

## Curriculum Vitae

Name:	Roland Liemberger
Nationality	Austrian
Date of Birth	22 July 1958
Profession	Water Utility Analyst
Company	Liemberger & Partners GmbH
Position in Project Team	
Years of Professional Experience	19

### Key Qualifications:

Roland Liemberger, for the last 5 years Managing Director of Bristol Water Services has started his own consultancy business in 2003. His professional career began in 1985 and as early as 1987 he decided to specialize on water distribution networks, specifically water loss reduction and network rehabilitation. Following this specialization, he has been continuously working overseas and has developed a wide-ranging experience in all aspects of water distribution network management. For example:

- Water Audits
- Production and consumption metering
- Non-revenue water (NRW) analysis and reduction
- Network rehabilitation
- Network operations and maintenance
- Institutional strengthening
- PSP project and contract design
- Leakage and Demand Management

Roland is Vice Chair of the IWA Water Loss Task Force and a member of the AWWA Leak Detection & Water Accountability Committee. Roland has worked in Austria, Bosnia & Herzegovina, Bulgaria, Croatia, Egypt, Germany, India, Indonesia, Jordan, Kazakhstan, Kuwait, Malaysia, Nepal, Philippines, Sri Lanka, Tajikistan, Turkey, United Kingdom and Uzbekistan and has published a number of specialised papers (see below).

During the last 5 years Roland was heavily involved in developing and promoting the concept of performance based Non-Revenue Water reduction contracts. He has designed the implementation programme of the Selangor NRW reduction contract.

Since 1996 Roland is engaged in the IWA Water Loss Task Force and was involved in the work on Performance Indicators which has lead to the IWA's Best Practice Manual.

### Languages:

	Speaking	Reading	Writing
German	Mother tongue	Mother tongue	Mother tongue
English	Excellent	Excellent	Excellent

## Education:

Centre of Education or Professional Body	Qualification or Position	From	To
HTL, Vienna Technical College	BSc Civil engineering	1972	1977
University of Bodenkultur, Vienna	BSc (Hons) Water and Sanitary Engineering	1977	1982
University of Bodenkultur, Vienna	MSc Municipal Water Engineering	1982	1985
International Water Association	Vice Chair, Water Loss Task Force	2002	To Date
American Water Works Association	Member, Water Loss Control Committee	2001	To Date
Austrian Association of Water Engineers	Chartered Engineer	1999	To Date

## Experience Record:

From	To	Company	Country	Project	Details and Level of Responsibility
2003	2003	Liemberger & Partners	Vietnam	Leakage and Network Management Option Study for Ho Chi Minh City Water Company	Consultant to the World Bank; objective of the assignment was to review existing data and prepare options for PSP in all aspects of NRW reduction – with special focus on performance based contracts.
2003	to date	Liemberger & Partners	Austria	various	Founder and Managing Director of L&P, a consulting firm specialised in Water Utility Analysis and Advisory services with special focus on efficiency gains through NRW reduction.
2003	2003	BWS	India	Water Sector Reform: Introducing 24 hour water supply	Team member and NRW reduction analyst in this initiative sponsored by the Water and Sanitation Programme (World Bank).
2003	2003	BWS	India	Karnataka Urban Water Supply Project	Project Manager of a World Bank funded NRW base lining study for the cities of Gularga, Belgaum, Hubli and Dharwad. Assessment of the present level of water losses and design of a strategy to re-establish 24h supply
2003	2003	BWS	Sri Lanka	Privatisation of the Negombo and Kalutara to Galle Coastal Strip Water Supply Schemes	Project Manager of World Bank funded baseline study to assess present levels of service and NRW, design an NRW reduction strategy. Main objective to prepare 15 forecasts for NRW reduction and related investments.
2001	2002	BWS	Tajikistan	Dushanbe Water Supply Project	Transition Advisor for the Dushanbe Management Contract (World Bank). Responsible for the establishment of performance indicators and targets, cost estimates, determination of required services and related standards as well as for support of the Client during the bidding process.
2001	2002	BWS	Kazakhstan	Northeast Kazakhstan Water Supply Project	Project Manager for the “Demand, Consumption and Water System Analysis” in the cities of Karaganda, Temirtau and Kokshetau (World Bank).
2000	2003	BWS	UK/Austria		Managing Director of Bristol Water Services Ltd. Responsible for general management, business development as well as the provision of senior NRW reduction, leakage management and network rehabilitation expertise
1999	2000	BWS	Bosnia & Herzegovina	Mostar Water and Sanitation Project	Project Director. Responsible for the demand, consumption and water system analysis (World Bank)

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1999	1999	BWS	Uzbekistan	Bukhara and Samarkand Water Supply and Waste Water Project	Senior NRW Reduction Specialist & Project Manager for the "Demand, Consumption and Water System Analysis" (World Bank)
1998	2001	BWS	Malaysia	Selangor NRW Reduction Project	NRW Reduction Advisor for the World's largest Water Loss Reduction Contract. Detailed design and supervision of the real and apparent loss reduction strategy during Selangor Phase 1 and Selangor Phase 2 contracts. Including the design of the proposal for the US\$ 105 M Selangor Phase 2 Contract.
1998	2000	BWS	Austria/UK		General Manager of BWS, overall responsibility for BWS' NRW reduction projects
1997	1998	SEBA Messtechnik	Bulgaria	Pilot Project "Mladost2" in the City of Sofia	Project Director. Improvement of network efficiency, reduction of unaccounted-for water, institutional strengthening, review of the government's private public partnership concepts, advisory services towards the management of the Sofia water utility.
1997	1998	SEBA Messtechnik	Bosnia & Herzegovina	Water Distribution Network Rehabilitation Project	Project Director of the Water Distribution Network Rehabilitation Project, Sarajevo, Bosnia, financed by the European Commission (DG1A). Scope of the project <ul style="list-style-type: none"> <li>• Analysis of the water supply system</li> <li>• Water pricing</li> <li>• Institutional strengthening</li> <li>• Capacity building</li> <li>• Design of the network rehabilitation project</li> <li>• Preparation of tender documents</li> <li>• Preparation of cost estimates</li> <li>• Leakage modelling</li> </ul>
1996	1996	SEBA Messtechnik	Bosnia & Herzegovina	Rehabilitation of 4 Water Supply Systems	Project Coordinator of the "Rehabilitation of the Water Supply Systems in Jajce, Zepce, Tesanj and Travnik Project", BiH, responsible for the entire implementation of the project. The project comprised analysis and rehabilitation of the water supply systems in the above mentioned cities, including supply of materials and construction supervision and was financed by the Austrian Federal Chancellery.
1996	1996		Indonesia	Water Loss Reduction (Sector) Project	NRW reduction specialist in an international consulting team working for the ADB - financed "Water Loss Reduction (Sector) Project" for the Government of Indonesia. Scope of work: <ul style="list-style-type: none"> <li>• Analysis of NRW situation in 4 cities (Bandung, Karawang, Sleman, Tegal)</li> <li>• Preparation of NRW reduction concepts</li> <li>• Estimation of needed materials and civil works</li> <li>• Determination of staff training needs</li> <li>• Design of a capacity building program</li> <li>• Preparation of detailed cost estimates as well as overall cost breakdown for the entire sector loan (70 Mio \$)</li> </ul>
1994	1996	SEBA Messtechnik	Philippines	Metropolitan Waterworks and Sewerage System, Manila	Network Management Advisor. Advising MWSS on all aspects of NRW reduction, design and supervision of a NRW reduction pilot project.
1994	1994	SEBA Messtechnik	Turkey	ERZINCAN Earthquake Rehab.	NRW Specialist for the water loss reduction programme

From	To	Company	Country	Project	Details and Level of Responsibility
1994	1994	SEBA Messtechnik	Jordan	Operations and Management Support Project	Advisor for the NRW reduction part of the 'Operations Management Support Project', AMMAN, Jordan. Short time visits to Amman for the preparation of a water loss analysis program.
1993	1994	SEBA Messtechnik	Kuwait	Reduction of unaccounted-for water Project	Several short term missions from Egypt to Kuwait, as NRW expert for the "Reduction of unaccounted-for water Project. Responsible for project planning, data evaluation and Interpretation as well as the preparation of final reports and recommendations.
1989	1994	SEBA Messtechnik	Egypt	Network Rehabilitation for Kafr El Sheikh Governorate	Leakage Manager for K10/K11, responsible for network investigations, mapping; design supervision and implementation of a leakage reduction strategy
1988	1988	SEBA Messtechnik	Nepal	Leak Detection and Repair Project	Project manager and Leak Detection Engineer for a GTZ "Leak Detection and Repair Project" in KATMANDU and PATAN (Nepal).
1987	1988	SEBA Messtechnik	Austria, Germany	various	Water Loss Analysis And Reduction In Various Projects In Austria and Germany
1985	1987	Friedreich & Partners	Austria	various	Design of water pumping and transmission facilities

### **Selected Publications:**

- 2003 Aqualibre™ - A New Innovative Water Balance Software, (IWA & AWWA Conference on Efficient Management of Urban Water Supply, Tenerife, April 2003 )
- 2003 Competitive Tendering of Performance Based NRW Reduction Projects, (IWA & AWWA Conference on Efficient Management of Urban Water Supply, Tenerife, April 2003 )
- 2002 Do You Know How Misleading the Use of Wrong Performance Indicators can be?, (IWA Managing Leakage Conference, Cyprus, November 2002)
- 2002 Outsourcing of Water Loss Reduction Activities – the Malaysia Experience, (AWWA ACE New Orleans June 2002)
- 2002 The Water Topic of the 21st Century: Non-Revenue Water Reduction, (Asian Water Magazine, April 2002)
- 2001 Performance Target Based NRW Reduction Contracts - A new Concept Successfully Implemented in Southeast Asia, (IWA 2nd World Water Congress, Berlin, October 2001)
- 1998 The Never-Ending Story: Reducing Water Losses to Acceptable Levels, (aqua press International, Vienna)