Chapter 8
Definition of Priority Services and Value Targets

In this chapter we discuss the step of the methodology which supports the definition of priority services and their quality value targets. As for the overall methodology, the general idea is that the choice should be driven by a clear understanding of

- the strategic/political objectives from the different layers involved (see Chap. 3);
- the elements composing the service as part of a complex system of values, impacting both the inner and outer context of intervention (see again Chap. 3); and
- the related qualities.

According to such an analysis, the planning activity results in a set of priority services based on the results of eGovernment vision elicitation (see Chap. 4) defining the macro – micro-objectives which develop them.

As shown in Fig. 8.1, macro- and micro-objectives depend, respectively, on the final intentions and associated strategies, resulting from eGovernment vision elicitation step; in the running example provided in Sect. 4.3 a macro-objective is defined on the basis of final intention *Achieve internal effectiveness*, while the micro-objectives are defined on the basis of strategies *improving administrative processes* and *improving information management and coordination by means of laws or ICT*.

For example, *to improve registry services* is a macro objective to *achieve internal effectiveness* that can be implemented through the achievement of a set of micro-objectives such as

(i) *to simplify administrative procedures for registry services* (specifying the *improving administrative processes* strategy);
(ii) *to deploy new proactive services* which asks for innovation at the legal and technological levels (specifying the *improving information management and coordination by means of laws or ICT* strategy);
(iii) *to deploy services accessible with multiple channels* as implementation of the macro-objective *use innovative ICTs*.

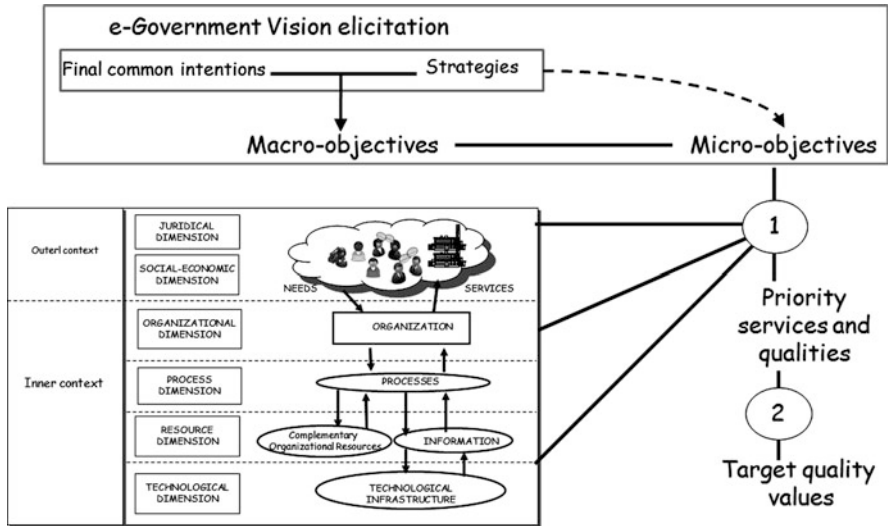This chapter is authored by Gianluigi Viscusi.

Fig. 8.1 Relationships between eGovernment vision elicitation, macro – micro-objectives, and activities of the step

The chosen set of priority services and their related qualities should better fit the achievement of the new quality target values.

In this step we exploit the results of the previous steps of the eG4M methodology, namely the eGovernment vision elicitation, state reconstruction, eReadiness, and quality assessment steps.

These three steps provide the information supporting the choice of the services which are more relevant for the context of intervention for both what concerns the back office and the front office of the involved public administrations. In particular, we point out the following issues:

- The outputs of the eGovernment vision elicitation step are used to choose the appropriate macro- and micro-objectives.
- The outputs of the eReadiness assessment and state reconstruction steps are used to find the most appropriate services or cluster of services for the chosen macro- and micro-objectives.
- The outputs of quality assessment are used to define the relevant qualities and related values for services and other facets of the context of intervention.

As shown in Fig. 8.2, the step is composed of three activities:

- *Definition of priority macro/micro-objectives*, where for each macro – micro-objective identified in the eGovernment vision elicitation step, we define the priority ones on the basis of the results of state reconstruction and eReadiness assessment steps.

Activity 1.Definition of priority macro/micro-objectives
- For each macro/micro-objective defined in the e-Government vision elicitation step defines the priority ones on the basis of the results of state reconstruction and e-Readiness assessment steps.

Activity 2. Definition of priority services
- For each macro/micro-objective find the existing involved administrative services together with a set of new value-added services (as proactive as possible, namely provided by the public administration without any user request).

Activity 3. Definition of priority qualities and quality target values
- For each service define the relevant qualities from the quality registry.
- Besides service qualities, define the relevant qualities for the legal framework, the organization/process, data, and technologies related to the priority services/processes.
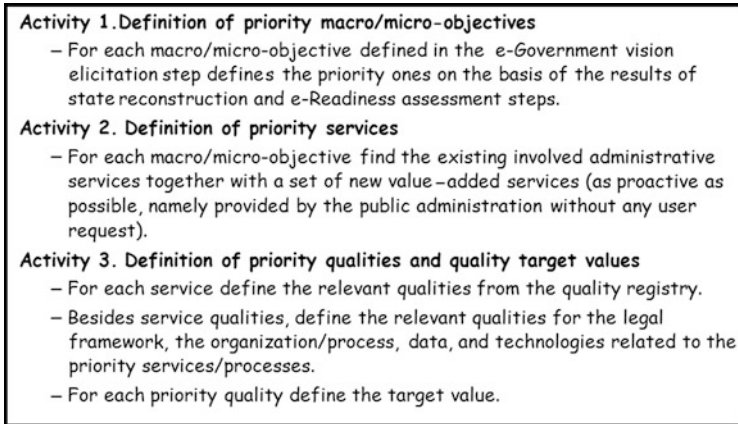- For each priority quality define the target value.

Fig. 8.2 Activities for the definition of priority services and target quality values

- *Definition of priority services* where the *service package* is defined on the basis of macro- and micro-objectives. The service package [94] discussed in Chap. 1 in other methodologies is usually composed of *core services* and *support services*; in our case, using the concepts proposed in [164], the service package is seen as composed of *administrative services* (the basic functionalities and resources offered) and *value-added services* (the functionalities and resources considered of value for the user).
- *Definition of priority qualities and quality target values* where priority quality dimensions for the chosen services are identified and the target values to be achieved in the time horizon of the plan are defined.

In the following we describe the activities leading to the choice of services and we refer to the running example. In Sect. 8.1 we discuss the definition of priority macro/micro-objectives, leading to the choice priority services described in Sect. 8.2. Finally, in Sect. 8.3 we detail the activity of selection of priority qualities for services and the definition of their target values.

8.1 Definition of Priority Macro/Micro-objectives

In Chap. 4 we have defined a preliminary set of macro- and micro-objectives for the running example. We now define their priorities on the basis of the results of state reconstruction and eReadiness assessment steps. We now briefly review the preliminary macro/micro-objectives identified in the eGovernment vision elicitation step:

- for what concerns the organizational and legal facets we have identified *to simplify administrative procedures for registry services* (MIO1 in the following) as

a common micro-objective for the macro-objective *effectiveness and the simpli-fication of administrative activities macro-objectives* (MAO1 in the following);

- for what concerns the service facet we have identified *deploy new proactive registry services* (MIO2 in the following) as a micro-objective of the macro-objective *improve registry services as macro-objective* (MAO2 in the following);
- for what concerns the technological facet we have identified the *use of innovative ICTs* (MAO3 in the following) as a macro-objective in order to provide *services accessible with multiple channels* as micro-objective (MIO3 in the following).

As shown in Fig. 8.3 improving registry services is important in order to satisfy the need for choosing services oriented toward user local needs. In particular, the high number of yearly requests in the running example and the high number of potential users are related to the critical phenomenon of urbanization of the rural population. In order to provide new proactive registry services, a huge back-office intervention is required at the organizational and legal levels in terms of

- roles defined by the law for different central and local public administrations involved in the service provision;
- reduction of hierarchical levels and distribution of responsibilities inside the public administration organization;
- improvement of the internal communication between organizational units of the same or cooperating public administrations.

Macro-objective	Micro-objective	Facet	State reconstruction	eReadiness
Improve registry services	Deployment of new proactive registry services	Service	Relevance of the services related to change of address (5,000,000 of potential users at the national level and 1,000,000 of requests each year)	– Need for services oriented toward user local needs
Effectiveness of administrative activity Simplification of administrative activities	Simplification of administrative procedures for registry services	Organization–legal framework	–Different organizations involved at both central and local levels –Different roles by law for the ministries involved in service provision: (a) the ministry of finance certifies information both for residency and for health card provision, and co-governs with the ministry of health the health card provision information flow (b) Ministry of interior is the owner of registry office	– Need for horizontal projects and back-office reorganization – Hierarchical and centralized organization – Lack of internal communication
Use innovative ICTs	Provision of services accessible with multiple channels	Service /technology	– Widespread use of mobile phone (45% of the total population) – High cost of Internet access – Low diffusion of Internet access (20% of the total population have Internet access)	– Not homogeneous distribution of ICT knowledge

Fig. 8.3 Specifications for the macro/micro-objectives from the state reconstruction and assessment steps

Finally, the widespread use of mobile phones, the high cost, and the low diffusion of Internet access decline the macro-objective of using innovative ICTs in terms of deployment of a technological infrastructure, supporting both a multichannel service provision and the public administration's internal communication.

The information collected in the state reconstruction and eReadiness assessment steps allows to define the appropriate specifications for macro-objectives impacting on different facets of the context of intervention. It is important to note that at this level the different facets are considered as separated and self-referential from a system perspective. In this sense, micro-objectives are the real bridge toward the outer context or environment, and we can define dependencies and priorities between them.

As shown in Fig. 8.4 the deployment of new proactive registry services (MIO2) asks for a selection of value-added services besides administrative services. Nevertheless, value-added services cannot be deployed without an efficient and agile back office dedicated to the provision of core administrative services (see arrow 1 in Fig. 8.4), as outcome of the implementation of the micro-objective aiming at the simplification of administrative procedures for registry services (MIO1). Finally, the technological infrastructure supports the provision of services accessible with multiple channels (MIO3) for a back-office and an organization (see arrow 2 in Fig. 8.4) which should be made efficient and agile for MIO2 as a final micro-objective (see arrow 3 in Fig. 8.4).

In conclusion, the type of services chosen is strictly related to the requirements of the micro-objectives, namely (i) value-added services in terms of proactiveness for the final user are associated with MIO1, (ii) administrative services are related to MIO2; and (iii) value-added services considered at technological level as mobile and multimedia services are associated with MIO3.
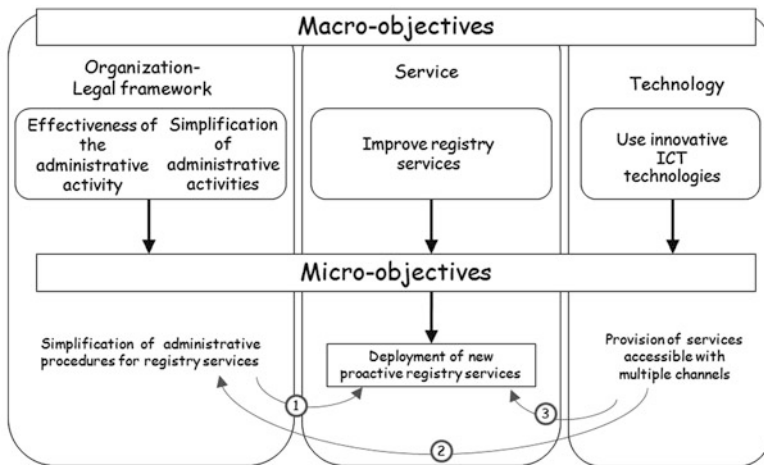

Fig. 8.4 Dependencies and priorities between macro- and micro-objectives

8.2 Define the Priority Services

For each macro/micro-objective we now identify the existing available services. This activity is carried out with the support of the repository of services described in Sect. 5.1.2, using information retrieved during the state reconstruction step.

Administrations provide many services to citizens. At this stage, we will consider services in the repository classified by events of life; in particular, as shown in Fig. 8.5, we focus on the services related to the change of residency. In the running example the services retrieved from the repository have to be associated with the micro-objectives and classified on the basis of their function (see Sect. 5.1.2) and their type (administrative or value-added services). It is important to note that the available services are mainly administrative and related to the MIO1 micro-objective, while value-added services related to other micro-objectives are provided by other public administrations in the repository (see column owner in Fig. 8.5).

Indeed, the preliminary analysis of the services retrieved from the repository suggests two different choices in terms of priority; investments for (i) the improvement of available administrative services and (ii) the reuse of existing value-added

Service	Type	Micro-objective	Functional class	Owner
Report the change of residency to the old municipality and request of certificate	Administrative	Simplification of administrative procedures for registry services	Certification	The considered public administration
Report the change of residency to new municipality and request of certificate	Administrative	Simplification of administrative procedures for registry services	Certification	The considered public administration
Report the change of residency to the ministry of transport and update the driving licence	Administrative	Simplification of administrative procedures for registry services	Certification	The considered public administration
Report the change of residency to the change to the health local agency and update the health card	Administrative	Simplification of administrative procedures for registry services	Certification	The considered public administration
Reservation for medical examination	Administrative	Provision of services accessible with multiple channels	Registration	The considered public administration
Information on how to change the utilities (gas, electricity, etc.).	Value added	Deployment of new proactive registry services	Suupporting knowledge	The considered public administration
Family information on where schools or kindergartens are with all the features needed for choosing	Value added	Deployment of new proactive registry services	Suupporting knowledge	Other public administrations in the repository
Call center for information on the change of residency process	Value added	Provision of services accessible with multiple channels	Suupporting knowledge	Other public administrations in the repository
Information on the state of the case (by sms, e-mail, or text-based posts)	Value added	Provision of services accessible with multiple channels	Suupporting knowledge	Other public administrations in the repository

Fig. 8.5 Services in the repository for the change of residency

services provided by other public administrations. Nevertheless, in order to properly choose priority services a further evaluation is required.

In order to evaluate the relevance of the services for citizens, we consider for each service the information resulting from the state reconstruction step. The evaluation in Fig. 8.6 considers the following properties:

- the number of potential `users`;
- the `yearly frequency`, namely the number of single requests of the services in a year;
- the public value (see Sect. 4.1) related to the realization of macro- and micro-objectives implementing the political vision;
- the level of interaction of the available services;
- the costs related to the number of interactions between organizational units and public administrations involved by the law;
- the technological infrastructure required.

Figure 8.6 shows that the priority services are the administrative ones related to the micro-objective "simplification of administrative procedures for registry services" in Fig. 8.5. This latter is related to macro-objectives impacting mainly at the organizational and legal levels (see Sect. 4.4), confirming their role in enabling the main macro-objective of "improving registry services."

Service/ properties	Users	Yearly frequency	Public value	Level of interaction	Cost	Relevance
Report the change of residency to the old municipality and request of certificate	5,000,000	1,000,000	High	Information	High	Very high
Report the change of residency to new municipality and request of certificate	5,000,000	1,000,000	High	Information	High	Very high
Report the change of residency to the ministry of transport and update the driving licence	2,000,000	500,000	High	Information	High	Very high
Report the change of residency to the change to the health local agency and update the health card	5,000,000	1,000,000	High	Information	High	Very high
Reservation for medical examination	5,000,000	10,000,000	Very High	Information	High	Very high
Information on how to change the utilities (gas, electricity, etc.).	5,000,000	10,000,000	Medium	Information	Low	Medium
Family information on where schools or kindergartens are with all the features needed for choosing	Nd	Nd	Medium	Information	Low	Medium
Call center for information on the change of residency process	Nd	Nd	High	Two-way interaction	High	High
Information on the state of the case (by sms, e-mail, or text-based posts	Nd	Nd	High	One-way service	High	High

Fig. 8.6 Relevance of the services chosen as the priority ones

Indeed, the administrative services for the change of residency are support services having public value when provided in a coordinated way and at the same level of interaction. This objective can be reached only with an efficient back-office leading to high organizational costs besides the technological costs related to the evolution of the actual infrastructure. The intervention will also provide the support required for the reservation of medical examination service, an administrative service related to the provision of services accessible with multiple channels (MIO3 of the macro-objective "use innovative ICTs").

For what concerns value-added services (see the two priority services highlighted at the bottom of Fig. 8.6), they have a second-order priority and their potential reuse of available ICT solutions have relevant costs, mainly in terms of governance between involved public administrations.

Nevertheless, a potential service package can be designed by integrating the "reservation for medical examination" administrative service with value-added services from other public administrations (see arrows in Fig. 8.6), such as the call center for information on the change of residency process and an information service on the state of the case (by sms, e-mail, or text-based posts).

The other value-added services have low priority for the following reasons. The service providing information on how to change the utilities (gas, electricity, etc.) even if characterized by high volumes of users and yearly requests is not a priority because of its interaction level which needs a routine activity of update and alignment of the service-related information. Finally, the service providing family information on where schools or kindergartens are located is relevant but with a second-order priority too because of the actual level of administrative service provision asking for higher investment priority.

In this activity our service-oriented methodology has supported the choice of a set of priority services, which are mainly administrative in the running example. In the following, we define priority qualities for the different facets involved in service provision.

8.3 Definition of Priority Qualities and Target Values

This activity is based on the data available in the registry of qualities (see Chap. 7), resulting from the quality assessment step and new survey carried out by the service users. It is important to note that besides service qualities, we also define the relevant qualities for the legal framework, organization, data, and technologies related to the priority services. In order to support the reader, we reproduce in Fig. 8.7 (which was already discussed in Chap. 7) the qualities identified for the administrative services with their current values.

Besides Fig. 8.7, we consider Fig. 8.8 which shows the qualities and their current value for the macro- and micro-objectives related to the use of innovative ICTs for the improvement of temporal accessibility by means of multichannel access to services. As discussed in previous sections and shown in Fig. 8.3 these macro- and

Layer	Quality dimension	Service	Current value
Service	Temporal accessibility	Report the change of residency to the new mun.	30 h a week
		Report the change of residency to the old mun.	30 h a week
		Report change of residency and update the driving licence	20 h a week
		Report change of residency and update the health card	25 h a week
		Reservation for medical examination	15 h a week
Service	User time	Report the change of residency to the new mun.	3 h
		Report the change of residency to the old mun.	6 h
		Report change of residency and update the driving licence	6 h
		Report change of residency and update the health card	6 h
		Reservation for medical examination	24 h a year
Service	Service provision time	Report the change of residency to the new mun.	1 week
		Report the change of residency to the old mun.	1 week
		Report change of residency and update the driving licence	1 month
		Report change of residency and update the health card	1 month
		Reservation for medical examination	3 days
Organization/ process	Level of simplification	Report the change of residency to the new mun.	2 interactions
		Report the change of residency to the old mun.	2 interactions
		Report change of residency and update the driving licence	2 interactions
		Report change of residency and update the health card	2 interactions
		Reservation for medical examination	2 interactions
ICT infrastructure (channel)	Channel accessibility	Report the change of residency to the new mun.	Only desk
		Report the change of residency to the old mun.	Only desk
		Report change of residency and update the driving licence	Only desk
		Report change of residency and update the health card	Only desk
		Reservation for medical examination	Only desk

Fig. 8.7 Current values for administrative services in the running example

Macro-objective	Micro-objective	Layer	Quality	Dimension	Current value
Use innovative ICTs	Services accessible with multiple channels	Service	Accessibility	Temporal accessibility	30 h a week
Use innovative ICTs	Services accessible with multiple channels	ICTs	Accessibility	Channel accessibility	Physical desk for 99% of services

Fig. 8.8 Current values for value-added services in the running example

micro-objectives have been considered in the running example as mainly related to the service and technological facets of the context of intervention.

In this context, indeed, accessibility is strictly related to value-added services, asking for a high cost of intervention due to its actual low values, namely the physical desk for 99% of services and only 2% of sites physically accessible (see Fig. 8.8), and the availability of technological services only from other administrations.

In order to identify the priority dimensions to be considered for the definition of final eGovernment projects on the basis of available information, we now produce a qualitative evaluation of the impact of quality dimensions on macro-objectives. In Fig. 8.9 we first report the relevance of the quality dimensions for the macro-objectives considered in the running example by adopting a five-point scale from no

Macro-objectives	Facets	Quality dimensions				
		Temporal accessibility	User time	Service provision time	Level of simplification	Channel accessibility
Improve registry services	Service	Low	High	High	NO	High
Effectiveness of the administrative activity	Organization	Low	NO	NO	High	High
Simplification of administrative activities	Legal framework	NO	High	Low	High	NO
Use innovative ICTs	Technology	High	Low	NO	Low	High

Fig. 8.9 Relationships between political objectives and quality dimensions in the running example

when there is no relevance at all to yes for a full relevance; intermediate values are Low, Medium, and High.

We now consider the results of Fig. 8.9 and in particular the quality dimensions with high relevance for a given facet of the context of intervention. Figure 8.10 shows each quality related to its main quality dimension and facet: in the running example the resulting characteristics are efficiency and accessibility. In Figure 8.10 arrows represent dependencies between qualities for different facets as a priority path.

Quality dimension/facet	Efficiency			Accessibility	
	User time	Service provision time	Level of simplification	Temporal accessibility	Channel accessibility
Service	Improve registry services	Improve registry services	→④	Use innovative ICTs ⑤	Improve registry services ⑥
	①	③			
Organization			Effectiveness of the administrative activity		Effectiveness of the administrative activity
Legal framework	Simplification of administrative activities	②	Simplification of administrative activities		⑦
Technology					Use innovative ICTs

Fig. 8.10 A priority path for qualities

The first quality to be considered is the *user time* at the service level in order to improve registry services (see arrow 1 in Fig. 8.10). This improvement is strictly related to a simplification at both the front office (e.g., by unifying the request points) and back office (e.g., by reducing the administrative procedures and organizational units involved by law). Nevertheless, as we have seen in the quality assessment step the simplification of administrative activities is constrained by the low level of accountability and completeness of the legal framework.

Due to these issues, user time has a priority in terms of improvement of the quality of legal framework for MAO1 aiming for the simplification of administrative activities (see arrow 2 in Fig. 8.10).

As seen above, this simplification in the eGovernment vision is strictly related also to the second facet of MAO1 aiming to improve the effectiveness of the administrative activity at the organizational level. The high relevance of the *level of simplification* for both the facets of MAO1 makes this quality the third to be considered in order to improve *service provision time* at the service level (see arrow 3 in Fig. 8.10).

A comment on Fig. 8.10 points out the resulting priority of efficiency for administrative services, and in particular of efficiency-related qualities impacting at the organizational and legal levels. Indeed, the service-oriented approach of the eG4M methodology allows to identify quality priority not related to technology as preliminary requirements for a technological initiative.

Taking these issues into account, the priority path in Fig. 8.10 shows how in the running example *temporal and channel accessibility* for the improvement of service provision time (see arrow 4 in Fig. 8.10) depends once again on the effectiveness of the administrative activity at the organizational level (see arrow 5 in Fig. 8.10), which can suggest a horizontal initiative based on MIO1 at both the legal and organizational levels (see Fig. 8.3).

In the considered priority path, channel accessibility at the technological level has the lowest priority but a relevant role in enacting the results of initiatives related to higher priority qualities (see arrows 6 and 7 in Fig. 8.10). The path described in Fig. 8.10 allows to rank the priority of the considered qualities as follows:

1. user time (efficiency);
2. level of simplification (efficiency);
3. service provision time (efficiency);
4. temporal accessibility (accessibility);
5. channel accessibility (accessibility).

As final activity, we fix the target values of quality dimensions to be achieved in the time horizon of the plan. These values are influenced by (1) the length of the projects, (2) the political vision and macro – micro-objectives, and (3) the available budget, which may force the delay of costly projects.

Figure 8.11 describes the current and expected values for the quality dimensions in the running example classified on the basis of their resulting priority.

Note that we have expressed a unique global target value for the level of simplification of the four services related to the change of residency. The reason is that we

Priority	Layer	Quality dimension	Service	Current value	Expected value
1	Service	User time	Report the change of residency to the new mun.	3 h	10 min
			Report the change of residency to the old mun.	6 h	10 min
			Report change of residency and update the driving licence	6 h	10 min
			Report change of residency and update the health card	6 h	10 min
			Reservation for medical examination	24 h a year	5 min
2	Organization/ Process/law	Level of simplification	Report the change of residency to the new mun.	2 interactions	
			Report the change of residency to the old mun.	2 interactions	
			Report change of residency and update the driving licence	2 interactions	1 interaction
			Report change of residency and update the health card	2 interactions	
			Reservation for medical examination	2 interactions	
3	Service	Service provision time	Report the change of residency to the new mun.	1 week	2 days
			Report the change of residency to the old mun.	1 week	10 min
			Report change of residency and update the driving licence	1 month	3 days
			Report change of residency and update the health card	1 month	3 days
			Reservation for medical examination	3 days	10 min
4	Service	Temporal accessibility	Report the change of residency to the new mun.	30 h a week	72 h a week
			Report the change of residency to the old mun.	30 h a week	72 h a week
			Report change of residency and update the driving licence	20 h a week	72 h a week
			Report change of residency and update the health card	25 h a week	72 h a week
			Reservation for medical examination	15 h a week	Always open
5	ICT infrastructure (channel)	Channel accessibility	Report the change of residency to the new mun.	Only desk	Desk, Internet, mobile phone
			Report the change of residency to the old mun.	Only desk	Desk, Internet, mobile phone
			Report change of residency and update the driving licence	Only desk	Desk, Internet, mobile phone
			Report change of residency and update the health card	Only desk	Desk, Internet, mobile phone
			Reservation for medical examination	Only desk	Desk, Internet, mobile phone

Fig. 8.11 Current and expected values for the relevant qualities in the running example

perceive that the four services could be managed together. In the next phase of the eG4M methodology we will look for technologies that may enable such a choice.

8.4 Summary

In this chapter we have discussed the activities leading to determine an appropriate choice of services. In particular, we have discussed how to identify priority macro/micro-objectives on the basis of the outputs of the state reconstruction and eReadiness assessment steps. The choice of priority macro – micro-objectives is relevant in order to link the political vision to the operational level implementing the final services. Indeed, in this chapter we have described how the defined priority macro – micro-objectives lead to the choice of priority services and their related qualities. These latter exploit the outputs of the quality assessment step, providing details on the priority path of intervention for the different facets of the considered context. Finally, we have described the activity of definition of the quality target values to be achieved through the projects which result as output of the following steps of the operational planning phase.