



OPERATION
WATER

Operation Water seeks to deliver clean water solutions to the greatest number of people in need, at the lowest cost per person, by developing scalable and sustainable infrastructure.

- Major water infrastructure investments build the foundation upon which the most marginalized can escape the cycle of poverty.
- Our objective is to end the global water crisis in the next 30 years.
- Success requires expertise, local knowledge and access.
- We will engage with all stakeholders to execute scalable and sustainable water infrastructure projects on a Public-Private Partnership basis, utilizing a “Capital Light” financing structure.
- Our focus is on high priority, economically sensitive, and socially critical projects, reducing execution risk, maximizing social impact and generating financial returns.

Initiating the Ripple Effect



Every \$1 spent on water and sanitation is estimated to yield a \$4 economic return.¹

- Investing in water infrastructure transforms communities, impacting health, safety and education.
- The opportunity cost of collecting water translates into \$24 billion of lost economic benefits per year.²
- Without this burden, increased school attendance and literacy rates engender enhanced socioeconomic opportunity.
- In a world where fewer than one in three has access to a toilet,³ solving the two-headed monster that is the water crisis - lack of clean water and sanitation - provides people with essential "dignity."
- The provision of adequate sanitation leads to less infectious disease, as well as reduced child and maternal mortality.

Thinking Bigger – Our Approach & Solution

Business Approach

- Engage with local governments and utilities to develop scalable water infrastructure projects on a Public-Private Partnership basis.
- Leverage our strong business development skills and extensive experience to work directly with government officials, utilities, law firms, financial institutions, and contractors to execute projects.

Innovative Funding

- Work with strategic partners to raise money and apply this capital as equity in PPPs using a “Capital Light” funding structure that raises debt at attractive rates from Development Finance Institutions and Export Credit Agencies.
- Water consumers pay an affordable price for the clean water we provide to repay the debt over the life of the concession.

Sustainability

- The PPP structure ensures that the project will be maintained over the life of the concession.
- Bigger projects achieve economies of scale which enable the sourcing of water from a sustainable source.

Scalability

- Larger water infrastructure projects not only meet the needs of more people, but they also allow for additional villages and water treatment plants to be added to the network of pipes as funding permits.



How We Are Different

	Others	Operation Water
Scope	Focused on small, “grassroots” projects using only donor funds.	Develop larger projects that will provide access to the most amount of people at the lowest cost per person.
Funding	Raise funds from individuals and companies on a donor basis and fund 100% of the projects that they build from those funds.	Partner with impact investors and philanthropists to eliminate the financial strain of donations granted, and instead, preserve and compound injected capital. To maximize impact and financial return, we access debt from development finance institutions and export credit agencies.
Client	Individuals or villages.	Governmental parastatals that are already responsible for delivering the service to their people, but unsuccessfully doing so.
Approach	Work closely with the target communities to find viable water solutions.	Work with government leaders, finance institutions, and contracting companies.

Quantifying the Difference

	Others*	Operation Water**
Capital Source	Donation	Investment
Injected Capital	\$15,000,000	\$15,000,000
Number of People Served per Year	376,945	1,500,000
Annual Cost per Person (15 years)	\$2.65	\$0.67
Final Balance	\$0	\$23,369,511

Operation Water’s ethos of “Evergreen Philanthropy” will affect the most powerful social impact, while preserving and compounding capital for future reinvestment.

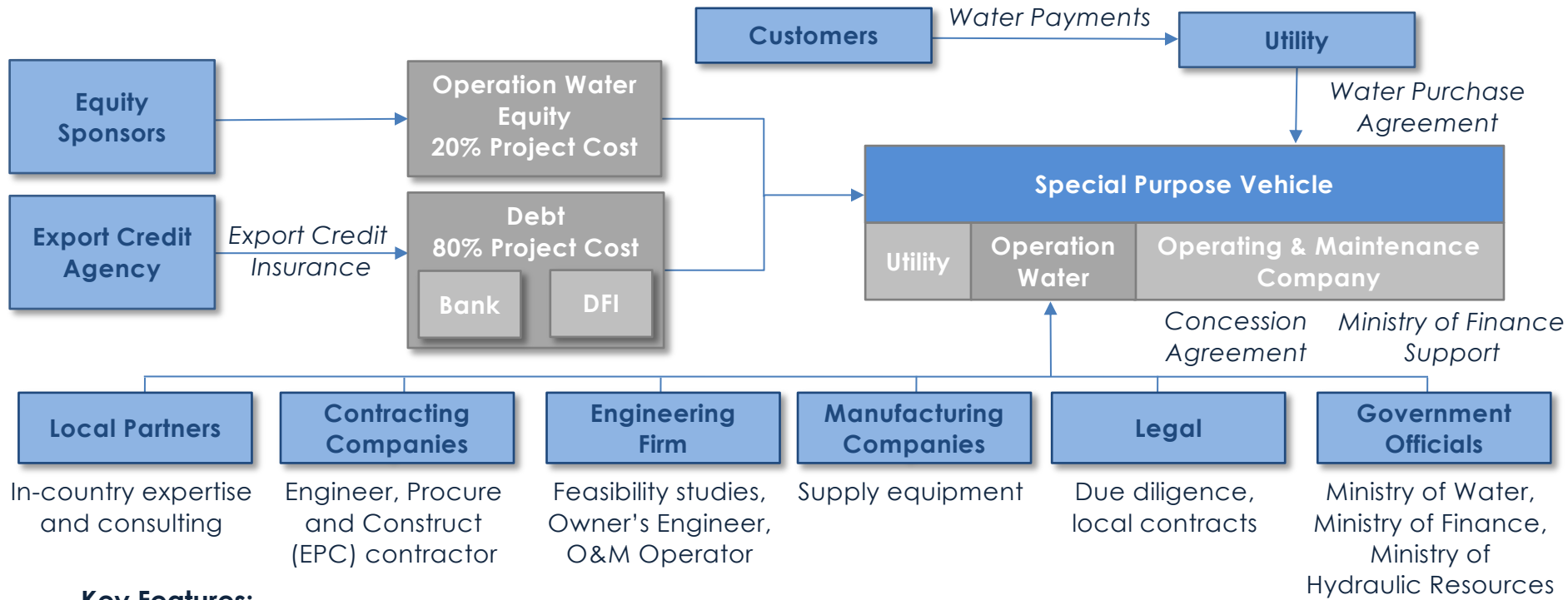
- Operation Water will provide access to potable water to nearly 4x as many people per every dollar spent compared to other organizations.
- An investment in Operation Water will result in preservation of principal plus a compounding return on equity. The investment can then be returned or reinvested into other financially and socially impactful projects.
- A contribution to a non-profit organization will solely generate a tax deduction; principal will be lost.

*Assumes average project size of \$10,000, and average of 314 people served per project (Source: charitywater.org). Assumes water point non-functionality rates of 20%, based on post-implementation surveys of water point non-functionality of 20%-23% in Malawi (Source: WaterAid, 2015) and estimates of 10%-67% non-functionality of hand pumps across Sub-Saharan African nations (Source: RWSN, 2009).

**Assumes \$100,000,000 project size, 15% financed by equity, 15-year concession life, and 3% annual return on equity over life of concession.

Project Structure

The “Capital Light” structure minimizes required equity and levers with attractive debt rates.



Key Features:

- More efficient to implement than government funded or typical multilateral approach.
- Focus on Public-Private Partnerships.
- Robust operation & management contracts for the project assets.
- Provide water at affordable prices.
- Economically viable corporate venture.
- Governments incur less sovereign debt.



Type:
Bulk Water Treatment

Cost:
88.3M Euros

Date:
2008

Size:
200,000m³ of water
per day

People Served:
1,500,000

Background

In 2004, Biwater Plc, a British water treatment contractor and developer, engaged with the Sudanese government to develop the Manara Water Project in Khartoum, Sudan. It could not raise sufficient debt financing on the strength of a sovereign guarantee to build a 200,000 cubic meters per day bulk water treatment plant so needed to address and resolve the following constraints in order to finance the project:

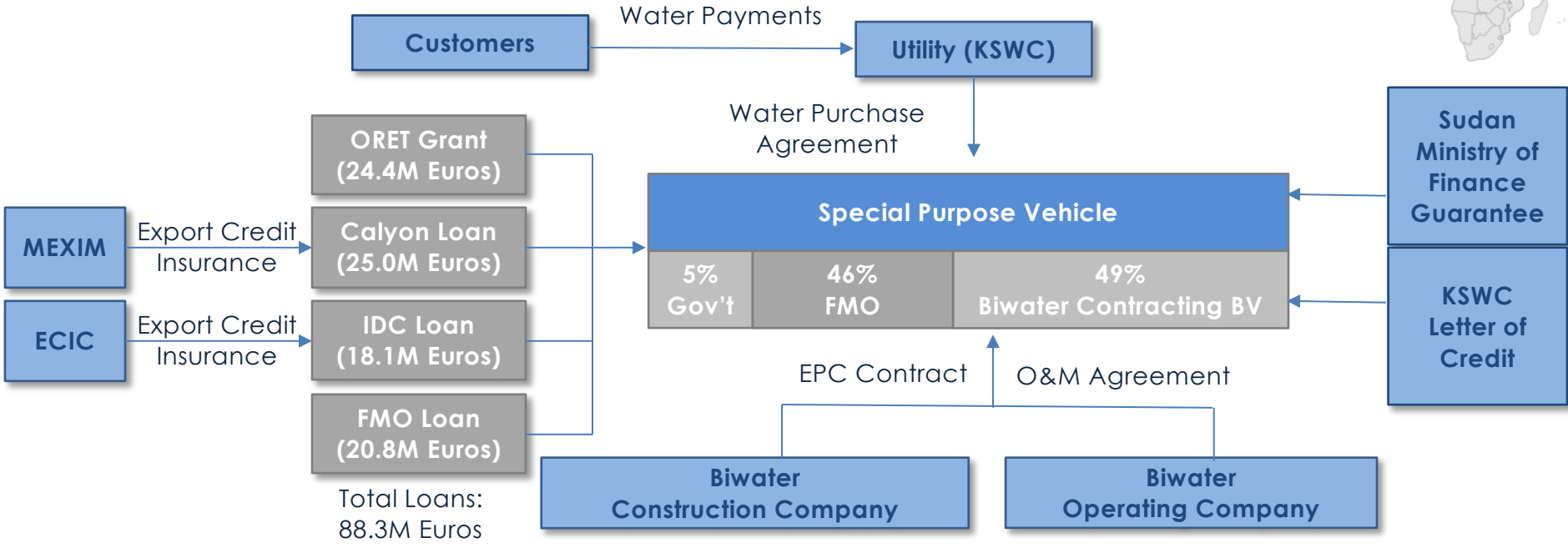
- the inability to source funding for the Sudanese Government;
- the need to produce water at an affordable tariff; and
- insufficient sovereign wealth to make a capital investment into the project.

Project Description

Below is a summary of the details of the deal where the innovative Capital Light funding structure was implemented for the first time, and was awarded Euromoney's Trade Finance Deal of the Year award in 2008 and the Global Water Intelligence Award in 2009.

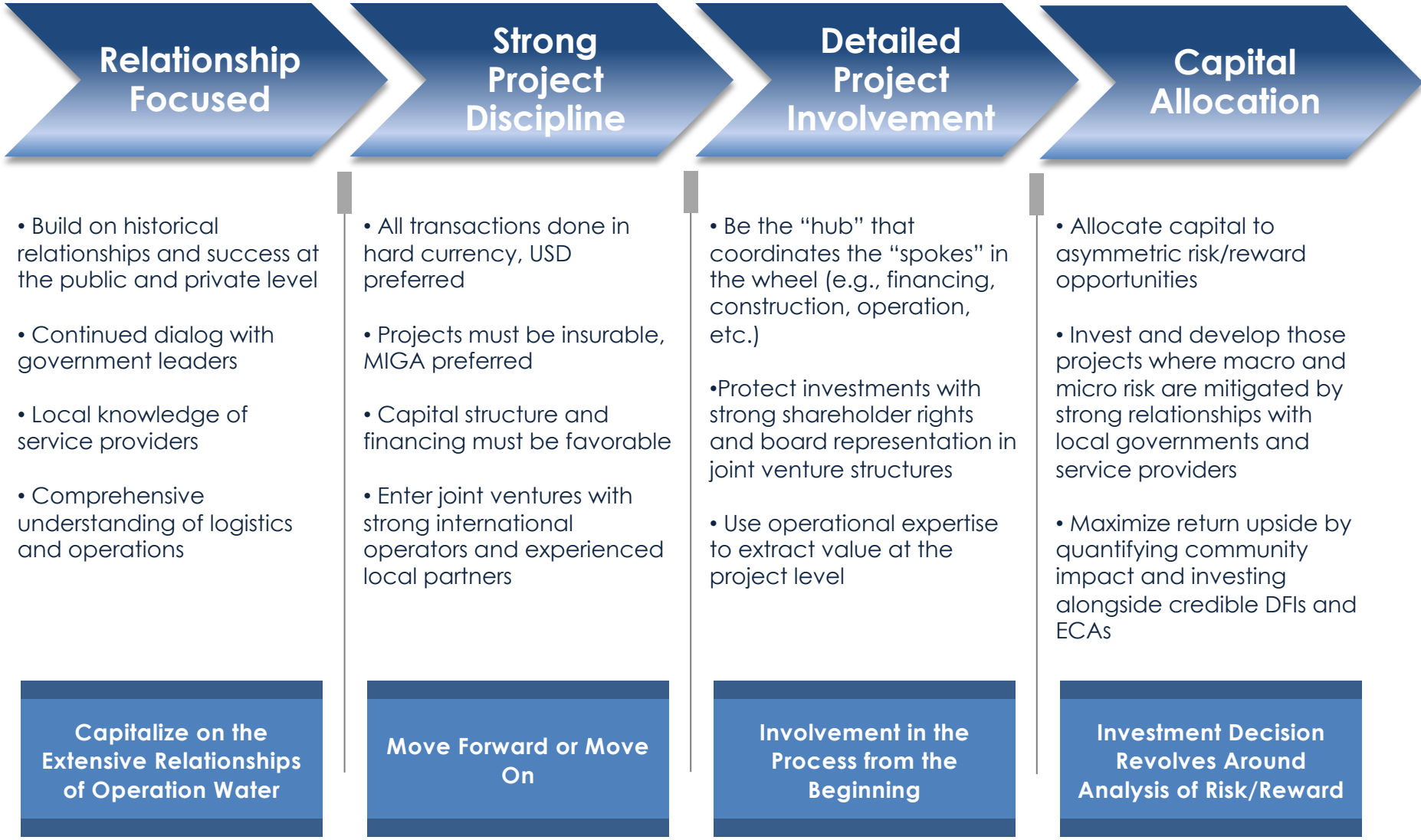
- Total project cost was 88.3 million Euros.
- Public Private Partnership was structured as a special purpose company (SPC) to attract 100% multilateral debt financing from the Netherlands Development Finance Company (FMO), export credit agency-supported bank funding, and an export-assistance grant from the Netherlands (ORET).
- The local water utility (Khartoum State Water Company or KSWC) has a minority shareholding interest in the SPC.
- Private sector contractor (Biwater) entered into a 13-year Water Purchase Agreement with the Government of Sudan (thereafter the plant is to be transferred to the water utility at no cost).
- Operation & maintenance provided by same private sector contractor (Biwater).
- Break-even tariff determined based solely on debt servicing and operating & management costs.

Case Study: Khartoum, Sudan (Cont'd)



Benefits to Sudan:

- Government did not incur sovereign debt / capital burden on its budget.
- Structure facilitated financing from development banks and infrastructure funds focused on private sector investments.
- A single entity builds and operates the facility, therefore the operational risk resides with the contractor.
- The utility (Khartoum State Water Company) only pays for water once the facility has been commissioned. No payments are due during the construction phase; the customers pay an affordable rate for the investment rather than the Government paying for the investment with sovereign funds.
- The final tariff agreed in the Water Purchase Agreement was 24 Eurocents per cubic meter compared to 50 Eurocents per cubic meter had the project been financed on a typical project finance basis.

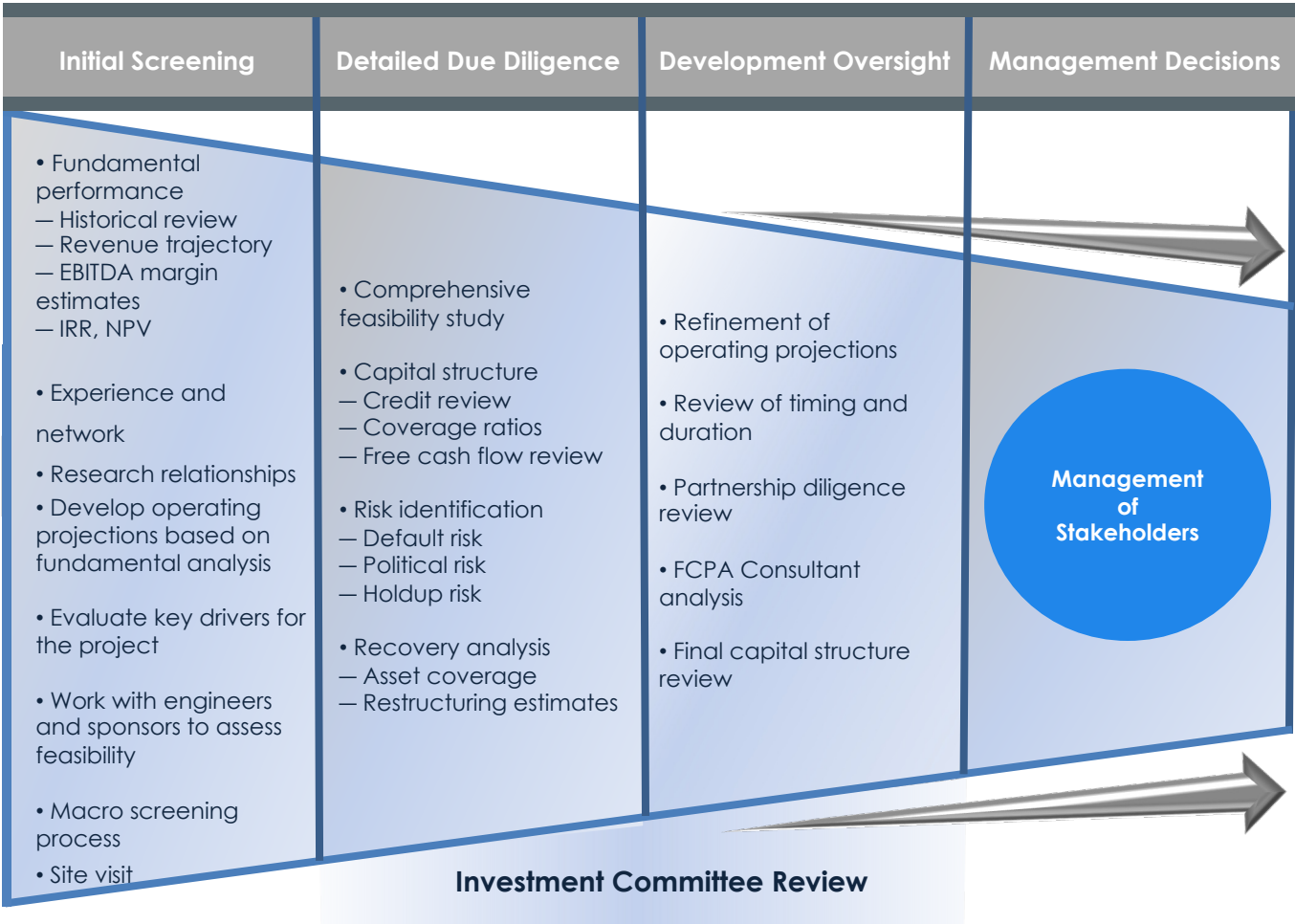


Investment Criteria

Project Metrics	Project Selection	Financial Risk Management	Business Risk Management
<ul style="list-style-type: none"> • Minimum project size: \$10 million • Target geographies: Sub-Saharan Africa, South Asia, the communities most in need • Geographic concentration: No more than 30% concentration in any one country, after the first few projects are operational in each county. 	<ul style="list-style-type: none"> • Project-by-project, top down risk/reward • Country and macro review • Assessment of deal size • Proposed capital structure and counterparties review • Target return • Upon rigorous due diligence, managing partners will approve and be accountable for the project • Investment Committee will make final decision 	<ul style="list-style-type: none"> • Currency: Hedge all local currency exposure when feasible • Interest Rate: Manage any material exposure • Country/ Political: Constantly review political risk coefficient assigned to each country • Facilities/Operations: Manage process and extract value through improving labor and construction timelines and cost • Monitor all parts of project capital structure 	<ul style="list-style-type: none"> • Monthly Investment Committee meetings • Active feedback, constant reassessment of investment thesis (social and financial impact) • Develop/manage strong relationships with stakeholders (governments, utilities, EPC firms, O&M companies, community) • Actively manage compliance, regulatory and tax issues

Investment Process

Management will employ a disciplined strategy of sourcing and evaluating opportunities, negotiating and closing transactions, and managing the operational process.



Executive Board Members

Ryan Phillips-Page

Ryan Phillips-Page is Founder and CEO of Operation Water, and Co-Founder and Board Member of Terra Firma, a registered Canadian charity which has partnered with Operation Water to develop water infrastructure projects in developing countries. He is also a Board Member of Even Ground, a non-profit that funds community-based programs serving disadvantaged youth in South Africa, and an Advisor to Latin American Leadership Academy, which promotes sustainable economic development and strengthens democratic governance in Latin America by developing and connecting a new generation of principled and socially innovative leaders.

Prior to founding Operation Water, Ryan was Founder and CEO of RPP Capital Projects and Finance (Pty) Ltd, a business development consultancy that sources and structures financing solutions for power and water infrastructure projects in Sub-Saharan Africa. In this capacity, he has travelled extensively across Sub-Saharan Africa to meet with Presidents, Ministers, Governors, Director Generals of utilities, and African businessmen to discuss the strategic infrastructure priorities of many African nations.

Previously, Ryan served as Director of Facilities and Operations at African Leadership Academy, a world class pan-African boarding high school located in Johannesburg, South Africa. He was African Leadership Foundation's first staff member and assisted the Founders with networking and fundraising. Prior to moving to South Africa to help launch African Leadership Academy, he served as Vice President of Business Development and Sales at IntellectSpace Corporation, a Seattle-based technology company that serves investment banks, hedge funds, foundations, and law firms.

Ryan started his career in New York City as an Analyst in the Investment Banking Division of Goldman Sachs Group, Inc. He graduated with honors from Boston College's Undergraduate Carroll School of Management with a concentration in Finance.

Yogesh Mago

Yogesh Mago is Founder and President of Operation Water. He is also a Senior Advisor to Ospraie Ag Science LLC, the venture arm of Ospraie Management LLC, a commodities investment firm. Yogesh serves on the Board of Directors of Bioceres Crop Solutions Corp., a NASDAQ-listed company which is a fully integrated provider of crop productivity solutions designed to enable the transition of agriculture towards carbon neutrality. In addition, he is Chairman of the Board of 5Metis, Inc., which innovates new modes of action for sustainable food production by combining boron-based small molecule discovery and synthetic biology. Furthermore, Yogesh is on the Board of Directors of the Canadian charity, Terra Firma, as well as the Advisory Board of Girl Rising, the nonprofit organization behind the worldwide social action campaign for girls' education and empowerment.

Previously, Yogesh was a Senior Investment Analyst at hedge funds Ospraie Management LLC and Merchants' Gate Capital LP. In those roles, he sourced and oversaw portfolio investments across five continents in a variety of industries, including agriculture, travel, consumer, industrials, and real estate. He has over 15 years of experience in public and private equity investing globally.

Yogesh began his career in the Investment Banking division at The Goldman Sachs Group, Inc., in New York City. He received a BS in Economics from the NYU Stern School of Business, graduating magna cum laude with concentrations in finance and international business.

Non-Executive Board Members

Marco Di Girolamo

Marco Di Girolamo is Co-Founder of Operation Water, and Founder and CEO of Terra Firma, a registered Canadian charity, which has partnered with Operation Water to build water infrastructure projects in developing communities in emerging economies. He also serves as Senior Vice President at Brookfield Asset Management, a global alternative asset manager with over \$650 billion AUM, focused on investing in real assets across real estate, infrastructure, renewable power and private equity. Marco manages institutional, financial service, and family office partner (LPs) relationships across Canada for Brookfield.

Before joining Brookfield, Marco advised family offices as a Director/Portfolio Manager for UBS's Private Bank. In this role, he managed discretionary client portfolios on an absolute return basis and ran business development activities. Prior to this role, Marco consulted technology companies in Silicon Valley with Gartner.

Marco completed his MBA with distinction at the Ivey School of Business at Western University in Ontario, Canada, and received a Bachelor of Commerce in Finance at the University of Ottawa.

Mian Azmy

Mian Azmy serves as the Catalyst Club President at Operation Water, and is Managing Director of Global Equity Sales at JPMorgan, serving as Deputy Head of US Franchise Sales. In this capacity, he is responsible for pitching global equity ideas/trades to US based institutional investors. He started his career in New York City as a US Equity Sales and Trading Analyst at JPMorgan, after graduating from Boston College with a concentration in Finance.

Mian was born in Bangladesh and has a passion for sports, investing in cryptocurrencies and stocks, and spending time with his wife and two daughters. His other non-profit affiliations include Project ALS, Leukemia & Lymphoma Society, and the Susan G Komen Breast Cancer organization.

Non-Executive Board Members

Barry Schiffman

Barry Schiffman is a Partner, Senior Advisor and Board member to Mandala Capital. Mandala is the only institutional private equity fund manager that invests exclusively in the food supply and agribusiness sector in India and South Asia. Prior to joining Mandala, Barry worked with a private family office where he was the co-founder of Next Frontier Capital, an emerging markets private equity firm.

While at Next Frontier, he focused on technology and natural resources transactions in the CIS and Africa, and co-founded Viewdle, a facial recognition software company. Barry served as Viewdle's COO and General Counsel, and was a member of its Board of Directors; Viewdle was acquired by Google. He has also served as a board member and General Counsel of The Frayman Group, and has served on the boards of numerous privately held companies in which he has been an active and engaged investor.

Barry began his career as an attorney for Bracewell and Giuliani, and has also worked for Fulbright and Jaworski. He graduated magna cum laude from Georgetown University with a degree in government, received a law degree from Georgetown University Law Center, and is a member of the New York State bar. He serves on the Board of Directors of the Moise Safra Center in New York, and is the Founder and Chairman of the Allgemeiner Editor's Club. Barry is a supporter of the Virunga Fund in the Democratic Republic of the Congo and the Mugie Conservancy in Kenya.

Brett Stewart

Brett Stewart has extensive private equity and investment banking experience in both emerging and developed markets. He is currently Head of US Fintech Banking at Standard Chartered Bank and lives in San Francisco. Brett was previously based in New York and responsible for coverage of the bank's global private equity practice. He also spent over 6 years on the bank's direct private equity investment team in Johannesburg, and coordinated their investment activities in Southern and West Africa.

Prior to joining Standard Chartered Private Equity, Brett was an investment banker in London and New York, initially with Goldman Sachs Group, Inc, and then with Moelis & Company. At Goldman Sachs and Moelis, Brett covered the consumer and retail sectors for both M&A and financing transactions.

Brett started his career at Deloitte's Southern California audit and tax practice. He has an MBA from Columbia Business School and a BBA from the University of Georgia. He was raised in South Africa and is a dual US-South African citizen.

Advisory Board

Chris Bradford

Chris Bradford is Founder and CEO of African Leadership Academy, a world class pan-African boarding high school located in Johannesburg, South Africa. Prior to becoming CEO, Chris served as Executive Vice-President and COO of African Leadership Academy, and the President of African Leadership Foundation, whose mission is to fund leadership initiatives on the African continent.

Chris previously worked in brand management at The Procter and Gamble Company and as a consultant with the Boston Consulting Group. He has also consulted to the Broad Foundation, one of the leading educational foundations in the United States, and taught economics and physics at Oundle School, one of the leading coeducational boarding schools in England.

Chris holds a BA degree summa cum laude in Economics from Yale University and an MBA and MA in Education from Stanford University.

Chris McTammany

Chris McTammany is Founder and CEO of McTammany Partners, a New York City based strategic advisory and recruiting firm that caters to the alternative investment community. He has over a decade of experience placing long/short, fundamental and systematic, public equity investing professionals within global hedge funds and family offices. In addition to managing McTammany Partners, Chris actively raises capital through a broker dealer for a myriad of investment opportunities including hedge funds, private equity funds, special purpose vehicles, and other esoteric ventures.

Prior to launching McTammany Partners, Chris was one of the founding members of CB Global Search, where he individually built and ran their Alternative Investments division. Before joining CB, Chris worked at a family office in Southern California that had over 5 million square feet of office, industrial, and retail properties, making it one of the largest single owner operators of private commercial real estate in California. Chris was the apprentice to the CEO and General Counsel, working on all aspects of acquisition and disposition diligence, portfolio management, and operations. Chris graduated from the Undergraduate Carroll School of Management at Boston College with a concentration in Marketing.

Advisory Board (Cont'd)

Claudette Lavallee

Claudette Lavallee is Founder and General Manager for PROWATER Consultores, a Mozambican consultancy that specializes in Water and Sanitation. She also serves as the embedded adviser for the National Directorate of Water and Sanitation of Mozambique, and manages the Water portfolio for the SPEED+ project, which is financed by USAID.

Previously, Claudette was Team Leader for the Sustainable Water and Sanitation in Africa (SUWASA) program, which works to improve access to safe, reliable, affordable, and sustainable water/sanitation services for unserved and underserved urban populations in sub-Saharan Africa. She was also Program Manager for the Inhambane Rural Water Development Programme, where she led the planning efforts for a pilot implementation of Rural Water programme, and developed the management model for Demand Responsive Approach (DRA). This role was conceptualized through Claudette's work with the Canadian International Development Agency (CIDA), where she was responsible for building the new investment development program for all CIDA projects in the Health, Education, and Water sectors in Mozambique.

While living in Canada and managing her own law firm, Claudette also served as President of the Chamber of Commerce in Mascouche, Quebec, the Founding President of the Development Counsel for the Des Moulins Regional, and the Founding President of the Tourist Development Society, among various other roles.

Claudette received her undergraduate (LLL) and post-graduate (DDN) degrees from the University of Montreal, Canada, and earned an MBA from De Montfort University in Maputo, Mozambique. Claudette serves as a Board Member for the Canada-Mozambique Chamber of Commerce and for Aguashare.

David Nastro

David Nastro joined Morgan Stanley in 1992 and is Head of the Global Power & Utility Group. The Global Power & Utility Group works with the Firm's electric, gas, water and clean energy clients on mergers and acquisitions, strategic advisory assignments and public and private capital markets transactions. He has worked in both Hong Kong and New York on a range of corporate finance and advisory assignments for domestic clients, multinational conglomerates and local governments.

David has been actively involved in many of the industry's leading mergers and acquisitions, including the following recent transactions: Duke Energy's minority stake sale in its renewables business to John Hancock, Aqua America's acquisition of Peoples Gas from SteelRiver, the sale of ITC Holdings to Fortis, Teco Energy's sale to Emera, Duke Energy's sale of its Midwest Generation assets, Teco Energy's acquisition of New Mexico Gas, Dominion's sale of selected merchant generation assets, National Fuel Gas' defense against Activist Shareholders, Duke Energy's spin-off of Spectra Energy, RWE's acquisition of American Water Works, UIL's acquisition of Iberdrola's Gas LDCs, and the formation of Pantellos Corporation (the utility industry's B2B procurement exchange). He has also worked with several sovereign and local governments, public power and municipal utilities in evaluating privatization alternatives and other strategic assignments.

David has worked on several high-profile equity and debt financing transactions. He was recently involved in equity and equity-linked offerings for: Duke Energy, Dominion Resources, Consolidated Edison, Southern Company, Xcel Energy, Entergy Corporation, UIL Corporation, Teco Energy, CMS Energy, Hawaiian Electric, PG&E Corp., and American Water. In addition, he also worked on multiple public and private investment grade debt, high yield, securitization and project finance transactions.

David received a B.A. in Political Science (with honors) from Amherst College and a Masters degree in International Relations (with distinction) from Cambridge University. David has also been a Board member at Water For People and Freedom House, serving as Treasurer and chairing the Finance Committee at both organizations.

Advisory Board (Cont'd)

Denise Cortês-Keyser

Denise Cortês-Keyser is an award winning Entrepreneur, Motivational Speaker, Finance and Investments Adviser, former TV Macroeconomic Analyst and Philanthropist. She founded DCK GLOBAL (DCK Africa), an online platform that empowers women and African entrepreneurs, by promoting intra-Africa trade and investments and created DCK GLOBAL Master Class, a series of interviews on different topics related to "Doing Business". Several African personalities, including politicians, investors, entrepreneurs and philanthropists have participated and shared their knowledge through the platform. Denise is also a non-executive Board Member of New Faces New Voices in Mozambique, an organization chaired by Mrs. Graça Machel, aiming to empower women working in the Financial Sector and promote Financial Inclusion.

Previously, Denise served as the Former Vice-President for Studies, Projects and Marketing Board of the Mozambique Football Federation. From 2013-2015, Denise was the Executive Director of ACIS – Association of Commerce, Industry and Services of Mozambique. ACIS is the biggest Business Association in Mozambique, comprising 400 companies with a combined investment of USD 70 Billion and a workforce of more than 75,000 employees.

Denise is currently an Advisory Board Member of the African Council of Trade, Tourism and Investments (AfCOTTI). She is a Certified Accountant, with an honors degree in Management from Instituto Superior de Ciências e Tecnologia de Moçambique and a post-graduate qualification in Corporate Finance from ISCTE Business School in Portugal.

Efe Ukala

Efe Ukala is a Nigerian US based investment lawyer, philanthropist, and Founder of ImpactHER; an organization that works to bridge the \$42 billion entrepreneurship funding gap experienced by African female entrepreneurs. She connects African female entrepreneurs to sources of funding for their businesses, and has provided free entrepreneurship training to over 4,500 African women entrepreneurs across 28 African countries. Efe also serves as Vice President and Assistant General Counsel at JP Morgan where she advises institutional investors. She has extensive experience in private and public investments arising out of frontier markets, inclusive of Kenya, Nigeria, Ethiopia, Zimbabwe, and Rwanda.

Previously, Efe served as a Vice President and Chief Compliance Officer at Kuramo Capital Management, an independent investment management firm focused on alternative assets in emerging and frontier markets, where she advised on numerous cross-border investments deals across Africa and managed the firm's fund formation processes. At Kuramo, she participated in the firm's Investment Committee meetings, advised on structuring cross-border private equity transactions, negotiated transactions, and drafted agreements. In addition, Efe also advised the firm and its portfolio companies on compliance and Foreign Corrupt Practices Act matters.

Efe received her A.B. from the University of Chicago where she was a Jeff Metcalf Fellow and her J.D. from Washington and Lee University School of Law. Efe is a member of the New York State and New Jersey State Bars. She was an elected member of board of the University of Chicago Black Alumni Association and Vice President of the Association of Black Women Attorneys NYC.

Advisory Board (Cont'd)

Johan Oelofse

Johan Oelofse co-founded Operation Water, and specializes in innovative structuring techniques, which is often required to mitigate risks to secure finance for projects in Africa. Johan is currently a Director at OSK International, a South African company that delivers fully managed projects, a design and build service, covering every aspect of commercial office interiors.

Prior to joining OSK, Johan was Founder and Managing Director of Capital Lite Finance (Pty) Limited, and also worked as a sole proprietor, where he advised and arranged finance for infrastructure projects across the African continent. Representative completed projects include a bulk water treatment plant in Sudan, water and sanitation projects in Seychelles, and rural electrification projects in Ghana. The financing structure he created for the bulk water treatment plant in Sudan won Euromoney's Trade Finance Deal of the Year award in 2008, and is the structure used by Operation Water.

Johan has over 30 years of experience in assessing and executing infrastructure projects on the African continent. He has worked for ABSA Bank, Nedbank Africa, Nedcor Investment Bank, and Societe Generale in South Africa as well as Credit Guarantee Insurance Corporation of Africa Limited where he was responsible for their projects division.

Manuel Alvarinho

Manuel Alvarinho is the President and Founder of the Aquashare Association, a non-profit network of water sector professionals from Mozambique. Alvarinho is also on the board of Trustees of WaterAid, which has reached 28.8 million people with clean water, transforming the lives of women for more than 40 years. He also has extensive international water sector experience through his work with the World Bank, WHO, and UNICEF.

Alvarinho recently retired as President and Founder of the Water and Sanitation Regulatory Council (CRA) of Mozambique, an independent regulator of urban water supply and sanitation services, now known as AURA. While leading CRA, he drafted and implemented a cost recovery strategy for metropolitan water utilities, engendering sustainable operations in major cities and impressive growth of national coverage, which promoted a pro-poor strategy to expand affordable services to the urban poor. Under his leadership, CRA also developed a benchmarking system to evaluate and compare the performance of water utilities.

Prior to CRA, Alvarinho held numerous instrumental roles in the water sector in Mozambique. As the UNDP Project Coordinator within the National Directorate for Water Affairs, he led a team of advisors to support the implementation of the National Water Policy as well as enhancing the Sector Investment Planning and Project Portfolio. The project made a crucial contribution in reinforcing Mozambique's positioning on issues pertaining to international rivers within the Southern African Development Community (SADC), the adoption of the SADC Protocol on Shared Water Courses, and the Transboundary Agreement for the Incomati and Maputo Rivers, which involved South Africa, Swaziland and Mozambique. His previous roles also include: Head of Department of Water and Sanitation at the National Directorate for Water Affairs, Mozambique; General Manager of the National Water Supply and Sanitation Board, Mozambique; and Senior Water Expert in a UNDP Programme for the Southern Region of Angola.

Alvarinho began his career as an Engineer at the National Directorate for Water Affairs, Mozambique. He received his Degree in Civil Engineering, specializing in hydraulics, at Eduardo Mondlane University, Maputo, and his Postgraduate Diploma in Water Resources Planning and Management at Università per Stranieri, Perugia, Italy. Alvarinho recently attained his Doctor Honoris Causa in Technological Sciences, by University of Technology of Delft, Netherlands, in 2017.

Advisory Board (Cont'd)

Mikael Jansen

Mikael Jansen has over 20 years of business development and project management experience across Africa, Latin America, and the Caribbean. Currently, Mikael serves as Sales Director at Babcock & Wilcox Vølund, which manufactures, constructs, maintains, and operates renewable energy plants, with a focus on waste-to-energy.

Before joining B&W Vølund, Mikael was the Business Development Manager for Haldor Topsoe for over 10 years, contracting large-scale fertilizer projects from corporate headquarters in Denmark and overseas offices in Argentina, Brazil, and South Africa. In this capacity, he met with political and business leaders to develop strategic projects that aimed to alleviate food shortages in developing nations.

Prior to Haldor Topsoe, Mikael served as a Sales Project Manager at Burmeister & Waine Scandinavian Contractors, structuring turnkey power plant projects in undeveloped regions. He also previously worked with environmental technology firms, Oreco and FLS Airtech, overseeing the financing of air pollution control and oil spill control projects in close cooperation with export credit agencies and other funders.

Mikael began his career as a Sales Manager at Maersk Industry. He graduated with a BS in Production Engineering from the Technical College of Odense.

Dr. Mima Nedelcovych

Dr. Mima Nedelcovych is Founder and CEO of Africa Global Partners, a consulting firm which focuses on trade facilitation, project development, project finance, and public-private partnerships in Africa, and is Executive Chairman of Schaffer International Services, a project developer of agro-industrial and renewable energy projects in Africa and Central America. He also serves as the President Emeritus & Senior Advisor of the Initiative for Global Development (IGD), an NGO that engages corporate leaders to reduce poverty through business growth and investment in Africa.

Previously, Mima was the lead Partner for the Schaffer Global Group in the establishment of the Markala Sugar Project in Mali. He has also served as Country Director in Liberia for Buchanan Renewables, and in the Administration of President George Bush as the U.S. Executive Director to the African Development Bank. Mima started his work in Africa as the Peace Corps Country Director for Gabon.

Mima serves on the Boards of Vista Bank, Marathon International Bank, and the Advisory Board for Millennium Challenge Corporation. He received a BA from Yale University, an MA in International Relations from George Washington University, and a PhD in Comparative Political and Economic Development from Florida State University.

Advisory Board (Cont'd)

Nyananso Gabriel Ekanem

Nyananso Gabriel Ekanem is Founder and Managing Consultant at Weircapacity Ltd, an infrastructure and management consultancy that provides advisory services for the Water, Environment, and Infrastructure sectors.

Prior to founding Weircapacity, Nyananso was responsible for PPP contract management for the Federal Government of Nigeria Regulatory Agency for Public Private Partnerships. As an independent consultant, he worked on Government and Civil Society partnership projects, including a European Union supported Water and Sanitation sector reform programme; this comprised Policy and Legal Reform, Institutional Reform, Financial Sustainability, Technical Capacity Assessment, Community Water Management, and Monitoring and Evaluation.

Nyananso earned a Masters Degree in Water and Environmental Management from the Water, Engineering, and Development Centre at Loughborough University in England.

Paulo Jorge Veiga

Paulo Jorge Veiga has over 20 years of management experience across Sub-Saharan Africa, Europe, Southeast Asia, and the Middle East, and is a Founding Partner and CEO of Power-Blox Africa SA, the local affiliate “on the ground” in Africa, responsible for the implementation of the Power-Blox swarm electrification solutions. With offices in Angola and Mozambique, Power-Blox Africa works actively with local governments, development finance institutions, telecommunications and media companies, as well as local communities to implement sustainable power solutions for the empowerment of local communities.

Paulo is also the Principal Consultant for OBT Group SA, where he leads a team of international experts tasked with the development of a Sustainable Palm Oil Industry strategy framework in Angola. He also advises leading private and government related organizations and agencies on strategic industrial policy and foreign direct investment, with a focus on sustainable agriculture.

In addition to his current consultative and advisory roles, Paulo is the Chairman and Founding Partner of Falck Angola SA (part of Falck Group), where he led the establishment and localization of the O&G Offshore Safety Division - the world's premier group in Emergency Services, Healthcare, and Safety Training. He was also a Founding Partner of the O&G cluster organization in Angola, Offshore Center Angola.

Previously, Paulo was the Founding Partner and Principal Consultant at Clear Stone Group, which focuses on localizing and growing top international blue-chip clients in Angola. While leading Clear Stone, he brought Operation Water into Angola, and continues to serve as our local partner in Angola.

Paulo has also worked with Offshore Energy, NL Supervision Company, the Angolan Ministry of External Relations, and many other organizations in various capacities throughout his career. He earned an MBA with distinction and a Bachelors in Civil Engineering from University of London.

Advisory Board (Cont'd)

Peter Macy

Peter Macy has 40 years of experience in all aspects of water supply, sanitation, and wastewater engineering, and is Founder, President, and CEO of ROCKBlue. ROCKBlue is a social enterprise that partners with public utilities to collaboratively solve the management and institutional challenges of providing reliable and high-quality potable water and sewerage to urban customers.

Prior to founding ROCKBlue, Peter served in multiple capacities with CDM Smith, and oversaw their management of over \$2 billion in infrastructure operations across Africa. He has also worked within and for numerous public utilities, including utilities in Mozambique, Tanzania, Zimbabwe and Lesotho.

Peter has lived most of his life in Africa and started his career as a Peace Corps Volunteer in Togo and the Central African Republic. He earned a BS in Industrial Engineering and Operations Research (IEOR) from Syracuse University.

Satish Menon

Satish Menon is the Founding Partner of Atethemis Inc, an international development consultancy that provides program planning, design, implementation, and management support for global development projects. Atethemis has a track record of successfully executing development projects that deliver sustainable water & sanitation service, with a focus on environmental integration, and social and gender inclusion. Satish also serves as a board member for ROCKBlue, and is a director and film producer.

Satish has extensive experience in leading projects in water treatment and distribution, wastewater collection and treatment, and storm water collection and detention. He also has experience in master planning and feasibility studies, and conducting risk assessment and mitigation exercises.

Satish earned a BA in Civil Engineering as well as a Master of Science in Environmental Engineering from Michigan State University.

Advisory Board (Cont'd)

Simiso Velempini

Simiso Velempini is Founder and Managing Director of Vele Africa Advisory, an Africa-focused strategic advisory firm that provides exclusive support to corporates, development finance institutions, donors, family offices and individual investors throughout the investment lifecycle. The company's services include market entry assessments; political and policy risk analysis; pre-transactional integrity due diligence; ESG advisory; government and public affairs advisory; stakeholder mapping and engagement; reputation and crisis management guidance; and non-litigious dispute resolution support.

Prior to starting her own firm, Simiso was CEO of Africa Matters, where she led the company's strategic direction and advised clients on mergers and acquisitions, stakeholder engagement, reputational risk management and non-litigious dispute resolution. Previously, she led the Africa practice at K2 Integrity, where she served as Managing Director, and led the Africa team's investigations, intelligence gathering and dispute resolution work.

Before joining K2 Integrity, Simiso was based in Johannesburg where, as Vice President of Reputation Management at Barclays Africa, she advised the business on reputation management for specific issues related to transactions and relationships across 12 African markets. Prior to joining the bank, Simiso worked as the Southern Africa analyst at Control Risks, where she provided bespoke political and policy analysis as well as risk consultancy for a range of clients across multiple sectors in Africa.

Simiso holds a BA (Languages), a BA (International Relations) and a BA (Honors) in International Relations from the University of Pretoria. She also holds a MA in International Security from Sciences Po, Paris and an MSc in International Relations from the London School of Economics.

Dr. Upmanu Lall

Dr. Upmanu Lall is the Director of Columbia Water Center, leading intellectual inquiry into the assessment, understanding and resolution of the most pressing global water issues. Through Columbia Water Center, he has led projects in multiple countries on water and climate sustainability, risk analysis and mitigation, infrastructure solutions, and the integration of financial instruments. He is also the Chair of the Department of Earth & Environmental Engineering at Columbia University, an Alan and Carol Silberstein Professor of Engineering, and a Senior Research Scientist at International Research Institute for Climate & Society. Upmanu's work has received the Henry Darcy Award from the European Geophysical Union, and the Arid Lands Hydraulic Engineering Award from the American Society of Civil Engineers, among others.

While at Columbia Water Center, Upmanu conceived of and has been pursuing the "America's Water Initiative", where he has been developing research and advocacy towards comprehensive national water, energy, agriculture planning informed by climate, and decentralized, "one water" solutions as the future direction for US and global water infrastructure. His work ranges from basic research on hydroclimatology and data science to applied research on systems design and optimization, policy analysis and innovation, and field engagement. Upmanu's research and ideas have been published and aired in leading publications and networks, including: World Economic Forum, European Commission; CBS Marketwatch; Statistics Views; Business Insider; CSR Wire; Bloomberg News; The Mcbride Network; Environment & Energy News; Economist, National Geographic, NY Times, Washington Post, USA Today, CBS, ABC News, CNN, PBS, NPR, BBC, among many others.

Prior to joining Columbia University, Upmanu had an extensive career as a Professor in the Civil & Environmental Engineering department at University of Utah. While at the University of Utah he led the Utah Water Research Lab, the oldest and among the largest university-based water research facilities in the United States.

Upmanu began his career as a Prestressed Concrete Development Engineer at ISMAL, Ranchi, India. He acquired his Bachelor of Technology degree in Civil Engineering at Indian Institutes of Technology, and his Masters and PhD in Civil & Environmental Engineering at the University of Texas.

