

The Durban Water Recycling Project:

Creating shared values between
Municipalities and Industry

DWR PROJECT PRESENTATION

18 September 2018



Project Objective

To treat 47.5 MI/d of municipal wastewater to a near potable standard for direct reuse in industrial processes.



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Project Motivation

- **Alternative to augmentation of the city's Southern Wastewater Treatment Works marine outfall.**
- **Mondi Paper expressed the desire to increase it's off take of reclaimed water**



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Project History

- **1993 - Mondi approached Durban for the provision of additional recycled water.**
- **1994 - Durban implemented a technical feasibility study.**
- **1995 - Pilot plant process investigation indicated the technical viability of the project.**



Project History

- **1996 - Durban undertook construction of the secondary treatment plant.**
- **1997 - Rand Merchant Bank indicated the financial feasibility of the project.**
- **1998 - Durban invited tenders for a Public Private Partnership**



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Project History

- **1999 - The concession contract was awarded to Durban Water Recycling**
- **2000 - Plant construction began.**
- **April 2001 - Plant commissioning.**
- **May 2001 - First water sales**



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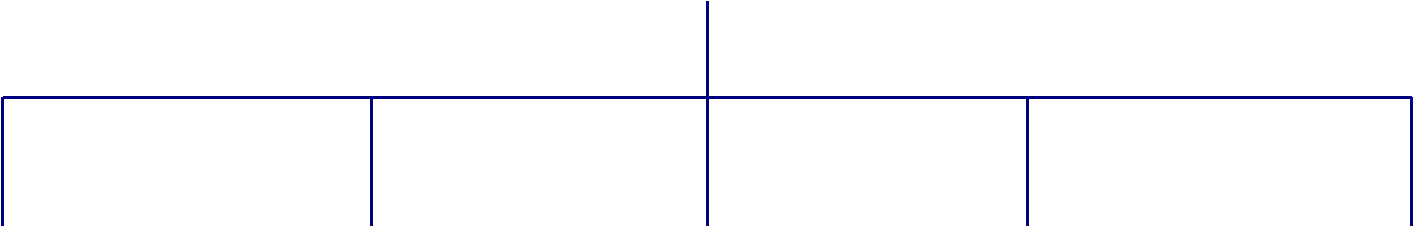


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The Project Consortium



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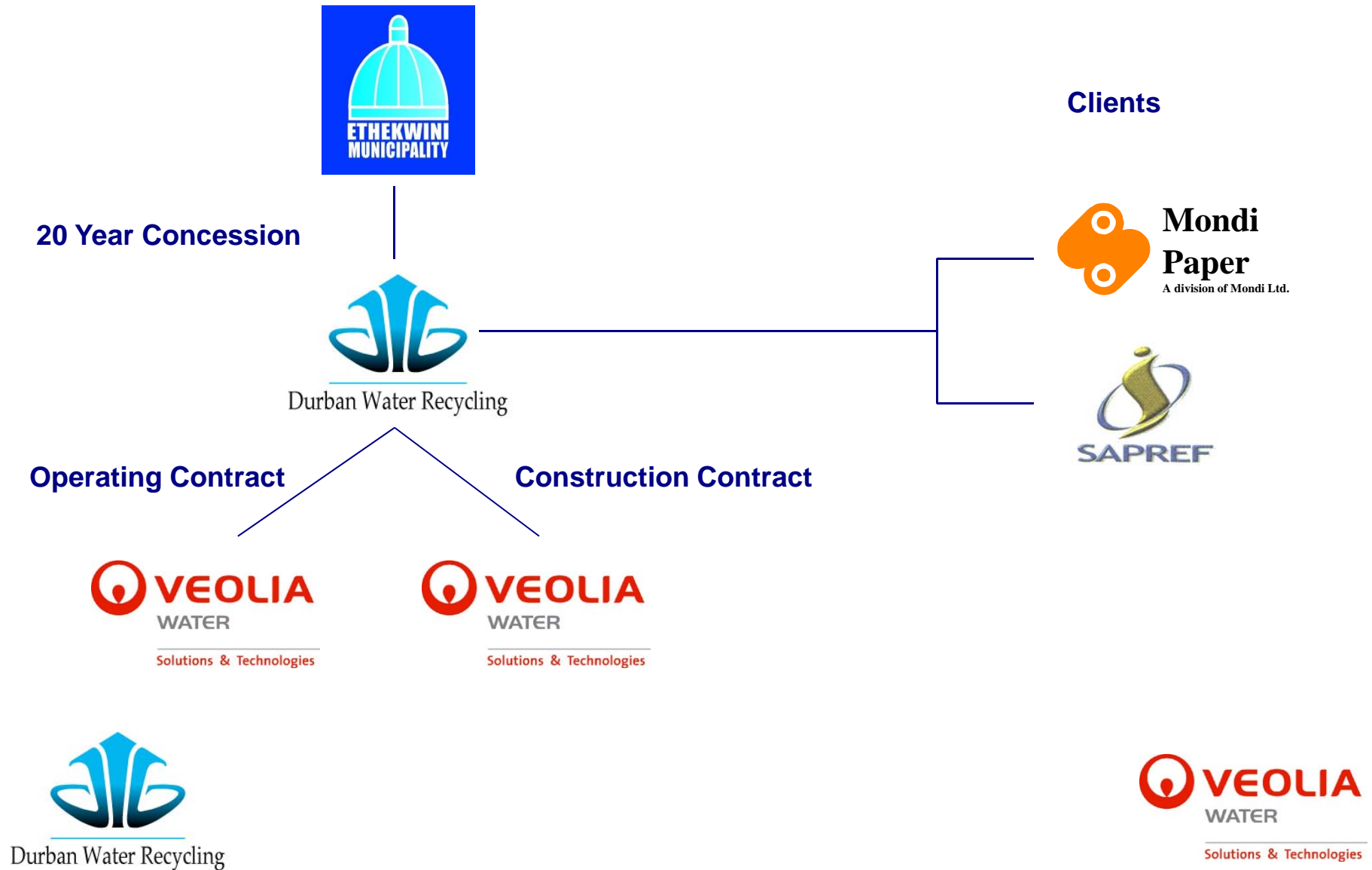


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Contractual Framework



Project Achievements - Environment

Sustainable Development of Water Resources

- **At capacity the plant reduces the city's water consumption by 7%.**
- **Extends the life of the city's water catchment resources.**
- **Unused water can be directed to unserved communities.**



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Project Achievements - Environment

Pollution Load Reduction and Waste Minimisation

- **Reduction in the sea outfall pollution load by 24%**
- **The process operates at 97.9% water utilisation efficiency**



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Project Achievements - Partnerships

- **The 20 year concession is the first PPP of its kind in South Africa.**
- **Strong reliance on the relative expertise of the partners.**
- **A model of success for PPP's in South Africa.**



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Project Achievements - Economics

The City

- **Delayed capital investment for increased marine outfall pipeline capacity.**
- **Delayed capital investment for future bulk potable water supply infrastructure.**
- **No capital investment for the construction of the recycling plant.**



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Project Achievements - Economics

The City, continued

- **Creation of a long term revenue stream from a levy raised on the production of recycled water.**
- **Reduction in the city's operating costs.**
- **Consequent reduced cost of water services to Durban's citizens.**



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Project Achievements - Economics

Durban Water Recycling (Pty) Ltd.

- **Attractive investment opportunity.**
- **Sustainable, long term project**
- **Demonstration of the company's technical capacity.**



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Project Achievements - Economics

Mondi Paper and Sapref

- **52% saving in water tariff**
- **Probable lower escalation of recycled water than potable water.**
- **Significantly enhanced drought supply security.**



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Project Achievements - Technical

- **Treatment of wastewater to a very high quality standard**
- **Extensive re-use of existing infrastructure**
- **Compact design**
- **Fast track design and construction**
- **Waste minimisation**



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Conclusions

- **A MODEL FOR SUCCESSFULL PUBLIC PRIVATE PARTNERSHIPS**
- **SEWAGE IS NOW A POTENTIAL RESOURCE**
- **A VISION FOR THE FUTURE: PRODUCTION OF POTABLE WATER FROM SEWAGE ?**



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