

- An evaluation plan
- An evaluation report

Evaluation plan

- The consultants have prepared an evaluation plan (inception report) which will contain:
- A description of the key issues to be evaluated, an evaluation matrix, and criteria and indicators for assessing the evaluation questions.
- A detailed program for field visits, interviews, and consultation meetings.
- A list of key documents, data sources and resources people for the evaluations.
- The draft format of the evaluation report

Evaluation report in English, including

- An analysis of achieved results versus objectives as defined in the original data to decision proposal.
- Assessment of the impact of Akvo's tools and software on the reporting and monitoring activities of selected implementing partners in the WASH sector.
- Assessment of outreach and dissemination within governments and partner organizations.

- Assessment of sustaining and scaling up of operations during the Data to Decision project.
- Assessment of Akvo's contribution to the enabling environment in the context of digital WASH monitoring, specifically in targeted communities.
- Recommendations for potential next steps in DGIS-Akvo cooperation.

The evaluation plan must be approved by DGIS before the start of the field visits.

6 Time frame

Period	Activity
2019	
November	Request for concept notes from MoFA's framework agreement
December	Selection of concept notes and request for 2 proposals
December	Selection of winning proposal
December	Final work plan
2020	
January	Desk study
	Draft plan of action
February	Deadline plan of action
	Field studies
March	Preparations of final draft report
April	Deadline final report

Funding

The evaluation will be funded by the IGG department of DGIS.

Competency and expertise requirements

The ideal profiles to perform this evaluation include evaluation professionals who know the region and have a background in Water Sanitation and Hygiene, Data for Development, Information and Communication Technologies for development (ICT4D), and/or data use frameworks. Evaluators should have experience with projects implemented in the global south, working to affect change in a complex environment and with a variety of actors. None of the evaluators may have previously worked with or for Akvo.

We suggest the following division of labour:

Expert on digitalization and WASH – 30 days

- 10 years' experience in the measurement of results and functionality in WASH activities.
- Experience in the reporting procedures of WASH activities to governments, local and international organisations, and donors.
- Financial background to assess Akvo's financial viability regarding dependency of DGIS support
- Knowledge of the region and
- Good working knowledge of English and French.

Expert in digital tool development – 30 days

- Affinity with ICT-related interventions in development.
- Familiarity with open-source software development.
- A background in (web-based) communications in development contexts is considered an asset.
- Knowledge of the region and good working knowledge of English.

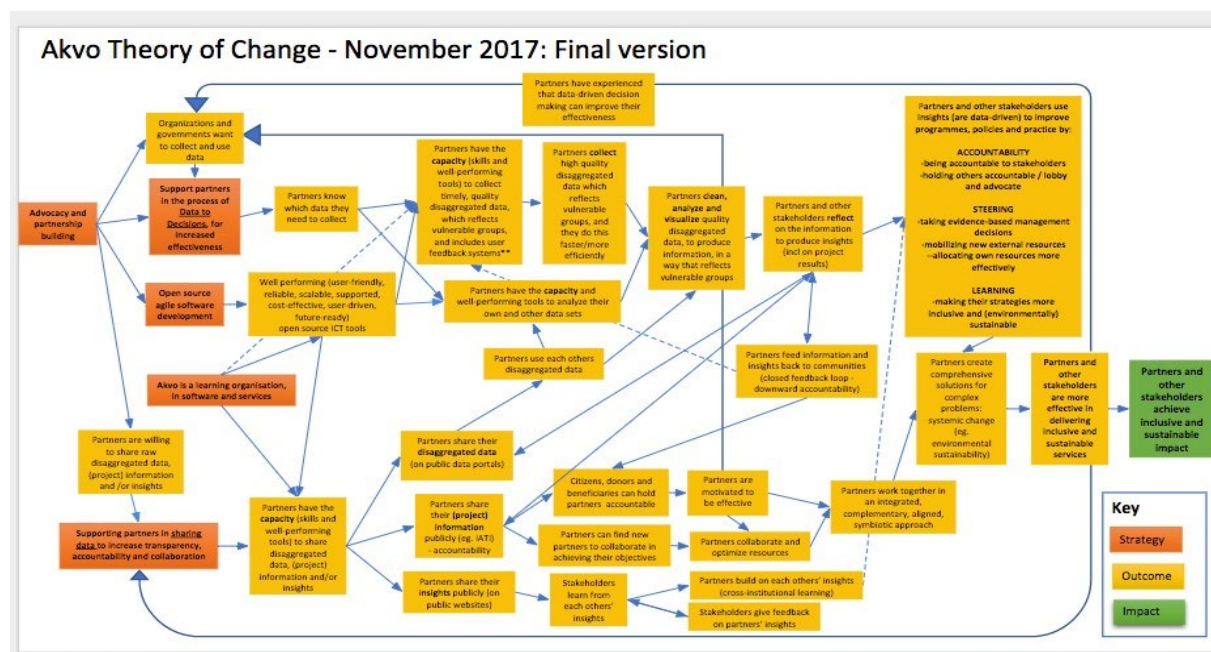
Moreover, for the accompaniment of the experts during the field visits, two local experts will be recruited:

Two local experts – 10 days each (countries yet to be selected)

- Experience with digitalisation and WASH projects in the country concerned.
- Working knowledge of English.

Attachment

- Original proposal for the D2D project D2D program(Annex 1)
- The evaluation of PPP3 by PWC (Annex 2)
- Ministry of Foreign Affairs (2015) "[How to use the IATI Standard: Publication guidelines for partners, contractors and suppliers of the Netherlands Ministry of Foreign Affairs.](#)"
- Digital Agenda MoFA <https://www.government.nl/documents/policy-notes/2019/07/31/digital-agenda-for-foreign-trade-and-development-cooperation-bhos>



D2D Monitoring framework

D2D - Monitoring Framework									
Result	Element of result to be measured	Indicators	Method of measurement	Source	Baseline	Targets			
						global target	global target	global target	global target
					1/4/2017	31/12/2017	31/12/2018	31/12/2019	31/12/2020
1. Partners have the capacity (skills and well performing tools) to collect timely, quality disaggregated data, which reflects vulnerable groups, and includes user feedback systems (*)	Measures capacity, in terms of organisations having the skills to collect (...) data.	Nr. Of training events worldwide including Flow-training	Quarterly measurement, cumulative. Note that one single event can be counted in more than one indicator. Note that one person can be trained in different tools and then be counted in more than one indicator	Planning training sheet	0	80	170	270	380
		Nr. Of people trained worldwide on Flow			0	900	1600	2500	3600
		Percentage of women trained on Flow, out of total trainees worldwide			n/a	25%	28%	32%	36%
		Nr. Of training events worldwide including Caddisfly-training			0	15	30	50	75
		Nr. Of people trained worldwide on Caddisfly			0	220	400	610	840
		Percentage of women trained on Caddisfly, out of total trainees worldwide			n/a	20%	25%	32%	32%
		Nr. Of training events worldwide including Lumen-training			0	10	35	60	90
		Nr. Of people trained worldwide on Lumen			0	120	280	480	720
		Percentage of women trained on Lumen, out of total trainees worldwide			n/a	15%	20%	25%	30%
		Nr. Of training events worldwide including PMEL training			0	12	25	40	60
		Nr. Of people trained worldwide on PMEL			0	100	200	320	480
		Percentage of women trained on PMEL, out of total trainees worldwide			n/a	35%	40%	45%	45%
		Nr. Of training events worldwide including data science training			0	3	8	15	24
		Nr. Of people trained worldwide on data science			0	40	100	180	300
		Percentage of women trained on data science, out of total trainees			n/a	35%	40%	45%	45%
	Measures capacity, in terms of organisations having the tools to collect (...) data	Nr of Flow instances	Quarterly measurement, cumulative	Nr. Of contracts	160	174	190	208	228
		Nr of Flow & Caddisfly instances			18	27	32	40	50
		Nr of Lumen instances			3	25	45	80	120
2. Partners collect high quality disaggregated data which reflects vulnerable groups and they do this faster / more efficiently.	Measures the amount of data collected using Akvo tools	Nr of forms collected with Akvo Flow	Quarterly measurement, cumulative	Flow stats	4223236	5000000	6200000	7500000	9000000
		Nr of Caddisfly projects		Nr. Of Caddisfly contracts	18	27	40	50	60

D2D - Monitoring Framework										
Result	Element of result to be measured	Indicators	Method of measurement	Source	Baseline	Targets				
						global target	global target	global target	global target	
3. Partners clean, analyse and visualize quality raw data to produce information in a way that reflects vulnerable groups.	Measures the nr. Of times Akvo tools are used to clean and analyse data	Nr. Of datasets uploaded in Lumen	Quarterly measurement, cumulative	Lumen stats	99	250	600	1200	1800	
	Measures the nr. Of times Akvo tools are used to visualize data	Nr. Of dashboards created in Lumen (includes demo and trial instances)			300	500	600	800	1000	
4. Partners and other stakeholders use insights to improve programs, policies and practices by accountability and steering	Assesses the level in which the collection and analysis of data leads to insights and informed decisions.	To be defined	Annual qualitative assessment	Selection of partners	n/a	n/a	n/a	n/a	n/a	
	Assesses the quality of data collected using Akvo tools	To be defined			n/a	n/a	n/a	n/a	n/a	
5. Organisations and governments want to collect and use data	Measures the number of organisations actively working with Akvo tools and services.	Nr. Of new bilateral governmental partnership agreements	Quarterly measurement, cumulative	Nr of contracts	0	3	10	18	28	
		Nr. Of new bilateral private sector partnership agreements			0	4	8	14	20	
		Nr. Of new bilateral NGO partnership agreements			0	20	40	60	80	
		Nr. Of new bilateral knowledge institute partnership agreements			0	3	6	9	12	
		Nr. Of new multilateral partnership agreements. (cumulative, during project) (multilateral agreements not counted in the previous indicators)			0	2	8	14	20	
6. Partners have the capacity (skills and well performing tools) to share their raw disaggregated data, (project) information and/or insights	Measures capacity in terms of organisations having the skills to share their data, information and/or insights	Nr. Of trainings on RSR	Quarterly measurement, cumulative	Planning training sheet	0	20	45	70	100	
		Nr. Of people trained on RSR			0	200	450	700	1000	
		Percentage of women trained on RSR, out of total people trained			n/a	30%	30%	35%	35%	
7. Partners share their raw disaggregated data (on public data portals)	Assesses how many partners actually share their raw data publicly	To be defined	Annual qualitative assessment	Selection of partners	n/a	n/a	n/a	n/a	n/a	
8. Partners share their (project) information publicly (e.g. IATI)	Measures how much partners share their information publicly using Akvo tools	Nr. Of national or regional WASH data portals based on Akvo Sites or Lumen	Quarterly measurement, cumulative	Quarterly report Akvo hubs	5	7	8	15	24	
		Nr. Of active partners using RSR (Partners at least in implementation status and/or an update made and/or an indicator reporting update has been made). Partners can be counted more than once because they are in consortia as well.		RSR Stats	4053	4100	4600	5100	5600	
		Nr. Of RSR projects (Projects at least in implementation status and/or an update made and/or an indicator reporting update has been made)			5588	6100	6700	7400	8200	

D2D - Monitoring Framework										
Result	Element of result to be measured	Indicators	Method of measurement	Source	Baseline		Targets			
							global target	global target	global target	global target
		Nr. Of projects using the RSR results framework			1904		2100	2400	2800	3300
		Nr. Of result updates placed on Akvo RSR monitoring framework			6715		8200	10000	12000	14500
		Nr. Of Akvopedia content pages (excluding redirect pages)		Akvopedia stats	1957		2060	2160	2260	2360
	Measures in how much partners share their information using IATI specifically	Nr. Of organisations reporting to IATI via RSR	Quarterly measurement, cumulative	RSR stats	21		30	42	55	70
		Nr. Of RSR projects reporting to IATI			758		1200	1700	2400	3200
9. Partners share their insights publicly (on public websites)	Assesses in how much partners share their insights using IATI specifically	To be defined	Annual qualitative assessment	Selection of partners	n/a		n/a	n/a	n/a	n/a

Annex 2 Evaluation approach and methodology

In this annex the refinement is discussed of the evaluation questions of the ToR. In the ToR several questions for each objective are given. In the inception phase the questions as presented in the ToR were broken down and restructured following the DAC criteria. In this process some evaluation questions were clustered into overarching evaluation questions. In this Annex is explained how the questions are restructured.

Questions from the ToR:

- 1) Perform an **evaluation of the D2D project**, with a focus on (but not restricted to) the following evaluation questions:
 - 1.1) What is the key achieved result according to the agreed results framework and how do they relate to the original targets?
 - 1.2) What is the quality of monitoring and evaluation – based on recommendations of the previous evaluation?
 - 1.3) To what extent has Akvo expanded its partnerships with implementing organisations and governments worldwide? Are these partnerships sustainable? How are partners and initiatives within partnerships identified?
 - 1.4) To what extent has Akvo scaled up its operations in both existing initiatives as well as sustainably broadened the scope of its operations to other sectors such as IWRM? Is Akvo's training of trainers effective? Can they help institutionalize data-management?
 - 1.5) To what extent and how are Akvo's tools and activities being implemented on a local level? Have the four pillars of the D2D program (partnerships, enabling environment, sustaining and scaling operations, outreach and dissemination) improved sustainability and service delivery in targeted communities?
 - 1.6) Are organisations able to use Akvo's open source code without Akvo's active support, or is there an implicit need to rely on Akvo's service provision?
 - 1.7) What is the effectiveness of: capacity building through trainings; PMEL services and training; data science services and training; the survey library and the improvement of data feedback systems; the online knowledge platform and the 24/5 helpdesk?

- 2) Formulate **recommendations regarding further cooperation between DGIS and Akvo in the context of digital WASH monitoring**, with a focus on the following evaluation questions:
 - 2.1) Is Akvo as an (international) organisation unique in the field of digital WASH monitoring, both in the context of its software and tools as well as its activities (outreach, lobby, partnerships, etc.)?
 - 2.2) Is there a high risk of dependency on DGIS if cooperation is to be extended in the future?
 - 2.3) Does DGIS's support to Akvo distort the level playing field of other parties with similar activities?
 - 2.4) What scope is there for collaboration and cooperation with other relevant parties in the digitalization sector in order to avoid duplication of activities in targeted regions?
 - 2.5) Has Akvo appropriately identified the demand in the region; does Akvo work demand-driven?

The ToR evaluation questions have been transformed to new evaluation questions as follows:

Evaluation questions for objective 1: Perform an evaluation of the D2D project		Original ToR
Relevance: Is the D2D program doing the right things?		
EQ 1	How well designed is the D2D program to achieve its objectives?	Design of 1.1 and 1.2
EQ 2	Has Akvo appropriately identified the demand in the region; does Akvo work demand-driven?	2.5
Effectiveness: Is D2D achieving its objectives and envisaged results (outputs, outcomes, and impacts)?		
EQ 3	What are the key achieved results according to the agreed results framework and the ToC and how do they relate to the original targets? What evidence exists to show that results are achieved?	Achieved 1.1 and 1.2
EQ 4	How effective is the Akvo Data Journey Approach (Design > Capture > Understand > Act) and do the services and tools support the partners well along their journey to achieve "Partners and other stakeholders are more effective in delivering inclusive & sustainable services?"	1.4 (1 st), 1.5, 1.6 and 1.7
Sustainability: Will the benefits last?		
EQ 5	What evidence is there to demonstrate that Akvo has scaled up its operations in both existing initiatives (WASH) as well as sustainably broadened the scope of its operations to other sectors such as Agriculture?	1.4 (2 nd)
Coherence: How well does the intervention fit?		
EQ 6	To what extent has Akvo expanded its partnerships with implementing organisations and governments worldwide? Are these partnerships sustainable? How are partners and initiatives within partnerships identified?	1.3

Evaluation questions for objective 2: Formulate recommendations regarding further cooperation between DGIS and Akvo		
Relevance: Is Akvo doing the right things?		
EQ 7	Is Akvo as an (international) organization unique in the field of digital WASH monitoring, both in the context of its software and tools as well as its activities (outreach, lobby, partnerships, etc.)?	2.1
Sustainability: Will the benefits last?		
EQ 8	Does DGIS's support to Akvo distort the level playing field of other parties with similar activities?	2.3
Coherence: How well does the intervention fit?		
EQ 9	Is there a high risk of dependency on DGIS if cooperation is to be extended in the future?	2.2
EQ 10	What scope is there for collaboration and cooperation with other relevant parties in the digitalization sector in order to avoid duplication of activities in targeted regions?	2.4

In this Annex the consultants explain how the questions of the ToR (1.1 – 1.7 and 2.1 – 2.5) were addressed in the Evaluation Questions.

EQ 1 "How well designed is the D2D program to achieve its objectives?" This question covers the design component of question 1.1 of the ToR: "What are the key achieved results according to the agreed results framework and how do they relate to the original targets?" and 1.2 "What is the quality of monitoring and evaluation – based on recommendations of the previous evaluation?"

EQ 2 is the same as ToR question 2.5 “Has Akvo appropriately identified the demand in the region; does Akvo work demand-driven?”.

EQ 3 is the same as ToR Question 1.1 “What are the key achieved results according to the agreed results framework and how do they relate to the original targets? But will cover more than just the answer on question 1.1. The consultants will also cover the ToC and will validate the steps of the predicted change against the evidence in practice. EQ 3 will also answer ToR question 1.2 “What is the quality of monitoring and evaluation further”.

EQ 4 “How effective is the Akvo Data Journey Approach (Design > Capture > Understand > Act) and do the services and tools support the partners well along their journey to achieve “Partners and other stakeholders are more effective in delivering inclusive & sustainable services?” is a clustered EQ and will cover answers of several questions in the ToR, all related to the data journey: the second part of ToR question 1.4 “Is Akvo’s training of trainers effective? Can they help institutionalize data-management?”, Question 1.5 “To what extent and how are Akvo’s tools and activities being implemented on a local level? Have the four pillars of the D2D program (partnerships, enabling environment, sustaining and scaling operations, outreach and dissemination) improved sustainability and service delivery in targeted communities?”, 1.6 “Are organizations able to use Akvo’s open source code without Akvo’s active support, or is there an implicit need to rely on Akvo’s service provision?” and 1.7 “What is the effectiveness of: capacity building through trainings; PMEL services and training; data science services and training; the survey library and the improvement of data feedback systems; the online knowledge platform and the 24/5 helpdesk?”.

EQ 5 “What evidence is there to demonstrate that Akvo has scaled up its operations in both existing initiatives (WASH) as well as sustainably broadened the scope of its operations to other sectors such as sustainable agriculture?” relates to the second part of ToR question 1.4 “To what extent has Akvo scaled up its operations in both existing initiatives as well as sustainably broadened the scope of its operations to other sectors such as IWRM?” but based on the current focus of D2D is modified to cover also sustainable agriculture.

EQ 6 is the same as ToR question 1.3 “To what extent has Akvo expanded its partnerships with implementing organisations and governments worldwide? Are these partnerships sustainable? How are partners and initiatives within partnerships identified? “

EQ 7 and ToR question 2.1 are the same: “Is Akvo as an (international) organisation unique in the field of digital WASH monitoring, both in the context of its software and tools as well as its activities (outreach, lobby, partnerships, etc.)?”

EQ 8 is the same as ToR question 2.3 “Does DGIS’s support to Akvo distort the level playing field of other parties with similar activities?”

EQ 9 is the same as ToR question 2.2 “Is there a high risk of dependency on DGIS if cooperation is to be extended in the future?”

EQ 10 is the same as ToR question 2.4 “What scope is there for collaboration and cooperation with other relevant parties in the digitalization sector in order to avoid duplication of activities in targeted regions?”

Annex 3 Stakeholders met and interviewed during the Inception phase

Public version: names deleted due to privacy reasons (AVG).

Annex 4 Stakeholder selection – evaluation phase

The consultants received from Akvo a list of 80 projects with a budget of over €50,000 (L68) and a list of other partners (L71). The lists consist of different types of organisations: Government NGO, Network, private organisation, multilateral, foundation, or knowledge partner.

Akvo also described of each project which phases of the data journey were part of the project, the consortium partners of the project and the hub they received the support from. Most of the consortium partners work with local NGO's and local governments to implement the projects.

Akvo operates through international NGO's and these international NGO's engage local implementing partners. To ensure that we will reach the local partners we have asked the hub managers to provide local partners. This will give a good impression of the trickle-down effect of capacity building through a trainer-of-trainer approach and the use of Akvo tools and services at the local level in the field.

Some international NGOs' (ICCO, SNV) and UNICEF have projects in several countries with Akvo. For ICCO and SNV we have randomly selected one or two country offices and for UNICEF three country offices. We will contact their respective headquarters and selected country offices for interviews.

The consultants have focused for the partner selection on partners in the four hubs where Akvo is most active: The Eastern Africa hub, the South East Asia Pacific hub, the West Africa Burkina Faso hub and the West Africa Mali hub. In addition, in Europe and the Americas, several partners have been selected at headquarter level under Global. The consultants also have planned interviews with two competitors (mWater and CTOSurvey).

Based on the considerations and criteria mentioned the below listed organisations to be interviewed has been created. Akvo will introduce the consultants to the organisations. The consultants will then contact them to schedule interviews digitally.

Eastern Africa hub:

- 1 out of 6 projects was randomly selected: 2Scale consortium
- Local partner Kewasnet

SEAP hub:

- 1 out of 4 projects was randomly selected: Spice up (Nele Schuurmans / University Bogir, PT Can and Verstegen interviewed)
- ICCO: G4AW Cambodia
- Local partner Kopernik

West Africa – Burkina Faso hub:

- 1 out of 6 projects was randomly selected: Government of Sierra Leone
- Local partner: Tiipaalga + resource person IDH in Ghana

West Africa – Mali hub:

- 2 out of 7 projects were randomly selected: Somagep and DNH (DNH + DNR were interviewed)

Global:

- NGO: 2 out of 7: Nabu and IDH
- Unicef (Unicef Mali, Unicef Sierra Leone and Unicef Mauretania, HQ and West Africa Office > 3 out of 13 country offices randomly selected)
- SNV: SNV Mali, SNV Burkina Faso and HQ (2 out of 6 country offices was randomly selected)
- ICCO: G4AW Cambodia and HQ (1 out of 4 country offices)
- Private Organisation: Witteveen & Bos (1 out of 5 randomly selected)
- Waterschappen: Blue Deal (1 out of 2 projects randomly selected)
- DGIS provided: WHO, WPDx, Godan and NWP
- YEP (HQ and a young professional formerly from Akvo)
- 2 out of 10 projects: Watershed and International WASHAlliance
- Knowledge partners: Tu Delft, WUR, Cranfield University and IRC
- Foundation: Cisco

Annex 5 Stakeholder interview list – evaluation phase (alphabetical order)

Based on the partner selection in Annex 5 in combination with overview of stakeholders from DGIS and Akvo, we have created a list of persons that we interviewed. This is an alphabetical list (due to privacy reasons, except for the two kick off meetings).

Public version: names deleted due to privacy reasons (AVG).

Annex 6 Stakeholder interview list – evaluation phase (anonymous order)

For the references to the interviews we have created an anonymous list based on the order of the interviews conducted and the type of stakeholder.

#	Type Organisations
I1	DGIS
I2	Akvo
I3	Knowledge Partner
I4	Knowledge Partner
I5	Akvo
I6	Akvo
I7	Akvo
I8	Akvo
I9	Akvo
I10	Akvo
I11	Akvo
I12	Akvo
I13	Akvo
I14	Akvo
I15	Akvo
I16	Akvo
I17	Akvo
I18	Knowledge Partner
I19	Knowledge Partner
I20	Local NGO
I21	Local NGO
I22	NGO
I23	Competitor
I24	NGO
I25	Private Organisation
I26	Knowledge Partner
I27	Knowledge Partner
I28	Akvo
I29	NGO
I30	Private Organisation
I31	Government

I32	Akvo
I33	NGO
I34	DGIS
I35	DGIS
I36	Private Organisation
I37	NGO
I38	DGIS
I39	Knowledge Partner
I40	NGO
I41	NGO
I42	DGIS
I43	NGO
I44	NGO
I45	Multilateral
I46	Akvo
I47	Foundation
I48	Akvo
I49	NGO
I50	Government
I51	Private Organisation
I52	Multilateral
I53	NGO
I54	Local NGO
I55	NGO
I56	DGIS
I57	Akvo
I58	Akvo
I59	NGO
I60	Multilateral
I61	Government
I62	DGIS
I63	Internal
I64	Competitor
I65	Private Organisation
I66	DGIS
I67	Multilateral
I68	Private Organisation
I69	Multilateral
I70	DGIS
I71	Multilateral
I72	DGIS
I73	Akvo
I74	DGIS
I75	Akvo

I76	Akvo
I77	Akvo
I78	Akvo
I79	Akvo
I80	Government
I81	DGIS
I82	Multilateral
I83	NGO
I84	Akvo
I85	Government
I86	Akvo
I87	DGIS
I88	Private Organisation

Annex 7 Stakeholder question lists

In this Annex the base questions have been formulated for the most important stakeholders of Akvo.

1 Main stakeholders of Akvo

4. Akvo Partners

These include private companies, international NGOs, local partner NGOs of international NGOs, local independent NGOs, National governments, local governments, knowledge partners.

5. Local Akvo Hub staff

6. Expatriate Akvo hub staff

7. NL Akvo staff

8. DGIS (in The Hague and at embassies)

9. Competitors in regard to the Akvo software tools (mWater, Survey CTO)

2 Questions for Akvo staff

EQ 1 How well-designed is the D2D program to achieve its objectives?

How did you design the D2D project? Could you explain the 4 pillars > 10 programs? In terms of activities / finance and staff?

Who was involved (stakeholders) in the design of the D2D project?

How did you incorporate the recommendations of the PwC evaluation of PPP3?

How was the ToC developed? Who was involved? How was the ToC translated into the performance framework and the intervention logic of D2D? How SMART is the performance framework? What were your assumptions? How do you check your assumptions?

With the knowledge of today, would you have developed a different ToC? What changed in practice?

Why do you mainly provide your services to large organizations and governments? Do they pay the full costs of the services provided to them? Why not?

How did Akvo and its partners learn throughout the project? Did this lead to changes in the ToC? What were the underlying assumptions that would lead to the desired outcomes and impact?

How did the D2D program supported DGIS in implementing its WASH activities? How?

How did you develop the Data journey model? Could you explain the Data journey model in terms of capacity building, support services and supporting tools for each phase? Do you have a systematic method to follow the progress of partners in their data journey? Please explain? Does the data journey vary for different type of clients / size of clients / sector? How do you assist organizations to identify their needs?

Do you have a customer feedback system? Please describe?

How do you develop your product roadmaps? You specifically extended your product and services a lot in water quality monitoring? Why?

How is the Monitoring Framework and its data collection set up (qualitative and quantitative)?
Who is collecting the data?

In your 2019 annual report you state that you mainly planned to work on monitoring services for WASH SMEs, but you realized the market was not good for that. On what insight was this based, how did you investigate?

EQ 2 Has Akvo appropriately identified the demand in the region; does Akvo work demand-driven?

Do you consider Akvo as a demand-driven organization? Please explain?

How did you identify the demand in the region? Examples

Do you have a systematic process for this?

How did you know what organizations need?

Do you have a systematic process to capture this? Please explain?

EQ 3 What are the key achieved results at outcome level according to the agreed results framework and how do they relate to the original targets?

How did the D2D program produced or contributed to the intended outcomes in the short, medium, and long term?

Are the outcomes achieved according to the agreed results framework and how do they relate to the original targets? There are some inconsistencies between the annual report and the data reported in RSR, could you please explain? (Send full monitoring framework with targets and actuals including the observed inconsistencies before)

If all targets are achieved does that mean that all desired outcomes are achieved?

What evidence exists to show that the results are achieved?

Did the ToC described correctly the changes observed? To what extent can changes be attributed to the D2D project? What unintended outcomes did you observe?

Did data contribute to improved service delivery and sustainability of partners? How do you measure that?

In the D2D Progress report summary you performed an internal progress scan to determine the progress of all project objectives. How did you determine this? Please explain in more detail.

EQ 4 How effective is the Akvo Data Journey Approach (Design > Capture > Understand > Act) and do the services and tools support the partners well along their journey to achieve “Partners and other stakeholders are more effective in delivering inclusive & sustainable services”

Describe your capacity building model? How do you conduct a needs assessment? How is your training of trainers (ToT) set up? Who are your trainers of trainers? Is Akvo's ToT program effective? Do you measure its effectiveness? Do you measure how many trainees are trained by the trainer of trainer's program? How do you monitor the quality of trainings by local hubs and partners?

How effective was the capacity building of partners to move them along the data journey steps?

Do you measure what trainees do with their training?

How effective did the Akvo tools support the partner in their needs during the data journey? How do you measure that?

How effective were the other services to support partners during their data journey? How do you measure that?

What services and tools worked best in which phase? What did not go well?

What do you need to improve the data journey model?

Does the Data Journey model help to institutionalize data-management? How do you measure that?

Are organisations able to use Akvo's open source code without Akvo's active support, or is there an implicit need to rely on Akvo's service provision? Or do partners deliberately choose for this? Why?

Have the four pillars of the D2D project (Partnership – Enabling Environment -Sustaining & Scaling operations and Outreach & Dissemination) contributed to sustainability and improved service delivery in targeted communities? How do you measure that?

Mapping: Which tools are used in which countries? Which partners have implemented the tools? How many were trained? How do they use the tools?

How satisfied are the users?

Do they feel local ownership?

Do partners consider the data journey model effective? How do you measure that / What is your evidence?

What were the features of the project and context that made a difference? Why? What was the influence of other factors?

EQ 5 What evidence is there to demonstrate that Akvo has scaled up its operations in both existing initiatives (WASH) as well as sustainably broadened the scope of its operations to other sectors such as Agriculture?

To what extent and how are Akvo's tools and activities being implemented on a local level? Has did this grow during the D2D project?

How are Akvo's tools and services been used in different sectors?

How different is the data journey in the WASH sector compared to the Sustainable Agriculture sector?

Did partners see improvement of service delivery and sustainability through the services of Akvo?

Together with the Waterpoint Exchange (WPDx) you developed a method to calculate the number of people that could benefit from an increased efficiency of WASH investments through Data decision making. How does that work? Could this also be used for other programs?

Are partners able to pay for the services and tools of Akvo during and after the project period?

How were privacy and security considered in the development of new tools and services?

EQ 6 To what extent has Akvo expanded its partnerships with implementing organisations and governments worldwide? Are these partnerships sustainable? How are partners and initiatives within partnerships identified?

Please explain the partner engagement model.

How do you work with local partners?

How do the hubs operate? Do they have targets? Are they autonomous in their decisions?

How did your strategy changed during the D2D program in targeting new partners?
 Are partners able to continue without Akvo support after a program stops? Could you give an example?
 What happens with the data if the partner does not continue after a program?

EQ 7 Is Akvo as an (international) organization unique in the field of digital WASH monitoring, both in the context of its software and tools as well as its activities (outreach, lobby, partnerships, etc.)?

Peru + Bolivia initiative to monitor chlorine levels in piped water systems – how will the structured data and related maps look like and how will these be generated (automatically through Akvo tools or should structuring of data be done additionally through Excel or other software)?
 Which software by other parties in your opinion has similar functionality as Akvo software and why then in your idea should customers choose for Akvo software tools?
 Are you doing benchmarking against “competitors” to determine which gaps you need to cover for partners?
 Do you see competitors for your Data Journey model?
 Who do you consider to be your main competitors regarding your software tools?
 Who (and which types of parties) do you consider to be your main competitors regarding your data journey related services?

EQ 9 Is there a high risk of dependency on DGIS if cooperation is to be extended in the future?

How do you decide to go for a tender?

- What would be the damage for Akvo if in the near or somewhat further future DGIS funding would stop? Why?

EQ 10 What scope is there for collaboration and cooperation with other relevant parties in the digitalization sector in order to avoid duplication of activities in targeted regions?

How do you collaborate with other organizations in the sector (outside a program)?
 Can you explain your lobby and advocacy activities?
 Which parties would you want to consider for a merge or strategic partnership if it was up to Akvo?
 Why?

3 Questions for DGIS staff

EQ 1 How well-designed is the D2D program to achieve its objectives?

How was DGIS involved in the project design?
 Why did DGIS funded the D2D program after the PwC evaluation of PPP3? What is the funding arrangement (for example regarding matching funds from Akvo?)
 How did DGIS ensure that the recommendations of PwC were implemented by DGIS itself and by Akvo?

What were the objectives for DGIS with the D2D project? What is the governance structure to steer the project?

What is the purpose and scope for DGIS to evaluate the D2D project? Why is the evaluation before the end of the D2D project?

To what extent would you say the project is aligned with DGIS policies in general, and specifically about its WASH strategy?

Did the D2D program supported DGIS in implementing its WASH activities? How?

Did the project change a lot between the proposal phase and the inception phase?

Do you consider the Data Journey model as a strong model that supports partners of Akvo in designing data-driven solutions? If yes how / if not, why not?

Akvo transformed from a tool-based organisation to a data service-based organisation, was this based on questions from clients? On research? Please explain?

How was the ToC and the Monitoring Framework developed and how was DGIS involved? Who else?

How do you see the link between the ToC and the performance framework versus the pillars, objectives, and interventions?

What were the reporting requirements?

Do you consider the ToC of Akvo and its performance framework as a strong ToC?

How did Akvo and its partners learn throughout the project? Did this lead to changes in the ToC?

EQ 2 Has Akvo appropriately identified the demand in the region; does Akvo work demand-driven?

Were the embassies involved in determining the demand in their countries?

To what extent was the D2D proposal demand-driven? How?

EQ 3 What are the key achieved results at outcome level according to the agreed results framework and how do they relate to the original targets?

Did the D2D program produced or contributed to the intended outcomes in the short, medium, and long term? How?

Are the outcomes achieved according to the agreed results framework and how do they relate to the original targets?

If all targets are achieved does that mean that all desired outcomes are achieved?

EQ 4 How effective is the Akvo Data Journey Approach (Design > Capture > Understand > Act) and do the services and tools support the partners well along their journey to achieve “Partners and other stakeholders are more effective in delivering inclusive & sustainable services?”

How would you describe the data journey model?

Do you consider the capacity building along the data journey steps as effective?

How effective did the Akvo tools support the partners in their needs during the data journey?

Have the four pillars of the D2D program (Partnership – Enabling Environment -Sustaining & Scaling operations and Outreach & Dissemination) contributed to sustainability and improved service delivery in targeted communities?

What were the features of the project and context that made a difference? Why?

EQ 5 What evidence is there to demonstrate that Akvo has scaled up its operations in both existing initiatives (WASH) as well as sustainably broadened the scope of its operations to other sectors such as Agriculture?

Did DGIS visit the D2D partners? What was your impression how D2D contributed?

In what way are partners of Akvo able to sustain their services after the input by Akvo stops?

How does DGIS support sustainability of local partners?

EQ8 Does DGIS's support to Akvo distort the level playing field of other parties with similar activities?

How and to what extent is Akvo competing with you? How is this affecting your business?

What can and do you do to win the competition?

What are the bottlenecks for your organization to win it?

EQ9 Is there a high risk of dependency on DGIS if cooperation is to be extended in the future?

What would be the damage for Akvo from a DSGIS point of view if in the near or somewhat further future DGIS funding to Akvo would stop? Why?

4 Questions for large partners of Akvo

Governments/NGOs/Private sector/Multilateral/knowledge institutes (maybe slightly different than others)

General information for each client:

Name of person interviewed

Date of interview

Function of person interviewed

Organisation person interviewed

Sector person interviewed

When did your organisation start the partnership with Akvo?

Why was Akvo selected?

What tools and services did Akvo provide?

Are you satisfied with the services?

We would also like to interview one of your local implementing partners. Could you provide us a list of your partners and introduce us with the selected local partner?

EQ 1 How well-designed is the D2D program to achieve its objectives?

How did you participate in the design of the D2D project?

Why did/do you need the tools and services of Akvo?

Why did you choose to work with Akvo and not with other providers of software tools and/or consultancy services like those of Akvo?

How did Akvo support you and your partners in the design phase of your project?

Who was involved in the design phase of your project?

What would you do if your organization had to pay the full costs of Akvo's services?

EQ 2 Has Akvo appropriately identified the demand in the region; does Akvo work demand-driven?

What priority data needs do your local partners have in general in building and improving their organizations?

How do the services and tools of Akvo trickle down to your local partners? Why/why not?

EQ 3 What are the key achieved results at outcome level according to the agreed results framework and how do they relate to the original targets?

Why did/do you need the tools and services of Akvo?

How did Akvo contributed to your organization to become more effective in-service delivery?

EQ 4 How effective is the Akvo Data Journey Approach (Design > Capture > Understand > Act) and do the services and tools support the partners well along their journey to achieve "Partners and other stakeholders are more effective in delivering inclusive & sustainable services?"

When have you started to partner with Akvo what did Akvo do first?
 Could you describe their data-journey model?
 Do you collect data on your programs?
 Were you already able to do data collection, data cleaning, data analysis and data visualisation before you collaborated with Akvo? If no are you able now? How did Akvo supported you? If yes, what did Akvo do additional? Have you improved? What are your challenges? Do you capture data differently than before you worked with Akvo? Give examples
 Are you able to do it now without Akvo support?
 Do you feel ownership of the project and your data?
 At what level do you consider your data quality?
 Do you capture data about vulnerable groups? Do you share this? How? With whom? Do you have a data security policy?
 Do you reflect on your data to create insights? If yes who participates? Staff? Stakeholders? What do you do with these insights?
 Do you share your data? How? Do you have open data? Did you get new partnerships after sharing your data? Please give examples.
 Did you create more data-driven comprehensive solutions? Please give examples
 Do you consider your service delivery more effective and sustainable after collaborating with Akvo? How did they contribute?
 Do you publish to IATI? How?
 Are you better able to create more inclusive and sustainable impact? Please give examples. How did Akvo contributed.

EQ 5 What evidence is there to demonstrate that Akvo has scaled up its operations in both existing initiatives (WASH) as well as sustainably broadened the scope of its operations to other sectors such as Agriculture?

Did you scale up your service delivery based on data-driven solutions? Examples?
 Did you use the Data-Journey model in other programs as well?
 Who paid for the services of Akvo? (own funding/grant/other)
 Are you able to continue with all tools and services after the project finishes?

EQ 6 To what extent has Akvo expanded its partnerships with implementing organisations and governments worldwide? Are these partnerships sustainable? How are partners and initiatives within partnerships identified?

Since when do you work with Akvo?
 Could you describe your partnership?
 Are you satisfied with the partnership?
 How long do you feel your partnership with Akvo will continue?

EQ 7 Is Akvo as an (international) organization unique in the field of digital WASH monitoring, both in the context of its software and tools as well as its activities (outreach, lobby, partnerships, etc.)?

Are there other software tools that could replace the Akvo software tools you are using? Why are you not replacing the Akvo software tools with these other software tools?

Are there other service providers that could replace the Akvo non-software services you are using? Why are you not replacing the Akvo non-software services with the services of these providers?

EQ 8 Does DGIS's support to Akvo distort the level playing field of other parties with similar activities?

Why did you choose for Akvo software tools and/or services?

EQ 9 Is there a high risk of dependency on DGIS if cooperation is to be extended in the future?

If DGIS would be fully open to you to make your own choices regarding software and data services, would you then still choose the Akvo software and services? Why?

EQ 10 What scope is there for collaboration and cooperation with other relevant parties in the digitalization sector to avoid duplication of activities in targeted regions?

Would you want to consider a strategic partnership or even a merge with Akvo? Why and what kind of partnership would you then imagine?

5 Questions for small partners of Akvo

Local partner NGOs of large customers of Akvo, independent local NGOs, local governments

The information is gathered through digital focus group discussions with project leaders, field supervisors and enumerators of these organizations who are or have been involved in Akvo's tools and/or services in different ways.

General information for each client:

Name of the organization

Organization type ((local NGO partner of large NGO, independent local NGO, local government):

Name(s) of person(s) interviewed

Date of interview

Function of person interviewed

Organisation person interviewed

Sector person interviewed

When did your organisation start the partnership with Akvo?

Why was Akvo selected?

What tools and services did Akvo provide?

Are you satisfied with the services?

EQ 1 How well-designed is the D2D program to achieve its objectives?

Why did/do you need the tools and services of Akvo?

Why did you choose to work with Akvo and not with other providers of software tools and/or consultancy services like those of Akvo?

How did Akvo support you and your partners in the design phase of your project?

Who was involved in the design phase of your project?

What would you do if your organization had to pay the full costs of Akvo's services?

EQ 2 Has Akvo appropriately identified the demand in the region; does Akvo work demand-driven?

What priority data needs do you have in general in building and improving their organizations?

How do the services and tools of Akvo trickle down to your local partners? Why/why not?

EQ 3 What are the key achieved results at outcome level according to the agreed results framework and how do they relate to the original targets?

Why did/do you need the tools and services of Akvo?

How did Akvo contributed to your organization to become more effective in-service delivery?

EQ 4 How effective is the Akvo Data Journey Approach (Design > Capture > Understand > Act) and do the services and tools support the partners well along their journey to achieve "Partners and other stakeholders are more effective in delivering inclusive & sustainable services?"

How do you collect data (the question is for both qualitative and quantitative data)? Did Akvo assist you in building up the methods and tools for this or did you already have these yourself?

How did Akvo support you with improving the way you collect data?

How do you clean your data? Did Akvo fulfil any role in how you do this?

How do you analyse your data? Did Akvo fulfil any role in how you do this?

How do you visualize your data? Did Akvo fulfil any role in how you do this?

How do you use the structured and analysed and visualized data? For whom, by who, how, for what purpose? Did Akvo fulfil any role in how you do this?

What have you gained with improving your ways of collection, structuring and use of data? What has Akvo done to assist you in this respect?

What would you like Akvo to assist you with still?

What bottlenecks do you still (often) have about data collection, data cleaning, structuring, visualization and data use)?

Which data collection software do you currently use? Why?

Who pays for these software tools?

In what ways do you still depend on Akvo support? How long will this need continue? How will you pay for it?

Do you feel ownership of the project and your data?

EQ 5 What evidence is there to demonstrate that Akvo has scaled up its operations in both existing initiatives (WASH) as well as sustainably broadened the scope of its operations to other sectors such as Agriculture?

How and how much has the turnover of your organization increased (or reduced) because of the Akvo support? Please explain

How do you use the things you developed with Akvo support in other programs of your organization?

Who paid for the services of Akvo? (own funding/grant/other)

How will/can you continue with all tools and services as obtained from Akvo after the project finishes?

EQ 6 To what extent has Akvo expanded its partnerships with implementing organisations and governments worldwide? Are these partnerships sustainable? How are partners and initiatives within partnerships identified?

Do you work directly with Akvo or through a donor? How?

Since when do you work with Akvo?

Could you describe your partnership?

Are you satisfied with the partnership?

How long do you feel you will work with Akvo, its tools and/or services?

EQ 7 Is Akvo as an (international) organization unique in the field of digital WASH monitoring, both in the context of its software and tools as well as its activities (outreach, lobby, partnerships, etc.)?

Are there other software tools that could replace the Akvo software tools you are using? Why are you not replacing the Akvo software tools with these other software tools?

Are there other service providers that could replace the Akvo non-software services you are using? Why are you not replacing the Akvo non-software services with the services of these providers?

EQ 8 Does DGIS's support to Akvo distort the level playing field of other parties with similar activities?

- Why did you choose for Akvo software tools and/or services?

6 Questions for competitors of Akvo

(Representatives of mWater, Survey CTO, possibly other parties, e.g. other parties also offering data journey consultancy services?)

EQ 7 Is Akvo as an (international) organization unique in the field of digital WASH monitoring, both in the context of its software and tools as well as its activities (outreach, lobby, partnerships, etc.)?

Which Akvo software in your opinion has similar functionality as your own software and why then in your idea should customers choose for your software tools?

What strengths does your software/do your services have above the Akvo software/services in your opinion? And what weaknesses?

What other services beside your software tools do you offer to your customers?

Akvo claims that its combination of having on site offices (hubs), software tools and data journey consultancy services makes it unique? Is this true in your opinion? Why/why not?

How can/do you compete with Akvo?

EQ 8 Does DGIS's support to Akvo distort the level playing field of other parties with similar activities?

Do you feel Akvo is distorting your market? Why?

EQ 10 What scope is there for collaboration and cooperation with other relevant parties in the digitalization sector in order to avoid duplication of activities in targeted regions?

Would you want to consider a strategic partnership or even a merge with Akvo? Why and what kind of partnership would you then imagine?

Annex 8 Market distortion risks related to Akvo

Type of DGIS support	Possible types of level playing field distortion	Risk level	Information sources
DGIS stimulating other parties it funds to work with Akvo and its software	<ul style="list-style-type: none"> DGIS asking parties to work with Akvo and/or parties developing a sense of feeling this is expected from them. Dutch embassies positioning Akvo by asking Akvo to train parties on its behalf, e.g. in IATI compliant reporting during which Akvo can promote RSR. 	Low to medium risk. Providers of similar services and software may as a result lose market even if they are better, better suited within the circumstances or cheaper than Akvo. DGIS recognizes the issue stating it promoted Akvo in the past based on its view that Akvo was unique, but also because Akvo is a Dutch organisation fitting in BUZA's digitalisation and WASH sector ambitions worldwide. Also, several organisations funded by DGIS admitted they felt this pressure (Multilateral I45). However, involved parties often have other reasons to choose for Akvo as well, such as Akvo's combination of infrastructure, local presence, etc. (the Akvo package), the absence of other parties that can deliver what is required in the areas focused on, etc. Several parties have also denied being influenced by DGIS in any way.	DGIS I34, Multilateral I45
Direct or open tender grant funding for the development and provision of Akvo survey software and	<ul style="list-style-type: none"> Other parties developing similar software that do not get (as much) subsidy for it, suffer. mWater depends for its business on a few large customers that are, however, kind of 	High risk. There are increasingly competitors of Akvo software who provide similar software for apps and data hosting in database environments, mostly developed with (differing levels and ways of) grant funding (e.g. mWater Data4Development) and/or based on generic (app) software (e.g. ODK) developed with grants (e.g. Survey CTO, Kobo) (NGO I29, DGIS I74). Also, the market for Akvo's software customization services is under pressure, especially in Asia, where competitors offer similar services against lower rates (e.g. Akvo 17). An exception is West Africa where there are still many parties that do not have any survey software and also lack insight or overview of the different software options. Akvo often offers parties the Akvo software and data hosting for free for the duration of a project (or program, such as D2D), with project / program funding used to pay the costs (Akvo also does this still in other areas). This is done even	NGO I29, DGIS I34, NGO I55, DGIS I72, DGIS I74, Akvo I75, I4, government I31, NGO I36,

Type of DGIS support	Possible types of level playing field distortion	Risk level	Information sources
related services	subsidizers as well, as they pay a lot for their licenses which enables mWater to offer most other customers the software for free (cross-subsidy mechanism).	<p>if other software is more suitable, especially regarding the (beyond project/program) costs of software, data hosting and guidance (e.g. government I31).</p> <p>Sometimes organisations get into problems as a result after a project/program has ended (especially for smaller organisations and government agencies) while it distorts the level playing field of competitors. DGIS is aware of this (DGIS I88). Some organisations use Akvo software in the projects in which Akvo is involved and other software in their other projects as in those projects they do not have funding for the Akvo software (NGO I36). Akvo in this respect claims that 'Organizations can download the data and continue with any free tool like for example ODK, based on the skills they learnt through us (Akvo I75). In the same time Akvo is very much against software that is provided for free and not based on a SAAS model with as argument that 'nothing is for free' while in the same time acknowledging the fact that the SaaS model is not ideal for the whole sector. (Akvo I75 and feedback by Akvo on the findings).</p> <p>The business case of mWater is interesting in this respect as it has a SAAS for large customers using the revenue from these parties to offer its software and data hosting for free to other customers. Some regard this as a good, successful but also vulnerable business case (I4). However, this mWater model in actual fact also distorts competitors because the SAAS of large organisations in reality comprise a sort of grant funding enabling mWater to offer the software and data hosting for free to large groups of customers with the vulnerability of this business case being related to the direct problems that may arise once one or a few of these large customers decide to no longer continue with mWater.</p> <p>Another software provider built its survey software and data hosting on the basis of ODK (free open source software), charges SAAS fees but provides technical assistance always for free and has made the software highly self-instructive so no training or guidance services are required. It hopes this is an interesting value proposition for customers valuing it more than competitors whose software and data hosting require such services on top of a SAAS fee (Akvo) or that are for free (mWater, although mWater is also highly self-instructive and does not need (much) additional services). This provider argued that 'for</p>	competitor I64, Private organisation I88

Type of DGIS support	Possible types of level playing field distortion	Risk level	Information sources
		<p>strategic central software, available to all for free [such as ODK], it is OK to subsidize it, so all software providers get the same advantage to be able to keep costs low as they can base themselves on that free software and focus on what they want to build on top for their own niche of customers (competitor I64).</p> <p>Akvo software does not fulfil this requirement because: (a) it is difficult to use as a basis by other software providers (even though the source can be downloaded from GitHub the data base environment is complex and difficult to use for others), (b) it is not for free if you need to get support or hosting service, (c) it does not have a worldwide community (ecosystem) working on it such as ODK has, and (d) Akvo also gets subsidy/grants to provide services around the software and build and sustain infrastructure in countries from where the software is marketed and customers are trained and guided.</p> <p>A main problem is that there are so many survey software systems that have been developed with grant money (e.g. aid money such as grants from DGIS) and other sources, which has increased duplication of activities. Several parties claim that DGIS (and other donors) should decide whether it wants to support organizations so they can buy data services or support a data service organization to provide these services cheaply or for free to organizations, but not both together (knowledge partner I4) while others state that apart from supporting the development of limited numbers of strategic central software tools, available for free to all (with coordinated avoidance of duplication of activities between donors), 'donors should support organisations to buy the software they choose themselves instead of funding the development of software' (competitor I64).</p> <p>Market distortion is not at stake where larger organisations make a well-informed choice for Akvo software on the basis of functionality in this software they value (and which they believe is not covered by competing software).</p> <p>Akvo also markets its software to both customers and donors, to be open source, meaning others can copy it (from GitHub) and build further software on it, as an argument for 'being better than others'. However, a DGIS staff member indicated that 'Akvo's software is a black box, where you are unable to</p>	

Type of DGIS support	Possible types of level playing field distortion	Risk level	Information sources
		change the data core without being a specialist. I don't call that open source.' (DGIS I34). However, other sources (e.g. Akvo I77) claim that the software can be downloaded at GitHub and used by developers to further develop it. The DGIS staff member also felt that 'on one hand Akvo wants organisations to develop a sustainable business model, on the basis of which Akvo introduced its SAAS model and its consultancy services, while on the other hand this means market distortion'. And 'Public money should be spent only on software that is open source, open data and open content' (DGIS I34).	
Direct or open tender grant funding for the development and provision of Akvo sector specific software	Example: Caddisfly, Akvopedia, and (partly) RSR	Medium to high risk. The software is specific for one or few sectors and therefore expectedly not developed by many others. However, commercial initiatives exist for both the WASH and the agri sector that compete with and sometimes even stretch beyond the functionality of Caddisfly, as described among others in L93. See Annexes 9 and 10 for further details on this. These initiatives could be distorted to some extent as a result of the grant funding used by Akvo to develop Caddisfly, but more likely in this respect is that these initiatives may outgrow the functionality of Caddisfly, even in its combination with Flow and Lumen (if this has not already happened). Furthermore, also mWater has developed a basic water testing functionality (website mWater). For IATI compliant reporting there are several tools that compete with RSR (e.g. Zimmerman & Zimmerman and Data4Development; DGIS I34) that even with Dutch government agencies (e.g. RVO) as a customer in some cases successfully compete with RSR (RVO I42). However, in areas where Akvo is active there are sometimes no other parties offering these specific software solutions + required surrounding services (such as training, guidance) yet. In such cases Akvo's sector specific software can fulfil an important role although it could in the future increasingly make sense for Akvo to be able to train parties more generically on water and soil testing, and even better if it can train customers to work other software where such software is more suitable for customers. Another issue is that a result of organisations that need an Akvo specific software tool such as Caddisfly, can only currently use Caddisfly if they also use Akvo Flow and Lumen in addition (government I31). To the contrary Akvo loses market if Caddisfly can only be used by customers who use Akvo Flow and Lumen. There is also some danger of duplication of activities with grant funding where other parties also develop similar software or software functionality. This is the case to some extent for the RSR competitors.	DGIS I34, L93, I23, website mWater, government I31

Type of DGIS support	Possible types of level playing field distortion	Risk level	Information sources
Grant funding for developing and offering services not focused on Akvo's software development	<p>Negative distortion where grant funding is used by Akvo to develop and/or offer fee-based services to customers where competing services are present or could be developed and offered by other parties if Akvo was not there.</p> <p>Negative distortion where Akvo's subsidized structure of hubs and services is an added value for consortiums and international customers and therefore selecting Akvo as a supplier, at the cost of other parties that could provide similar services if Akvo did not have the subsidy advantage.</p> <p>Non to positive distortion where there are no (proper) (potential)</p>	<p>Medium risk for the negative distortions. No risk for the non and positive distortions.</p> <p>The extent to which negative distortion in local markets happens depends on the presence of parties that can execute services similar to those of Akvo or those of parties supported with grant funding by Akvo in the concerned countries or develop such services in the not too far future. For Asia and South America there are increasingly local commercial companies offering such services, though not always as comprehensive and well as Akvo or its supported partners do. Especially for West Africa and fragile areas where commercial parties offering services similar to those of Akvo are not present, Akvo is not distorting any level playing field simply because competing parties do not or hardly exist (yet) in these areas. It is unknown though to what extent the presence of Akvo in the region withholds other parties (including international/Dutch NGOs active in services similar to those of Akvo, such as SNV, ICCO, MDF and Hivos, and, increasingly, local consultancy companies) from entering the market niches in which Akvo now sometimes has a monopoly in these countries (Embassy I62) financed through high fees and other costs paid from grant funding such as D2D (DGIS I35).</p> <p>In Eastern Africa a Dutch managed consultancy group with local associate companies in Uganda, Mozambique and Zambia, finds it difficult to compete with Akvo especially in international settings (consortiums, assignments through Dutch iNGOs) due to Akvo's (Dutch) relations with these parties and the 'low interest, or awareness, these iNGOs have [according to the management of this group] regarding cost-effectiveness and longer-term relationships with and support to country level parties, especially governments' (company I88). However, these consultancy firms also realize they could benefit from Akvo's expertise and guiding tools, especially trainer of trainers' capacity regarding the 'non-software' parts of Akvo's data journey if these are generic (not focused on Akvo's software).</p> <p>For international customers, e.g. IDH and W&B, Akvo's partially subsidized worldwide presence and partially subsidized services are an important added value with which Akvo outperforms (possible) competitors (Akvo L24, Akvo L44, company I30) but also enables their customers, which are often also companies, to become cheaper than their competition (company I30).</p>	<p>Akvo L7, Akvo L8, Embassy I62, DGIS I38, DGIS I87, L24, Akvo L44, DGIS I35, DGIS I38, Akvo I46, Akvo I12, UWV I25, company I30, NGO I83, Private organisation I88</p>

Type of DGIS support	Possible types of level playing field distortion	Risk level	Information sources
	<p>competitors and where Akvo offers its services, therewith filling a vacuum that will not be filled otherwise. The distortion becomes even more positive if Akvo (also) provides free or at least (subsidized and affordable for all) support to other parties (notably local consultancy bureaus and government agencies) to build sustainable training of trainers capacity regarding the non-software parts of Akvo's (data journey) services. Also, the development by Akvo of services (e.g. training manuals, expertise, etc.) that it claims are not and will not be developed by others</p>	<p>However, especially Dutch iNGOs indicate that the choice for Akvo is (often) also because of the 'Dutch connection', the like factor (they like Akvo staff), Akvo's development expertise and insights in general, overview and flexibility and other factors they do not find (sufficiently) among other (local) parties (company I30).</p> <p>To the contrary Akvo's presence in certain areas (e.g. fragile areas, West Africa) can fill a vacuum which would otherwise be left unfilled (DGIS I35). In these areas there is a lot of work and a lot of potential and scope also for other Dutch parties to cover the needs (Akvo I46). It would be even better, if besides providing its 'normal services', Akvo develops training of trainers capacity in such areas (DGIS I38, Embassy I62), notably among local consultancy bureaus (including but not limited to start-ups) and government parties. The development by Akvo of services and methods (e.g. training manuals, informative documents such as Akvo's e-books, data journey expertise, etc.) that are not and will not be developed by others, will not distort the market (Akvo I12) if the documentation underlying the services (e.g. training manuals) is generic, publicly and freely available and sufficiently self-instructive. However, regarding the use of grants to hire and capacitate expertise for the development and roll out of services that nobody else offers, it will be much more difficult to avoid market distortion as such expertise will be regarded by customers and consortiums as an added value (concluded from UVW I25, company I30). Also the demand by donors of matching grants, e.g. a consortium that will need to fund 50-% of the costs from other than the donors grant, distorts level playing fields of competitors who do not have access to the required own funding, while Akvo does use D2D money in this respect (e.g. in its collaboration with IDH, EU proposals etc.) (NGO I43, knowledge institute I39, among others). Akvo supports IDH with data collection for which Akvo capacitates, contracts and quality controls local companies (Akvo I12). This is negative distortion to a limited extent as selected companies get 'free training', paid for partly with grant funding that Akvo receives (e.g. from D2D) with which Akvo distorts its own competitors and the local companies may to some extent distort the level playing field for their competitors. However, it is also positive distortion because the selected companies are capacitated further, which is important for their sectors and countries and which would not have happened without the</p>	

Type of DGIS support	Possible types of level playing field distortion	Risk level	Information sources
	but are highly needed is a form of positive distortion.	intervention. ICCO sees that Akvo with its data journey services overlaps and partly competes with similar services by ICCO. (NGO I83).	
Grant funding to consortiums through open tenders in which Akvo is a partner	<ul style="list-style-type: none"> Negative distortion where a consortium subsidizes parties or value chains as a result of which one or a few parties benefit, making it hard or impossible for other similar parties to compete. Positive distortion where a consortium subsidizes a development in a value chain which enables commercial parties to become active where otherwise this would not have been possible (or very difficult) for them. 	<p>No risk for the positive distortions. Some examples: (A) G4AW assist new social enterprises to work with satellite data in agriculture, subsidizing them until their service has been developed sufficiently to be able to continue commercially, hence effectuating a new while for poor local farmers imperative service that would not have evolved without subsidy. Also, at Uduma > subsidy French company to deliberately disrupt the market to create a market so that people get water. (Akvo I84). (B) Consortiums developing an app for local farmers that provides objective advice to the farmers and not connecting them to one or another company of seeds, fertilizers etc. versus the danger that one such a company develops such an app and therewith only provides farmers advice about its own products, enhancing they buy from this company and not form other companies.</p> <p>Medium risk for the negative distortions. Some examples: (A) SpiceUp program and consortium in which Akvo is one of the consortium partners, developing an app for pepper farmers in some islands of Indonesia in which farmers can enter specific data of their crops and fields and get back advice regarding seeds, fertilizers and other inputs. A company providing pepper seeds and other inputs to farmers is involved and benefits because the farmers are connected through the app solely with this company which is a market distortion for other similar companies in the country (knowledge partner I26). However, to show how complicated it can be: this company is also investing itself by having field officers in the area of the farmers, assisting the farmers in the use of the app and monitoring whether all goes well and providing assistance if not. This shows that the company is also investing and not only receiving benefits from the grant funding in the intervention. It is also unknown whether there are competing seeds and fertilizer suppliers and if so, whether they would have been ready to make the effort together with the consortium. Hence, the level and severity of market distortion is difficult to determine in such a case. About this case Akvo rightfully argues that if there is market distortion, Akvo cannot be held accountable for it. (Government I85, knowledge partner I26, NGO I41) (B) Akvo through a consortium assists a local NGO it selected and collaborates with in a project to build further expertise and assist them in addition, when they found out they can be of use to each</p>	Akvo I84, knowledge partner I26, Government I85, NGO I41, DGIS I87

Type of DGIS support	Possible types of level playing field distortion	Risk level	Information sources
		<p>other (paid for through D2D money), to develop proposals in which Akvo also is a partner. Through the assistance which evolved because of the consortium intervention between Akvo and the local NGO, the local NGO outperforms other local NGOs but for which it has not paid itself. Akvo states it is often part of a consortium that distorts the market in one or another way but where Akvo is a sub-contractor or a partner of relatively low importance. The question then is who is responsible for the market distortion which in the opinion of Akvo in such cases is not Akvo. (Akvo I84).DGIS answers itself whether 'the time is there to develop a more competitive approach for IT and digitalisation interventions by introducing open tenders, e.g. for IT development and sustainability or for data management in developing countries, despite the fact that open tenders require a lot of time and effort to set up and execute.' It argues 'Now that the playing field of development aid and digital knowledge has matured this could and should be done.' (DGIS I87).</p>	

Annex 9 Akvo Software SWOT

In this Annex SWOTs are presented as have been developed with information derived from interviews and literature and the functionality test (L116).

Table 9 SWOT Akvo Flow + Lumen + Caddisfly

Strengths	Weaknesses
Robust, mature, professional, and scalable platform (Akvo I12) with a long track record (L116) which is appreciated by larger organisations that operates Flow with thousands of enumerators, forms and waterpoints (L116). In Flow in 7,4 million forms are uploaded in 213 instances (2019)	The Akvo Flow app is only available for android and not for IOS (Apple), this is a minor issue because android is the dominant platform (90% market share) for Africa especially in remote areas, but could play a role in other regions.
Organisations have their own instance and the ability to set flexible user rights and ensure data security at group and individual level customised to the needs of an organisation (L116) Data privacy and responsible data management: GDPR compliance (L19) Data is not shared via email but you need access to the tool to be able to download it (sheets or API).	Perceived as expensive, especially by government organisations and smaller NGOs. (Gov I31, NGO I54). In projects the budget for software and services is often included and perceived as free after the project partners need to pay a fee to continue uploading data which is difficult for smaller organisations and some governments (multilateral I67, Government I31, Akvo I73).
Better offline app functionality than other data collection tools, including offline installation and data transfer via USB (L116) this is improved in D2D based on request partners (I21). Enumerators can work completely offline.	Akvo software tools are open source and can be downloaded at Git Hub. In practice organisations do not do this independent of Akvo. (Akvo I14).
Seen as user friendly by partners (even for people who are not very literate) (I22) alternatives also offer intuitive easy to use software tools	Link between FLOW, Lumen and Caddisfly required several repetitive tasks that users would expect in one product (feedback Akvo)
AKVO offers good import and export options with the bulk upload functionality inbuilt into the app, as well as better segregated options for different reasons for import (and export) (L116)	Ability to share/migrate information/surveys between organisations is missing compared with mWater (L116) This is a deliberate choice of Akvo. Akvo separates organisations due to data security purposes. It can be done as a service by Akvo.
Akvo's software development process follows modern standards and is considered efficient (L10a).	The API is a read-only API. It can get data out of Flow but not to use the API to put data in Flow this limits the interoperability (Flow support). Partners have not requested for this yet. Data import is possible with Lumen using multiple different data import formats that are more user friendly than a write-API (Feedback Akvo)

Good trainings and guidance in Flow and Lumen and flexibility of Akvo staff to assess, understand and customize to the local context (mentioned in many of the interviews).	Calculated columns require coding and calculations not available in surveys (L116)
Akvo has large team that provides personal and local support to partners (L116, NGO I43). Akvo aims to react to all support requests within 8 hours. (This was met in 2019 for 80% of requests, L24)	Lower intuitive user-friendliness of the back-end platforms (more training needed than mWater) (L116)
Flow is Interoperable with several tools and platforms, including DHIS2, WPDx, CKAN, WhatsApp (L24), USSD and Webforms (L116) and through the API other tools can be integrated.	Akvo does not provide a survey/library functionality in the tool like in Kobo and mWater. Reason for Akvo: “we do not want to overwhelm users with a library that holds hundreds of options creating decision fatigue”
Akvo offer free form questions (signatures) and language localisation options for survey questions, also allowing for right to left languages (mWater does not offer this functionality) as well as different symbols. AKVO does provide their survey portal in multiple languages and provides the help menu available in multiple languages (L116)	For several soil tests still, large differences were found between Caddisfly and laboratory results during a pilot test (L26). Akvo work to improve the soil testing with Cranfield University, the limitations are the strips not the Akvo software (I27)
Flow creates an automated Comprehensive report that generates summaries for the entire data set and per question (Akvo I57)	Is only used in combination with Akvo Flow & Lumen (with exception of one organisation that connected it themselves to ODK).
In Lumen users can create simple summaries per dataset or more advanced depending on their needs. Bulk data transformations actions are available in Lumen, as the Derived Category transformation, change chase, trim whitespace. Lumen also has a transformation log that keeps data transparent (praised by skilled users)	
Captures polygon in field and exports geoshapes (not offered by mWater) L116	
Caddisfly is a unique water quality app and can be used for all WHO critical parameters (L116)	
Direct entry of water test data in a central database (Akvo Flow) Simple water and soil tests + data upload functionality and (through Flow & Lumen) real-time visualisation of the results (I27)	

Opportunities	Threats
Integration of Flow & Lumen with RSR and Akvo Sites. (NGO I55, DGIS I74) to offer one comprehensive tool along the data journey	Not unique, there are quite a few comparable software packages (Akvo I12, Akvo I13, knowledge partner I40). Most of the survey and visualisation software tools overlap for about 90% in their functionality (I64). Competitors get stronger, such as mWater, SurveyCTO, Kobo and ODK based software by local businesses in Africa (Ona) and Asia (Social Cops).
Work with big data, automated data analysis and prediction enabling farmers to collect data themselves + stretch out to other sectors (I32). as well improves the offering	Akvo does not have a local ecosystem like ODK (with many consultants are familiar with), partners remain dependent on Akvo and are not able to contract local suppliers (ex-Akvo I59).
Specialize further in building customized software layers on existing other software packages. (Akvo I17, ex-Akvo I59).	Caddisfly has competitors (Akvo I12, L93). For the agri sector for instance, the Dutch company Agrocares sells a handheld nutrient scanner, combining a near InfraRed and EC sensor. For the water tests commercial testing equipment connected to databases is increasingly being developed such as Waterlink and other data collection tools as mWater are including water quality test (at this moment still limited).
Focus on customers that want/expect dedicated support lines at HQ and local level and stop with smaller customers	Business model Akvo: Organisations discover after a project is over that they will not have Caddisfly (nor Flow + Lumen) for free and do not know then what to do. This may drive them to other solutions (using mWater that also has some of the Caddisfly functionality or other providers such as Agrocares or revert to doing laboratory tests and entering the results manually in a database. (Univ. of Bogor I26, local NGO I36). This may in the future also keep organisations from working with Akvo at all
No matter how good the tool or the software is, it still depends on the right processes and people in place to make data driven decision making a success. This provides opportunity for the data journey services	
Business case for Caddisfly can be improved when it will be combined with sales of hardware for water tests.	

<p>Open the possibility for Caddisfly to work independent of Flow to conduct the tests and save the data accessible to other data collection tools such as mWater, ODK and Kobo) and provide Caddisfly for free or a one off small amount (in the Playstore) This will contribute significantly to the BUZA goals (L49). Akvo can build a strong business case with services around the software that can then be offered to these much larger numbers of customers, therewith expanding not only its impact but also its income.</p>	
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