

## LEADERSHIP AND QUALITY IN THE PUBLIC SECTOR

### RUKOVOĐENJE I KVALITETA U JAVNOM SEKTORU

*Slavko Arsovski, Srđan Nikezić, Dobrica Stojković, Boban Đurović*

Stručni članak

**Sažetak:** Prikazane su mogućnosti upotrebe ORC tehnologija za transformaciju niskotemperaturnih izvora topline u električnu energiju. Primjenom ORC kogeneracijskih postrojenja na biomasu omogućava se dobivanje toplinske i električne energije iz jednog izvora topline. Dat je pregled ORC proizvođača sa rasponima snaga, toplinskim izvorom, temperaturnim razinama i korištenim radnim fluidom. Kako radni fluid igra ključnu ulogu u radu ORC sistema dana je uopćena metodologija izbora radnog fluida. Izvršeno je poređenje najčešće korištenih radnih fluida kroz njihov utjecaj na termodinamičku ili eksergijsku učinkovitost ORC procesa, ali i na okoliš i zdravlje ljudi. Dokazano je da se ORC sistem može primijeniti u malim lokalnim zajednicama ili industrijskim pogonima koji raspolažu dovoljnom količinom biomase za zadovoljenje svojih potreba za električnom i toplinskom energijom.

**Ključne riječi:** Organski Rankinov ciklus (ORC), biomasa, kogeneracija, izvor topline, radni fluid, zaštita okoliša

Professional paper

**Abstract:** Shown the possibility of using ORC technology to transform low temperature heat source into electricity. Applying ORC CHP to be getting heat and electricity from a single heat source. A review is given ORC manufacturers with ranges of power, heat source, temperature levels and used working fluid. As the working fluid plays a key role in the ORC system the generalized methodology of choice of working fluid is given. The comparison of the most commonly used working fluid through their influence on the thermodynamic or exergy efficiency of the ORC process is conducted, but also the environment and human health consequences are taken into consideration. It has been shown that the ORC system can be applied in small communities or industrial plants that have a sufficient amount of biomass to meet its demand for electricity and thermal energy.

**Key words:** Organic Rankine cycle (ORC), biomass, cogeneration, heat source, working fluid, environmental protection

## 1. INTRODUCTION

The issue of quality in the national and local administration was "opened" by David Osborne and Ted Gaebler by publishing the book "Reinventing Government" in 1992. At that time in the USA there was a culmination of dissatisfaction in services of the national and local administration. Therefore, it was no surprise that most Americans had positively answered the question in the *Times* magazine: "is the state dead?". Why? Even along with high state expenditures, only 5% of Americans was in 1980 satisfied with the services and considered it a success to work in the state administration, while only 13 % of employees in the state administration would recommend this career to others. A debate was opened whether the state administration is too large or too small.

In Osborn's and Gaebler's opinion, "our fundamental problem is that we have a bad type of state. We don't need more state or less state, we need a better state. To be more precise, we need better management. Management is a process through which we collectively resolve our problems and meet social needs. The state is merely an obsolete instrument that needs to be upgraded". This pointed to the significance of state

administration quality. This problem was later analyzed in other countries as well, especially in the European countries, and later in the EU through the development of a common framework for assessing the quality in the public sector.

In the first part of this paper quality issues in the state administration and public sector are analyzed and the structure of a common assessment framework (CAF) in the public sector is presented. In the second part an approach to improving leadership in the public sector is provided. As the public sector is very wide, this approach was tested on two local self-governing administrations in Serbia.

## 2. QUALITY IN THE PUBLIC AND STATE ADMINISTRATION (PLA)

### 2.1. Mission and vision in the public sector

The mission of the public and state administration, as well as the relevantly permanent task and purpose, is defined by the regulations in this area. Along with the Government of the Republic of Serbia, which is the fundamental stakeholder (Figure 1), employees, citizens,

county administration and other business entities participate in creating the mission of the public and state administration.

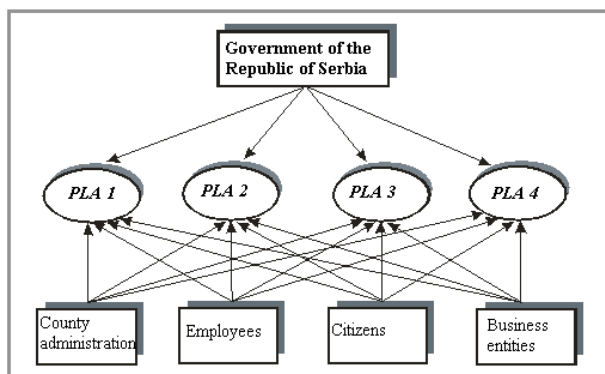


Figure 1. PLA stakeholders

In creating the PLA vision a dominant role is played by leaders who, following the requests of the Government of the Republic of Serbia, county administrations and expectations of citizens and business entities, define the elements of the vision that has to be:

- understandable for all stakeholders,
- challenging, but achievable,
- elevated and
- concise.

## 2.2. Policy and objectives

Bearing in mind the general features of quality policy that it:

- represents the highest ethical standard for all business activities,
- expresses the attitude that customer satisfaction is the top priority,
- points to the manner of achieving the mission by answering the question “How?”,
- points to the significance of quality and resources that are to be engaged for the purpose of constant quality improvement and the protection of the living environment,

the following components of PLA quality policy may be identified:

- constant increase in the level of service quality accompanied by optimal implementation of resources,
- increase in involving citizens as stakeholders and users of services,
- increase in the level of citizens’ awareness of the significance of quality,
- increase in the level of health, welfare and protection of the living environment at the local level,
- integration of common PLA processes and other local business systems for the purpose of increasing the level of service quality.

Taking into account that the general features of quality objectives must be:

- set up widely enough, so that they are not altered too often,

- set up clearly enough, so that they could be measured,
- directly connected with the mission and the policy,
- oriented toward achieving the mission and the policy,

the following PLA objectives may be defined:

- increase in the level of service quality (reduction in complaints, increase in customer satisfaction, meeting the deadlines etc.),
- improving communication with the users of services and the business environment,
- increase in the efficiency and effectiveness of PLA operation,
- increase in the level of protection of the living environment.

## 2.3. Strategy and plans for the implementation of a quality management system into PLA

Before considering strategies and plans for the implementation of a quality management system (hereinafter referred to as QMS) into PLA, global experiences from state and local administration are to be analyzed. According to [2], in *Figure 2* one may find the results of a USA study from 1992 on achieving the influence of the quality system on performances.

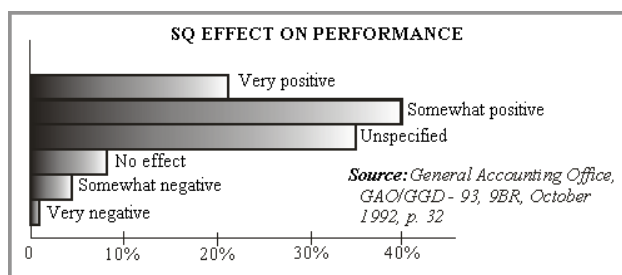


Figure 2. SQ influence on performances of companies in the local and state administration (PLA)

Quality improvement, according to [2], may be significantly achieved by:

- carefully observing and understanding users’ demands,
- grouping processes and problem-solving skills,
- internal communication,
- participating management style,
- meeting the deadlines in internal processes and
- a higher efficiency of processes.

Figure 3 shows obstacles in the SQ implementation, according to the same source.

The strongest obstacle is employees’ distrust that they will actively be included and become responsible for the processes. By analyzing these obstacles it becomes visible that they refer to:

- the human factor,
- the financial factor and
- the regulations.

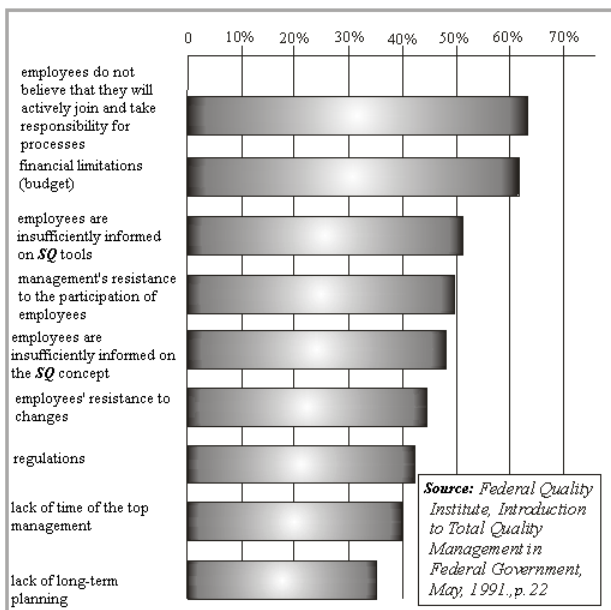


Figure 3. Obstacles in the SQ implementation

Regardless of the existing low level of PLA quality, according to [2] the quality improvement strategy must include key elements of quality management (Figure 4).

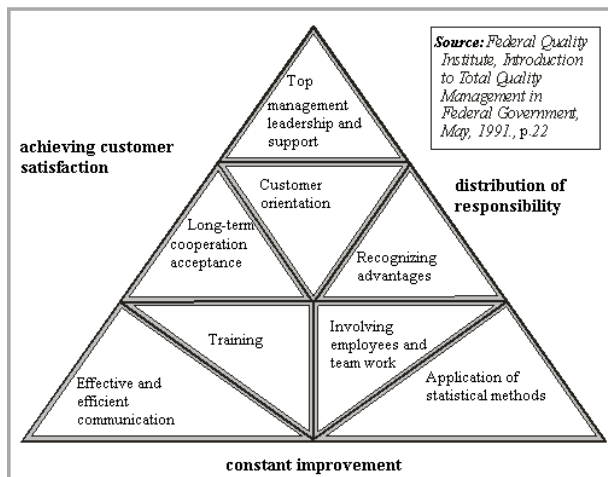


Figure 4. Key elements of quality management in PLA

Every side of the triangle is equally relevant to achieving the objectives. By analyzing key elements of quality management in PLA, the following components of quality improvement in PLA have been identified (Table 1).

Table 1. Components of quality improvement in PLA

Component quality strategies in PLA	OBJECTIVES			
	1. Increasing the level of service quality	2. Improving communications with service users and business environment	3. Increasing efficiency and effectiveness of PLA work	4. Increasing the level of the protection of the living environment
1. Improving management activities	+			
2. Directing activities towards customer satisfaction	+			
3. Achieving effective leadership in organization	+			
4. General acceptance of the quality philosophy in the organization	+			
5. Constant improvement			+	•
6. Improving communication in the organization and with the environment		+		
7. Increasing the participation of employees	+		+	+
8. Training and assuring human resources	+		+	•
9. Constant questioning and innovating vision, objectives, quality policy and strategy	+			
10. Management based on information	+	+		
11. Increasing reply speed		+		
12. Support on long-term plans	+			
13. Stressing each success	+			
14. Encouraging and implementation of team work	+	•		
15. Encouraging partnership	•	+	•	+
16. Designing quality by creating robust processes and products			+	

17. Improving and expanding the scope of training			+	+
18. Building trust and respecting employees			+	
19. Accepting quality philosophy as a life philosophy	+			
20. Transferring quality processes on suppliers			+	
21. Increasing responsibility for processes and the living environment	•		+	+
22. Respecting financial and other limitations	+		•	

**Legend:** + affects  
• doesn't affect

### 3. ORGANIZATIONAL EXCELLENCE IN THE PUBLIC SECTOR

#### 3.1. Features of the public sector

This paper will particularly focus on the analysis of the organization of local administration within the public sector. It has a specific organizational structure, formed processes and practice that are more or less of a bureaucratic character. Furthermore, it significantly depends on social and political factors. The need for improving the quality and excellence in this sector is obvious, but still not researched and carried out extensively enough for the purpose of meeting the demands of all stakeholders (politicians, local officials, citizens, voters, customers etc.).

A significant feature of local administration is a relatively high level of autonomy and independence in relation to the central state administration, so it is only natural that local authorities have been pioneers in the implementation of new methods in administration (*Gaster 1996, Gabris 2000, Skelcher 1992*). The result of their efforts is greater "closeness" to citizens and their wish to be more responsible and innovative. It also points to the fact that in the local administration the concept has been significantly altered from mere administration to meeting the demands of stakeholders, which is basically a quality concept.

Defining quality in the public sector is more difficult than in the private sector, where quality concept arose in the first place. The main elements of the quality concept in the public sector are:

- **value for money**, which points to the fact that local administration must deliver services and meet the needs of customers who pay taxes. This concept is the basis of the responsibility model developed by *Dohlgaard* in 1998, *Kirkpatrick* and *Lucio* in 1995 for the services provided by the local administration.
- **customer comes in first**, by tracking the wishes and needs of users and searching for ways for them to be met.
- **orientation towards public services**, whereat the rights of individual users and citizens being involved in planning public services are combined (*Kirkpatrick and Lucio 1995*).

A specific feature of local administration is its structure. The upper part of the structure is significantly

related to the political factor with other demand profiles of stakeholders. The bottom part of the structure is operative and an analogy may be made with the private sector.

According to *Gaster (1995)* the specifics of the public sector are:

- services are delivered to everyone, such as e.g. public lighting,
- services are available only for specific users (e.g. public kitchen etc.),
- services are prescribed by law and nobody is deprived of using them,
- services are guided by needs (e.g. primary healthcare),
- services depend on available resources,
- services may be of a prevention character,
- services must be available to those who want them, usually against payment, e.g. transport.

From the aforementioned facts it may be concluded that most services may be used if a customer wishes to, and for some services individuals have no choice, but to use the offered services. *Morgan and Murgatroyd (1994)* pointed to the fact that there is no market for many public services. Furthermore, the existence of some non-typical users does not diminish the need of the public sector to fight with problems such as inefficiency or losses. This also relates to the quality of public sector services.

The quality of local administration is not a new quality concept, but it is specific due to:

- political nature of public administration (elected members have great power),
- wide range of services and a large number of objectives, including the social ones,
- profit of service users,
- differences between the legal framework and public statutory limitations,
- special values, such as equality, democracy,
- geographical domain – activities of local authorities are related to a special geographical domain.

Generally speaking, local administration customers want to be treated as individuals and to be provided with services that meet their individual demands.

### 3.2. The role of citizens, customers and consumers

There is a debate whether it is possible for the *TQM* user concept to include citizens as well. *Skelcher* (1992) considered that citizens should:

- be aware of the existence of the main policy and decision-making by local authorities,
- be capable of discussing decisions of the Council,
- be more interested in the Council's care,
- be involved in the management of the local community,
- evaluate work of the Council and
- vote.

Internal users are employed at local (public) institutions – management, political leaders and other employees.

The political dimension of leadership in local administration is very important, because roles of local political parties and other political groups, as well as political atmosphere as a whole may not be ignored (*Wilkinson, 1998*). It is related to quality, because these are new demands of stakeholders from the world of politics. With this in mind, activities of decentralizing political decision-making are initiated so that:

- elected members have no contact with users and citizens,
- higher sensitivity of local administration is achieved in deciding on resources allocation and decision-making policy,
- a better approach to political processes and decision-making forums is granted to citizens.

For the purpose of improving quality in local administration it is necessary to raise awareness regarding:

- new demands of users,
- consumption limitations,
- decentralization and modernization policy,
- promotion of quality etc.

According to *Allen and Kilman (2001)*, obstacles to quality implementation in local administration are:

- lack of formal strategic plan for changes,
- lack of customer orientation,
- poor internal communication,
- lack of real influence by employees,
- lack of trust of employees in the top management,
- inadequate system of rewards
- accent on short-term financial results,
- lack of leadership etc.

This has affected the defining of attributes of public organizations (*Ingstrup and Crockall, 1998*) of great performances:

- accent on people,
- participation leadership,
- innovative working style,
- strong customer orientation,
- aspiration towards achieving optimal performances.

Therefore, *Federal Quality Institute* from the USA introduced seven operative principles for the application of quality in the public sector:

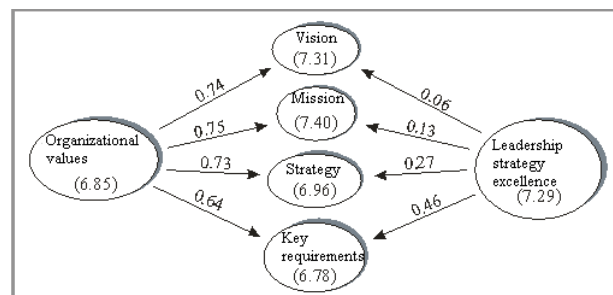
1. politics of the top management and personal leadership,
2. long-term strategic planning,
3. customer orientation,
4. measuring and analyzing products and processes,
5. training and acknowledging employees' success,
6. strengthening team work and
7. assuring quality.

### 3.3. Organizational values and leadership

According to a research conducted in Portugal, organizational values in local administration are:

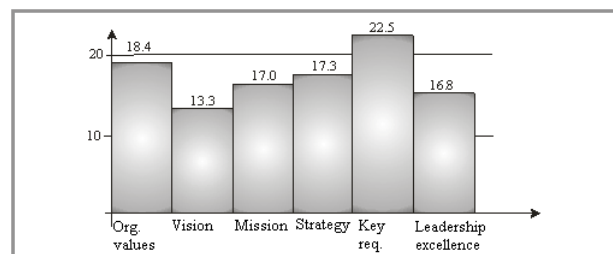
- utilitarianism – orientation towards a greater good for the majority,
- liberalism – free choice with minimization of central authority participation,
- redistribution of resources and power,
- social justice,
- limited inequality,
- filtering resources towards the bottom.

Based on this, vision, mission, strategy and key requirements are defined, which all together affect (*Figure 5*).



**Figure 5.** Variables in the leadership excellence model [11] on a sample amounting to 85 local administrations

There is an interesting difference in views of leaders and employees (*Figure 6*).



**Figure 6.** Difference in grades by leaders and staff

It is visible that leaders' grade on leadership and excellence has always been higher than the grade of local administration staff. A special difference in grades is around 15 %, which may be used for faster analyses of leadership in local administrations.

On the other hand, the internal grade and citizens' grade differ (*Table 2*).

**Table 2.** Comparison of mean values of grades

	<b>Internal grade</b>	<b>Citizens' grade</b>	<b>Difference</b>
Communication related to strategy	6.72	5.14	1.58
Conforming strategy policy	6.89	4.60	2.29
Coordination and team work	6.66	4.48	2.18
Measuring performances	5.95	4.78	1.11
Benchmarking	6.16	4.85	1.31
Constant improvement culture	7.12	4.54	2.58
Leadership approach	7.62	4.76	2.86
Responsibility for changes and citizens' needs	7.09	4.68	2.41
Service and process innovation	5.81	4.45	1.36
Awareness on citizens' needs	7.30	4.50	2.80
Information and communication quality	6.35	4.59	1.91
Suggestions and complaints management	7.24	4.10	3.14
Value for money	7.22	4.38	2.84
Financial situation	7.40	5.08	2.32
General image	7.44	5.17	2.27
Contribution to the development of local administration and the quality of citizens' life	8.56	5.42	3.14

#### 4. CONCLUSION

It may be noticed that employees' grade is significantly higher than the grade by citizens as users of local administration services.

The following conclusions may therefore be made:

1. the area of public administration becomes the subject of many analyses and improvement efforts, especially due to unsatisfactory service quality,
2. current individual attempts haven't delivered expected results,
3. a grading model is recommended, which is conformed to some of the business excellence models,
4. in order to assure comparability of quality levels, the EU issued the *CAF* model as a framework for common grading of public sector organizations,
5. due to the recorded initial activities in this area, there is a huge challenge for the quality movement in Serbia, especially for the Quality and Standardization Association, which relates to active involvement in improving public administration processes from the aspect of quality,
6. the created infrastructure, especially the Fund for Quality Culture and Excellence (*FQCE*) has been priceless for external assessment of business excellence of public sector organizations.

*CAF* model has become a model for recognizing and identifying the level of quality of the public administration in the EU. According to a previously conducted research, self-assessment was most frequently found in local administration (44 organizations), education and research (18), social welfare and services

(16), economy, agriculture, fishery and trade (9), general politics and coordination (7), transport, infrastructure, public work (7), protection of the living environment (4), justice and law (4), budget-related divisions of the public sector, *ICT* (4), customs, taxes and finances (3), health (3), police and safety (3), household work (2), post and communications (1), other (3).

The application of the *CAF* model is significantly easier if there are previous experiences with other models, especially with the *EFQM* model, quality circles, *QFD* and *FMEA* methods and other national rewards for business excellence.

What is to be said in the end? We are in the initial phase of applying the *CAF* model in Serbia. A special action plan should be made for "attracting" the interest of public administration in *CAF* and their involvement in the business excellence reward in Serbia.

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**Kontakt autora:**

**Slavko Arsovski**, Full Professor, graduate engineer,  
University of Kragujevac, Kragujevac,  
cqm@kg.ac.rs

**Srdan Nikezić**, Assistant Professor, graduate  
economist, University of Kragujevac, Kragujevac

**Dobrica Stojković**, Ražanj County,  
opstinarazanj@gmail.com

**Boban Đurović**, Vrnjačka Banja