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Deliverable 3.2 ENERQI Guide

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Aim and contents of this guide

This document provides guidelines for the planning, implementation and operation of a public transport quality monitoring scheme based on regular observations by costumers. The main objective is to guide public transport operators, local authorities, or other types of organizations in setting up their own costumer based quality monitoring.

The guide was developed on the basis of the general methodological approach as conceived in the ENERQI project, but also on the initial process of learning and exchange of views and experience that took place during the setup phase of the quality monitoring in the parcitpating organizations.

A step plan takes the public transport authority/operator to a full functioning of continuous quality monitoring and usage of “real time” feedback in relation to quality improvements. The guide is divided into three parts:

- An **Introduction to the ENERQI approach**, explaining the methodology and comparing it with other common quality monitoring approaches.
- A **Setup Manual**, a step plan for the planning and implementation of the costumer based quality monitoring approach.
- An **Operational Manual**, describing the main tasks for a continuous operation of the quality monitoring approach.

The guidelines are intended not only to describe the methodology and its steps but also to inform on different design options that can be followed and their performance in relation to particular objectives, resource availability and supply and demand context of each site.

The document provides broad guidance into the application of the methodology, but in some aspects it does not go into detail (e.g. sampling methods). For such the reader may find additional information on methodological issues and evaluation of the ENERQI methodology in the correspondent deliverables of the ENERQI project (see also www.enerqi-online.eu).

Introduction to the ENERQI approach

The ENERQI approach

The ENERQI approach consists of measuring public transport service quality by involving present and potential customers in the observation and reporting of pre-defined quality aspects on a regular basis. It intends to provide a continuous monitoring of public transport quality and to timely identify appropriate measures to improve quality. Additionally, it allows to closely evaluating impacts on perceived quality of new measures, as well as of communication campaigns.

This process emerges as a “quality loop” giving direct inputs to the management of the public transport operator and authority. A closer customer relation management is made possible. In the end, the “real time” availability and use of quality monitoring information will lead to an increased use of public transport and lower consumption of energy, environmental emissions, and congestion through less private car use.

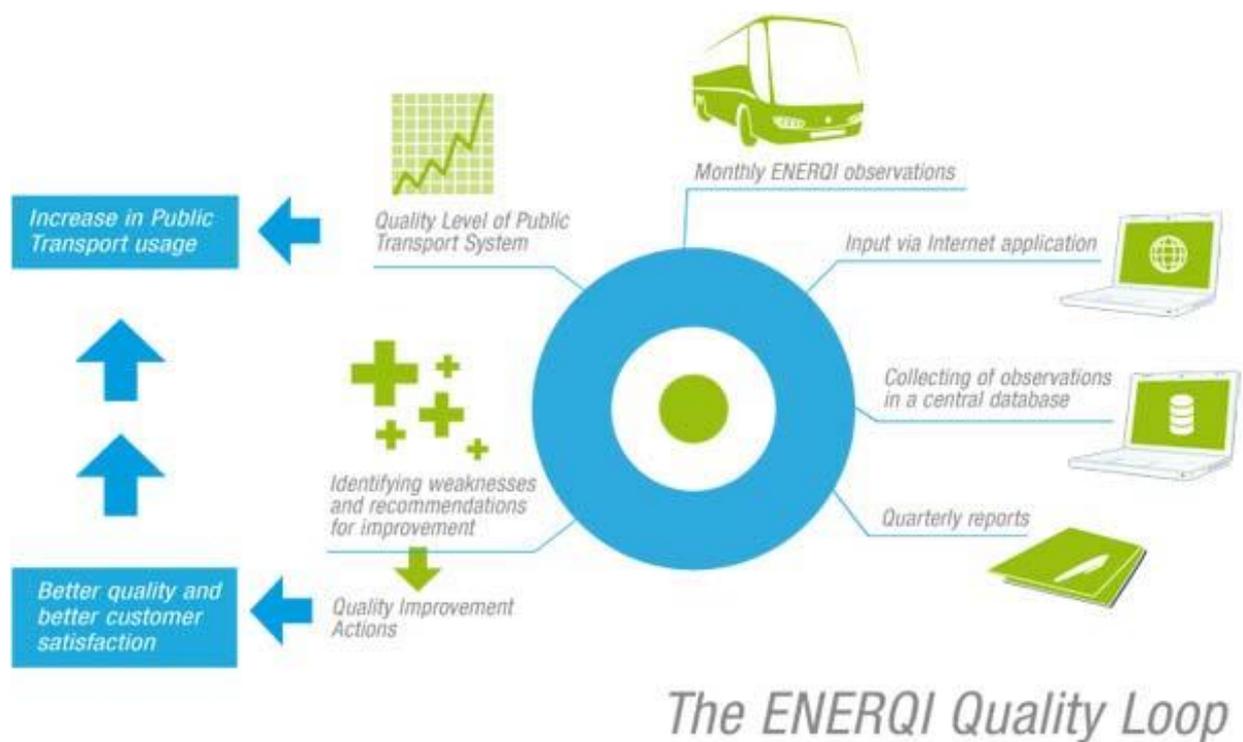


Figure 1 – The ENERQI Quality Loop

Why use the ENERQI methodology?

The customer based continuous quality monitoring methodology provides the ability for the transport operator or other entity to receive detailed up-to-date feedback on the real perceived quality of public transport services.

According to the European Standard EN 13816:2002¹, there are four sub categories of «quality of service», depending on whether the measurement is conducted from the operator's point of view (a and b) or from the user's point of view (c and d):

- a. The desired quality of service: quality aimed by the controlling authority or by the operator itself.
- b. The delivered quality of service: the actual quality delivered by the operator.
- c. The perceived quality of service: quality of service as perceived by the users themselves, i.e. their subjective perspective as a result of their travel experiences.
- d. The expected quality of service: level of quality currently desired by the users.

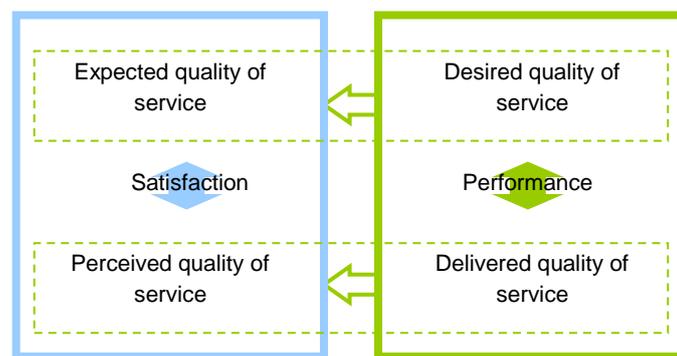


Figure 2 - Measurement of the quality of service.

It is the perceived quality of service that is related to customer satisfaction and therefore with the willingness to use public transport. This methodology concentrates more closely than any other methodology on measuring the quality of service perceived by the users.

The approach integrates the customer view with the aim of providing public transport services which match their needs and expectations as closely as possible. The approach is built on the synergies created between the users and the operators. As such, it is expected to be a key tool to improve the quality of public transport, and perform better than other quality monitoring approaches.

The observer based ENERQI approach is half-way between the customer satisfaction survey and the mystery shopper approach. Rather than using paid staff to make observations, as with the mystery shoppers, the information collection is carried out directly by the users during their routine journeys. On the other hand, while in a customer satisfaction survey the interviewee has no prior information, an ENERQI observer can have training and knows in advance the criteria to assess in each observation assignment.

¹ "Transportation – logistics and services – Public passenger transport – Service quality definition, targeting and measurement"

Table 1 – Comparison of quality monitoring methodologies

	ENERQI methodology	Customer satisfaction survey	Mystery shopper
Type of measure	Perceived quality	Marketing	Delivered Quality
Type of performance criterion	Quantitative and qualitative Benchmarking	Quantitative and qualitative	Quantitative
Type of administration	In situ or a posteriori	A posteriori	In situ
Observations made by...	Users and, potentially, non-users of PT	Users of the public transport network	Service provider

The ENERQI approach does demand the use of permanent resources in the management of the observer panel and the administration and maintenance of the supporting tools, but it can also save monitoring resources by taking advantage of the willingness of costumers to help in the improvement of public transport. For that reason, the commitment of the volunteers is crucial to the success of the ENERQI process. Their role is of primary importance because it guarantees the quality of the collection information.

Advantages of costumer based continuous quality monitoring:

- Up-to-date monitoring of perceived user quality,
- providing a tool for decision making at the operation and strategic level,
- while enhancing the relationship between costumers and operator and
- saving resources for quality monitoring.

Who can use the ENERQI methodology?

The ENERQI methodology can be of interest to several types of organizations with the aim to monitor public transport quality, including:

- Public transport operators
- Public transport regulators / transport authorities
- Passenger/consumer associations
- Other organizations aiming at public transport improvement (e.g. environmental or energy agencies)

SETUP MANUAL

About the Setup Manual

This **set up manual** provides guidelines for the planning and implementation of a quality monitoring scheme based on user observations. The main objective is to guide public transport operators, local authorities, or other types of organizations in setting up their own customer based quality monitoring. A step plan takes the public transport authority/operator to a full functioning of continuous quality monitoring and usage of “real time” feedback in relation to quality improvements.

The setup manual is organized into six main **steps** that conduct to the implementation of the ENERQI methodology in a local site. They are:

- 1. Defining objectives** – To clarify and detail the objectives of the quality monitoring.
- 2. Choosing targeted services** – This step consists of defining the object of quality monitoring, i.e. the targeted public transport services or lines and possibly the specific schedules to be covered. This topic will discuss criteria for the selection of the targeted lines and how it will influence the following implementation steps;
- 3. Defining perceived quality indicators** – This step is about choosing quality indicators. This is based on the main objectives at hand and the characteristics and expectations of the local PT users. A common set of indicators is suggested, although specific indicators may be useful to define in each place, for which recommendations are given;
- 4. Survey design and assignment** - This topic will outline principles to be followed in survey design and provide guidelines for local adaptations. The common questionnaire that was developed and tested in the ENERQI project can be used as a basis. In terms of survey application, the first step is to provide guidelines about the **timing and location** of the inputs given by the observers, which may follow different approaches like regular vs. irregular basis. Secondly, several types of **survey formats** may be used, depending on the type of observers: Paper survey, internet access, interest groups consulting (students, elder people), quality audits, mystery client etc.
- 5. Constitution of the observers’ panel** – This topic relates to the recruitment of observers and the attainment of a representative sample for relevant target groups, as well as the communication with them and the way to motivate them.
- 6. Database and management system development** – In this topic, principles for the management of the database required for organizing all the information provided by the observers and other relevant information will be provided. For the ENERQI local applications, details on the structure and functioning of the ENERQI database system will also be defined and guidelines will be provided for its use.

Steps to setup

The six steps to the implementation of the customer based quality observation methodology are presented below.

Step 1. Defining objectives

The first step in designing a quality monitoring approach is to define the objectives at stake. Clear objectives are essential for a sound design of the quality monitoring scheme and the various options that will have to be taken in its design.

In the first place it must be noted that the application of the ENERQI approach is directed at certain operational objectives, in particular that the monitoring is:

- Continuous – i.e. providing almost “real-time” information;
- Specific – providing detailed information on specific services or schedules – and;
- Focused on perceived quality.

If at least one of these aims of quality monitoring is not intended, then it would probably justify using another types of quality monitoring and not the ENERQI approach.

Some particular objectives have influence on the appropriate design of the local scheme. At the strategic level there may be different objectives at stake that should have direct implications on the design of the scheme. E.g. if the strategic objective is to improve perceived quality as such in order to improve social well-being, then it makes sense to cover all segments of demand and services. On the contrary, if the objective is to increase public transport (PT) use, it might make sense to specifically focus on the measurement of perceived quality by segments of demand that are more sensitive to quality in their travel choices (e.g. it does not make sense to focus on captive users, who have no alternative choice and might have different preferences in comparison with non-captive users). As stated in the examples, the definitions of strategic objectives unfold into specific operational objectives to which the specific design of the monitoring scheme should correspond.

Another dimension relevant for definition of objectives is the prior knowledge on customer preferences and on the strengths and weaknesses of the public transport services. At an initial stage with low level of knowledge on these aspects, the monitoring may be intended at acquiring additional general information. At a more advanced stage of knowledge on supply and demand characteristics, the aim may be directed at the more specific monitoring of particular performance aspects or effects on perceived quality of measures improving delivered quality.

Step 2. Choosing targeted services

Public transport services can be defined by route and schedule. The choice of services to include in the monitoring scheme depends basically on the objectives, availability of resources and resource efficiency of the quality monitoring and quality improvement.

As in the example above, if the strategic objective is to increase use of public transport it may make sense to focus on services where demand sensitivity is greater. This tends to happen in services that compete with the car, particularly at peak-times and in lines covering dense areas where the costs for using the car are greater.

Focusing monitoring on services with high demand instead of services with low demand is an appropriate approach from a statistical efficiency perspective, particularly if the available resources are limited. Directing efforts on high demand services allows obtaining statistical significance for a wider population of present and potential customers.

Another possible reason for focusing on specific services may be related to the intention of measuring particular quality aspects or their evolution. E.g. the operator may want to know more about the opinion of the costumers on a hot topic associated with particular lines or to understand the effect of the introduction of a new measure (like training of a group of drivers).

The availability of knowledge on quality or the degrees of freedom (cost efficiency) for delivered quality improvement are also factors of relevance for the choice of targeted services. For example, if an operator of several modes (including buses and metro) has high prior knowledge on the perceived quality of its metro services and the metro services have much less flexibility in terms of available measures for quality improvement (e.g. they are already very punctual, frequent and comfortable) then it would make sense for the operator to concentrate its efforts in studying the evolution of quality perceptions on its bus services instead.

The above considerations on the choice of targeted services may be synthesised through the following **recommendations**:

- Define the network and services to observe
- Focus on services that you can change
- If resources are limited, focus on services with higher demand
- If your objective is increasing PT usage, focus on services with higher sensitivity of demand to quality

Step 3. Defining perceived quality indicators

A proper assessment of quality perceptions requires the choice of relevant, understandable, reliable and measurable indicators. The ENERQI methodology focuses on specific trips and therefore the indicators should in general be related to characteristics of individual trips rather than general characteristics of the services in question. For example, service *availability* (e.g. frequency, area coverage) might be understood as a general characteristic of the service or network rather than a specific feature of the trip in observed. Punctuality, on the other hand, is clearly a performance issue related to single trips. This does not mean that the ENERQI questionnaires do not include questions on general service or network characteristics at all, but it is probably not useful to produce those same questions continuously since the related quality is not related to the performance of single trips.

The European Standard EN 13816:2002 is the reference in Europe concerning public transport quality indicators. It presents a list of standard indicators. It is suggested that any selection of indicators departs from this list, which is exhaustive and allows for a more comprehensive comparison across sites. The list of indicators set by the norm is presented in Annex to these guidelines. It includes eight groups of indicators: Availability; Accessibility; Information; Time; Costumer care; Comfort; Security, and; Environmental impact. The following figure presents a subjective view of their general positioning concerning relevance towards trip specific performance and perceived quality of service. In face of this classification, it can be concluded that groups of indicators 3. to 7. are comparatively more relevant for a continuous observer based quality monitoring approach.

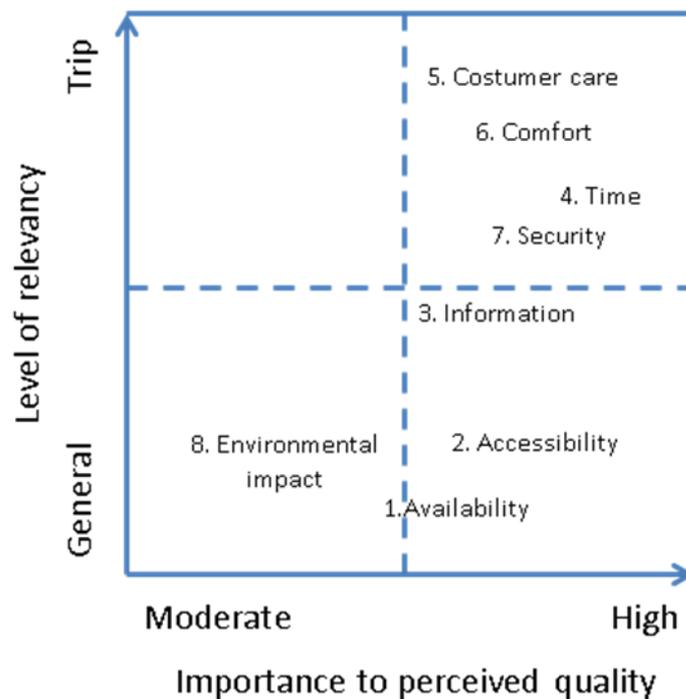


Figure 3 – Classification of groups of indicators proposed by EN 13816:2002 according to their importance towards specific trip performance and customer perceived quality

The relevancy of each indicator may vary from place to place, according to customers' expectations and preferences. For example, mobility users in a place may be highly focused on status concerns – projected by comfort – as in a different place customers may be more economically rational, privileging for example time.

If, for an issue of resource constraints or simplification of the methodology (e.g. simplification of the surveys given to observers), it is important to limit the number of indicators tested, the ones more relevant for the target groups of customers should be selected.

Although partly overlapping, the ENERQI project departed from the reference list of indicators of EN 13816:2002 and defined a common set of indicators for use and comparison within the project with the following common characteristics:

- Indicators that are used to **measure the perceived quality** per type of user, trip, time of the day, individual bus line and place of arrival and departure. These indicators are both quantitative, like user classifications given to comfort, and qualitative, like specifying the reason of a feeling of insecurity.
- Indicators that allow for a measurement the level of quality **over time**, which are able to show “real time” results of a scheduled quality improvement action or communication campaign.

The Euro Norm indicators were unfolded into more specific indicators that were translated into questions for use in the questionnaires. A list of questions, each directly related to a specific quality indicator, can be found in the example ENERQI survey presented in Annex.

Along with the evaluation of the quality of service perceived by users on their own networks, the public transport operators may also want to compare their results with other public transport networks (benchmarking), as well as share their knowledge and exchange experiences about their practices to improve the quality of transport service. To fulfil this need for comparability of network performance, the terminology, measurement scales and collection tools applied in ENERQI may be used.

Step 4. Survey design and assignment

The observers report their opinion on the quality of trips assigned through surveys delivered to them. This topic will outline principles to be followed in the design and application of the observer surveys. They must be able to capture objective information on the targeted indicators, and they must allow identifying which indicators are most important to users.

- Contents
- Timing
- Format

Contents

The contents of the survey must allow measuring the perceived quality by the observer through indicators. Surveys can change from assignment to assignment, but they should include a common body of questions/indicators so that they can be aggregately analysed and so that evolution of perceived quality through time can be assessed.

Like in other questionnaires, some concerns should guide their design:

- The aims of the questionnaire/assignment should be clear to the observers
- Questions should be clear, not subject to different interpretations
- Questions should objectively represent the indicators they are supposed to measure
- The questionnaire should be structured in a way easy to follow (e.g. organized in topics)
- The questionnaire should not be too time-consuming

Given that the indicators concerned are mostly dealing with a subjective judgement by people, it is necessary to use an appropriate measurement scale, which should be understandable by the respondents and should translate into sound quantitative measurements of the indicators in question². In the ENERQI project, an ordinal scale of 5 scores was applied (ranging from “Very bad” to “Very good”).

The ENERQI project developed a standard questionnaire which was organized in the following topics of questions:

- Value for money
- Tickets and tariffs
- Level of crowding

² For a detailed overview of measurement scales, see the ENERQI *Deliverable 3.1 – ENERQI Methodology*.

- Safety and security
- Stops and shelters
- Vehicle condition
- Journey speed
- Staff service
- Information
- Disruption / Incidents
- Customer support

These were suggested as a basis for questionnaire development in the project ENERQI, although different sites were free to organize them in a different manner. What was common to all sites was a group of basic questions on the most important indicators which had to be applied in every site in order to allow comparing results across sites. The standard ENERQI questionnaire is available as an Annex.

Timing

The timing of the assignments sent to observers may follow different approaches, like on a regular basis upon specific requests to observers, or on an unregular basis. Timing concerns both the **frequency** and the **level of specification** of the assignment object (the trip).

The more frequent are assignments given, the closer to “real time” information is possible to achieve and more information there is to process. On the other hand, higher frequency of assignment delivery involves more resource consumption and, most importantly, a possible fatigue of the observers through repetitiveness of the survey content and own time consumption. The annual measure is appropriate for reporting purposes, but smaller periods may be more useful for flexible quality responses to everyday challenges. The issue is directly related to cost. The advantages and disadvantages of the frequency level must be balanced for an appropriate decision. If the recording procedure is automated and internet based the measurement could be a constant and daily procedure. If the analysis procedure is also automated, then the reporting could also be quite frequent. For the needs of middle management quarterly reporting is sufficient while for the needs of top management yearly reporting is recommended to set priorities. In the ENERQI project, the general option was to conduct common assignments with a frequency of one month, although some partners realize additional assignments to address specific local issues.

The level of specification of the assignment refers to obligation of the observers to conduct the reporting of a particular trip or, alternatively, to be free to choose the reported trip. There are three possible dimensions of specification of the trip(s) to evaluate: service/line, period of time (e.g. a week or a day) and schedule of the trip (e.g. a particular circulation departing at 8:30 am). These three trip dimensions have different implications and may be related to the following objectives:

- Bounded target services/lines: the specification of a service or line (or group of services or lines) depends on the desire of the quality monitoring entity to evaluate some services in particular related to reasons described above
- Linkage of quality perception results to specific events, measures undertaken or trip features

- Representativeness of the sample: If the observers are free to choose the trips to report, results will be biased according to the reasons of the observers to choose certain trips to report in favour of others. On the other hand, even with this bias it can be expected that the results will be consistent in showing the issues that concern users in terms of quality perceptions.

The ENERQI project partners have followed distinct approaches in this respect, with some choosing to assign specific itinerary runs (e.g. The Netherlands) and others giving total freedom for observers to choose the trips to report (e.g. Plovdiv).

One additional issue is the need to guarantee that there will not be fraud in observers reporting. There may be an incentive to do so particularly if there are rewards for participation. One way to avoid this possible problem is to include questions on aspects of the trip that the observer will only be able to respond if he or she actually does the trip, like providing the registered number of the vehicle (which can usually be found inside buses).

Format

Several types of survey formats may be used, depending on the type of observers: Paper survey, phone interviews, email, internet site, etc. The least costly means is the reporting through the internet, since it does not involve resources to copy responses into a database, a process that is done automatically in this case. However, some user groups may not have access to internet or may be more motivated through other means. In this case, paper or telephone reporting may be necessary.

Step 5. Constitution of the observers' panel

To carry out the observer based quality observations it is necessary to have a number of users or potential users of public transport that are available to cooperate in the task. The following issues are relevant in the constitution of the observers' panel:

- Definition of target groups
- Sampling of target groups
- Recruitment of observers
- Instruction/training of observers
- Communication with observers

The first two issues are covered here. The later three are covered in the Operation Manual.

Target groups

The observers can be a group of regular customers or potential customers (like car users). As mentioned above, the choice of target groups of users should depend on the objectives of the scheme. If the central high level objective is to improve the well-being of the public transport users, then the target groups should include all segments of demand. If, on the other hand, the objective is to increase public transport usage, then it makes sense to focus

on segments that are more sensitive to quality on their travel choices, including non-users of public transport.

The following figure provides an example of segmentation of the customer base of a public transport operator. The groups closer to the middle-right area (active, middle-aged) tend to be the most sensitive to public transport quality.

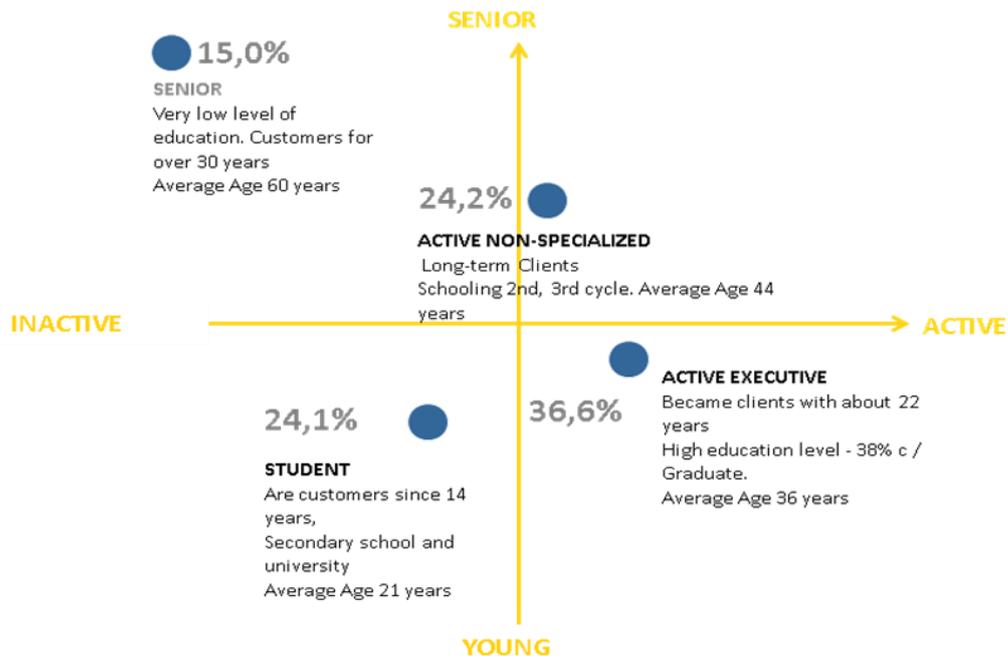


Figure 4 – Segments of the demand of Carris, the bus operator in Lisbon (Source: Carris)

Involving non-users can be also an opportunity to persuading them to change their habits and move to public transport. The perception of non-users on public transport quality is often lower than the actual quality due to stigmatization or persistence of past image of PT quality. Having non-users experiencing public transport may thus be an opportunity to change that type of perception³.

Sampling

For obtaining sound results it is important to have an efficient sampling of the quality perceived by the users of public transport, by providing measurements of a group that will represent the values taken by the measured indicators within the entire population covered by public transport. Therefore the crucial questions are: will the quality measurements made by the observers faithfully represent the quality level rendered by the target services? How to prevent possible biases? Can the observations be safely extrapolated to the whole population of trips, and furthermore of customers?

³ For example, after the end of the six month trial period of the Stockholm congestion charge, about half the people who had shifted from car to public transport did not move back to car after the tolling was cancelled (see Jonas Eliasson, Lessons from the Stockholm congestion charging trial, Transport Policy, Volume 15, Issue 6, November 2008, Pages 395-404).

It is easier to be neutral in the choice of observers, i.e. simply taking all users that offer to be observers. However, there is a risk of distortion of the representativeness of the sample, since some user groups may be easier to recruit than others, for cultural, availability or practical reasons. Some examples: if the observer reporting is based on internet as a reporting tool, the non-internet users will be excluded; retired people may be more willing to cooperate due to having time available; in some societies, older people may be less willing to cooperate due to mentality issues related with the willingness to cooperate with public authorities. For these reasons, it is recommendable to adjust the sampling included in the observers' panel to be representative of the target groups.

Ideally the ENERQI methodology would ultimately aim at representing the whole public transport network and users. However, such comprehensive sample may be not recommendable for two sets of reasons:

1. Lack of feasibility
 - a. Absolute practical impossibility to carry out the measures or recruit the observers;
 - b. Outrageous unit cost;
2. Irrelevance to the ENERQI goals:
 - a. High Specificity: a part of the network (area, form of operation, type of customers) may be too specific to be included in the ENERQI scheme;
 - b. Unpredictability: for some reason, generally owed to the mode of operation, a high variability of quality rendered can be feared, making the quality observations equally inconsistent;
 - c. Lack of leverage for action: when some parts the PT network seem unattainable to quality improvements actions in the mid-/short-term, notably due to the amount of investment needed, it might be wise to exclude that parts from the ENERQI scheme at least for the duration when such conditions will remain.

The sampling choice should consider and balance these factors. With the prospect of comparing results from different networks, the comprehensiveness of the range covered by the observations should be known when appraising notable differences.

This Guide does not present sampling methodologies. For an overview, the reader may consult for example the ENERQI methodology report⁴.

Step 6. Database and management system development

A database is required to gather all the information provided by the observers and other relevant information. On the other hand, there must be a system of information analysis and interaction with the observers.

⁴ ENERQI Deliverable 3.1 – ENERQI Methodology

Database

For the ENERQI local applications, a common database was developed which may be applied by followers of the project. The database content structure for every site consists out of 5 main tables:

- a personal section in which privacy sensitive information of the ENERQI volunteers/observers,
- a time table of the public transport service,
- a section containing the quality indicators on the basis of which the questionnaires are constructed.
- a section of assignment generation for the involved observers based on randomly chosen trips from the timetable,
- a section containing the actual observations on the basis of which performance analysis can be executed.

Management system

Some kind of management system is useful mainly for the following purposes

- Development of surveys,
- Realizing assignments,
- Data analysis.

In the ENERQI project such type of system was developed within the ENERQI website⁵, which has three main aims. It is a dissemination platform, giving general and in-depth information about the project, it is the working platform for operators and volunteers and it also serves the partners for management purposes.

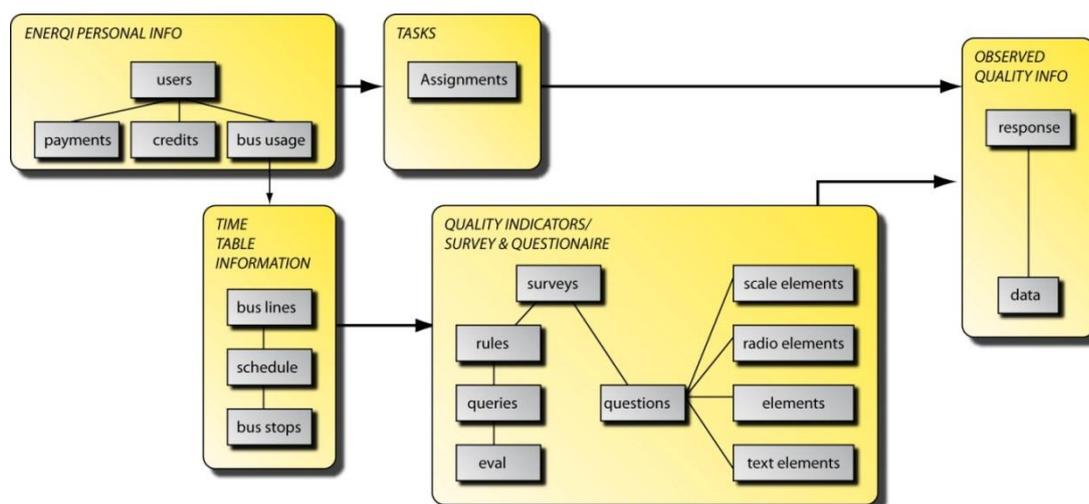


Figure 5 – Scheme of ENERQI database and management system structure

A restricted area only open to the registered volunteers contains a data entry section linked to the on-line database and allows observers to report directly there. This part is the

⁵ The website of the project ENERQI lies under the URL <http://www.enerqi-online.eu>

technical “backbone” of the quality-monitoring process. The interface focuses on clearness and user friendliness to help and not to hinder the process of monitoring. It is cross-platform capable, which means that it allows to be filled stationary (the observer performs the quality check on paper and he or maybe someone else fills the data afterwards).

The platform can be accessed through a mobile interface (the quality observer uses a mobile device to collect the data and fill the database). So, all levels of technical capabilities of the users are covered. ENERQI does not build on dedicated devices, but browser technology with small screen capabilities are used as a technical basis to allow compatibility with most mobile devices available.

The operator/ manager area supports in the preparation of a number of tasks, in coordination with the other sites which are applying the methodology. It contains the following sections:

- Assignment preparation section,
- Questionnaire management section,
- Public transport network, lines, stops and schedule management section,
- Volunteers’ filled data control check and analyse section,
- Reporting and results presentation section.

Confidentiality and security

Confidentiality issues must be taken care of in the contact with the observers and the development of the management system. This is so in relation to personal data of the observers but also, in case the management system is common to several monitoring entities, in relation to confidentiality of data of each monitoring entity. Confidentiality statements and security devices are used for this purpose.

OPERATION MANUAL

About the Manual

The **operation manual** aims at a successful practical execution of the ENERQI based quality improvement process, and provide guidance on its operation and management. Five major types of tasks are covered by the operation manual. They are:

1. **Building resources** – This topic corresponds to the set-up of necessary resources for the operation process, such as defining the team responsible an recruiting and training observers;
2. **Quality monitoring** – This topic addresses aspects such as data gathering and reporting, data analysis and communication with volunteers;
3. **Quality improvement actions** – This topic will describe some of the possible improvement measures that can be taken by the transport operators to improve the service quality, and how can they be best used to transform the attitudes of potential and intermittent users, considering the results of the quality monitoring and departing from a cost-benefit perspective and present state of the art of each site.
4. **Communication with the public** - The ultimate objectives of ENERQI can only be fully achieved if the quality improvement actions implemented locally are properly translated into perceived quality by regular and non-regular public transport users. To achieve this goal, communication campaigns are essential. This topic will address how marketing and communication can be best coordinated with the application of the ENERQI approach.
5. **Evaluation of process and high level results** - In order to take full advantage of the lessons learnt from the ENERQI process, the public transport operator can also assess the effects that the ENERQI methodology had on modal shift, energy and emissions. This topic will summarize the methodology that can be used to evaluate the process and its main results.

The figure in the following page outlines the key steps and tasks of the operational process and their interrelations.

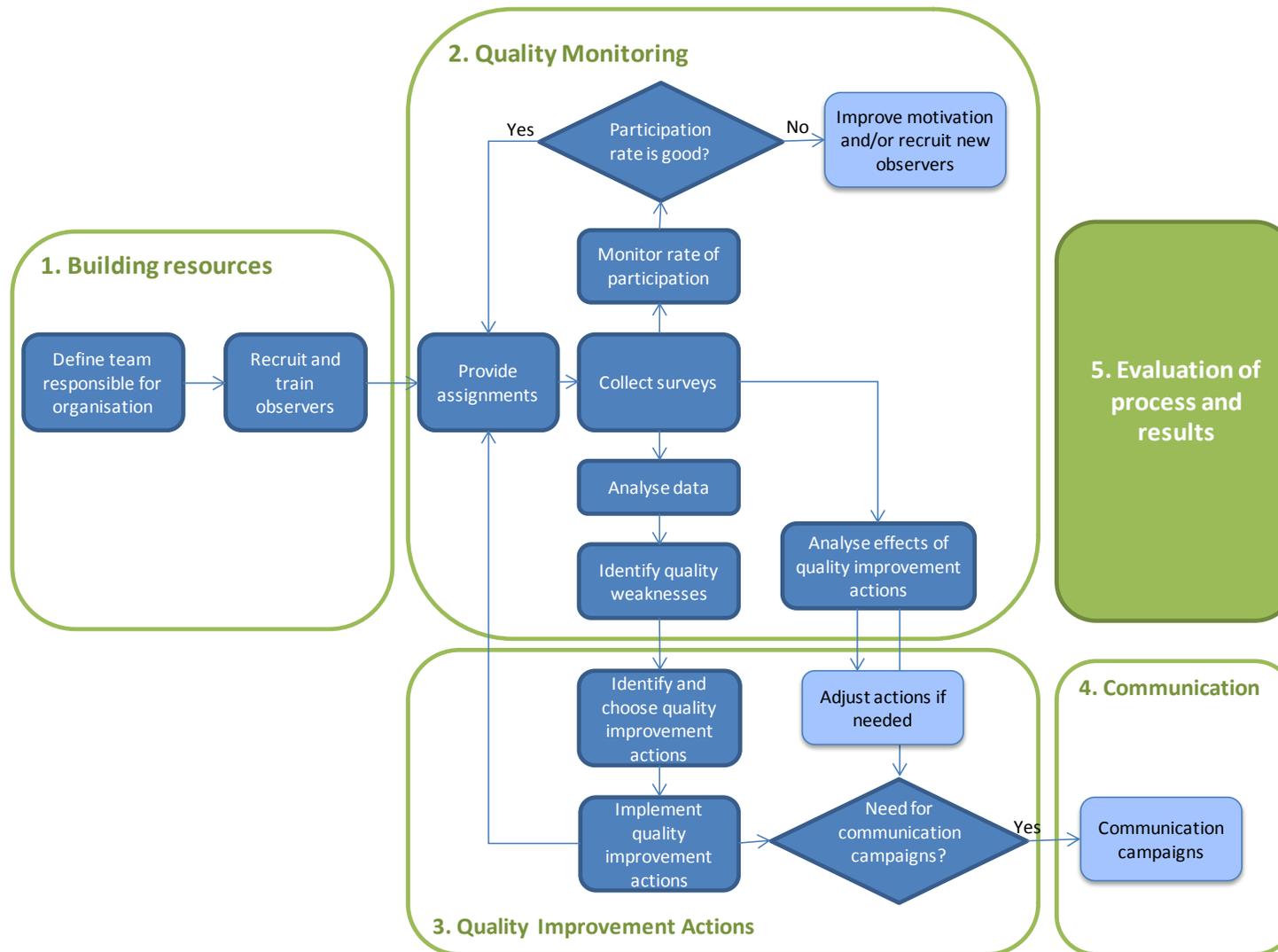


Figure 6 - Key steps of the operational process

Task 1. Building resources

This topic corresponds to the set-up of necessary resources for the operation process, particularly the definition of the team responsible for the monitoring management, recruiting, training and communicating with observers and involving any external entities with interest to the project.

Setting up the team responsible for the local organisation

To successfully implement the ENERQI methodology, is important to define on a first stage of the process the human resources that will be allocated to the project. The necessary valences of such a team are relatively diverse and specific. The main tasks involved are:

- Contact with observers;
- Database management, assignments, observer management;
- Data analysis;
- Specification and management of local quality improvements;
- Communication campaigning

These valences, especially the two latter ones, will most probably implicate the participation of different departments within the operator for the first three potentially the involvement of external entities for carrying out part of the tasks.

Observer recruitment

The observer recruitment process should consider two issues: how to contact potential observers; how to motivate potential observers.

The appropriate choice of **means** of contacting observers depends on which are the targeted user groups and services – different target groups may be reachable through different means – and which means and resources are available locally. Some possible means of contacting observers are street personal contact (in public transport vehicles or infrastructure), phone, advertisements in vehicles, infrastructure or media or internet social networks.

The ability to **motivate** potential observers to cooperate may be very distinct from place to place. This has been clearly shown in the ENERQI project. In some places people are not used to the concept of directly cooperating with public authorities, while in others they are happy to do so. Different social and age groups may have different willingness to cooperate as well. However, the experience shows that in almost all cases it is important to provide some kind of rewards for cooperation. The appropriate types of incentives may again be different depending on culture and availability of resources. For example, in the Netherlands a small monetary reward is given for each report delivered, in Lisbon there is a lottery for the most cooperating observers, while in other places small gifts are given. For non-users of public transport, the minimum requirement will be to offer tickets corresponding to the trips reported. Additionally, an

effective and costless incentive seems to be simply the promise of giving feedback to observers on the results of the quality monitoring. A continuous and close contact with observers is also an important factor of motivation.

Observer training

One of the major differences of the observer based monitoring in relation to other monitoring methodologies is that observers are made aware beforehand on the configuration of their assignments. In principle the observers should know in advance in detail what aspects of quality will be assessed in the trips assigned. Moreover, the observers must be acquainted with the system of observation assignment and reporting whereby the monitoring entity provides assignments to the observers and observers provide their reports back. This implies some kind of prior instructions or even training. Observer awareness can take various forms, namely through either personal or remote and individual or collective contact.

Communication with observers

Throughout the implementation of the ENERQI quality monitoring approach there will be the need for a continuous communication line between the operator and the observers. The relevant factors for a correct choice of a communication platform(s): survey and feedback of results formats, characteristics of the observers (e.g. age, education, and technological knowledge), timing of survey application defined. As for the survey format and feedback reporting of results, internet communications are the least resource consuming ones, but they may be inappropriate for certain user groups. On the other hand, a more personal contact may be recommendable from the point of view of identification and commitment to the project by the observers, e.g. by organising regular discussion events for the observers.

Involvement of stakeholders

During the course of the ENERQI process it is important to maintain close contact with all the local stakeholders like interest groups, local authorities, other public transport operators, and also the target audience in the evaluation of monitoring of the impacts of these improvements (which includes users and also non-users such as frequent users of private transport).

The observer based quality monitoring methodology can benefit from the involvement of the stakeholders identified above, namely

- Learning from their past experiences and asking for their inputs and suggestions;
- Asking for their collaboration on communication and dissemination of the ENERQI process and quality monitoring results;
- Helping on the implementation of the quality improvement actions.

In the end, feedback from stakeholders will allow the improvement of the process, to identify strengths and weaknesses and foresee possible problems and troubleshooting alternatives.

Task 2. Quality monitoring

The quality monitoring involves selecting and sending assignments to observers, collecting and analysing them. Additionally the process should include the monitoring of the rate of participation of observers in order to adjust actions for their motivation and or refresh the group of volunteers if necessary.

Providing assignments and collecting surveys

This phase is where the process unfolds: the assignments are provided to the observers, the observers answer to the questionnaires which are then submitted into a database (by the observers themselves if is an online questionnaire, or by the managing organization in case of paper/phone questionnaires).

The choice of assignments to deliver should be based on the initial plan of continuous monitoring but can and should be complemented by new needs of data that emerge either from the building of knowledge on customer preferences and quality of service given by data analysis of previous assignments or from the introduction of new measures or appearance of relevant 'hot topics' to study on an *ad hoc* basis (e.g. snow in the street).

Data Analysis

With the information that comes from the observations, different types of analysis have to be taken to best assess the quality of service and evaluate which should be the most cost-effective quality improvement measures.

Analysing quality perceptions:

- **Identify the major weaknesses of the public transport service, network and individual lines** - The analysis of quality perceptions before the implementation of quality improvement actions will help identifying which are, for the observers, the major quality weaknesses.
- **Understand which of the identified weaknesses are most relevant for the users** – Situations may occur where the major weaknesses identified by the users are afterwards not relevant for the overall satisfaction of public transport' quality of service. So, identifying the quality items that are more relevant for the perceived quality of the observers will be useful to define and implement the most cost-effective quality improvement measures.
- **Benchmark analysis** – Followers of ENERQI methodology will be able to compare their results with the test sites used in ENERQI project or other cities whose quality monitoring has data to compare with. The benchmarking will allow the public transport operator to measure its level in terms of quality of service, and position themselves in relation to other operators to see if the current state of quality service is within what is practiced elsewhere.

Understanding the evolution of perceptions:

Throughout the period of the observation, it is expected that there will be some adjustment of expectations by the observers. Past experiences have shown that during the quality monitoring process, users tend to become more demanding considering the quality of public transport service. This can also occur for example if the quality improved measures don't follow their expectations, or if the impact of communication campaigns didn't go as expected. Therefore it is important to distinguish the **expected quality** (level of quality desired by passengers) from the **perceived quality** (level of quality perceived by users during their journey).

Analysing the effects of the quality improvement actions

By comparing reported user perceptions data from before and after the implementation of the quality improvement actions, it will be possible to assess the real effects of these actions on the perceived quality by users and on increasing public transport usage. For example, comparing journey times before and after the implementation of punctuality improvement actions, and verifying if the time saved was enough to change the users' perceptions.

Monitoring the rate of participation

The organisation should monitor on a constant basis the rate of participation throughout the process, and check the need to improve the communication channels with the observers.

It is important to assure that the volunteers are motivated and willing to proceed with the observations along the projected time. Some important points to be taken in consideration might be:

- Accommodating assignments with the observers regular routines;
- Observers have to feel that they are part of the organisation, and that their collaboration is crucial for the success of the process. To improve the commitment between the observers and the ENERQI organisation it might be important to set a training meeting instead of just giving the observers written instructions;
- Keeping the observers informed about the results of the ENERQI process;
- In case the rate of participation is low, further encouraging the fulfilment of questionnaires by observers with additional communication and rewards.

If the rate of participation is decreasing or unsatisfactory, these mechanisms of motivating observers should probably be reinforced or new observers must be recruited.

Task 3. Quality improvement actions

This step deals with the decision on the choice of quality improvement actions to carry out in response to the feedback provided by the monitoring process or fine-tuning of previous actions. The observer based continuous monitoring methodology has the ability to provide continuous

and almost real time information, which enables a very quick response to new problems or needs.

According to the ENERQI methodology, the characteristics in any public transport that influence the perceived quality can be divided into 4 dimensions of service:

1. Physical aspects (including accessibility, cleanness and design),
2. Nature of the service offered in accordance with the customer travel needs (including reliability and information);
3. Personnel (including competence of the personnel, consideration of the customer and politeness), and
4. Image of public transport, which is partly defined by the first 3 dimensions, yet also by the communication strategy of the public transport operator.

The quality improvement actions should be outlined following a cost-efficiency perspective. The goal should be to improve quality as much as possible with a minimum consumption of additional resources. These quality improvement actions should seek to respond to the public transport service needs and can be used to transform the attitudes of users. The choices have nevertheless to take into account the implementation costs and feasibility of this quality improvement actions.

From the results taken from the observers questionnaires, is possible to sort the major weaknesses in terms of quality of service. This is important because there might be quality items that, although having a good potential for improvement, are not considered by users as relevant as other elements whose improvement would contribute more for improving global satisfaction.

The tables below present lists of quality improvement actions according to their potential to fulfil quality gaps of different categories of quality. The first table refers particularly to impacts on user perceptions according to the groups of indicators set out in the EN 13816:2002. The second table refers to the same potential according categories structured in the standard ENERQI questionnaire. This type of assessment is useful in the choice of appropriate measures to respond to particular weaknesses as identified by the observers. The first table is oriented to the perspective of the customer. The second one is more oriented to the perspective of the operator, as it is organized in terms of activities/objects of the operator.

Table 2 – Quality perception improvement actions (EN13816:2002 items)

Quality improvement action	Effect on perceptions: (according to EN 13816:2002 Items)							
	Availability	Accessibility	Information	Time	Customer Care	Comfort	Security	Environmental Impact
Bus driver training in customer service/hospitality	-	-	-	-	+++	-	-	-
Bus driver training in driving style	-	-	-	-	++	+++	++	+
Investments in new vehicles	++	-	-	-	-	++	+	++
Intensified vehicle cleaning programs	-	-	-	-	-	++	-	-
Smart cards, SMS ticketing	+	++	-	+	+	-	-	+
Better shelters for bus stops	-	++	-	-	-	++	-	-
Punctuality improvement measures	+	-	+	+++	-	-	-	-
Improved passenger information systems	-	-	+++	++	+	-	-	-
Increase of frequency	++	-	-	+++	-	+	-	-
Operation control systems (e.g. through GPS)	++	-	++	++	-	-	-	-
Introduction of additional services (e.g. Wi-Fi in public transport)	-	-	-	-	-	++	-	-
New bus/tram lines	+++	-	-	+	-	-	-	-
Green branding of public transport	-	-	+	-	-	-	-	++
Campaigns on healthy lifestyle and public transport	-	-	+	-	-	-	-	++

Table 3 – Quality improvement actions (ENERQI items)

Quality improvement action	Effect on perceptions: (according to standard ENERQI survey items)										
	Value for money	Tickets and tariffs	Level of crowding	Safety and security	Stops and shelters	Vehicle condition	Journey speed	Staff service	Information	Disruption / Incidents	Customer support
Bus driver training in customer service/hospitality	+	-	-	-	-	-	-	+++	-	-	++
Bus driver training in driving style	+	-	-	++	-	-	-	++	-	+	-
Investments in new vehicles	++	-	-	+	-	+++	-	-	-	++	-
Intensified vehicle cleaning programs	+	-	-	-	-	+++	-	-	-	-	-
Smart cards, SMS ticketing	++	+++	-	-	+	-	-	-	+++	-	+
Better shelters for bus stops	++	-	++	-	+++	-	-	-	+	-	-
Punctuality improvement measures	+++	-	-	-	-	-	++	-	+	++	-
Improved passenger information systems	+	-	-	-	-	-	-	-	+++	+	++
Increase of frequency	++	-	++	-	-	-	+++	-	-	+	-
Operation control systems (e.g. through GPS)	++		-	-	-	-	++	-	+	++	-
Introduction of additional services (e.g. Wi-Fi inside bus)	++	-	-	-	-	+	-	-	+	-	-
New bus/tram lines	+++	-	-	-	-	-	-	-	-	-	-
Green branding of public transport	++		-	-	-	+	-	-	-	-	-
Campaigns on healthy lifestyle and public transport	++		-	-	-	+	-	-	-	-	-

In the decision of which quality improvement measures the operator should additionally take into account some of the risks that may surge in its implementation, such as:

- Insufficient funding
- Organisation and administrative changes
- Lack of innovativeness
- Lack of political support
- Major changes on infrastructures and built environment

Task 4. Communication

The ultimate objectives of ENERQI can only be fully achieved if the quality improvement actions implemented locally are properly translated into perceived quality by regular and non-regular public transport users. To achieve this goal, communication actions may be necessary. In the case of regular customers, it is not guaranteed that quality improvements delivered will actually translate into improvement of perceived quality, since the users may not notice the changes in question. In these cases, it may be useful to endeavour communication campaigns in order to bring delivered quality into perceived quality. The comparison of data on delivered quality (e.g. punctuality) and perceived quality is a way to assess this need.

This need is even more stringent in relation to non-users, who do not have the opportunity to feel any quality improvements through experiencing public transport. Apart from spread the word phenomena, the way to change perceptions of non-users is mainly through communication campaigns.

Some of the means of communication campaigns foreseen in the ENERQI project are in vehicle screens, press release (bulletins, articles in local press), flyers, posters, free advertisements, social media or the website. It is more (cost) efficient to use these means to inform travellers of the implemented / planned quality improvements as well as to encourage them to register as a quality observer.

It is then useful to use the data on perceived quality to assess the effectiveness of the communication campaigns.

Task 5. Evaluation

In order to take full advantage of the lessons learnt from the ENERQI process and to provide additional inputs for daily and strategic public transport management, the public transport operator should periodically evaluate the results of the application of the customer based continuous quality monitoring.

A general evaluation of the evolution of **quality perceptions** is useful to understand the tendency of the customers' opinions. As described above, this continuous evaluation should drive management decisions on the PT operations and related measures. At a higher level, a

general overview on the evolution of quality preferences is useful for the overall assessment of the use of the customer based continuous quality improvement.

This type of analysis should nonetheless take into account that customers' quality assessment depends on their expectations, which increase with time with the quality provided itself. As a consequence, the eventual increase of delivered quality may have results on reported perceived quality in the short-time but not in the longer-term as their standard of expectations adjust at a higher level. This phenomenon should be possible to identify and take into account through the patterns of evolution of data.

On the other hand, for an overall assessment of perceived quality evolution, it must be guaranteed that the results are comparable through time, which may not happen if a common set of questions is not included or if the samples of compared customers or PT services are not uniform.

Also important is to assess the actual **high level effects** that the monitoring approach might and related quality improvement measures have obtained. Particularly, it is relevant to assess the attainment of the strategic goals (see Step 1 in the Setup Manual) that resulted in the adoption of the quality monitoring, like increased public transport usage, modal shift, energy savings, environmental emissions and more generally well-being.

Can a relation between the evolution of public transport quality perceptions and the level of use of public transport be identified? Does improving quality of service really influence the mobility choices of people? To answer this question is a difficult task due to, on one hand, the known inertia in changing the perceptions of non-public transport users (which are those that might potentially increase the PT usage) and on the other hand on the influence of external factors on the evolution of PT usage like economic performance, energy prices, other mobility policy, lifestyle, etc. Concerning the presence of external influence factors, their identification is crucial for a sound analysis of effects.

One way to identify external tendencies is to observe them from before the implementation of the scheme and its actions. If, for example, a given public transport operator shows a consistent decrease in PT usage this tendency will be regarded as such in the evaluation of results of ENERQI. Finally, it is also possible to better assess the influence of external factors and improvement actions if the improvement actions are only applied in some of the lines, allowing to isolate the different effects (in data is available per line).

Cross-information between quality improvements, communication campaigns and PT usage results might give indications on the importance of linking role of communication between actual quality and perceived quality of non-users.

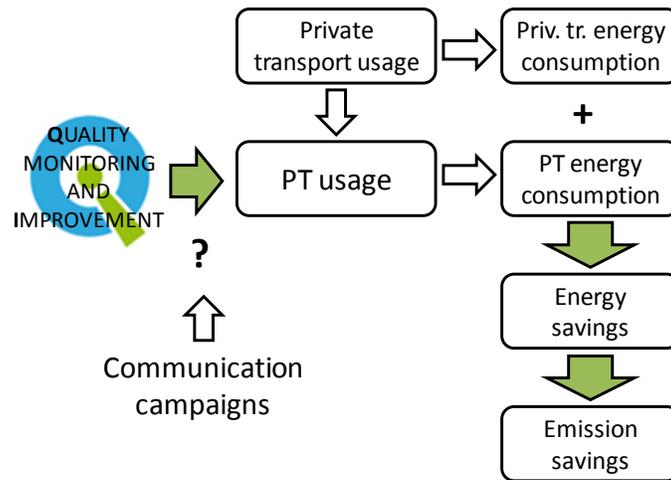


Figure 7 – Effects of the continuous observer based quality monitoring on public transport usage and on environment and energy consumption (as evaluated in the ENERQI project)

Finally, to keep continuously improving the public transport quality of service, the operator can evaluate the **implementation process** of the ENERQI methodology: Local expert analysis on local implementation, external constraints due to particular events, etc. in order to deliver further insights and recommendations for the future design and implementation of quality monitoring.

The objective of process evaluation is to provide useful indications for design and implementation of the scheme based on the lessons learned with the process of quality monitoring endeavoured. With it, the monitoring entity may learn lessons for the future for its own use and for others. The main topics to be included in the evaluation may be the ones identified and described in this Guide. An extensive evaluation of the process of implementation is carried out in the ENERQI project.



Contact us

If you would like to know more information or if your organization wants to be a follower of the ENERQI approach, contact us:

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Annex 1 - Quality Criteria in Public Transport (EN13816:2002)

Quality Criteria		
Level 1	Level 2	Level 3
1. Availability	1.1 Modes	
	1.2 Network	1.2.1 distance to b/a points
		1.2.2 need for transfers
		1.2.3 area covered
	1.3 Operation	1.3.1 operating hours
		1.3.2 frequency
		1.3.3 vehicle load factor
	1.4 Suitability	
	1.5 Dependability	
	2. Accessibility	2.1 External interface
2.1.2 to cyclists		
2.1.3 to taxi users		
2.1.4 to private car users		
2.2 Internal interface		2.2.1 entrances/exits
		2.2.2 internal movement
		2.2.3 transfer to other PPT modes
2.3 Ticketing availability		2.3.1 acquisition on network
		2.3.2 acquisition off network
		2.3.3 validation
3. Information	3.1 General information	3.1.1 about availability
		3.1.2 about accessibility
		3.1.3 about sources of information
		3.1.4 about traveling time
		3.1.5 about customer care
		3.1.6 about comfort
		3.1.7 about security
		3.1.8 about environmental impact
	3.2 Travel information normal conditions	3.2.1 street directions
		3.2.2 b/a - point identification
		3.2.3 vehicle direction signs
		3.2.4 about route

		3.2.5 about time
		3.2.6 about fare
		3.2.7 about type of ticket
	3.3 Travel information abnormal conditions	3.3.1 about current/forecast network status
		3.3.2 about alternatives available
		3.3.3 about refund/redress
		3.3.4 about suggestions & complaints
	3.3.5 about lost property	
4. Time	4.1 Length of trip time	4.1.1 trip planning
		4.1.2 access/egress
		4.1.3 at b/a-points and transfer points
		4.1.4 in vehicle
	4.2 Adherence to schedule	4.2.1 punctuality
		4.2.2 regularity
5. Customer care	5.1 Commitment	5.1.1 customer orientation
		5.1.2 innovation and initiative
	5.2 Customer interface	5.2.1 enquiries
		5.2.2 complaints
		5.2.3 redress
	5.3 Staff	5.3.1 availability
		5.3.2 commercial attitude
		5.3.3 skills
		5.3.4 appearance
	5.4 Assistance	5.4.1 at service disruptions
		5.4.2 for customers needing help
	5.5 Ticketing options	5.5.1 flexibility
		5.5.2 concessionary tariffs
		5.5.3 through ticketing
5.5.4 payment options		
5.5.5 consistent price calculations		
6. Comfort	6.1 Usability of passenger facilities	6.1.1 at b/a points
		6.1.2 on vehicle
	6.2 Seating and personal space	6.2.1 in vehicle
		6.2.2 at b/a points
	6.3 Ride comfort	6.3.1 driving
		6.3.2 starting/stopping
		6.3.3 external factors
	6.4 Ambient conditions	6.4.1 atmosphere
6.4.2 weather protection		

		6.4.3 cleanliness
		6.4.4 brightness
		6.4.5 congestion
		6.4.6 noise
		6.4.7 other undesired activity
	6.5 Complementary facilities	6.5.1 toilets/washing
		6.5.2 luggage & other objects
		6.5.3 communication
		6.5.4 refreshments
		6.5.5 commercial services
		6.5.6 entertainment
6.6 Ergonomics	6.6.1 ease of movement	
	6.6.2 furniture design	
7. Security	7.1 Freedom from crime	7.1.1 preventative design
		7.1.2 lighting
		7.1.3 visible monitoring
		7.1.4 staff/ police presence
		7.1.5 identified help points
	7.2 Freedom from accident	7.2.1 presence/visibility of supports, e.g. handrails
		7.2.2 avoidance/visibility of hazards
		7.2.3 active safeguarding by staff
	7.3 Emergency management	7.3.1 facilities and plans
8. Environmental impact	8.1 Pollution	8.1.1 exhaust
		8.1.2 noise
		8.1.3 visual pollution
		8.1.4 vibration
		8.1.5 dust & dirt
		8.1.6 odour
		8.1.7 waste
		8.1.8 electromagnetic interference
	8.2 Natural resources	8.2.1 energy
		8.2.2 space
	8.3 Infrastructure	8.3.1 effect of vibration
		8.3.2 wear on road/rail etc.
		8.3.3 demands on available resources
		8.3.4 disruption by other activities



Annex 2 - ENERQI Questionnaire

Question	Answers	Compulsory	Non-compulsory
1. What was the date of the trip you observed?	(day, month, year)	X	
Start of trip			
2. What was the number of the line you boarded?	Select the line number	X	
3. At which stop did you get on the vehicle?	Select the (bus)stop name	X	
4. What was the number of the vehicle you boarded? (This question can be adapted by another local characteristic that can be used to identify the vehicle, tram and/ or metro)	Enter the number	X	
First interchange <u>Question 5. : did you make an interchange? Yes/ No</u> (Note in case of an interchange question 2, 3 and 4 are repeated for each interchange)			
6. At which stop did you get off vehicle?	Select the (bus)stop name	x	
Overall customer satisfaction			

Question	Answers	Compulsory	Non-compulsory
7. How satisfied are you in general with the service offered to you?	Scale from 1 to 5 Scale from 1 to 10	x	For Q1 a scale from 1-10 can be chosen
8. Would you recommend others to make the trip you just made?	Yes no	x	
9. Which were the items that influenced your opinion most? Please select max. 3 out of the following list in order of importance: price, level of crowding, safety and security, condition of the stops, condition of the vehicles, punctuality, reliability, frequency, comfort, behaviour of the driver, information provision, handling of incidents and disruptions, pre- and after trip customer service.		x	
<p>Value for money, tickets and tariffs</p> <p>Mandatory for all observers who pay themselves for the public transport service, non compulsory for users that travel for free.</p> <p><u>Question 10. : Did you (or any other physical person) purchase your ticket? Yes/ No</u> (in case yes question 1 is compulsory, in case of no this section can be skipped)</p>			
11. How do you judge the value for money (price/ quality) of this service?	Scale from 1 to 5	x	
<p>Level of crowding (The questions 1 and 2 can be repeated for each interchange and line used during the trip, or one can choose for question 3) (see example stops/ shelters)</p>			
12. How satisfied were you with any crowding at your boarding stop(s)?	Scale from 1 to 5	x	
13. How satisfied were you with any crowding on the vehicle?	Scale from 1 to 5	x	

Question	Answers	Compulsory	Non-compulsory
14. If you experienced a situation of overcrowding, describe the (possible) reason and detail where.	If yes, please describe		X
Safety and security (The questions 1 and 2 can be separated for each interchange and line used during the trip or one can choose for question 3) (see example stops/ shelters)			
15. How satisfied have you been with your personal safety on the vehicle (s)?	Scale from 1 to 5	x	
16. How satisfied have you been with your personal safety at the stop(s)?	Scale from 1 to 5	x	
17. If you experienced any unsafe situation, describe this situation and detail where.	If yes, please describe		x
Stops/shelters (The questions 1 and 2A or 2B can be repeated for each interchange and line during the trip or one can choose for question 4)			
18. How do you judge the condition of the (bus) stop environment on departure (s)?	Scale from 1 to 5	X	
19a. How satisfied have you been with the punctuality of the departure? OR (in case of an offered frequency) 19b. How satisfied have you been with the reliability of the service?	Scale from 1 to 5	X	
20. How do you judge the conditions of the (bus) stop environment on arrival?	Scale from 1 to 5	X	
21. If you encountered a problem with the condition of the (bus)	If yes, please		x

Question	Answers	Compulsory	Non-compulsory
stops, please specify this problem and indicate where.	describe		
Vehicle condition (Questions 1 and 2 can be repeated in case of interchanges, or one can choose for question 3) (see example stops/ shelters)			
22. How do you rate the condition of the vehicle (s)?	Scale from 1 to 5	X	
23. How satisfied have you been with the comfort in the vehicle(s)?	Scale from 1 to 5	X	
24. If you encountered a problem with a vehicle condition, please specify this problem and indicate where.	If yes, please describe		x
Journey speed			
25. How satisfied have you been with the duration of your trip?	Scale from 1 to 5	x	
Staff service (Questions 1, 2 and 3 can be repeated in case of interchange(s) for each vehicle, or one can choose for question 4) (see example stops/ shelters)			
26. How satisfied have you been with the friendliness and the overall behaviour of the driver (s)?	Scale from 1 to 5	X	
27. If you asked for information / advice, how satisfied have you been with the information given by the driver (s)?	Scale from 1 to 5 N/A	x	
28. How satisfied have you been with the driving style of the driver (s)?	Scale from 1 to 5	X	
29. If you encountered a problem with the service of the driver of the staff, please specify this problem and indicate where.	If yes, please describe		x
Information (Questions 1 and 2 can be repeated in case of interchange(s) for each vehicle, or one			

Question	Answers	Compulsory	Non-compulsory
can choose for question 3) (see example stops/ shelters)			
30. How satisfied have you been with the information at the stop(s)?	Scale from 1 to 5	X	
31. How satisfied have you been with the information in the vehicle? (give some examples of info available on board, max 3 words between brackets, if any info is supposed to be available)	Scale from 1 to 5	x	
32. If you lacked any particular information during your trip, please explain which information and where.	If yes, please describe		X
Disruption/ incidents			
33. In case of an incident, please describe the incident.	Scroll down: vehicle didn't turn up, vehicle brake down, route change, accident, aggression other please describe	x	
34. In case of disruption, how satisfied have you been with information regarding the disruption and possible solutions?	Scale from 1 to 5 N/A	x	
35. Is there any other information you would like to share concerning the incident or disruption?	If yes, please describe		x
Any other information			
36. Is there any other information you would like to share?	If yes, please describe		X