

Reform of Astana Vodokanal using Private Sector Involvement

**A project to explore
opportunities for private sector
involvement**

(Jon Bateman)

Objectives of Programme

- In the long term, the introduction of sustainable safe and efficient water and wastewater services
- In the short term, improved financial and operational performance and improved service quality and efficiency

Objectives of Project

- Improve quality and efficiency in the provision of water and wastewater services
- Improve financial viability

Achieving these might include

- Financial provision for priority investment
- Institutional strengthening
- Increased autonomy for vodokanal
- Private sector involvement

Specific Objectives of Study

- Identify problems and possible solutions
- Formulate long term and priority investment programmes
- Consider and discuss possible future options for private sector involvement
- Develop a bankable project which could be financed by EBRD
- Produce an implementation plan

Challenges facing Vodokanal

- Supporting development of new capital city
- Higher expectations of customer service
- Stricter legal controls (regulation) on
 - Drinking water quality (waiting to be implemented)
 - Environmental standards (with fines for non-compliance)
- Inability of government to fund investment in the service

Other factors affecting Vodokanal

- Arrears of asset maintenance / replacement
- Inability of many customers to pay full economic cost of water and wastewater services
- The high relative cost of electrical energy

Legal and Institutional Context

- New laws on drinking water quality before parliament
- New laws on concessions
- Pressures to strengthen the powers of anti-monopoly committee regarding tariff setting

Findings from Fieldwork

- Competent and qualified operational staff committed to providing the best service possible with the assets available
- Improving revenue collection rates
- Barter decreasing as a proportion of total revenue
- Increasing use of household meters
- Increasing use of computers in billing

Findings (continued)

- A justifiable case for priority investment to:
 - Replace inefficient pumping equipment and reduce high energy cost
 - Renew deteriorating water and sewerage networks to improve quality and service standards
 - Provide efficiency tools and management aids
- A general need to improve revenue recovery
- Serious water rationing at key times

Financial Assessment (1)

- **Current financial situation:**
 - High level of accounts receivables
 - Negative working capital
 - High levels of barter settlement
 - Losses over past few years
 - Fixed assets need to be revalued
 - Insufficient depreciation charge

Financial Assessment (2)

- **Points of attention**
 - External audit
 - Fair statement of accounts
 - Improve lines of reporting
- **Urgently needed improvements**
 - Introduction international accounting standards
 - Provisions for doubtful debts / write-offs
 - Re-valuation of fixed assets;
 - Appropriate depreciation rate;

Financial Assessment (3)

- **More improvements needed:**
 - Reduce share of barter transactions;
 - Implementation of computerized bookkeeping system
 - Better co-operations all departments;
 - Improve lines of reporting
 - Internal audit and controls

Governance / Control Structure

Akimat

- Owner and main source of finance

• Anti-monopoly committee

- Economic regulation through tariff-setting

• Ministry of health

- Regulation of drinking water quality

• Environment ministry

- Use of water resources and regulation of discharges

**This is typical of many countries in the world
prior to water sector re-structuring**

Other Institutional Links

Ministry of Economy and Trade

- Regulation of customer relations through “rules for the use of communal water supply and sewerage systems”
- Regulation of construction through “construction norms and rules”. These regulatory documents are legally binding

Basis for Relationship of Vodokanal with Akimat

This relationship is determined by

- The VK charter (1996)
- The director's contract of employment

Preparation of revised charter in progress to take account of

- Changes to the civil code
- Law on bankruptcy
- Labour code

Actual Relationship of Vodokanal with Akimat

Despite the terms of its charter, the relationship is characterised by

- A high level of dependency
- Limited delegation in relation to planning, finance, design and procurement of new works

Vodokanal is, for practical purposes, an operational department of the Akimat

Operational Assessment

The assessment covers the following issues

- Levels of service
- System capacity
- Asset condition and serviceability
- Staffing and organisation

Levels of Service

Acceptable levels of service are currently maintained

This results from 3 factors

- The good quality of the raw water
- The large margin of spare capacity in relation to current demands
- The heroic efforts and technical skills of operational staff

**Drinking water and effluent discharge
quality comparable with those in EC
countries**

System Capacity

- System capacity exceeds demand due to a number of factors including
 - High original provision of reserve capacity
 - Reduced demand for industrial water
- Factors which will tend to reduce this margin are
 - The planned rapid population growth
 - Introduction of lower quality raw water

**Reduction of household water use and leakage
could allow investment in new treatment
capacity to be deferred for at least 10 years**

Asset Condition / Serviceability

- **Buildings and structures** - in better condition than found elsewhere in ex-soviet countries, possibly due to better original workmanship
- **Mechanical and electrical plant** - much in poor condition and needing replacement within 3 to 5 years to avoid system failure

Asset Condition / Serviceability

- **Water mains and sewers** - needs further study but burst / leakage rates indicate that a long term, renewal programme is required
- **Health & safety** - operational sites do not conform with current practice. **Storage facilities for liquid chlorine at the main filtration plant pose a particular threat in an urban location**

Staffing / Organisation

Staffing levels are high by most standards. (9 employees per 1000 equivalent connections)

Operational staff were:

- Motivated & provide the best possible service under the circumstances
 - Well-qualified in relation to the plant and equipment for which they are responsible
 - Resourceful ref.. Problems / solutions
- **Notable absence of younger staff**

Staffing / Organisation

- Vodokanal could achieve a staffing level of 4 employees per 1000 equivalent connections over the next 10 - 15 years
- On the basis of current population forecasts for Astana, total staff numbers would remain roughly unchanged

Any tendency to increase total staff numbers should be strongly resisted

Explaining PSP to Stakeholders

- What is private sector involvement
- Basic requirements for successful procurement
- Functions suitable for private sector involvement
- Benefits of private sector involvement
- Regulation / control of private sector operator
- Ensuring that private sector involvement works
- The difficulties ahead and overcoming them

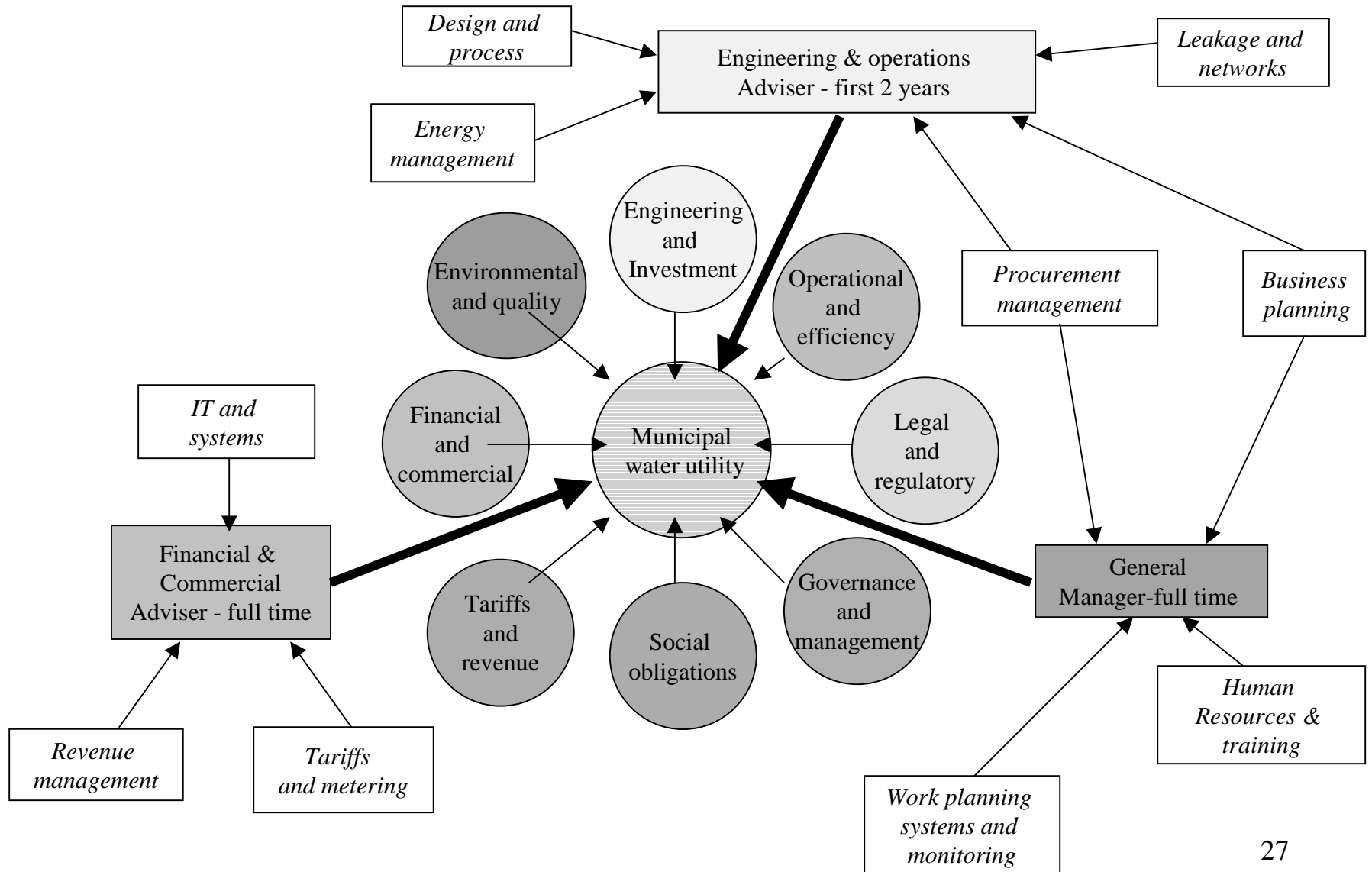
Understanding that many functions can be provided by Private Sector

- Options range from full concession to O&M
- PSP can focus on key activities such as
 - Revenue management
 - IT facilities
 - Operation and management of vehicles and plant
 - Capital improvement planning and implementation
 - New facilities design and construction
 - Laboratory service
- Market mechanisms for getting value for money
 - not readily appreciated

Promoting Benefits to Municipality

- Separate roles of municipality from operations
- Release professional resources to focus on community needs
- Allows municipalities to focus on cost, compliance, and financing of water services
- Allows municipality to distance itself from operations
- Helps board members concentrate on key functions

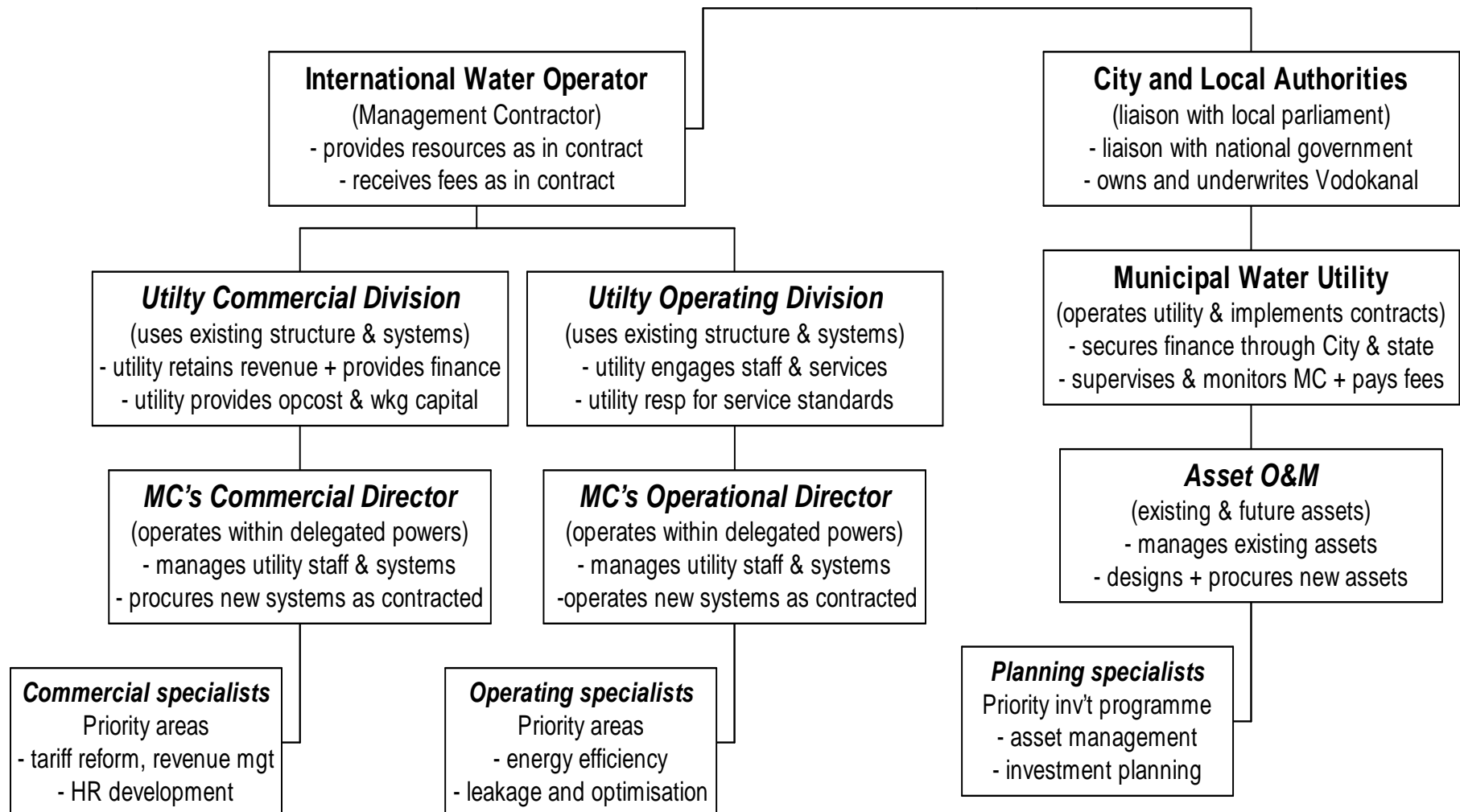
Generic Arrangement of outsourcing to Improve Performance



Key Parameters of Proposed MC

- Contract parties are municipality & operator
 - Municipality guarantees
 - Term - up to 5 years
- Contract clearly defines roles and responsibilities
- Fee structure and payment mechanism
 - X% time related, y% performance linked,
- Performance measured by targeted improvements
 - Revenue gains, cost reduction, service improvements
- Operator has powers to procure goods & services
- Contract specifies performance improvement targets

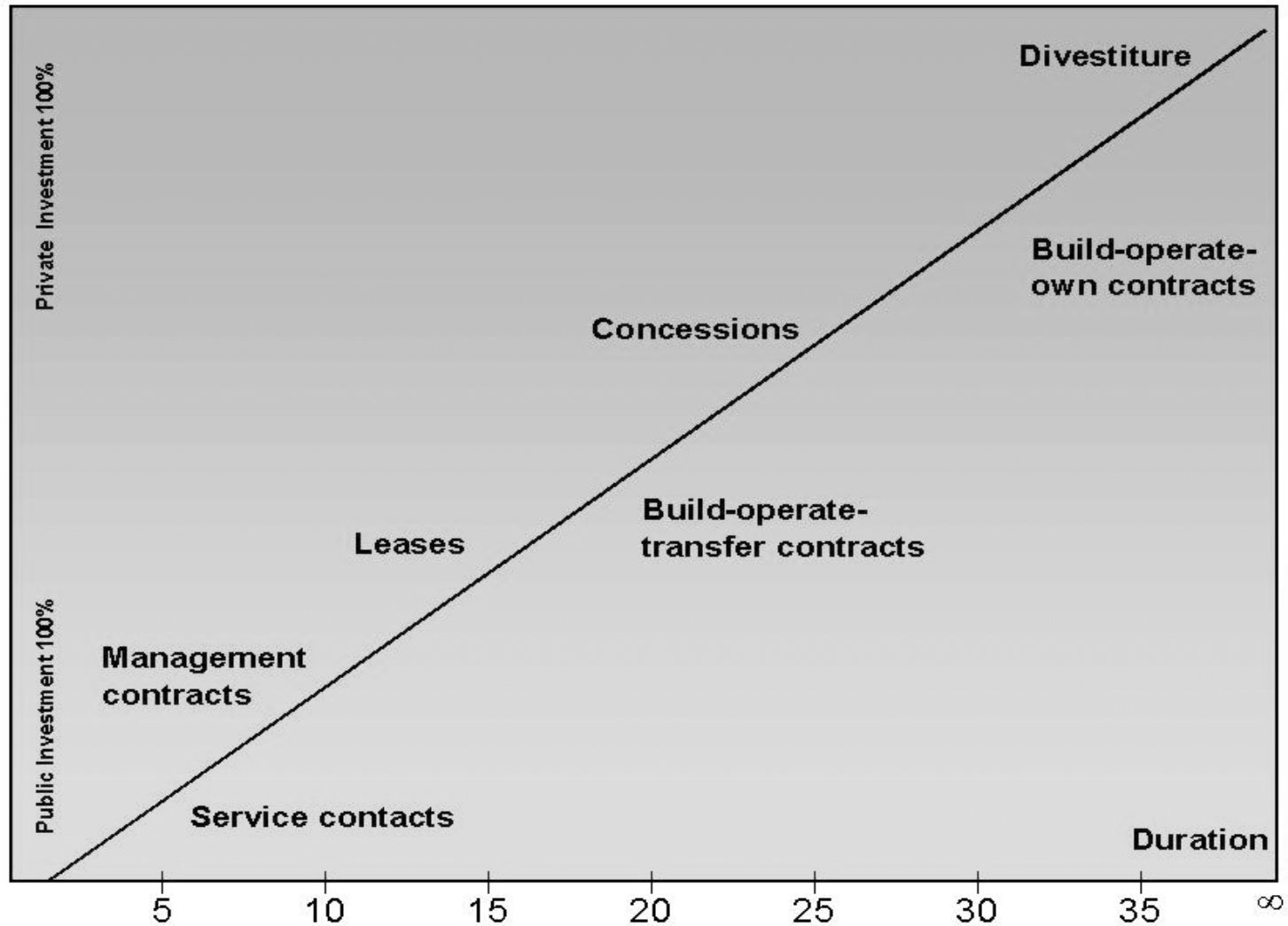
Proposed Relationship Between Operator, City and Vodokanal



PSP Options Considered:

<u>Objective</u>	<u>Typical solution</u>	<u>term</u>
Strengthen management	Technical assistance	2-3 yrs
Improve efficiency	Management contract	3-5 yrs
Improve service	Management contract	3-5 yrs
Reduce leakage	Operational contract	3-5 yrs
Quick fix	Remediation contract	1-2 yrs
Operate & maintain assets	Affermage - lease	5-12 yrs
Provide new facilities	DBFO, BOOT	10-15 yrs
Total management	Concession contract	15-25 yrs
Disposal	Privatization	long-term

Duration of PSP Contracts



Explaining Regulatory Aspects

Contract terms means that operators must take risks:

- Operating costs
- Service standards
- Quality compliance
- Asset operation & maintenance
- Asset expansion
- Inflation and exchange fluctuations
- Revenue collection

Effective regulation ensures that risk is taken by operators

Explaining that Municipality retains Control

- Private sector involvement does not mean loss of public control
- Effective regulation ensures municipality retains control of:
 - Facility and system ownership
 - Tariff setting and adjustment
 - Capital improvement decision-making
 - Engagement & termination of operator

Explaining the Financing Plan

Typical financing plan

• EBRD	65%	16m €
• City	8%	2m €
• VK revenue	12%	3m €
• Donor grants	16%	4m €
		<hr/> Total 25m €

Conditions for Financing

- Loan repayment period
 - 15 years, 4 years grace on principal
- Use of funds
 - Ring-fenced priority investment programme
 - Performance based MC with international operator
- Tariff reform
 - Implementation of agreed tariff policy
 - External performance audits
- Covenants and guarantees
 - Debt service cover, collection ratio, past due revenue
 - Sovereign guarantee backed by ministry of finance

Exploring Financial Possibilities

Arrangements can be designed to provide fees to municipality such as:

- Initial fees for purchase of concession
- Annual lease or royalties to municipality or local government
- Regulatory and monitoring fees
- Funding of operational improvements for improving efficiency and reducing costs
- Funding of major capital for improving efficiency, service or environmental schemes
- Information systems to improve billing and collection efficiency

However revenue can only come from tariffs

What Happened?

State, Municipality & Vodokanal unable / unwilling to meet bank's financial conditions

- Accepted
 - Limited PSP through management contract
 - Tariff reforms but limited price rises
 - Staff transfer proposals
- No agreement on
 - Sovereign / municipality guarantees
 - Rate of tariff rises
 - Loss of management control

**Japanese soft funding subsequently secured
for technical assistance**