TURIN SCHOOL OF LOCAL REGULATION

all policies are local

Knowing the FIELD for infrastructure and service regulation at local level: actors, information, incentives

Firenze| 31 October 2014

Performances in the Water Sector: Benchmarking, Regulation Drivers & Information Sharing

Franco Becchis, Turin School of Local Regulation

THE DESIGN

- Is the local dimension relevant for regulation?
- Are there peculiar critical aspects in local regulation?
- Do we need a new approach?

The local case: improper costs of regulation

$$NPVy = f(\alpha, net, \theta)$$

$$net = f(HLD)$$

$$P_n \in N_{HLD} > P_n \in N_{HLD}$$

$$C_{HLD} > C_{HND}$$

Traditional economics wins

- Game theory
- Incentive based contract theory
- Mechanism design

Traditional economics fails

- Network
- Relationships
- Institutions
- Legacy

TURIN SCHOOL OF LOCAL REGULATION
all policies are local

FIELD

Ronald Coase, Oscar Williamson, Douglass North, Elinor Ostrom. Models of regulation and typologies of transactions cannot be merely transplanted from an institutional context to another. Institutions matter!

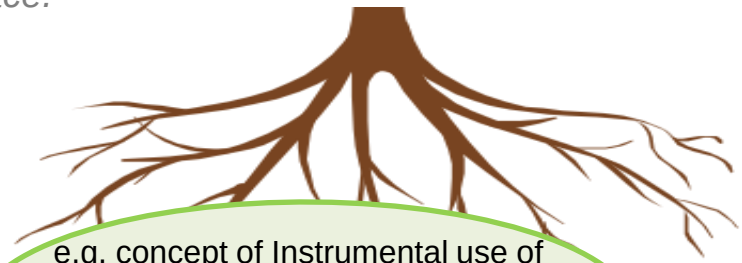
Concepts of incentives, incentive-compatibility in information transfer, mechanisms for information disclosure

Framework of Incentives to Empower Local Decision-makers

A multidisciplinary methodology for the analysis of local actors, incentives and information endowment that surround and lie behind the success or the failure of local services, infrastructures and projects, defining the playing field where their implementation and regulation takes place.

Game Theory & Mechanism Design

Institutional Economics



Erving Goffman. Social settings, 'front stage' and 'back stage', in which the front stage plays a performance meant to manage the impressions of an audience

Sociology

e.g. concept of Instrumental use of networks by individuals; centrality index; quantitative analysis; measuring the power within a network of players

Social Network Analysis & Social Physics

Political Economy Analysis

Aims to situate development interventions within an understanding of the prevailing political and economic processes in society (incentives, relationships, distribution and contestation of power) all of which greatly impact on development outcomes.

THE MATRIX - FIELDS

Categories of players

Players' Incentives

Information endowment

Information exchange

Types of relations

Categories of players

- Politicians
- Public officials
- Market actors (non-financial)
- Market actors (financial – local or national/international)
- Lobbies
- Consumer organizations
- Administrative tribunals (administrative,procedural, budget conflicts)
- Consumers / final users

Players' incentives

Institutional & Shadow

- Efficiency in provision of the service
- Profit
- Market share
- Effectiveness and quality
- Equity / redistribution / accessibility
- Electoral consensus
- Consensus
- Political control
- Religious control
- Ethnic control
- Maintaining / increasing own budget
- Financial public budget constraints
- Legacy **(NEW)**

Information endowment

Information on:

- Operational costs
- Investment costs
- Physical assets
- Revenues **(NEW)**
- Demand side **(NEW)**

Direct ownership (resident) **vs indirect ownership (NEW)** (non-resident, through transmission) of information? In case of indirect ownership, what are the costs to obtain information?

Information exchange (NEW)

Nature:

- mandatory (check, sanctions)
- control
- voluntary
- uses

Truth revealing incentive compatibility? (Yes / No)
Truth revelation mechanisms?

Types of relations

- Appointment
- Election
- Lobby pressure
- Strong political influence
- Corruption
- Command
- Control
- Regulation: price, quantity, quality, accessibility, distributional
- Sentences / rule of law / judicial enforcement
- Assignment
- Business relationship **(NEW)**
- Market power **(NEW)**

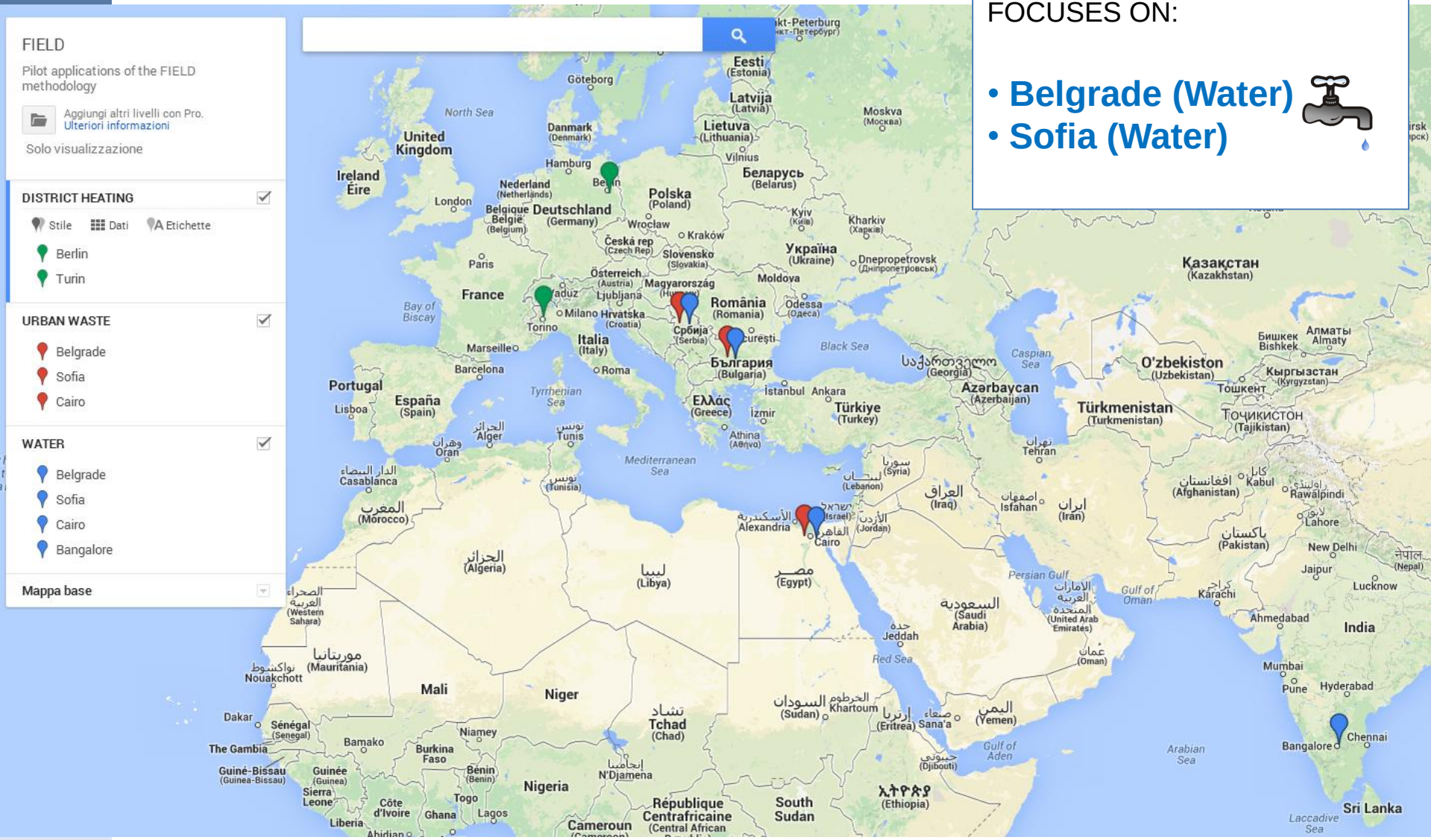
1. High degree of **subjectivity** (some solution tested, e.g. focus groups: see the case of district heating in Turin; or pools of referees?)
2. Difficulty to **compare** case studies that are economically and socially different
3. At the time being FIELD is a **static snapshot** of the situation. How to include the time dimension?

Policy-oriented tool

THE CASE STUDIES ANALYZED SO FAR

THIS PRESENTATION FOCUSES ON:

- **Belgrade (Water)**
- **Sofia (Water)**



Source: LORENET

Under reform

State and Local governments through Water Associations

	Bulgaria	Serbia
Who has the ownership of waterworks and plants?	Water Service Operators State Local governments	State Local governments
If applicable, who is in charge of tendering the services?	Municipalities and the State administration	Municipalities
What is the average duration of concessions? Can they be re-negotiated?	On average: up to 35 ys. Existing case: 25 ys Renegotiation: yes	By law: up to 99 years. Renegotiation is possible. In practice: no experience in the water sector.
Who manages the service?	Water Service Operators, generally public companies. One case of PPP	Municipalities and public compa
Is PPP a common practice in the Country?	No. It exists (one case in Sofia), but this model is not common.	No
Who regulates tariffs, profits/revenues and so on?	The State Energy and Water Regulatory Commission	The G price, local authorities set tariffs.
Who plans investments?	Water services operators with approval by the regulator	The Directorate for Water of the Ministry of Agriculture, Forestry & Water Management and local authorities
What is the structure of revenues?	Customer bills (+) EU funds (-)	Customer bills (mainly) and subsidies

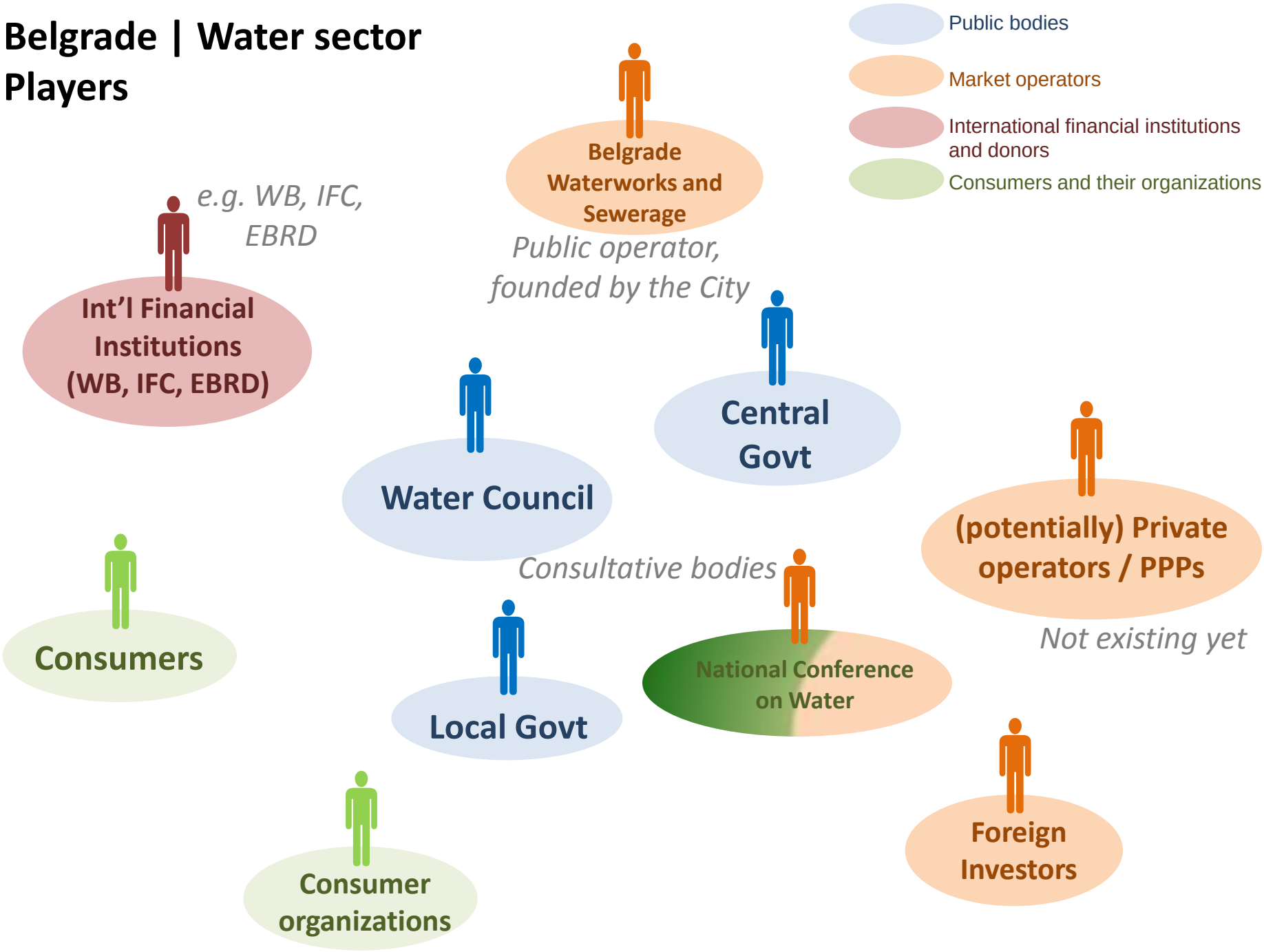
Water Associations to existing WSO, or will choose concessioners

Water Associations with the support of Water Service Op.

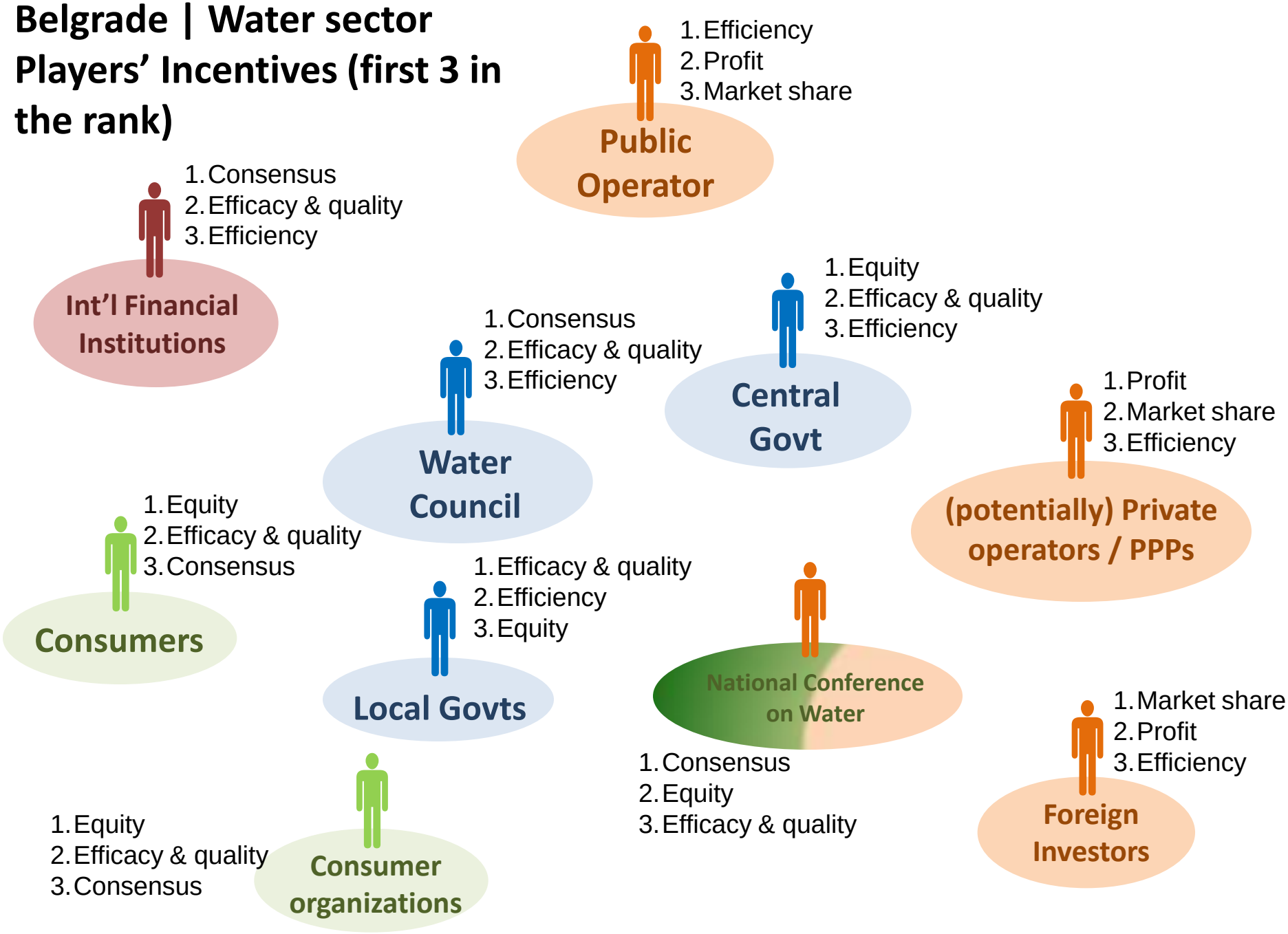
2011 Law on Public Private Partnership and Concessions, but limited in scope by the Law on Communal Services and difficult to be applied for low capacity of local public policy-makers

BELGRADE: PLAYERS & INCENTIVES

Belgrade | Water sector Players



Belgrade | Water sector Players' Incentives (first 3 in the rank)



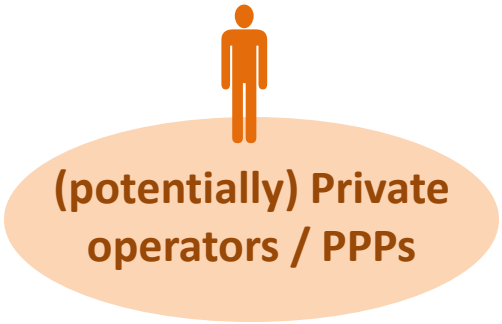
Belgrade | Water sector Players' Incentives (shadow)

Electoral consensus

Political control

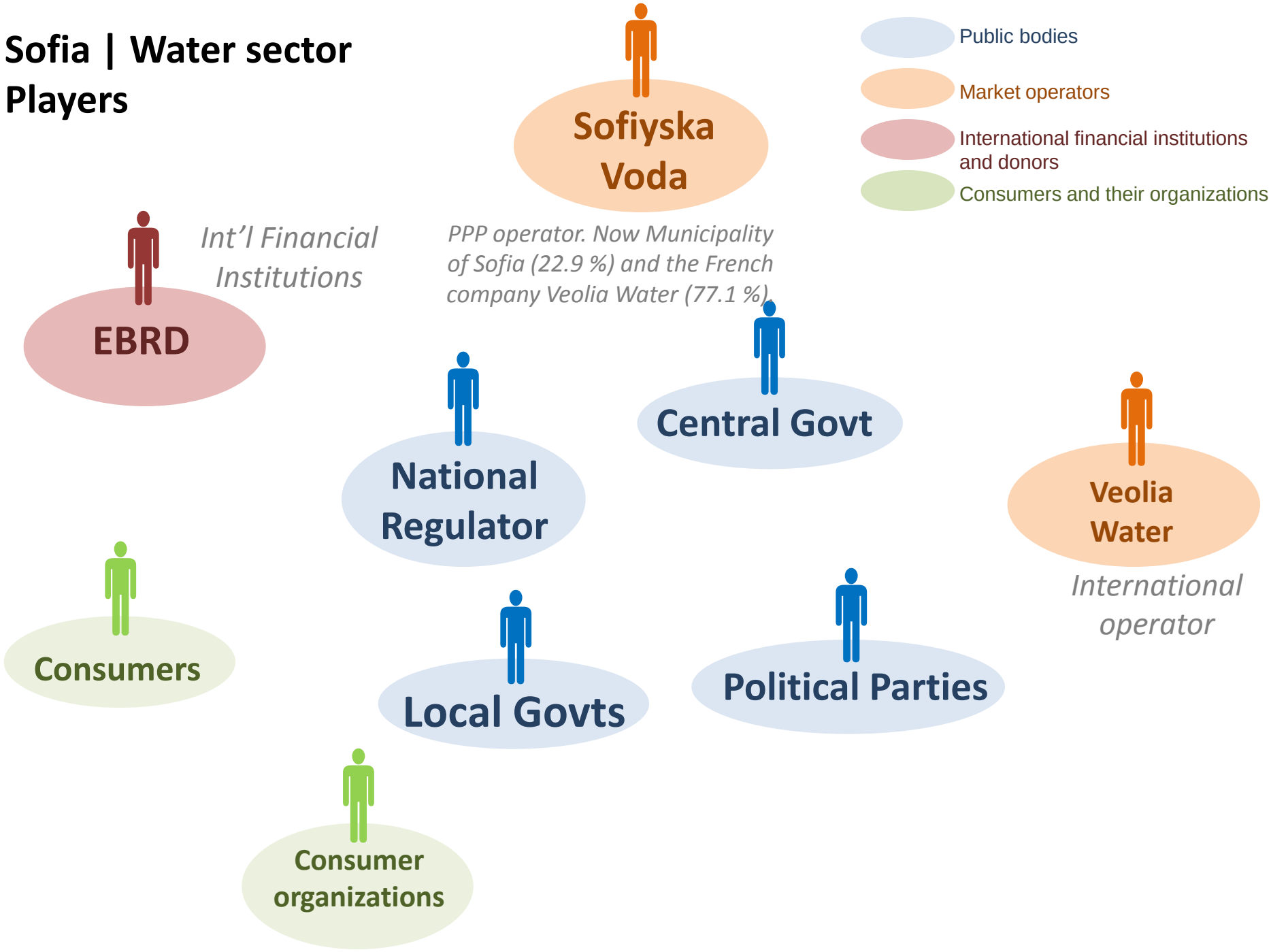
Bureaucracy (Maintaining / increasing own budget)

Financial public budget constraints

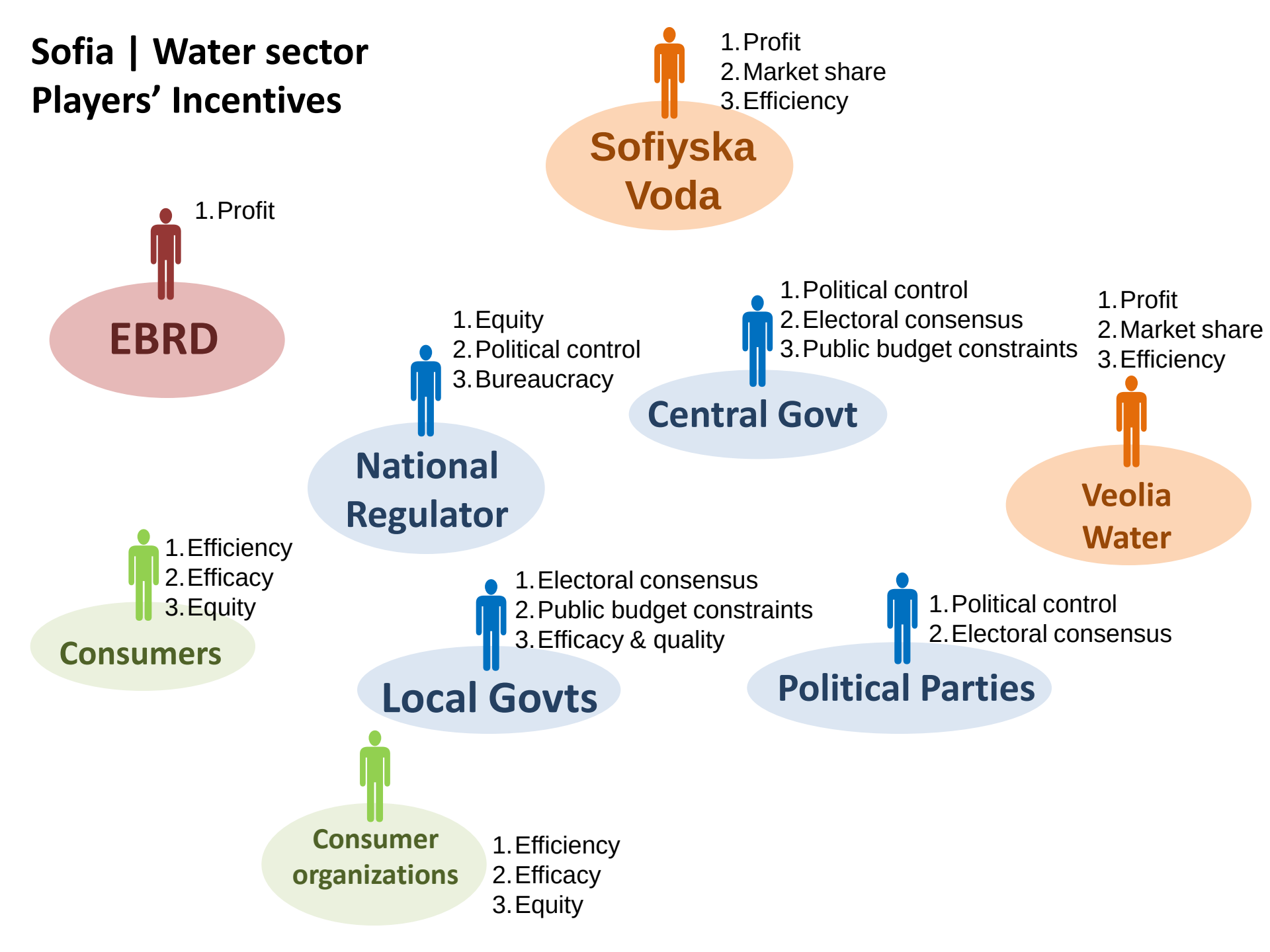


SOFIA:
PLAYERS & INCENTIVES

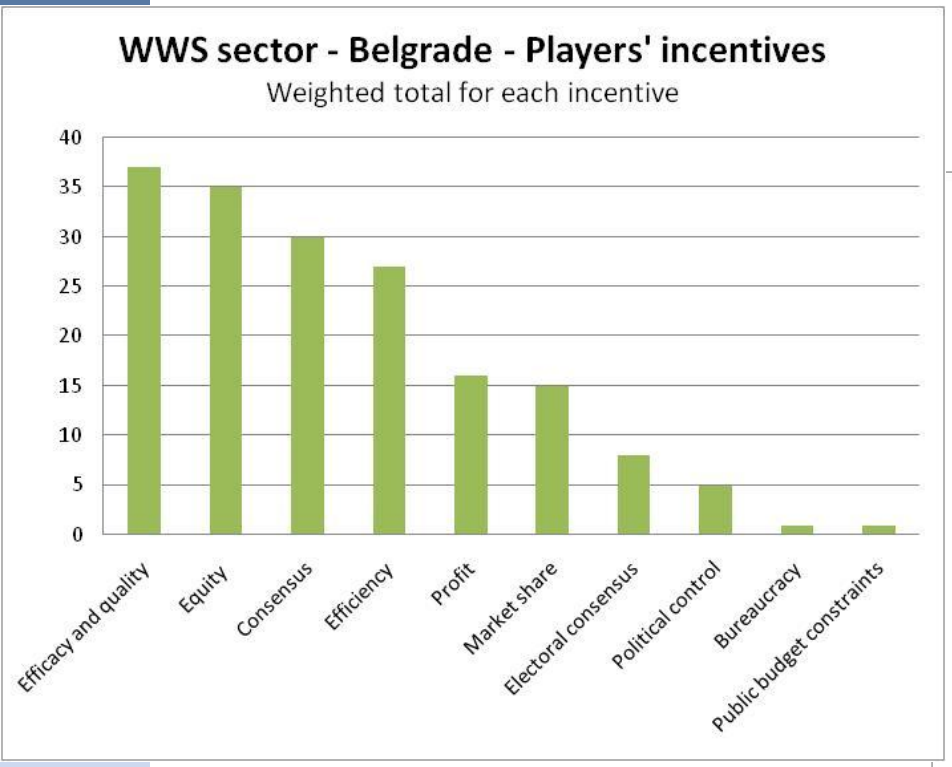
Sofia | Water sector Players

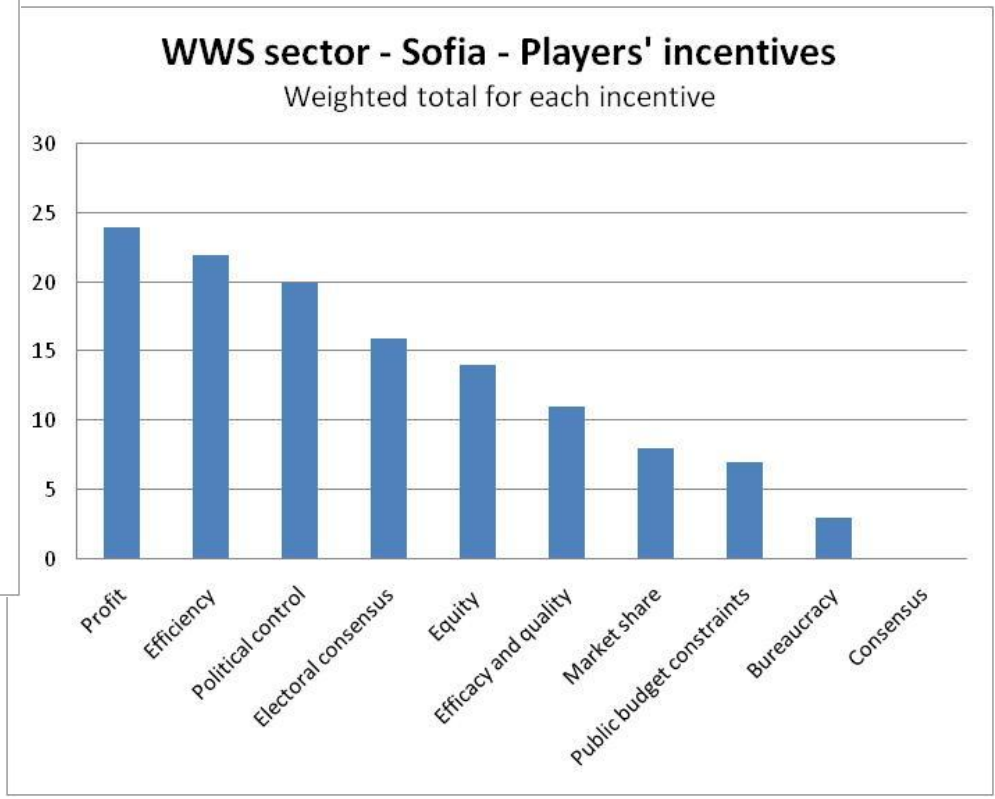


Sofia | Water sector Players' Incentives



COMPARISON ON WEIGHTED TOTAL INCENTIVES





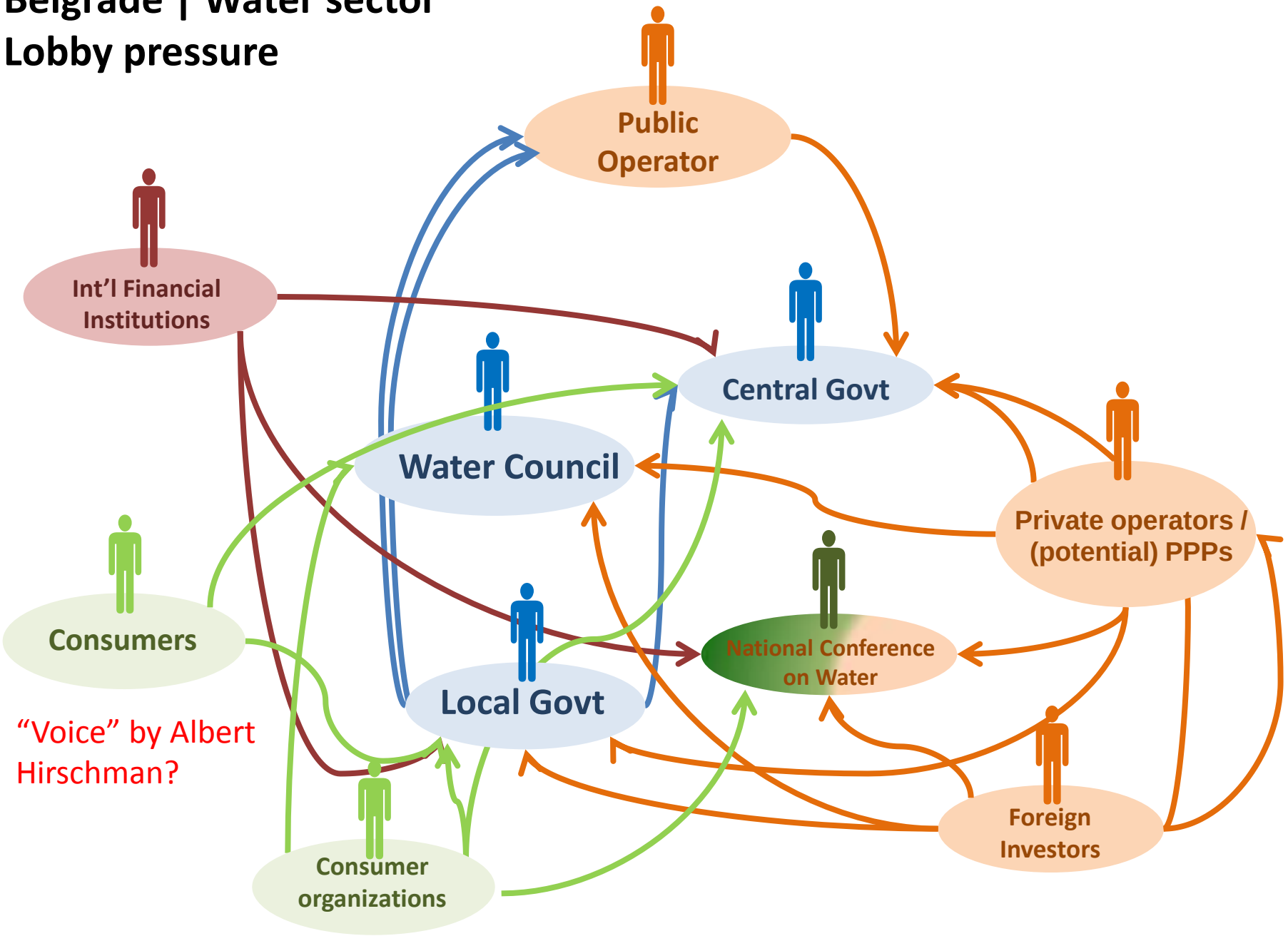
Weight given to each incentive according to the position in the ranking:
1st position: 8 | 2nd position: 4 | 3rd position: 3 | 4th position: 2 | 5th position: 1

BELGRADE: SOME RELATIONSHIPS

Belgrade | Water sector

Appointment; **Strong Political Influence**

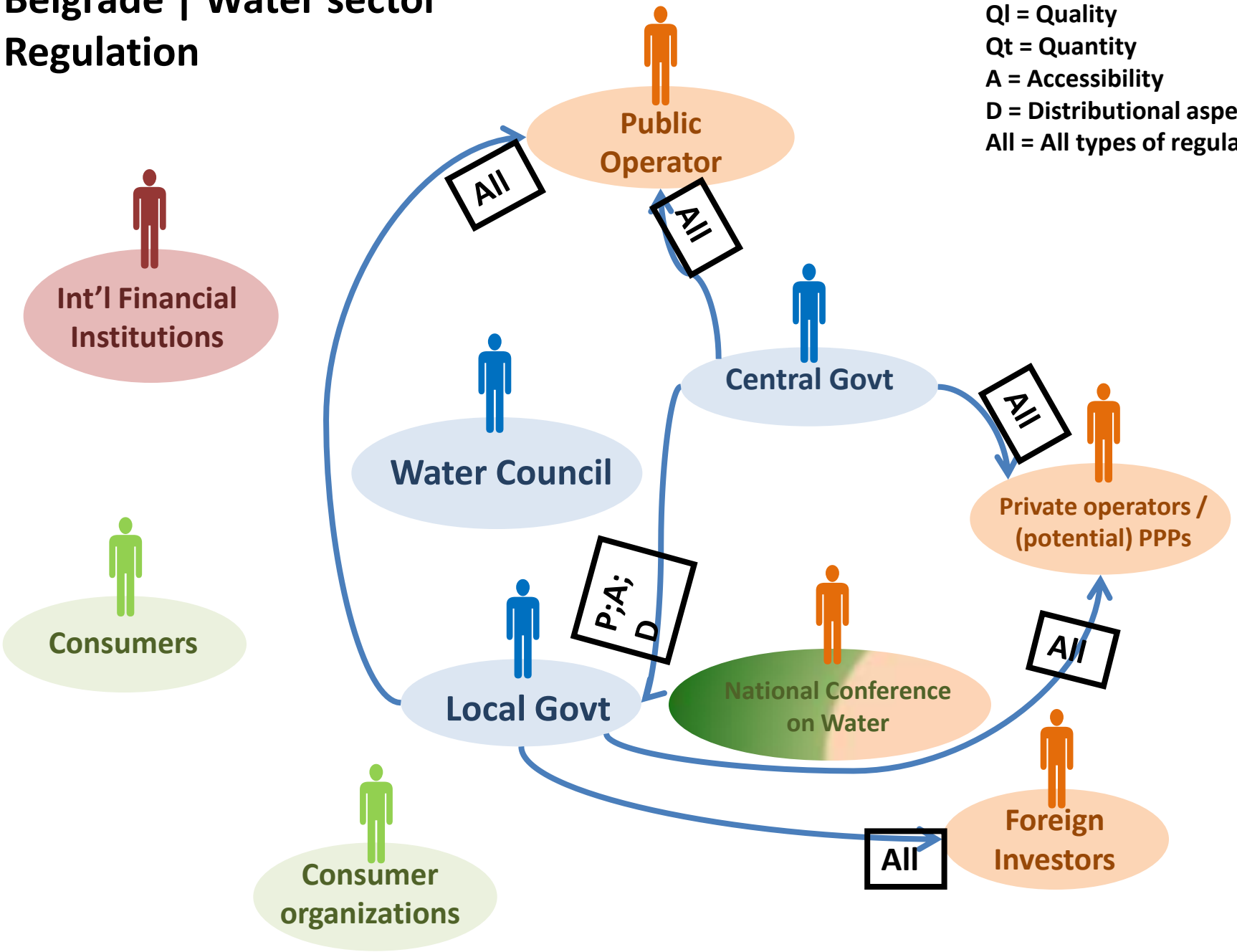
Belgrade | Water sector
Lobby pressure



"Voice" by Albert Hirschman?

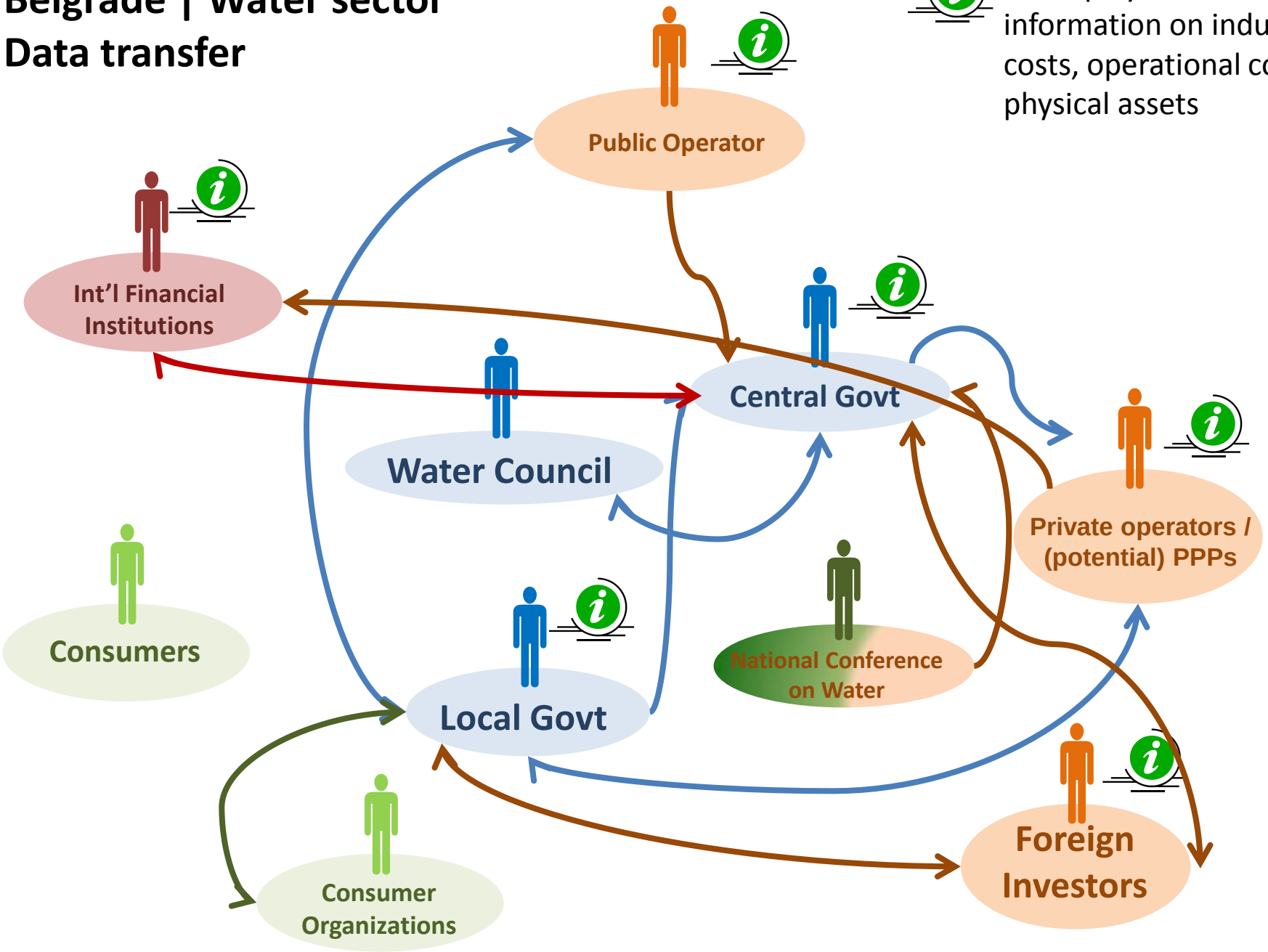
Belgrade | Water sector Regulation

P = Price
Ql = Quality
Qt = Quantity
A = Accessibility
D = Distributional aspects
All = All types of regulation



Belgrade | Water sector
Data transfer

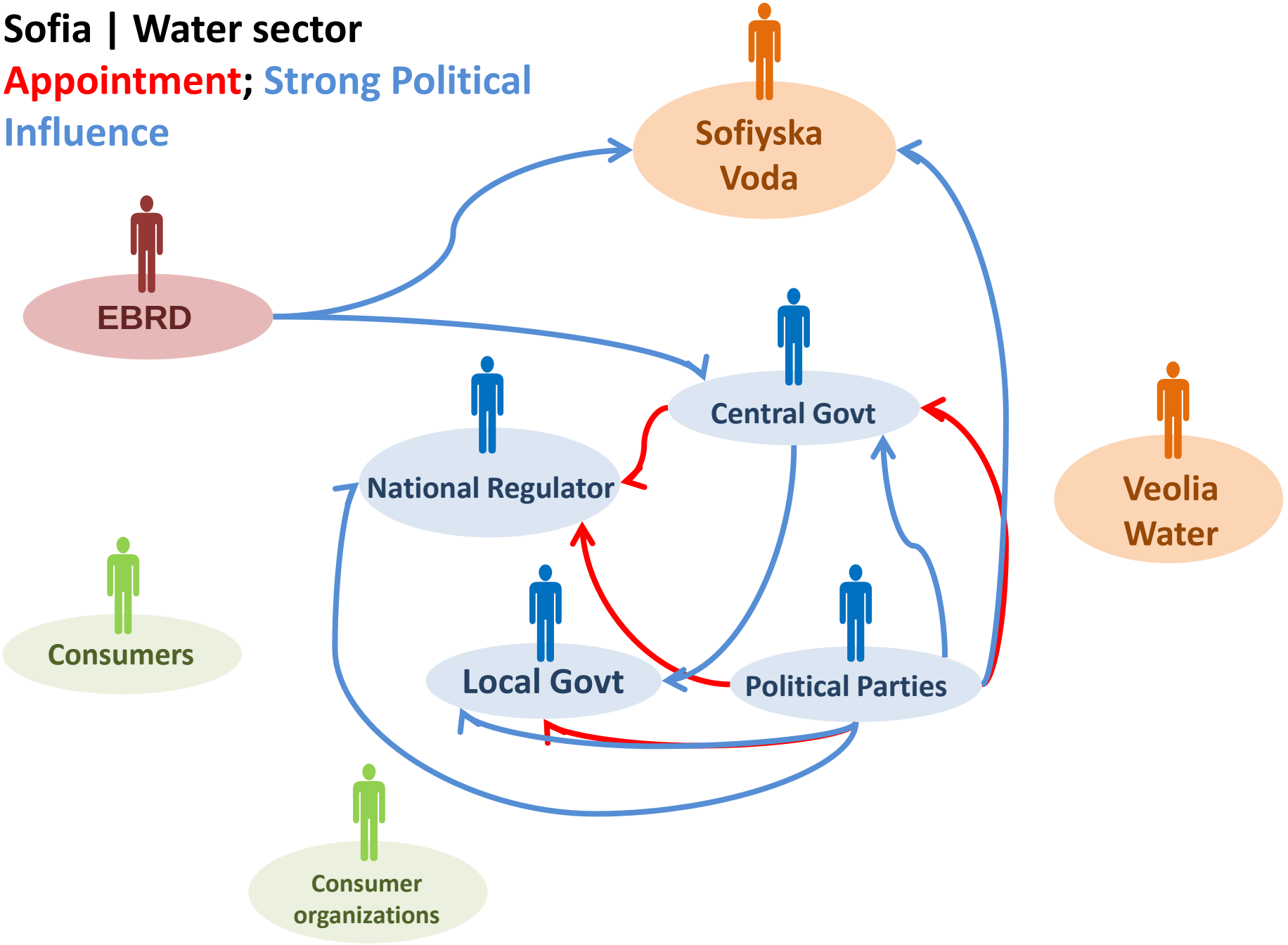
= The player owns information on industrial costs, operational costs, physical assets



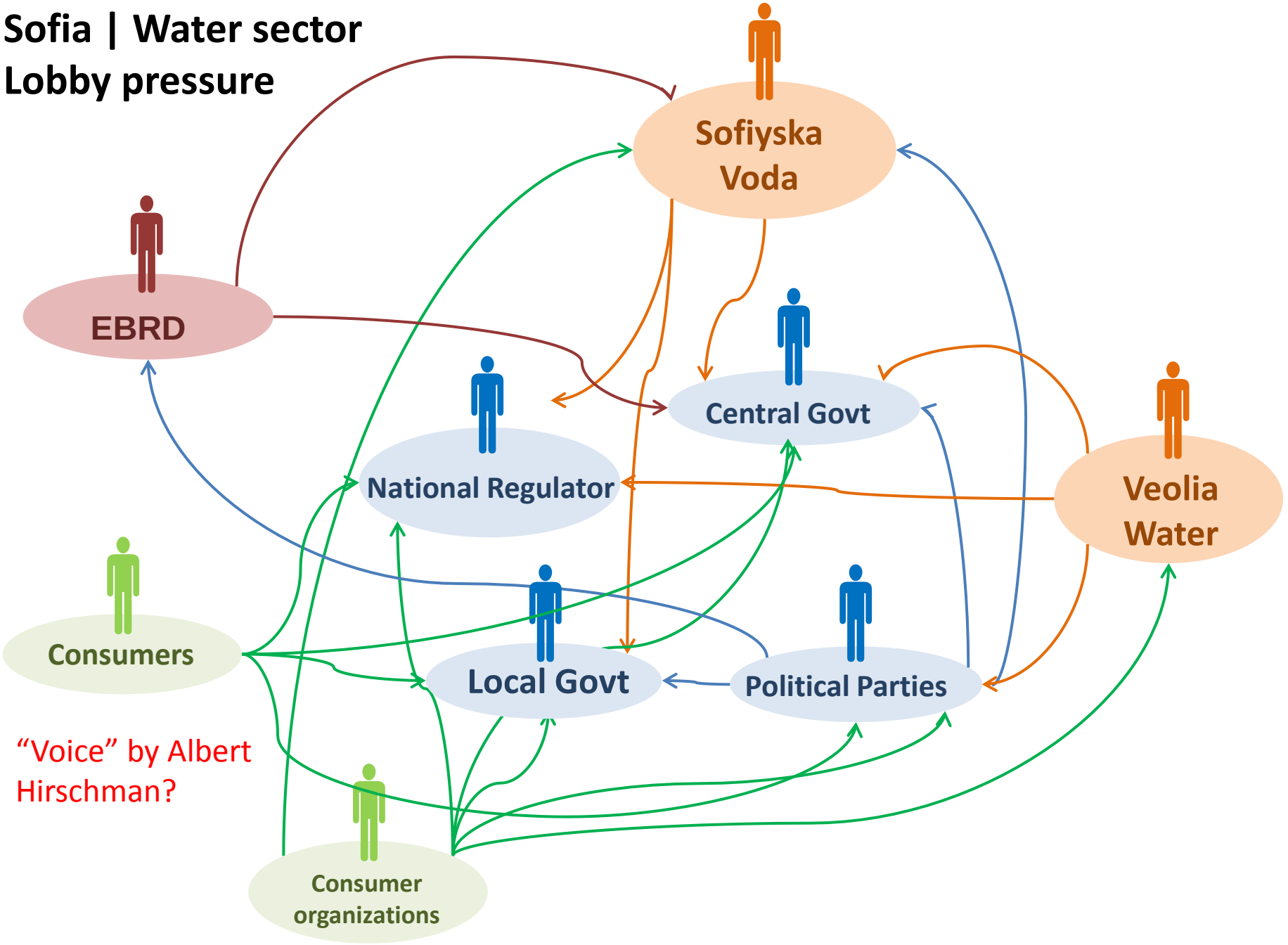
SOFIA:
SOME RELATIONSHIPS

Sofia | Water sector

Appointment; **Strong Political Influence**

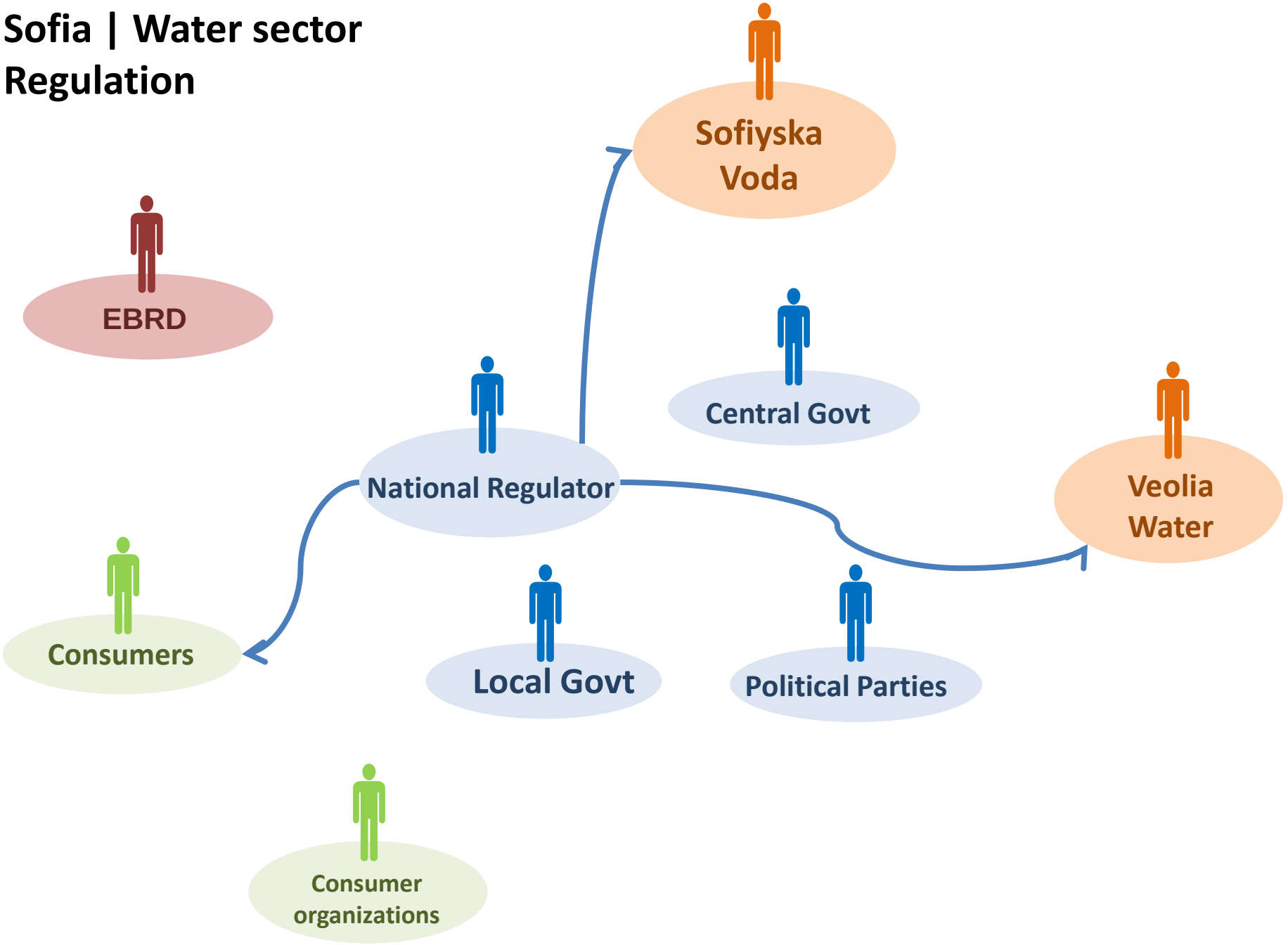


Sofia | Water sector
Lobby pressure

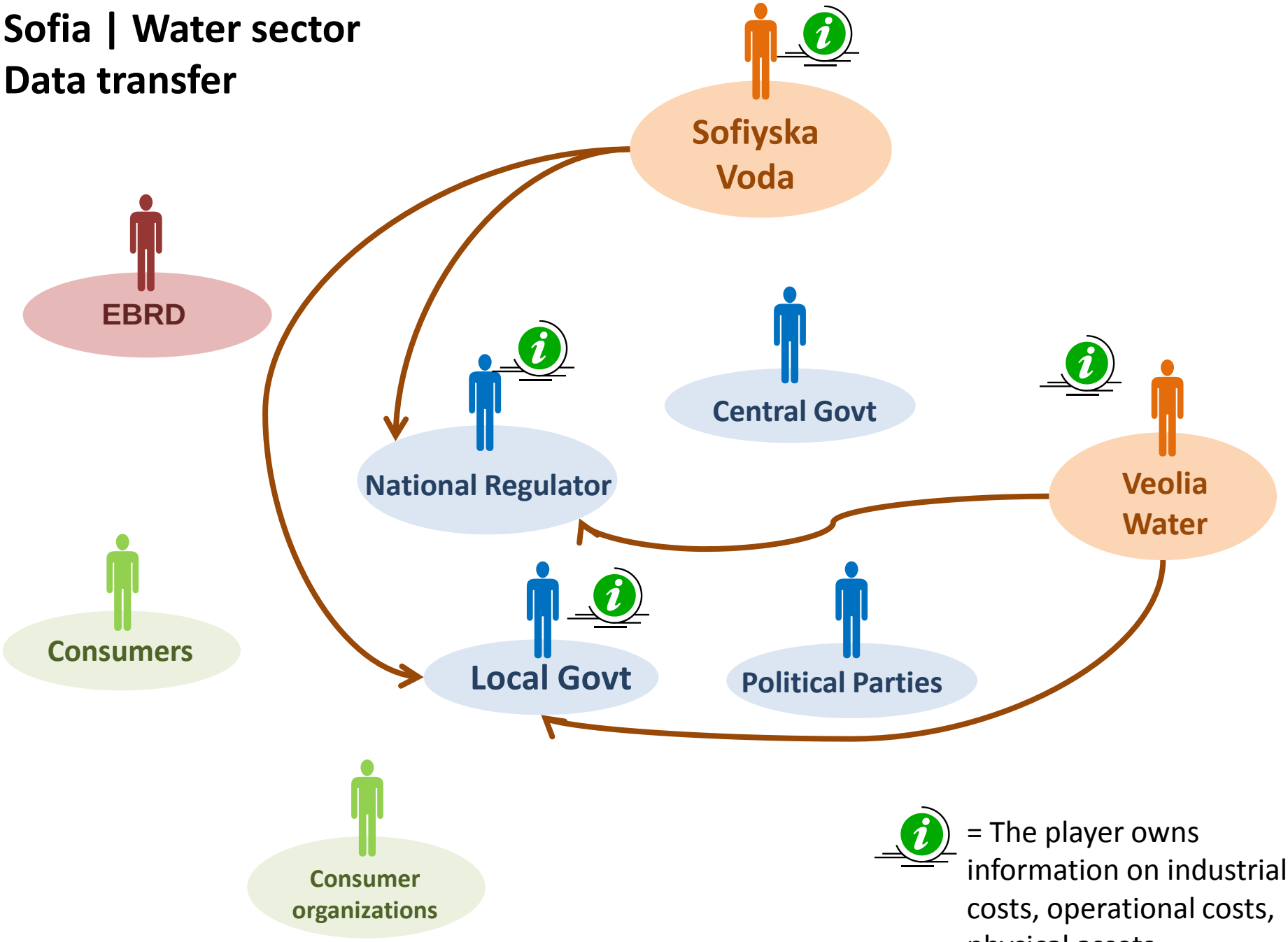


"Voice" by Albert Hirschman?

Sofia | Water sector Regulation



Sofia | Water sector
Data transfer



Outbound / Inbound Relation Ratio Index: foreword

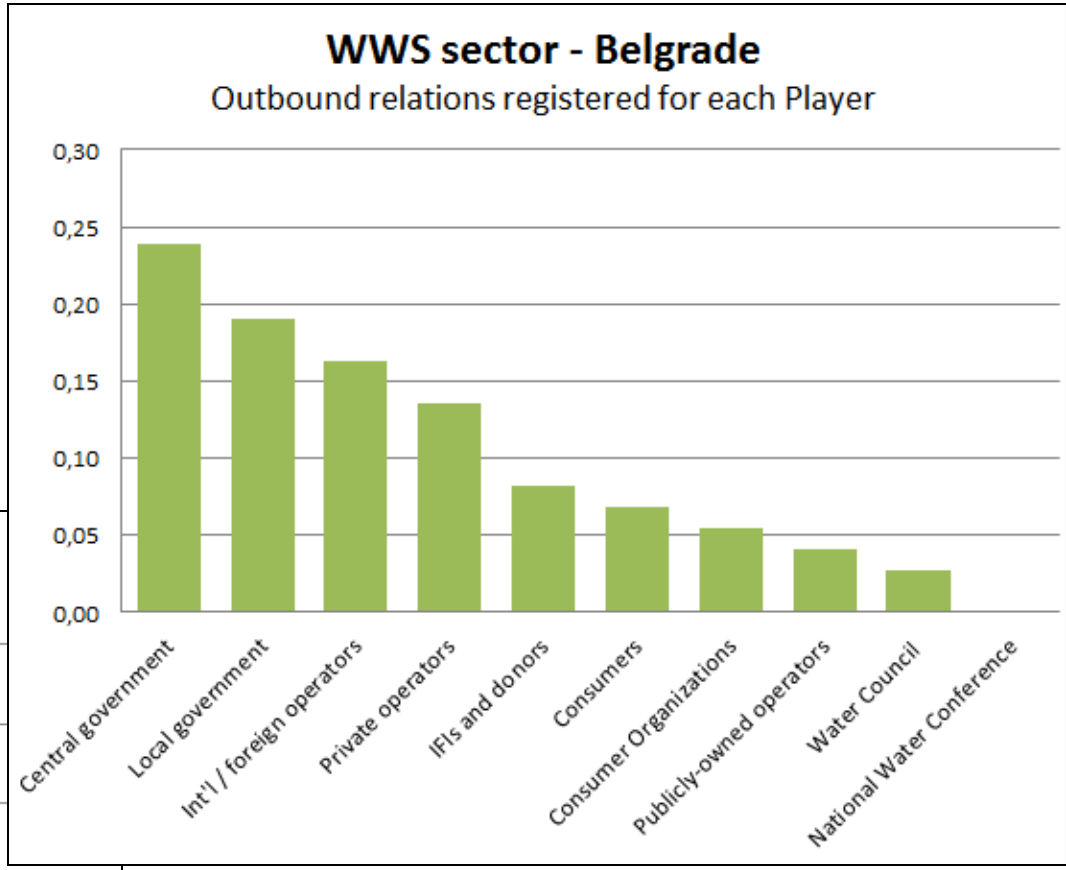
"**outbound**" and "**inbound**" relations registered for each player were calculated, according to who is the agent of the relation and who is the passive target.

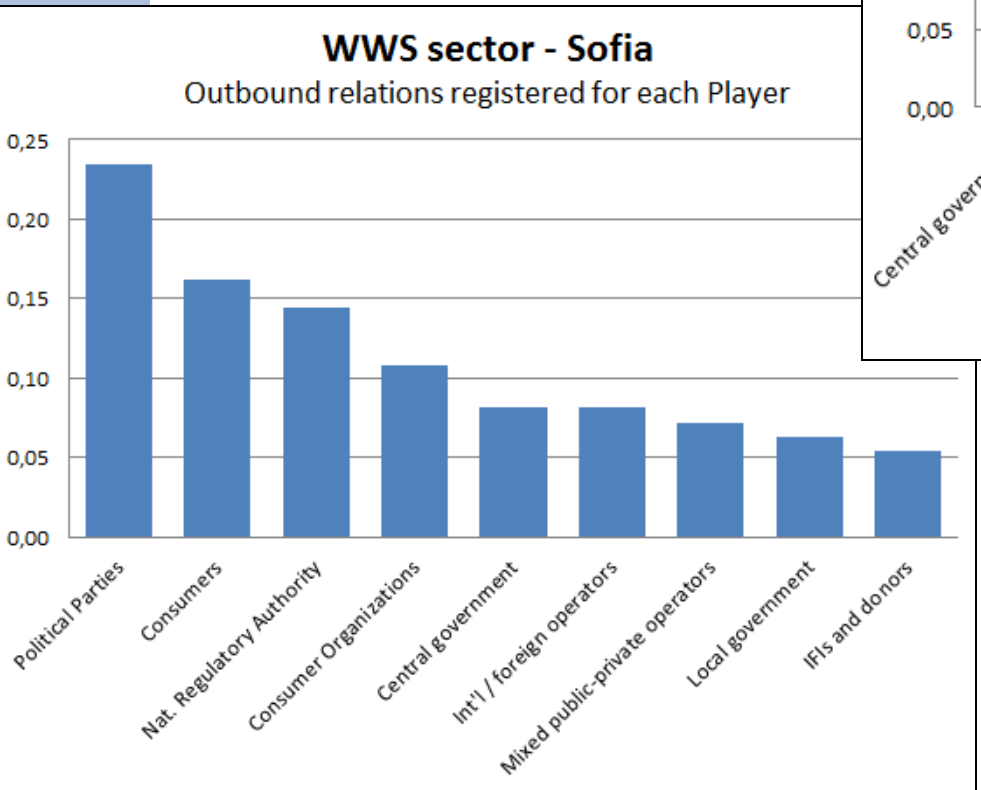
An **index** was created to assess the "**activism**" of each player in the context analyzed, based on the number of outbound relations that the player exerts. The index has been calculated dividing the sum of outbound relations registered for a single player by the total sum of outbound relations registered in that city (Outbound relations ratio).

The same procedure has been adopted for inbound relations (Inbound relations ratio).

$$\frac{\text{Outbound relations of Player X}}{\text{Total outbound relations of the city players}} = \text{Player X's Outbound RRI}$$

Outbound Relation Ratio Index: a demonstration





$$\frac{\text{Outbound relations of Player X}}{\text{Total outbound relations of the city players}} = \text{Player X's Outbound RRI}$$

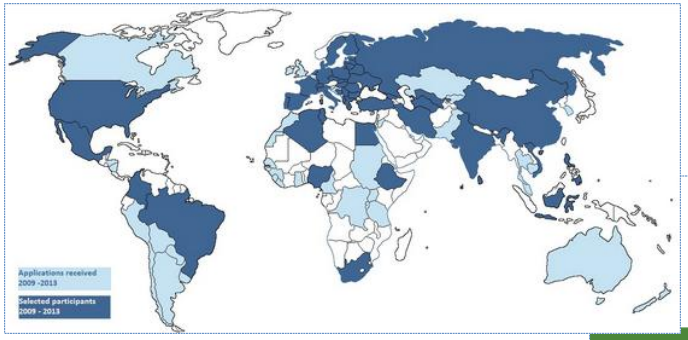
NEXT STEPS

Build a large portfolio of case studies to further test it:

- ❑ Water services in Arba Minch (Ethiopia)
- ❑ Local welfare (Turin)
- ❑ Biogas plant (Piemonte)
- ❑ Local public transport (Istanbul)
- ❑ Others to be identified

TURIN SCHOOL OF LOCAL REGULATION

all policies are local



Franco Becchis

Scientific Director

franco.becchis@turinschool.eu

www.turinschool.eu

An initiative of

Fondazione per l'Ambiente Teobaldo Fenoglio ONLUS

Under the patronage of

CITTA' DI TORINO

PROVINCIA DI TORINO

UNIVERSITÀ DEGLI STUDI DI TORINO

POLITECNICO DI TORINO

In partnership with

ISCTE IUL Instituto Universitário de Lisboa

ffu Environmental Policy Research Centre

Berlin Centre for Caspian Region Studies BC CARE