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Adapting EFQM Excellence Model for Public Transport Operators: A Case of IETT, Istanbul's Public Bus Operator

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ABSTRACT

There are several management approaches being utilized in public transport operators to achieve organizational performance. EFQM excellence model, promoted by the European Foundation for Quality Management, helps organizations achieve sustainable excellence with its holistic management framework. One of the most outstanding features of EFQM model is its balanced and holistic perspective for organizational performance based on continuous improvement approach to exceed the stakeholders' expectations. In this study, we examine the way EFQM excellence model has been adapted and implemented for urban public transport operators through a case study of Istanbul's public bus operator, IETT. The results of the case demonstrate the adaptation processes of the fundamental concepts of the model to a public transport operator's organizational context, thus, providing an applicable management model for other public transport operators as well. EFQM excellence model has been adopted for the first time in a public transport company, therefore the results have significant implications to enhance quality initiatives in public transport operators, in particular, and urban mobility, in general.

Keywords:

EFQM, Excellence Model, Public Transport, IETT, Quality, Urban Mobility

EFQM Mükemmellik Modelini Toplu Ulaşım İşletmelerine Uyarlamak: İstanbul'un Otobüs İşletmesi İETT Örneği

ÖZ

Toplu ulaşım işletmeleri tarafından organizasyonel performansı artırmak için kullanılmakta olan birçok yönetim yaklaşımı bulunmaktadır. Avrupa Kalite Yönetim Vakfı tarafından geliştirilen ve desteklenen EFQM mükemmellik modeli, bütünsel yönetim çerçevesi ile organizasyonların sürdürülebilir mükemmelliğe ulaşmalarına yardımcı olmaktadır. EFQM modelinin öne çıkan önemli özelliklerinden biri de sürekli iyileştirme yaklaşımına dayalı olarak paydaş beklentilerini aşacak ve organizasyonel performansı sağlayacak, dengeli ve bütüncül bir perspektif sunmasıdır. Bu çalışmada, EFQM modelinin kentiçi toplu ulaşım işletmeleri için uyarlanması ve uygulanması, İstanbul'un belediye otobüsü işletmesi olan İETT örneği üzerinden sunulmaktadır. Çalışma, modelin temel kavramlarının toplu ulaşım işletmelerinin organizasyonel bağlamlarına uyarlanma süreçlerini göstermekte ve diğer toplu ulaşım işletmeleri için de uygulanabilir bir yönetim modeli sunmaktadır. EFQM mükemmellik modeli ilk kez olarak bir toplu ulaşım işletmesi için uygulanmakta olduğundan, elde edilen sonuçlar, özelde toplu ulaşım işletmeleri genelde de kentiçi ulaşımda kalite girişimlerini artırmak açısından önem arz etmektedir.

Anahtar Kelimeler:

EFQM Mükemmellik Modeli, Toplu Ulaşım, İETT, Kalite, Kentiçi Ulaşım



1. Introduction

Quality has many different meanings and according to Peters and Waterman (1982) quality has been defined as excellence. Excellence can also be described as an ongoing process of continuous improvement. Excellence models provide frameworks for the strategic management of competitive organizations (Kassem et.al., 2016). European Foundation for Quality Management fosters such a business excellence model, also known as EFQM excellence model. It is a widely known and applied excellence model, especially in European companies. Organizations, both private and public, can use that model in order to implement Total Quality Management (TQM) principles with a view to achieving business excellence (Anastasiadou and Zirinoglou, 2015). Business excellence concept is based on those total quality management principles, and companies having adopted business excellence generally utilize certain initiatives, methods and techniques to accomplish the desired outcomes (Adebanjo, 2001).

In recent years, many papers on EFQM Excellence Model have examined different aspects of it. Camison (1996) presents empirical evidence on the extent to which the EFQM quality model might assist Valencian hoteliers to know and to close the gap between perceptions of quality and self-assessed ratings of quality performance. Moeller (2001) builds on previous reports by illustrating the experiences of German health service organizations that made their quality assessment based on EFQM Excellence Model. He provides an evaluation of the EFQM model with peer auditing and accreditation concept within health care. Wongrassamee et al. (2003) compare and contrast two widely known and well publicized improvement models: Kaplan and Norton's balanced scorecard (Kaplan and Norton, 1996) and the EFQM Excellence Model (EFQM, 2012). Rusjan (2005) evaluated the usefulness and procedures of EFQM Excellence Model for decision-making on organizational improvement activities. Bou-Llusar et al. (2009) analyze the extent to which the EFQM Excellence Model captures the main assumptions involved in the TQM concept, that is, the distinction between technical and social TQM issues, the holistic interpretation of TQM in the firm, and the causal linkage between TQM procedures and organizational performance. La Rotta and Rave (2016) investigated EFQM model under systematic review methods that include current state and challenges. Gomez et al. (2017) inferred that the organizations using EFQM as a management tool indirectly use TQM. Liu and Ko (2017) developed a modified EFQM Excellence Model for the the hotel industry by using the fuzzy analytic hierarchy process based on multi-criteria decision making method.

There are also some qualitative studies focusing on the application of business excellence models like TQM in public organizations as in the study of Ajmal et al. (2016). This study is also helpful from a macro-perspective in providing guidelines to build up an appropriate implementation plan for TQM practices. Although they share some similarities in implementation since both are public organizations with their specific non-profit inclinations, differences are also highlighted with respect to their specific goals and structures. Fryer et al. (2007) propose critical success factors for continuous improvement projects in public sector. The paper also compares the differences and similarities in the implementation of continuous improvement practices like TQM, EFQM etc. between manufacturing, service and public

organizations. As organizations strive to be more customer-centered including public organizations, EFQM model provides a framework to improve the quality of services.

The studies examining the management approaches for public transport operators generally view the issue from a service quality approach rather than holistic management frameworks. Among service quality oriented studies, Eboli and Mazzulla's (2007) study of service quality examines the bus transit, de Oña et al's (2013) study utilize a structural equation approach to measure the perceived service quality in bus transit service and Hensher et al's (2003) develop a service quality index for the commercial bus contracts providing a service quality approach. Disney (1999) examines the critical elements of service quality from a total quality management perspective and MacDorman et al. (1995) provides a useful guide for the implementation of Total Quality Management (TQM) in transport operators. Although the last two studies have a more total quality perspective compared to other studies, there are still lack of research addressing the implementation of holistic management frameworks like EFQM model in public transport operators. Therefore, this study is believed to fill that important gap in the literature of business excellence models in public transport sector.

In this paper, the implementation process of the EFQM model is examined in İETT, a publicly-owned urban bus operator operating in Istanbul. Since İETT is the first public transport operator to implement this model, the challenges faced during the process as well as the lessons learned provide a very good case example for not just other public transport operators but also for other public organizations operating in the service sector. The main motivations that led İETT to adopt EFQM model were to enhance its service quality in a holistic way, increase its competitiveness among other bus operators in the city and the quality-oriented outlook of the management. EFQM was believed to achieve the transformation of organizational culture from a bureaucratic mindset characteristic of public companies to a more business-oriented culture to increase efficiency. The way İETT has incorporated the fundamental concepts of EFQM model in its management systems is particularly examined in order to elucidate how other public transport operators can adapt this model so that they can increase their corporate performance and attain organizational excellence. Therefore, this implementation of EFQM model in İETT can be used as a reference case for other urban public transport operators. The most important contribution of our paper is to provide an adaptation framework for public transport operators which want to benefit from EFQM model.

Selecting proper key performance measures for monitoring improvement in a public transport company in the context of business excellence is another contribution of this paper. As urban transport systems is at the center of our urban lives, managing these systems in an effective and efficient way is crucial for sustainability as well. Measures related with sustainability is also provided in this paper, within a context of EFQM philosophy. Section 2 is the case study of EFQM application in İETT which provides a context and a general overview of EFQM application in İETT. This section also elaborates the Enabler Map of EFQM Model for İETT's case and it develops key performance indicators within the context of Results part of EFQM model. Section 3 discusses the results of the feedback report as well as the challenges during the process. Lastly, Section 4 concludes the paper with suggestion for future studies.

2. Case Study of the EFQM Application in IETT

Public transport in Istanbul began in 1869 after Dersaadet Tram Company was founded and the tunnel (the first subway in Istanbul) facilities were constructed. The first buses used in Istanbul were procured in 1926. After having been operated by foreign companies for a while; the electricity, tram and tunnel enterprises were nationalized in 1939 and it was given the title Istanbul Electricity Tramway and Tunnel (IETT) Enterprises. As a state-owned enterprise, IETT offers urban public transport services today, including bus, bus rapid transit – BRT, tram and funicular services.

Offering non-profit services in line with the principle of public welfare, IETT accepts the other bus and alternative public transport operators in Istanbul as stakeholders serving for Istanbul's urban transport system. Adopting integration as a value proposition, IETT acts in cooperation with alternative public transport actors by introducing lines to lead passengers to railway systems and seaway transport. In line with the efforts to facilitate urban public transport, traveling with private automobiles is regarded as a way of transport that IETT does not encourage, although it does not consider it a competitor.

IETT started to launch quality initiatives in 2011 with the introduction of various quality certificates like ISO 9001 Quality Management System, OHSAS 18001 Occupational Health and Safety System and ISO 14001 Environmental Management System. Integrated Management System was also introduced in 2011. These management systems created an organizational environment where several management concepts such as continuous improvement, total quality management and performance management can easily be applied. In 2012, IETT joined the National Quality Initiative led by KALDER in Turkey, which is EFQM's Turkey Partner. The first self-assessment was carried out according to EFQM assessment criteria and IETT got a score of 300. The assessment scores that IETT obtains for consecutive years are shown in Figure 1. As this figure shows, IETT reached its target for these years.

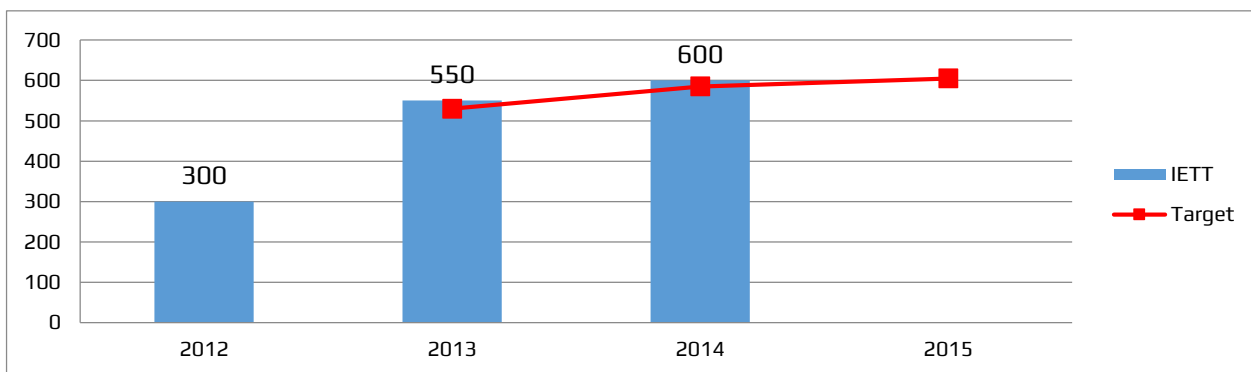


Figure 1. IETT self-assessment score (IETT, 2015).

After 2012, external assessments done by assessment teams of KALDER gave a score of 550 and 600, for 2013 and 2014, respectively. The organizational commitment and management support provided the increase in total assessment score.

The flow chart in Figure 2 summarizes and shows the EFQM implementation cycle in IETT:

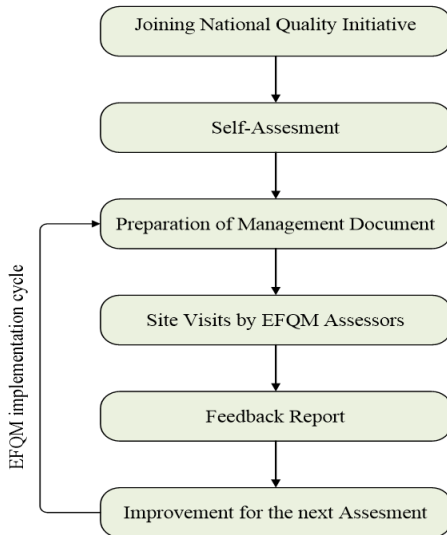


Figure 2. EFQM Implementation Cycle in IETT

Each assessment period starts with the overall review of EFQM's fundamental concepts and how these concepts are translated into organization's strategies, processes and corporate culture. This review is led by a committee called "Excellence Committee", which is composed of various departments' representatives and coordinated by Quality and Corporate Development Department. A Management Document, nearly 60-70 pages, is also prepared to demonstrate the way EFQM excellence model is applied in the organization. In this document, there are 3 main chapters and 1 annex section for additional information like organizational chart, excellence policy and business model. The first chapter, Key Information, summarizes the challenges and strategies of the organization, the market in which it operates and the products or services it offers, and which customers it serves. Also, company's operations, partners and supplies together with management structure and activities are also explained. The second chapter, the Enabler Map, provides an overview of the input criteria of EFQM Excellence Model and how these criteria are applied in the company with proof of activities being undertaken. These criteria include leadership, strategy, people, partnerships & resources, and processes, products and services. The last chapter, Results, is composed of the results criteria which include customer, people (employee), society and business results. The organization tries to show that it achieves the results it targets with sustained success over the years and have a comparable advantage to its peers in the sector. As put in the EFQM Excellence Model; "to achieve sustained success, an organization needs strong leadership and clear strategic direction. They need to develop and improve their people, partnerships and processes to deliver value-adding products and services to their customers. In the EFQM Excellence Model, these are called the Enablers. If the right Enablers are effectively implemented, an organization will achieve the Results they, and their stakeholders, expect" (EFQM, 2012). The document is delivered to the assessment team, who will carry out a site visit to see on-the-spot how the model is being deployed in the company. The assessment team get their first apprehension of the organization with this document.

The preparation work starts when Assessors read the management document, which allows them to familiarize themselves with the organization. Based on this initial understanding, the Team identifies the key elements to be investigated during the

site visit. During the second phase, the team plans the site visit in partnership with the organization. In an iterative way, the team goes from a high level master plan to a detailed site visit schedule, with individual interviews and focus groups.

During the site visit, EFQM assessment team, which is generally composed of 6 people with 3 separate teams, carry out in-depth meetings with various departments, teams and committees to understand how the EFQM fundamental concepts are implemented in the organization. To do this, there is an assessment framework that provides a structured approach to evaluate the performance of the organization. The model is called RADAR, which is composed of the initials of the following terms:

- Results: Determining the results the company is aiming to achieve as part of its strategy,
- Approaches: Planning and developing an integrated set of approaches to achieve results,
- Deployment: Whether the approaches are deployed in a systematic way for implementation,
- Assessment and Refinement: Monitoring and analysis of the results achieved together with approaches and assessing and refining them.

At the end of the assessment, the assessment team prepares a feedback report, which details the strengths and opportunities to improve future performance for each fundamental concept. Therefore, this feedback report is very significant for learning and improvement for an organization. One of the reasons that IETT achieved to increase its overall EFQM assessment score over the years is that it acted on the points in the feedback report. It has tried to sustain the organizational strengths and prepared yearly action plans to improve the points, which in the feedback report are identified as opportunities for improvement. There is no term in the EFQM model as "weaknesses", as it regards these weaknesses as opportunities for improvement and subtly phrase them as such.

2.1. Enabler Map

The EFQM Excellence model provides a framework to understand the relationship between what it does, the Enablers, and what it achieves, the Results. The following figure shows the relationship between these criteria: These enablers, results and their relationships are shown in Figure 3.

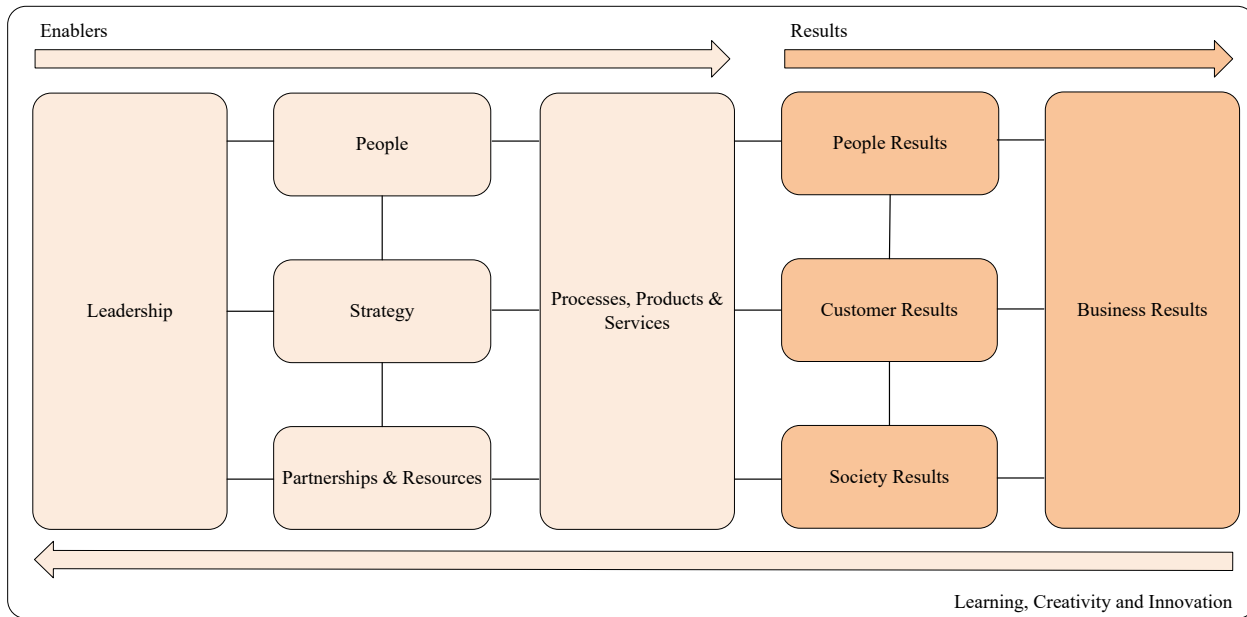


Figure 3. EFQM excellence model: enablers and results (EFQM, 2012).

Enablers are composed of leadership, people, strategy, partnerships and resources, processes, products and services. These are the things an organization needs to do to develop and implement its strategy.

2.1.1. Leadership

According to the model, excellent organizations have leaders who shape the future with their actions, acts as role models for its values and ethics and inspiring trust to the stakeholders. They are flexible, enabling the organization to anticipate and react in timely manner to ensure the on-going success of the organization (EFQM, 2012). In IETT, leader is defined as “the person who, in accordance with IETT’s vision and strategies, thoroughly puts the team’s goals forth, shares the rationales of the goals, mobilizes the team towards the goals and achieve the results” (IETT, 2015). In IETT, leadership is accepted not as an assigned title but an improvable skill and leadership skills are defined in light of this view. IETT executives, that are, general manager, deputy general manager, director, manager, section manager and supervisors are expected to have leadership skills.

EFQM model has provided a true understanding of the central role of leaders for organizational change. IETT, as a public company which has committed to becoming an organization truly managing change needed leaders to carry out this transformation within the company. For public transport companies, this is especially needed as they must be very responsive to the changing demand of the customers, employees and the urban transportation context. Creating a flexible and agile organization is only possible by effective leadership, as the EFQM model clearly describes.

2.1.2. Strategy

According to EFQM excellence model, excellent organizations implement their mission and vision by developing and deploying a stakeholder focused strategy (EFQM, 2012). IETT, as every public company in Turkey, is required to prepare a 5-year strategic plan in accordance with “Public Financial Management and Control Law”

issued in 2003. Based on this legal framework, IETT prepared its first strategic plan in 2007 and the second strategic plan in 2012, encompassing the years from 2013 to 2017. IETT has established its own standards by preparing the "Strategic Plan Preparation Guide" in 2007, which takes account of the organization's own characteristics. Strategic planning is accepted as a managerial process of IETT and has been defined with the process "Strategic Plan Management Process".

Strategies provide a roadmap to achieve the vision and mission with related performance indicators. IETT's key results are these performance indicators which are directly linked with mission, vision and strategic objectives. In IETT, targets related with key results are set out in accordance with the "Instructions for Target Setting Guide". In this framework, the key factors for target setting are defined as the legislative constraints, data from the past, stakeholders' requests, cyclical impacts and benchmark data. As EFQM model puts forward, the organizations should develop effective ways to deploy their approaches throughout the organization. Therefore, in the "Strategic Plan Preparation Guide" of IETT, the methods for communicating the strategies to the company are also explained. IETT Strategy Deployment Hierarchy that includes the mission, vision and strategies is shown Figure 4.

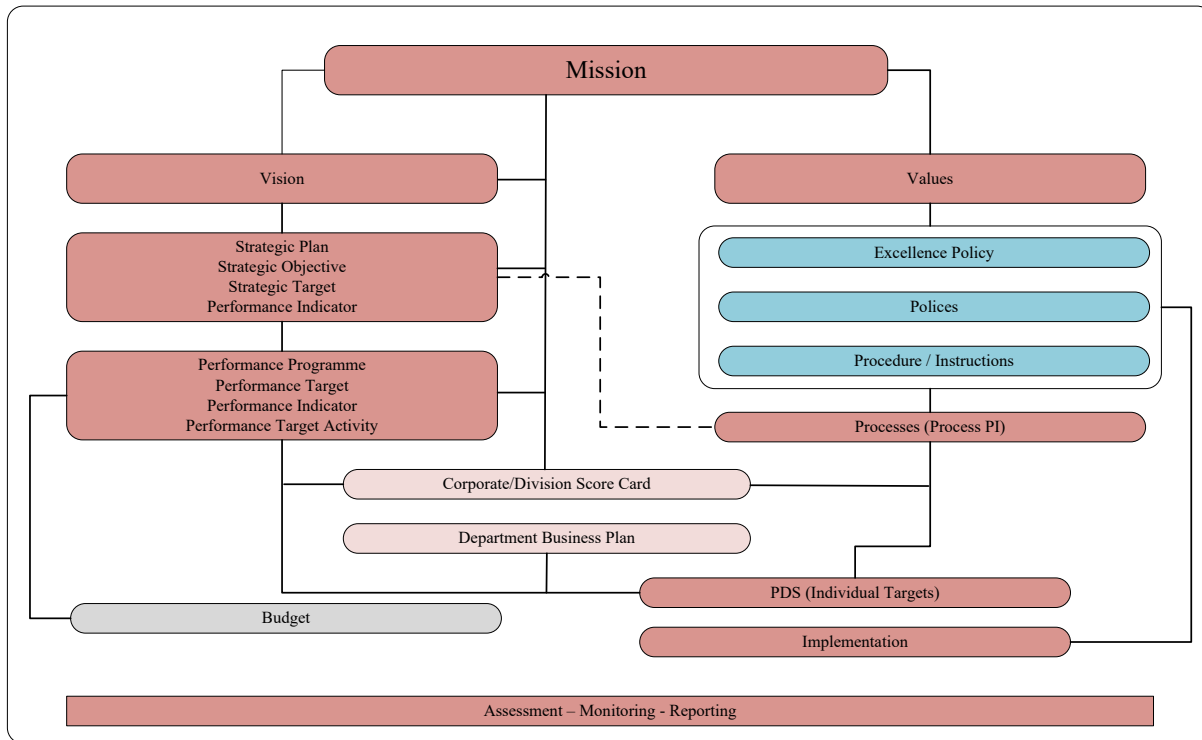


Figure 4. IETT strategy deployment hierarchy (IETT, 2015).

2.1.3. People

According to EFQM model, excellent organizations value their people and create a culture allowing the mutually beneficial achievement of organizational and personal goals (EFQM, 2012). They develop the capabilities of their people and promote fairness and equality. They care for, communicate, reward and recognize, in a way that motivates people, builds commitment and enables them to use their skills and knowledge for the benefit of the organization. "Succeeding through the talent of the people" is a fundamental concept of EFQM. In order to actualize this concept, IETT

defined its HR policy in its excellence policy. The understanding of personnel management in IETT has been replaced by the human resources management understanding. The name of the division which was "Personnel and Social Affairs" has been changed to "Human Resources and Training". With the new name, the activities which had mainly comprised of personnel administration have become diversified in terms of personnel development.

The "Competency Model" has also been developed, setting forth the behaviors, skills and attitudes required for ensuring that the organization's mission and vision are achieved and its strategies are realized; and the occupational, technical and behavioral competencies expected for each position have been defined in the Performance Development System, which is a performance evaluation tool used by the employees. The "target alignment" approach ensures that the individual targets of each employee are measurable and the link between the individual targets and organizational targets are aligned more clearly. Providing a culture of innovation and creativity is another fundamental concept in EFQM model, phrased as "harnessing creativity and innovation". IETT adopts innovation as one its corporate values and deploys it via various activities and approaches like launching an "Internal Suggestion System" to benefit more from employees' creative ideas. Effective internal communication, recognition of achievements and diversity are other elements that make an organization harness its people's capabilities and skills.

2.1.4. Partnerships and Resources

EFQM model makes it explicit that excellent organizations plan and manage external partnerships, suppliers and internal resources in order to support strategy and policies and the effective operation of processes (EFQM, 2012). Partnerships in IETT are divided into three main categories in order to identify the approaches and responsibilities regarding these partnerships. The category of "Key partnerships" includes law making public institutions, Istanbul Metropolitan Municipality and other transport operators. "Strategic partnerships" consist of those established to attain the strategic objectives and "Support partnerships" involve sub-contractors that IETT cooperate with for service procurement purposes to execute daily activities. Categorization of and management approach for partnerships are explained in the "Partnership Management Procedure".

With regard to technology management, which is quite important in public transport providers, to address the changing demands of their customers; IETT plans annual activities regarding information and communication technologies (ICT), intelligent transport systems (ITS), vehicle technologies and energy technologies to achieve its vision and mission. Information and knowledge management is another key factor to increase the effective use of know-how in the public transport sector. Knowledge management is considered to be the basis of the core competency, namely consultant. As part of its mission, IETT tries to be a company which acts like a know-how center for public transport sector both nationally and internationally. For example, IETT's Bus Rapid Transport (BRT) system, also called Metrobus, is a benchmarking example for various Metrobus projects around the world. Therefore; generating the know-how of Metrobus operations in a transferable way is key to IETT's consultant core competency.

2.1.5. Processes, Products and Services

EFQM model states that excellent organizations design, manage and improve processes to generate increasing value for customers and other stakeholders (EFQM, 2012). The processes in IETT are defined under three main categories as Customer Oriented, Support and Managerial Processes. The core of the customer oriented processes is the "Service Realization" process; the rest of the customer oriented processes are defined by forming a value chain, taking account of the input-output relation. Support processes are comprised of activities which provide resources for the value chain, while the managerial processes are designed to ensure management support for all processes. IETT Process Framework is shown Figure 5.

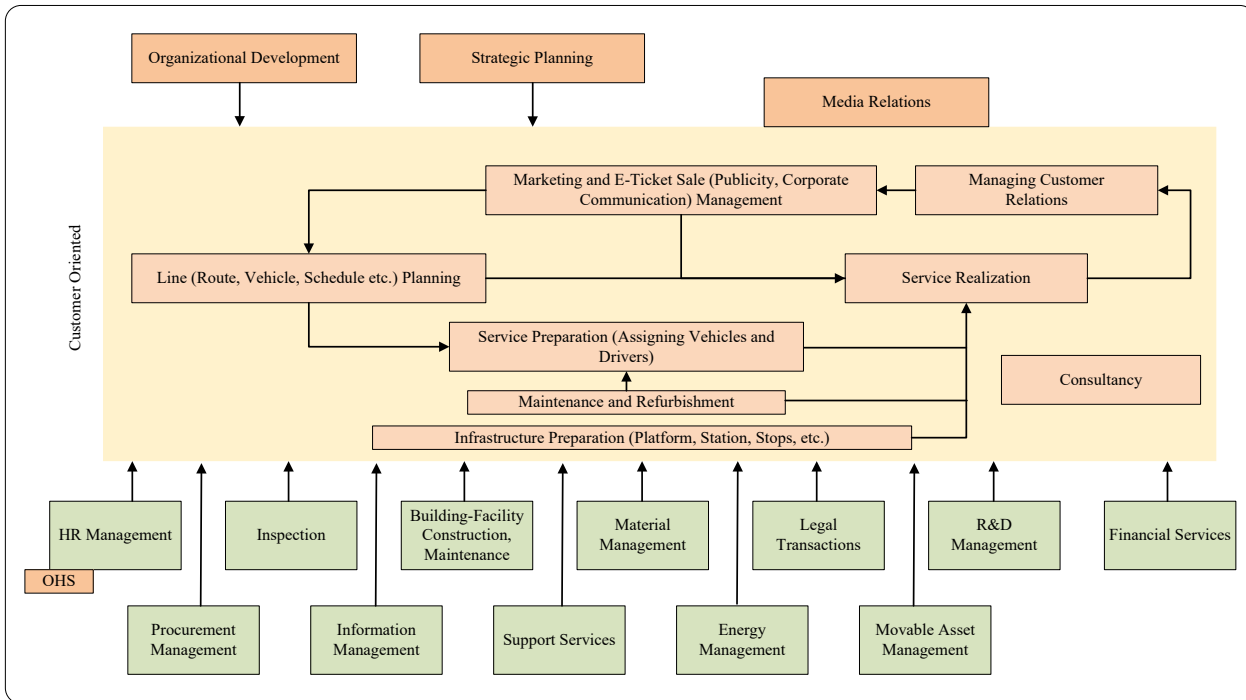


Figure 5. IETT process framework.

In an effort to identify customer perceptions and expectations, an annual customer satisfaction survey is conducted, with the help of independent research organizations. This survey covers all services and customer segments of the organization. Satisfaction assessment criteria take account of the service quality assessment model criteria. After examining the results of the survey, the areas requiring action are identified; and corrective and preventive measures are taken accordingly.

2.2. Results Criteria

Shown on the right-hand side of the model, the Results section details the results the organization achieves, in line with its strategic goals. There are 4 results criteria: Customer results, people results, society results and business results. According to EFQM model, excellent organizations develop a set of key performance indicators (KPIs) and related outcomes to determine the successful deployment of its strategy, based on the needs and expectations of its stakeholders (EFQM, 2012). The organization also has to set clear targets and segment these results to understand the performance of specific areas. It has to demonstrate a positive and sustained

good business results over at least 3 years. It also has to examine the reasons lying behind the trends and the relationship of this trend on other key performance indicators. Therefore, a sound and robust cause-effect relationship should be set among the key performance indicators, with comparison to similar organizations.

IETT has developed "Performance Indicators Hierarchy" in order to measure and assess organizational success. Key Performance indicators followed by IETT are given in the following sub-sections. Mission and vision indicators, strategic performance indicators, and several process performance indicators that affect strategic results are monitored as key results.

2.2.1. Customer Results

All the key performance indicators of IETT related with its customer results are given in Table 1. These indicators can also be used by other public transport providers as well.

6a0. Customer Satisfaction Score	6b1 .Vehicle Fleet Age
6a1. Reputation and Image Score	6b2. Ratio of Vehicles Accessible for Disabled People (%)
6a2. Product and Service Value Score	6b3. Ratio of Electronic Card Use (%)
6a3. Product and Service Delivery Score	6b4. Number of AVMs per Hundred Thousand People
6a4. Customer Services, Relations and Support Score	6b5. Number of Dealers per Hundred Thousand People
6a5. Customer Loyalty and Engagement Score	6b6. Ratio of Air-Conditioned Vehicles (%)
	6b7.Number of Application Centers per 100.000 People
	6b8. Number of Personalized Cards
	6b9. Rate of Timely Response to Customer Applications (%)

Table 1. Customer results.

The indicators in the right-hand side are what the organization does in order to improve the indicators on left-hand side as perceived by the customers.

2.2.2. People Results

All the key performance indicators of IETT related with its people results, which can be used by other public transport providers as well are given in Table 2.

7a0. Employee Satisfaction Score	7b1. Occupational Accident Rate
7a1. Satisfaction, Involvement, and Engagement Score	7b2. Overtime Hours per Personnel
7a2. Motivation and Empowerment Score	7b3. Survey Participation Rate
7a3. Leadership and Management Score	7b4. Personnel Turnover Rate
7a4. Competency and Performance Management Score	7b5. Training Hours per Employee
7a5. Training and Career Development Score	7b6. Training Satisfaction Rate
7a6. Effective Communication Score	
7a7. Working Conditions Score	

Table 2. People results.

2.2.3. Society Results

All the key performance indicators of IETT related with its society results, which can be used by other public transport providers as well are given in Table 3.

8a1. / 8a1.1 CRS Score	8b1. Low-Emission Vehicles
8a1a. Environmental Impact	8b2. Water Consumption
8a1b. Image and Reputation	8b3. Electric Power Consumption
8a1c. Societal Impact	8b4. Natural Gas Consumption
8a1d. Workplace Impact	8b5. Fuel Consumption
8a2. Media Exposure	8b6. Management System Documents
	8b7. Traffic Accidents

Table 3. Society Results

Excellent organizations, according to EFQM model, achieves and sustain results that meet or exceed the needs and expectation of the relevant stakeholders in the society in which it operates. IETT carries out an annual corporate reputation survey to understand the perception of the company as seen by the various stakeholders in the society. Suppliers, NGOs, other transport operators all participate in this survey. The results are analyzed with a view to improve the performance as perceived by the stakeholders.

2.2.4. Business Results

Business results shows how the organization meets or exceeds the needs and expectations of its business stakeholder. These indicators are monitored in the Corporate Scorecard of IETT. The list of key performance indicators related with business results are given in Table 4.

9a1. Operating Incomes	9b1. Ratio of Vehicles Available for Service
9a2. Operating Expenses	9b2. Maintenance-Repair Costs per Km
9a3. Difference Between Incomes and Expenses	9b3. Lost Trip Ratio (%)
9a4. Expense Coverage Ratio	9b4. Ratio of Actualized Trip Km (%)
9a5. Total Number of Journeys	9b5. Number of Intelligent Stops
9a6. Number of Lines	
9a7. Ratio of Line Network Length to Total Road Network Length	
9a8. Self-Assessment Score	

Table 4. Business Results

3. Results and Challenges

One of the benefits of applying the EFQM excellence model is the feedback report that the organization receives from the Assessment Team. The results of the entire implementation process can be seen in the feedback report. This report indicates the high level strengths that support the company's strategic drive, highlighting good – or even role model – practices. It also shows the high level opportunities to further improve on strategic challenges. Last, the scoring profile provides with an indication of the company's maturity level.

The Assessor Team has identified the following key strengths, linked to IETT's management systems and role model practices:

- IETT is a customer oriented organization at all levels, trying to constantly fulfil the needs of customers and to improve service quality, based on new technologies and innovation.

- The use of benchmarking, innovation and internal changes in management systems to adapt the company both to customers' new needs and expectations and to the future scenario of being the sole authority for public transportation in Istanbul.
- Alignment to strategic objectives and priorities throughout the organization. This is achieved through using objectives deployment and new ways of working to achieve better relations between departments and demonstrate an effective way to reach objectives focused on the customer.

However, to sustain IETT's journey towards excellence and to help the company to complete the adaptation to new scenarios and guaranteeing a sustainable future, the assessor team has also identified some key opportunities for further improvement:

- IETT has made considerable progress in developing and implementing the new approach for strategy deployment and process management. In order to ensure that results and indicators management is effectively covering all the company needs to all levels in a systematic way, continued review of structure, management and deployment on results (key, prioritization, cause- effect, processes and departments) could be considered.
- The continued deployment of a culture of continuous improvement, to ensure that once approaches are introduced, they are managed in an efficient and effective manner. The internal use of creativity and innovation to reinforce the culture of continuous improvement.
- To consolidate the progress made, a wider deployment of new approaches and the maturation of a stronger learning and improvement culture within the company at all levels.

On the other hand, the challenges faced by IETT during the implementation process are worth mentioning. They can also play a helpful role for other public transport operators which consider implementing a EFQM framework. The main challenges include the following:

- Even though with its extensive focus and experience on quality management techniques after 2010, the organizational culture of IETT had been still struggling to internalize the concepts incorporated in EFQM model. Performance-oriented mindset, continuous improvement approach, balanced management of stakeholders as well as sustainability concerns needed time to include and embed in the organizational culture of IETT.
- Although there have been many adaptations of EFQM model in public service sector, particularly in Turkey, lack of sectoral experience in public transport operators caused important benchmarking disadvantages. IETT, as the pioneer organization in the adoption of EFQM model in public transport sector, had to face significant challenges as new problems arise in the adoption of the model. For example, the KPIs used in the Results had to be developed for the first time in an EFQM context.
- Having a history of more than 140 years in the public transport industry in Istanbul provided both as an enabling factor, as well as an impeding factor in organizational change projects. Initial lack of commitment from the employees and managers turned into long-term commitment with the strong ownership and support of the project by

the top-management. Adoption of a transformational leadership style by the top management provided a sustainable source of trust on the part of employees and managers.

4. Conclusion

By utilizing EFQM model, IETT increased its service quality, satisfied its stakeholders and achieved an organizational culture change. Overall, EFQM model provides a comprehensive management check-up tool for organizations. Public transport companies, which have an urgent need to adapt themselves to changing environment in the sector, can utilize this model with some adaptations as put forward in this paper. This study, we believe, provides a good example for implementation of EFQM model in a public transport company. The challenges that are faced by IETT, the KPIs developed in the Results section and the feedback report provide remarkable source of information and experience for organizations aiming to adopt EFQM excellence model.

There is a potential gap for future research in the form of comparative and sectoral studies as more and more public transport operators adopt this model in their organizational framework. However, there needs to be some time for the maturing of the implementation process for the operators to have a long-run comparative study. All in all, EFQM excellence model provides a holistic and comprehensive organizational improvement model not only for public transport operators but also for the public service sector, which needs urgent transformation in their management approaches to catch up with the demands of a dynamic and changing environment.

References

- Adebanjo, Dotun. "TQM and business excellence: is there really a conflict?." *Measuring Business Excellence* 5.3 (2001): 37-40.
- Ajmal, Mian M., et al. "TQM Practices in Public Sector: Case of Finnish Healthcare Organizations." *International Journal of Information Systems in the Service Sector (IJSSS)* 8.1 (2016): 34-44.
- Anastasiadou, S. D., & Zirinoglou, P. A. (2015). EFQM dimensions in Greek Primary Education System. *Procedia Economics and Finance*, 33, 411-431.
- Bou-Llugar, J. C., Escrig-Tena, A. B., Roca-Puig, V., & Beltrán-Martín, I. (2009). An empirical assessment of the EFQM Excellence Model: Evaluation as a TQM framework relative to the MBNQA Model. *Journal of Operations Management*, 27(1), 1-22.
- Camison, C. (1996). Total quality management in hospitality: an application of the EFQM model. *Tourism management*, 17(3), 191-201.
- Canitez, F., Deveci, M., & Demirel, N. C. (2016). Designing and implementing EFQM excellence model for public transport companies. *The 16th Production Research Symposium, Istanbul*, 12-14 October 2016, 240-246.
- de Oña, J., de Oña, R., Eboli, L., & Mazzulla, G. (2013). Perceived service quality in bus transit service: a structural equation approach. *Transport Policy*, 29, 219-226.
- Disney, J. (1999). Customer satisfaction and loyalty: The critical elements of service quality. *Total Quality Management*, 10(4-5), 491-497.
- Eboli, L., & Mazzulla, G. (2007). Service quality attributes affecting customer satisfaction for bus transit. *Journal of public transportation*, 10(3), 2.
- EFQM (2012). *An Overview of EFQM Excellence Model*, IETT Corporate Publications.
- Fryer, Karen J., Jiju Antony, and Alex Douglas. "Critical success factors of continuous improvement in the public sector: a literature review and some key findings." *The TQM Magazine* 19.5 (2007): 497-517.

- Gómez, J. G., Martinez Costa, M., & Martínez Lorente, Á. R. (2017). EFQM Excellence Model and TQM: an empirical comparison. *Total Quality Management & Business Excellence*, 28(1-2), 88-103.
- Hensher, D. A., Stopher, P., & Bullock, P. (2003). Service quality--developing a service quality index in the provision of commercial bus contracts. *Transportation Research Part A: Policy and Practice*, 37(6), 499-517.
- IETT (2015). IETT Management Document, IETT Corporate Publications.
- Kaplan, R. S., & Norton, D. P. (1996). Using the balanced scorecard as a strategic management system.
- Kassem, Rassel, Mian Ajmal, and Mehmood Khan. "The Relationship Between Organizational Culture and Business Excellence: Case Study from United Arab Emirates." *International Journal of Information Systems in the Service Sector (IJISSS)* 8.3 (2016): 16-35.
- La Rotta, D., & Pérez Rave, J. (2016). A relevant literary space on the use of the European Foundation for Quality Management model: current state and challenges. *Total Quality Management & Business Excellence*, 1-22.
- Liu, Y. L., & Ko, P. F. (2017). A modified EFQM Excellence Model for effective evaluation in the hotel industry. *Total Quality Management & Business Excellence*, 1-14.
- MacDorman, L. C., MacDorman, J. C., & Fleming, W. T. (1995). *The Quality Journey: A TQM Roadmap for Public Transportation* (Vol. 8). Transportation Research Board.
- Moeller, J. (2001). The EFQM Excellence Model. German experiences with the EFQM approach in health care. *International Journal for Quality in Health Care*, 13(1), 45-49.
- Peters, Thomas J., Robert H. Waterman, and Ian Jones. "In search of excellence: Lessons from America's best-run companies." (1982): 101.
- Rusjan, B. (2005). Usefulness of the EFQM excellence model: Theoretical explanation of some conceptual and methodological issues. *Total Quality Management and Business Excellence*, 16(3), 363-380.
- Wolf, F., & Mujtaba, B. G. (2011). Sustainability in Service Operations. *International Journal of Information Systems in the Service Sector (IJISSS)*, 3(1)
- Wongrassamee, S., Simmons, J. E. L., & Gardiner, P. D. (2003). Performance measurement tools: the Balanced Scorecard and the EFQM Excellence Model. *Measuring business excellence*, 7(1), 14-29.

