

Focused Analysis

Innovation

Management in Water
and Sanitation Utilities

Focused Analysis

Innovation Management in Water and Sanitation Utilities

Author:

Fancisco Cubillo González

Technical and methodological edition:

Federico Pérez Peñalosa
Corinne Cathala

Technical collaboration:

Marcello Basani

A product of:

AquaRating

AquaFund



Schweizerische Eidgenossenschaft
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Agencia Suiza para el Desarrollo
y la Cooperación COSUDE



 Federal Ministry
Republic of Austria
Finance

Sponsored by AquaFund

This focused analysis was financed by the AquaFund Multi Donor Fund, a thematic fund of the Inter-American Development Bank (IDB), financed with Bank Ordinary Capital and partner donor agencies: Spanish Agency for International Development Cooperation (AECID), the Swiss Government through the Swiss Agency for Development and Cooperation (COSUDE) and the Swiss Secretary of State for Economic Affairs (SECO), the Government of Austria and the PepsiCo Foundation.

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Introduction

E This document is part of a collection named “**Focused Analyses**,” which addresses relevant themes within the provision of water and sanitation services in a particular way.

The **Focused Analyses** aim to establish a method and criteria for the characterization and assessment of a particular aspect of the management of provision of the aforementioned services.

The idea for developing this collection was born of the need to approach a partial and focused way of analysis from a different perspective, a concrete means, within a broad, comprehensive framework, of applying the **AquaRating**¹ system in the context of a company. The characterization is developed through a series of indicators and parameters that facilitate the analysis of the particular subject of the **Focused Analysis**.

A **Focused Analysis** studies the possible links with information that has already been taken into account within the AquaRating evaluation structure, and which complements the identification of information and additional parameters needed for a particular characterization of this new focus and perspective.

1. www.aquarating.org

Finally, we make an assessment of the feasibility of expanding the AquaRating evaluation elements based on the experiences and new parameters identified in this document, all with the goal of developing a **Focused Characterization**.



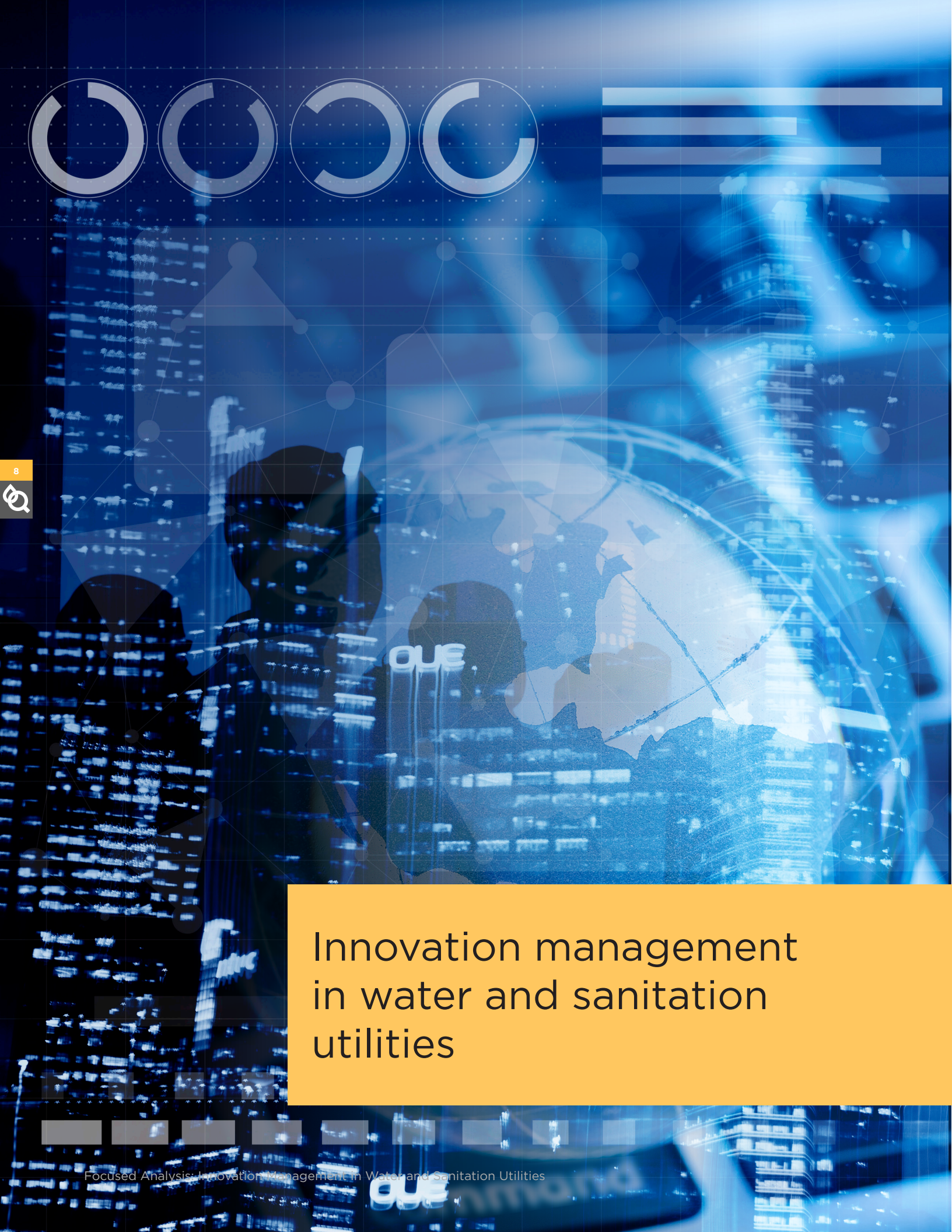
The purposes of a Focused Analysis include:

- Arriving at a better understanding of a certain aspect of the management of water and sanitation services
- Developing a more focused knowledge of a certain aspect of management
- Identifying potential improvements and additions to the AquaRating evaluation structure
- Helping to better understand the processes and the ecosystem of a specific aspect of management

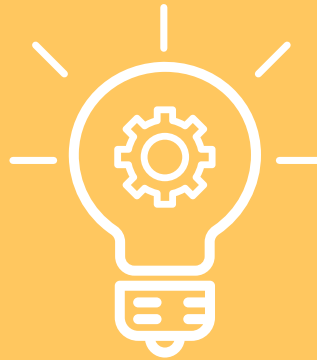
AquaRating Results and Products

The AquaRating Certification, the AquaRating Description, the Focused AquaRating Characterization, and other AquaRating Products are based solely on the information provided by the Water and Sanitation Service Provider, and as such, the responsibility for the accuracy and authenticity of said information remains exclusively with the Service Provider. Similarly, the results of the auditing process carried out by the auditing firm are based on the information provided by the Service Provider; as such, the Inter-American Development Bank is not responsible for, nor does it certify, the audit results.

The results of the AquaRating Characterization and/or the AquaRating Certification and/or the Focused Description, and all of the information and documents related to the implementation of AquaRating, do not necessarily reflect the opinion of the Inter-American Development Bank (IDB), nor of its Executive Director, nor the countries it represents.



Innovation management in water and sanitation utilities



Of the multiple definitions of innovation (IN), this document uses the one that identifies innovation as a perspective and a way of pursuing the best fulfillment of commitments and obligations, taking into account the constant evolution of opportunities, challenges, threats, and changes in the contexts and circumstances in which an activity is carried out.

This perspective can encompass:

- The component of creativity and the search for new solutions, which were previously unknown
- The component of experimentation with solutions whose efficacy, utility, and efficiency are still not considered to be sufficiently proven, and
- The component of smart adaptation, with a view toward future sustainability, of solutions already established and proven sufficiently.

This perspective is applicable to the management of water and sanitation services, and is the focus placed on all of the components in this document.

Definition of criteria for characterization and assessment

The characterization and analysis of a company's innovation should be based on two primary pillars:

- The intensity and quality of the effort dedicated to innovation, and
- The efficacy that said efforts have produced up until the date of the rating.

It is important to keep in mind that efforts materialize in different ways and that results are difficult to quantify in a particular way, since, globally speaking, they should be translated into the provision of quality service, in its most comprehensive embodiment. Efforts should be affordable and, what is most important with respect to innovation, should guarantee durability and sustainability into the future.

Within this focus on intensity and quality of efforts, it is important to differentiate: 1) the practices of innovation management as a way to develop creativity and the capacity for inventiveness and experimentation, and 2) the practices that seek the capacity for adaptation and adoption of advanced technologies and procedures with proven efficacy.

Creativity and innovative culture have the ultimate aim of ensuring the capacity to adapt to future contexts and circumstances, and the ability to implement market solutions that ensure greater efficiency and durability. To establish a point of reference for describing the implementation of solutions, technologies, or processes, the techniques and practices applied in a company have been evaluated in relation to the highest level known and implemented in the sector, with proven efficacy and efficiency, within the international landscape.

With these considerations in mind, the following specific approaches were proposed:

Approaches for the analysis of innovation management

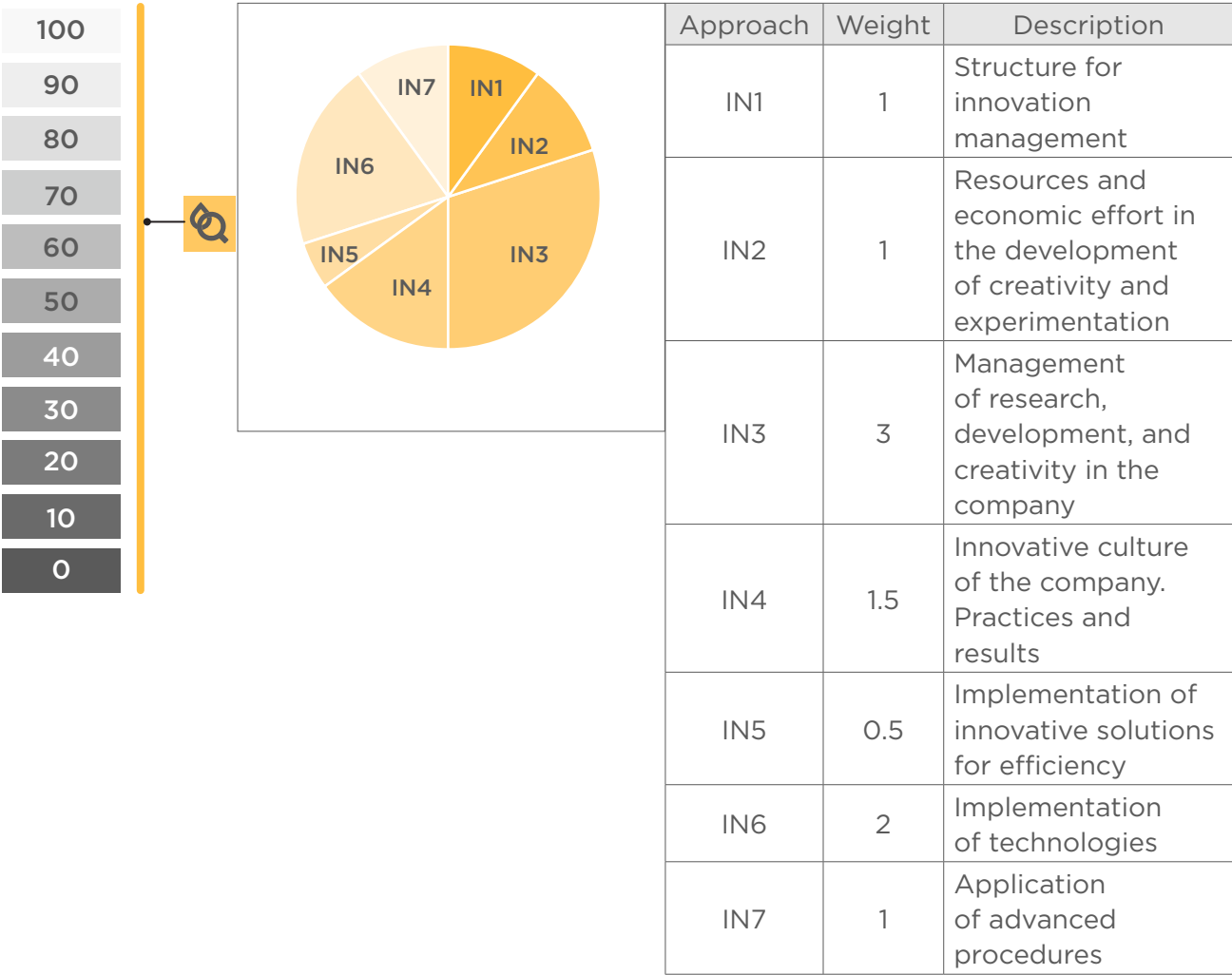


- | | |
|------------|--|
| IN1 | Structure for innovation management |
| IN2 | Resources and economic effort in the development of creativity and experimentation |
| IN3 | Management of research, development, and creativity in the company |
| IN4 | Innovative culture of the company. Practices and results |
| IN5 | Implementation of innovative solutions for efficiency |
| IN6 | Implementation of technologies |
| IN7 | Application of advanced procedures |

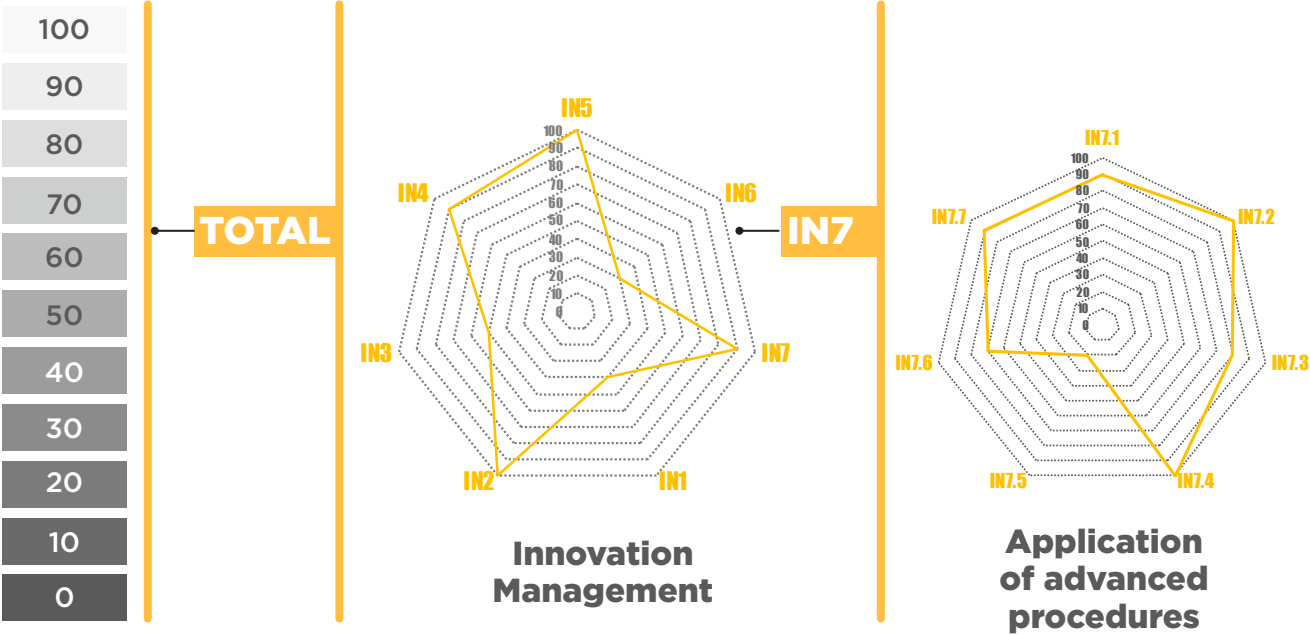
The global value of the Focused Characterization of the company's innovation management will be the result of the grouped and weighted characterization of the set of elements mentioned in this document, and which reflect both the implementation of solutions, processes, and advanced technologies, as well as the structure, resources, management, and performance of the innovative culture and creativity within a company. It is a parameter that encompasses items of a very distinct nature, but transmit within a single figure, the evaluation of the innovative character of a company, independent of its performance results and compliance with its commitments and obligations in the current moment.

To develop a characterization of the global innovation management within a company, the following parameters and indicators should be determined, all of them resulting from the scoring of individual elements, grouped by approach, with groups and weightings indicated in the following sections, and, where appropriate, uploaded information into the AquaRating application.

The global value will be determined with the values resulting from the different approaches (IN1, IN2, IN3, IN4, IN5, IN6 and IN7), weighted in accordance with what is laid out in the following table, which, in turn, breaks down information into specific groups, individual practices, and indicators. The global value will fall in a range between 0 to 100, and will be accompanied by a reliability factor that has been applied in determining said global value. Reliability will refer to the average of the reliabilities that have been calculated for each of the approaches, using the same weights.



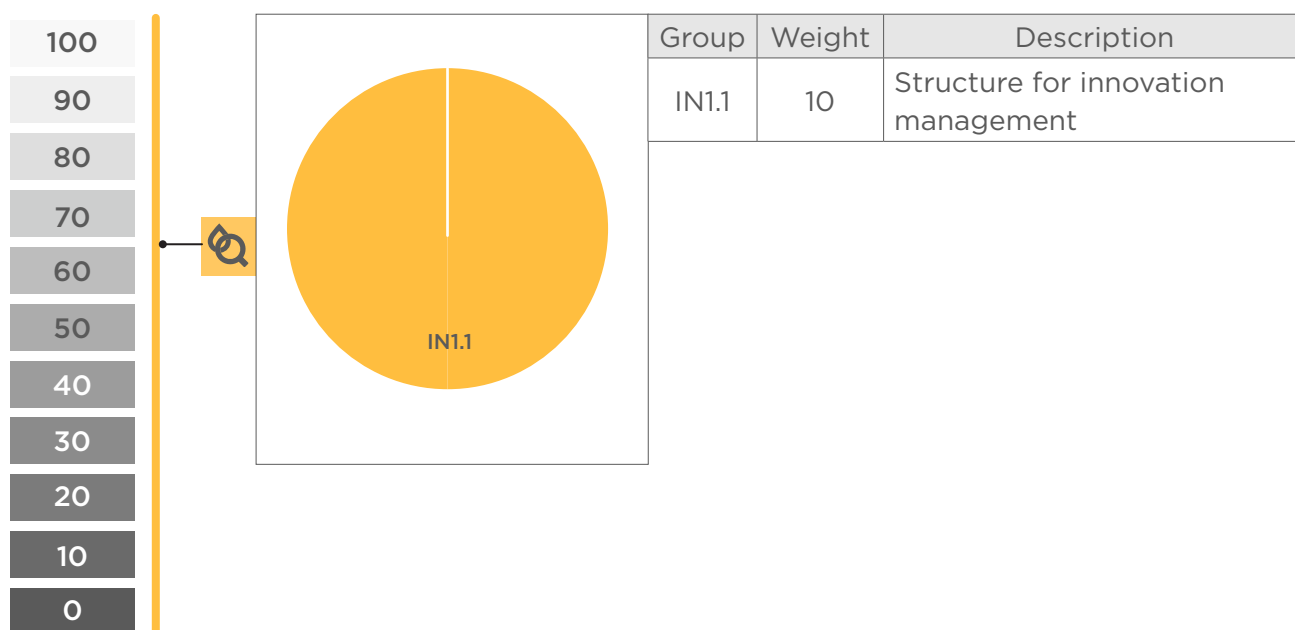
By way of example, the Focused Characterization of innovation management in a water and sanitation company could have a final score of 70/100, as observed in the following figure, which would be comprised of the weighted grouping of the seven approaches, where each approach has its own score; approach IN7 measures “Application of advanced procedures,” which in this example has an 86/100 as a result of the weighting of the groups that comprise it, along with its individual elements, each with their respective calculations, weights, and reliabilities.



Analysis for the focused characterization of innovation management in water and sanitation companies

Characterization of the structure for innovation management

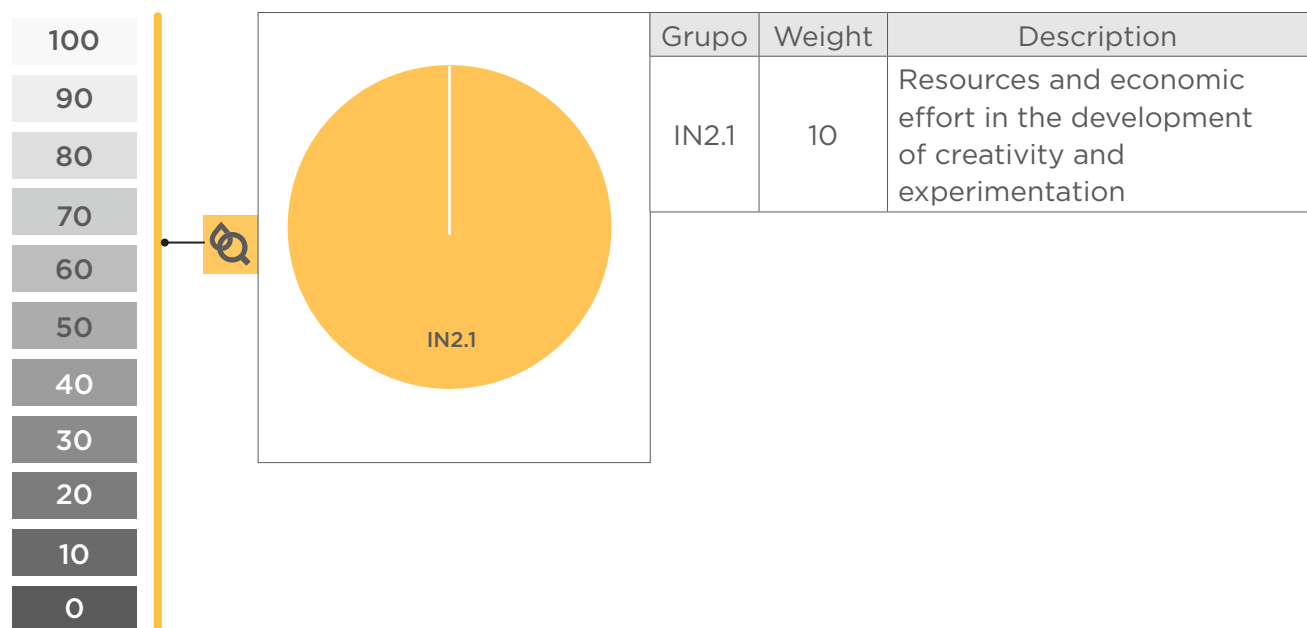
The characterization of the structure for innovation management in the company will be the result of the combined evaluation of everything that makes possible and promotes innovation in the company, and the results obtained in recent years. It will include a consolidation of the single IN1.1 group, corresponding to the IN1 approach, with its relative weight noted in the following table. The evaluation will be the result of these groupings, referenced on a scale of 0 to 100, which will be accompanied by the corresponding reliability factor.



IN2

Characterization of the resources and economic effort in the development of creativity and experimentation

The characterization of the resources and economic effort in the development of creativity and experimentation in the company will be the result of the combined evaluation of everything that makes possible and promotes innovation in the company, and the results obtained in recent years. It will include a consolidation of the single IN2.1 group, corresponding to the IN2 approach, with its relative weight noted in the following table. The evaluation will be the result of these groupings, referenced on a scale of 0 to 100, which will be accompanied by the corresponding reliability factor.



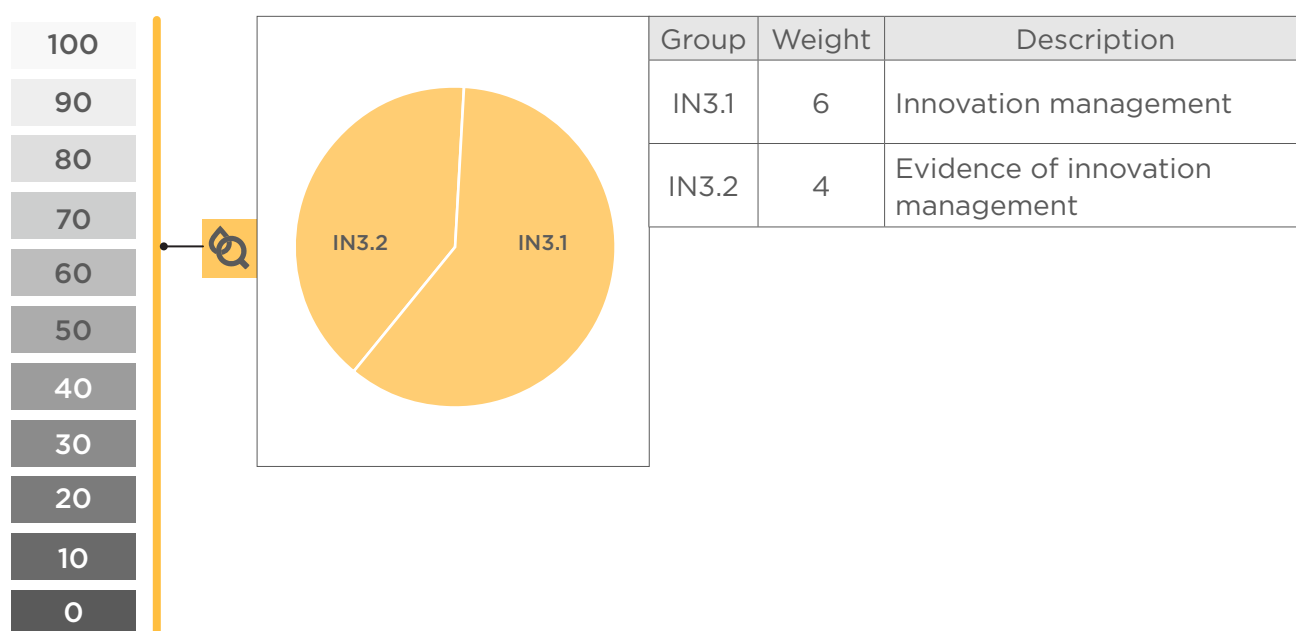
IN3

Characterization of the management of research, creativity and general inventiveness in the company, based on its procedures and results

The characterization of the management of research, creativity, and general inventiveness of the company based on its procedures and results, will be the result of the grouped and weighted description of the set of elements that take into account only those that are linked to innovation management in the company and the results obtained in recent years. The degree to which solutions or advanced procedures or technologies have been implemented will not be evaluated in this parameter, nor will the management of an innovative culture, the structure, or resources involved in the company's innovation.

Additionally, the characterization of the results achieved in the area of innovation, measured by the generation of innovative products, scientific publications, or activities in the number of modifications in processes and the implementation of new technologies will be the result of the grouped and weighted characterization of the set of elements that evaluate the results of innovation management and the innovative maturity of the company.

It will include a grouping of groups IN3.1 and IN3.2, corresponding to approach IN3, with its relative weightings noted in the following table. The evaluation will be the result of these groupings, referenced on a scale of 0 to 100, which will be accompanied by a corresponding reliability factor.

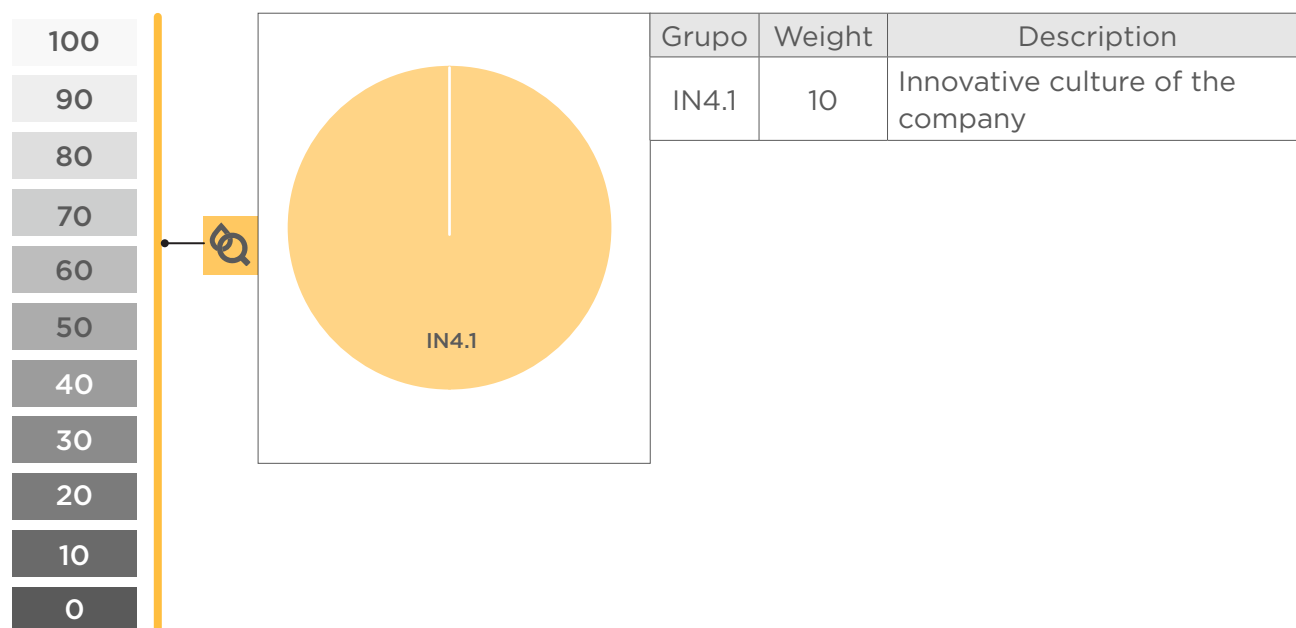


IN4

Characterization of the management of the innovative culture of the company

The characterization of the management of innovative culture in the company will be the result of the combined evaluation of the practices for the development of innovative culture and, in this case, the score obtained from the application of some method of quantification of the innovative culture in the company. In those companies that do not follow a practice of measuring innovative culture, the weightings will be adjusted, ignoring the corresponding parameter linked to the measure of innovative culture, but the resulting score will be penalized, affecting it by a factor of 0.9. It can only be determined in companies where the innovative culture has been quantified at some point during the past three years, using a known, representative method.

It will include a consolidation of the IN4.1 group, corresponding to the IN4 approach, with its relative weight indicated in the following table. The score will be the result of these groupings, referenced on a scale of 0 to 100, which will be accompanied by a corresponding reliability value.

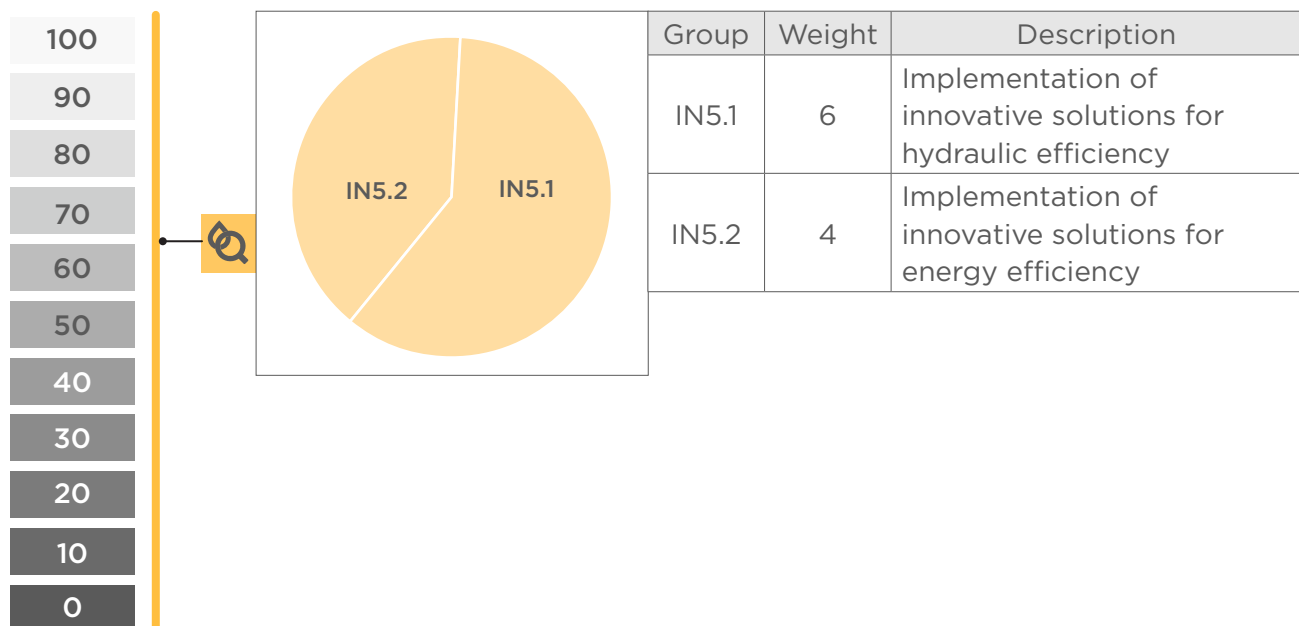


IN5

Assessment of the implementation of solutions and technologies for efficiency

The assessment of the implementation of solutions and technologies for efficiency in the company will be the result of the combined evaluation of the set of elements that assess the implemented solutions at the company for the efficient management of hydraulics and energy.

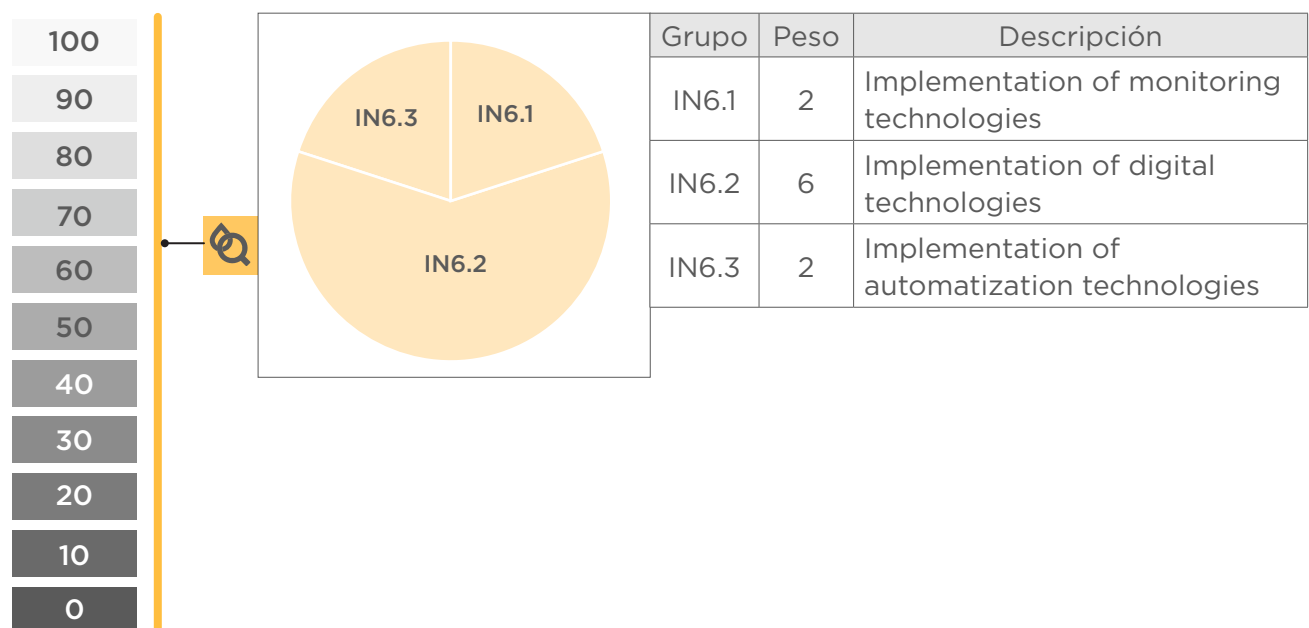
It will include a consolidation of the groups IN5.1 and IN5.2, corresponding to the IN5 approach, with its relative weights noted in the following table. The evaluation will be the result of these groupings, referenced on a scale of 0 to 100, which will be accompanied by the corresponding reliability factor.



IN6 Assessment of the implementation of technologies

The assessment of the implementation of technologies will be the result of the grouped and weighted characterization of the set of elements that evaluate the implementation of technologies in the company for different processes.

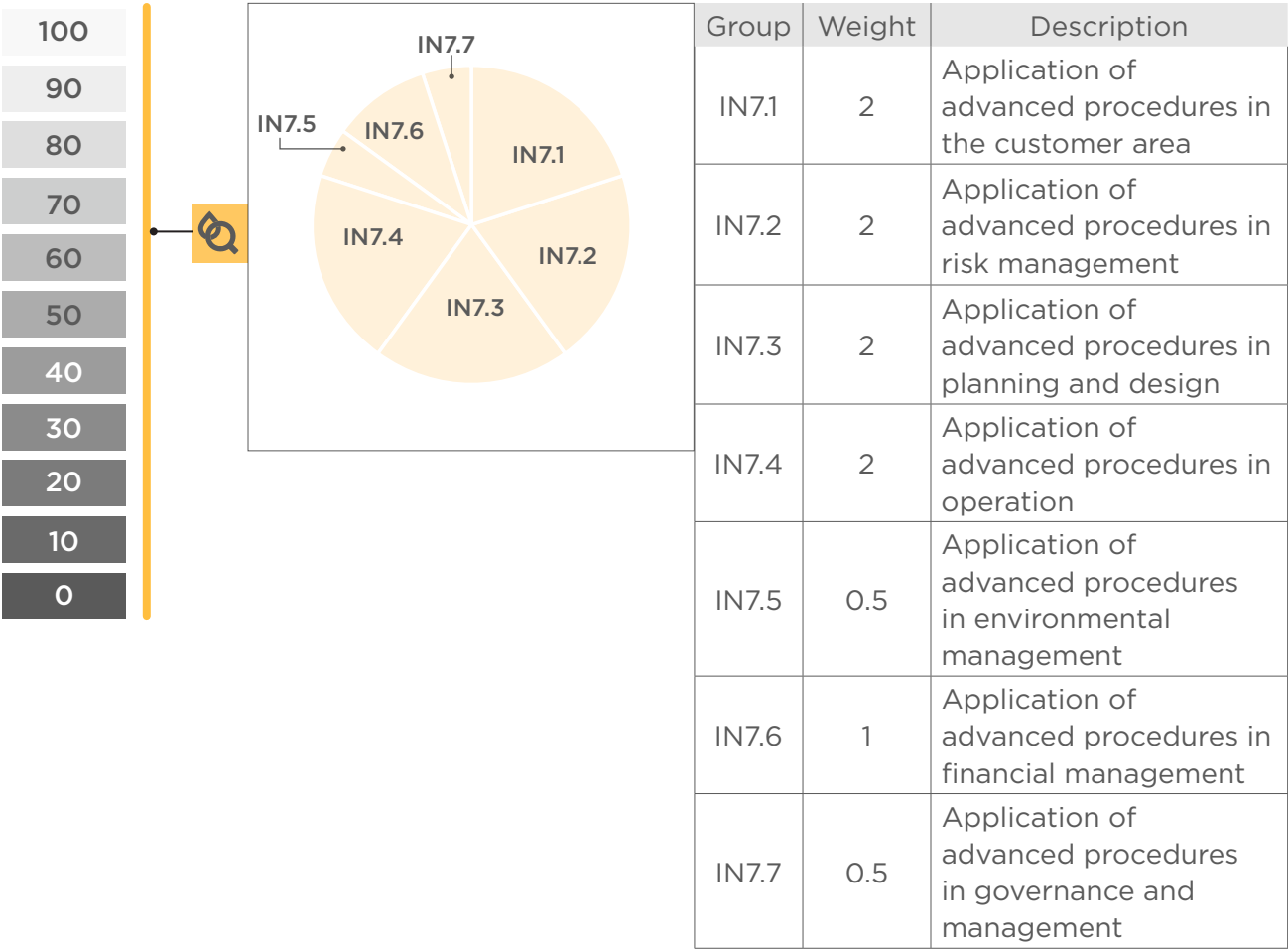
It will include a grouping of groups IN6.1, IN6.2, and IN6.3, corresponding to the IN6 approach, with relative weights noted in the following table. The evaluation will be the result of these groupings, referenced on a scale of 0 to 100, which will be accompanied by the corresponding reliability factor.



IN7 Assessment of the implementation of advanced management procedures

The assessment of the implementation of advanced management procedures will be the result of the grouped and weighted characterization of the set of elements that evaluate the procedures, processes, and practices implemented in the company for the different areas of planning, operation, management, and general governance.

It will include a grouping of groups IN7.1, IN7.2, IN7.3, IN7.4, IN7.5, IN7.6, and IN7.7, corresponding to the IN7 approach, with relative weights noted in the following table. The evaluation will be the result of these groupings, referenced on a scale of 0 to 100, which will be accompanied by the corresponding reliability factor.



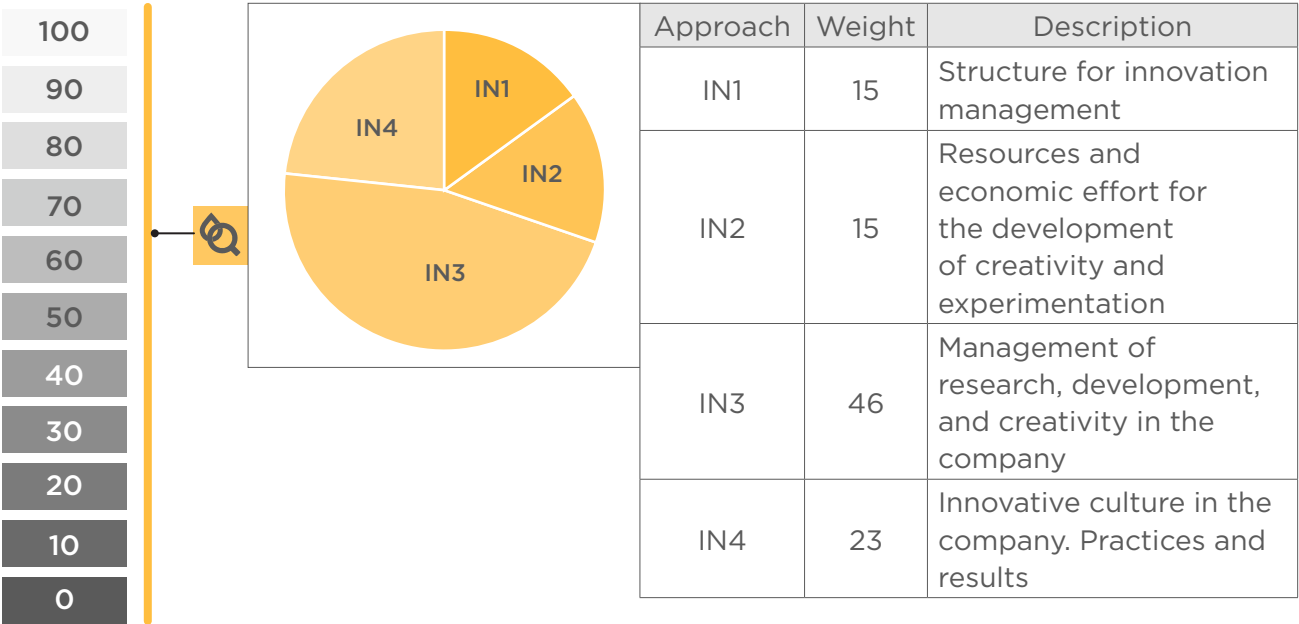
Additional groupings for analyzing innovation management in water and sanitation companies

To complement the analysis of innovation management, three additional groupings were defined, which comprise other combinations of approaches for defining specific themes:

Characterization of the structure and management practices of research, creativity, and general inventiveness in the company

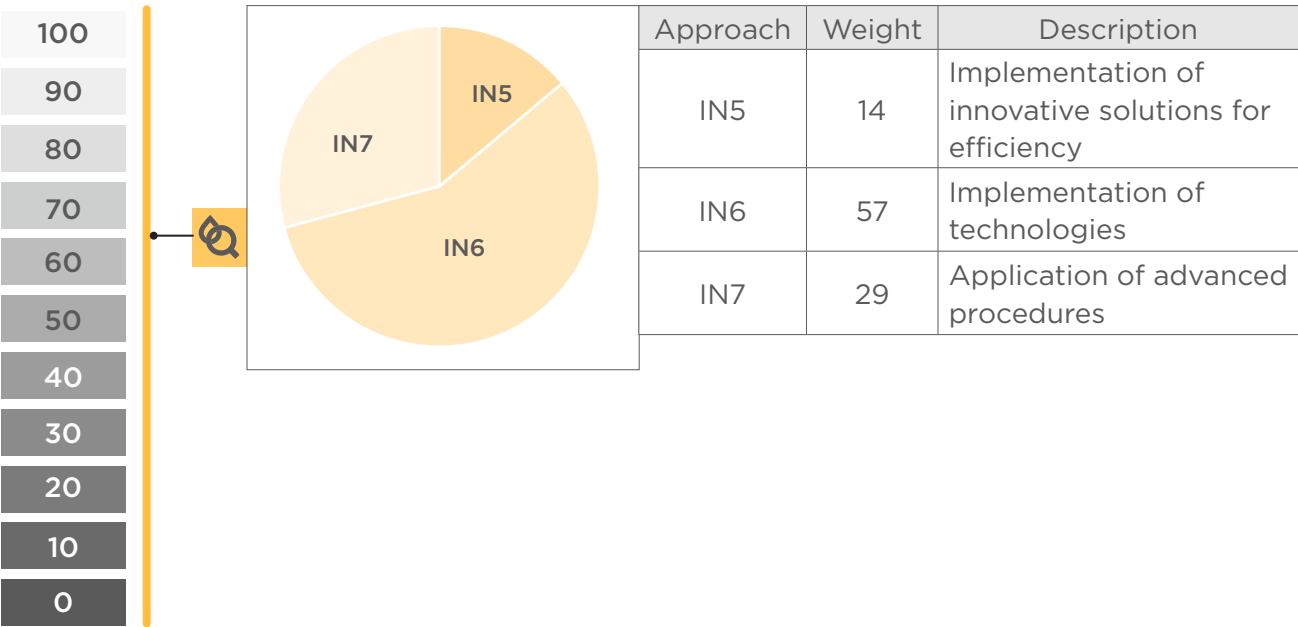
The characterization of the structure and practices of a company’s management of research, creativity, and general inventiveness will be the result of the grouped and weighted characterization of the set of elements that assess everything that make possible and promote innovation in the company and the results obtained in recent years. The degree of implementation of advanced solutions or procedures or technologies is not assessed in this case.

It will include a grouping of the IN1, IN2, IN3, and IN4 approaches, with their relative weightings as indicated in the following table. The evaluation will be the result of these groupings, referenced on a scale of 0 to 100, which will be accompanied by the corresponding reliability factor.



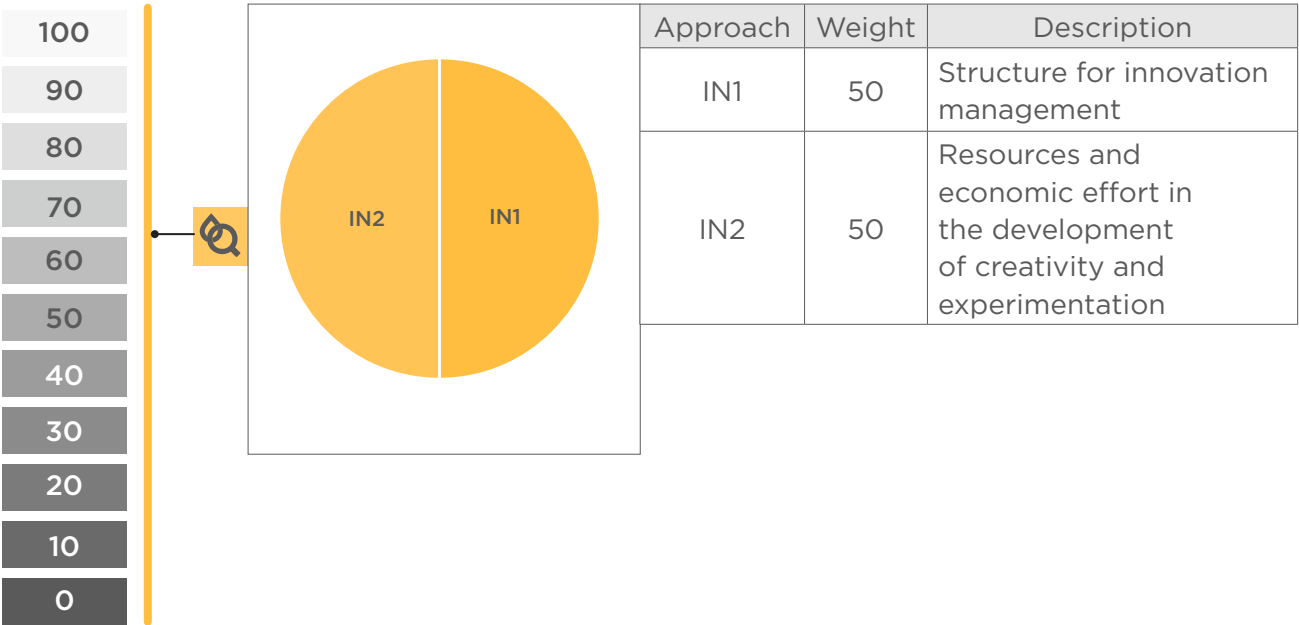
Assessment of the real implementation of solutions and advanced technologies available in the market and of proven efficacy

The assessment of the real implementation of solutions and advanced technologies available in the market and of proven efficacy will be a grouping of approaches IN5, IN6 and IN7 with their relative weights as indicated in the following table. The evaluation will be the result of these groupings, referenced on a scale of 0 to 100, which will be accompanied by the corresponding reliability factor.



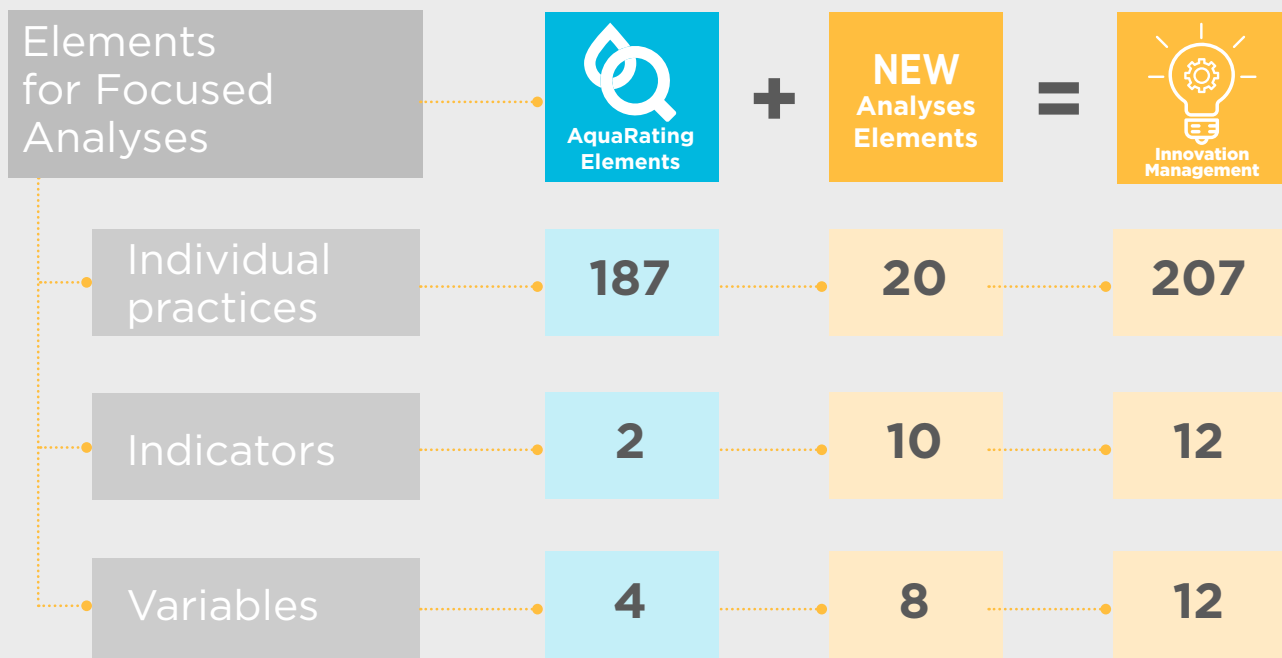
Characterization of the structure and resources for the company’s innovation management

The characterization of the structure and resources for the company’s innovation management will be the result of the grouped and weighted characterization of the set of elements that evaluate everything that promote the company’s innovation and results obtained in recent years. The degree to which advanced solutions or procedures or technologies have been implemented will not be evaluated in this case. It will be a grouping of the IN1 and IN2 approaches with their relative weights as indicated in the following table. The evaluation will be the result of these groupings, referenced on a scale of 0 to 100, which will be accompanied by the corresponding reliability factor.



Approaches for the analysis of innovation

The Focused Characterization of innovation management in water and sanitation service companies is comprised of a total of 199 individual practices, 12 indicators, and 12 variables resulting from the combination of elements included in the AquaRating standard and the new elements of specific analysis.



Elements of analysis included in the AquaRating structure

The first step has consisted of the search for and identification of the elements of evaluation, indicators, variables, and individual practices that are already included in the AquaRating structure that are oriented toward the characterization of some of the components of innovation mentioned in earlier sections.

One hundred eighty-seven individual practices, two evaluative elements of a quantitative nature, and four variables have been identified.

Each element taken from AquaRating maintains its original coding and is identified with the AquaRating symbol in the first column of the descriptive tables. “”.

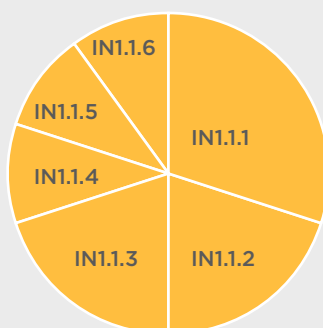
New elements of analysis not included in the AquaRating structure

In addition to the elements of evaluation and the practices considered in the AquaRating structure, additional groups, indicators, and variables should be taken into account for a more complete and detailed characterization, in accordance with the components identified in the previous sections.

The additional elements considered include 20 individual practices, 10 elements of evaluation of a quantitative nature, and eight variables. Each new element is identified with a “” symbol in the first column of the descriptive tables.

Structure for innovation management

IN1.1 Structure for innovation management



Type ————— Best Practices
Normalization — Weighted by practice

AR	Group	Element	Description	Reliability	Weight
+	IN1.1	IN1.1.1	There is a unit that specifically has exclusive responsibility for innovation	T.301	3
+	IN1.1	IN1.1.2	There is an innovation committee that reviews and updates innovation management	T.302	2
+	IN1.1	IN1.1.2	There is a system or protocol for establishing priorities in terms of initiatives and projects, and which makes decisions regarding innovative proposals	T.303	2
+	IN1.1	IN1.1.4	There is a person or unit with primary or exclusive responsibility for the diffusion of and communication about the projects and results of the innovation	T.304	1
+	IN1.1	IN1.1.5	There is at least one person in each department whose responsibility is to liaise with the innovation unit	T.305	1
+	IN1.1	IN1.1.6	There is a specific procedure or office for the management of innovative projects, with follow-up and evaluation of results	T.306	1

IN1.1.1

It is valid if there is a unit focused solely on innovation management tasks in the broadest sense. The unit may have responsibilities related to the management of Information and Communication Technologies, but not exclusively, nor does this task represent more than 50% of the company's human resources. It is not considered valid if it shares tasks or objectives related to the operation or planning of service management.

IN1.1.2

It is valid if there is a body (commission, committee, or a similar entity) with an exclusive focus on innovation (it is not valid if the committee's purview is exclusive to ICT), which meets at least every six months and monitors, guides, and makes strategic decisions related to innovative activities. It follows up on the Innovation Plan, if one exists.

IN1.1.3

It is valid if it is defined as part of the mission of the Innovation Committee or if a procedure exists that establishes the means of proposing and evaluating, and the decision-making body.

IN1.1.4

It is valid if evidence supports that this function exists and is in development. Dedication depends upon the company's innovation activity and to validate this practice, it must represent more than 70% of total activity. The existence of a communication, public relations, or publication arm of the company will not be considered valid if its activities do not represent more than 70% of innovation.

IN1.1.5

It is valid if at least 70% of the departments or main branches of the company's organizational chart are identified as having a person whose mandate is (among other tasks) to serve as a link to the unit responsible for innovation management or the innovation management committee (if one of these, in fact, exists). The function must ensure bidirectional communication related to innovation opportunities, new project or initiative proposals, initiatives for innovation development and an innovative culture, and must also ensure the distribution within management of the opportunities, initiatives, and achievements of the company with respect to innovation.

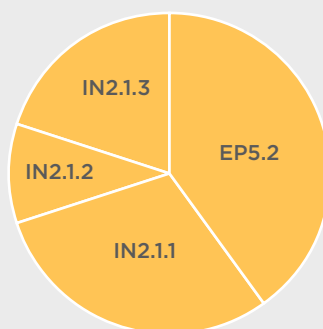
IN1.1.6

It will be considered valid if there is evidence of a specific or independent procedure for the management Research, Development and Innovation (R+D+I) projects, or a unit of any rank (but well-identified) among whose mandates and tasks is the follow-up and management of I+D+i projects.



Resources and economic effort in the development of creativity and experimentation

IN2.1 Resources and economic effort in the development of creativity and experimentation



Type ————— Best Practices
Normalization — Weighted by practice

AR	Group	Element	Description	Reliability	Weight
	EP5.2	EP5.2	Investment in research and development	T.39 y T.88	4
	IN2.1	IN2.1.1	Percentage of the workforce dedicated exclusively to innovation	T.71 y T.307	3
	IN2.1	IN2.1.2	Percentage of the workforce that is dedicated exclusively to innovation which also holds a Master's or PhD degree	T.71 y T.308	1
	IN2.1	IN2.1.3	Pursues or obtains funding or grants for innovation	T.309	2

IN2.1.3

It is valid when evidence is shown of having obtained from or applied for funding for innovation stimulus programs.

EP5.2 Investment in research and development

Definition — Measures expenditure on (and/or investment in) R&D over a 3-year period as a percentage of the utility's total operating revenue in the same period.

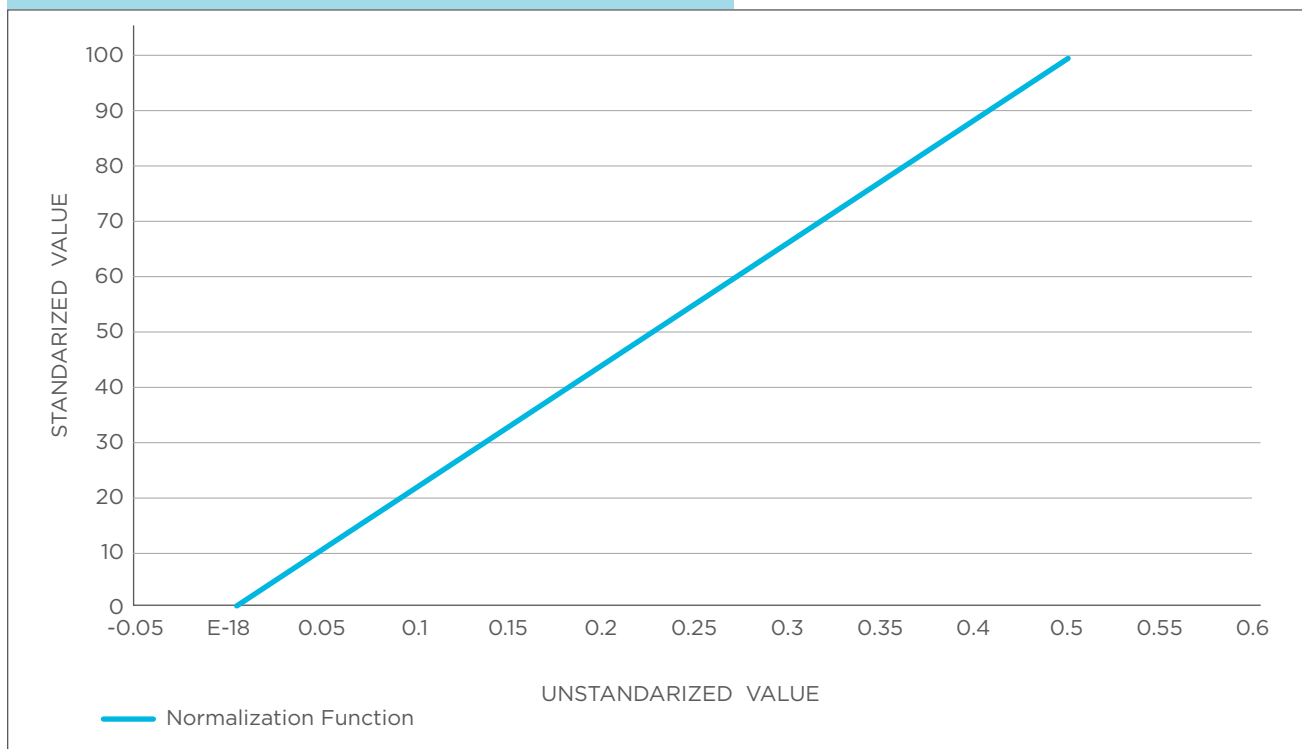
Type — Indicator

Service — Drinking Water and/or Sanitation

Glossary —

Formula — $([EP5-V1]/[SF3-V12])*100$ Unit: %

Normalization Function



Variables

[EP5-V1] Expenditure on (or investment in) research

Definition — Expenditure on (or investment in) research which a utility decides to carry out with the intention of discovering what might lead to development of new products or processes, or to improvement of existing products and processes.

Units — financial statement currency

Reliability — Table 39

[SF3-V12] Revenue from service delivery

Definition — Revenue from service delivery or sales entered in the income statement or profit and loss statement for the period and consistent with the revenue entered in accounts receivable.

Units — financial statement currency

Reliability — Table 88

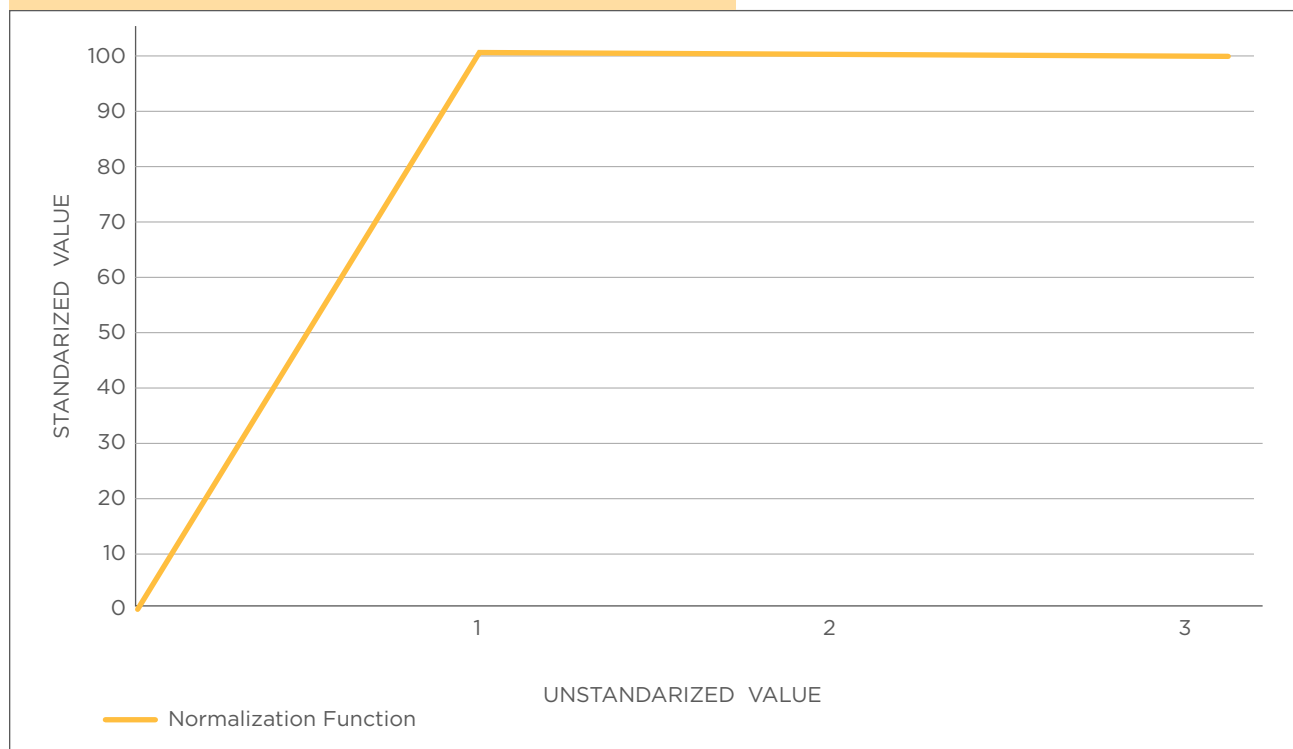
IN2.1.1 Percentage of the workforce dedicated exclusively to innovation

Definition — Evaluates the effort that human resources dedicates to the company with respect to tasks that are exclusively related to innovation management.

Type — Indicator

Formula — $([IN2-V1]/[EG4-V4])*100$ Unit: Percentage

Normalization Function



Variables

[IN2-V1] Number of people who are dedicated exclusively to innovation and its management at the end of the last calendar year.

Definition — People who have a permanent or temporary contract who are integrated into the unit that manages the innovation or those who are being integrated into other units where innovation represents more than 95% of their time, can be counted. Using the same criteria, people who have a contract in the form of a scholarship and have more than one year of tenure in the same company can be counted. People in areas whose primary responsibility is for ICT will not be counted.

Units — N°

Reliability — Table 307

[EG4-V4] Total workers

Definition — Average number of own workers during the evaluation year

Units — N°

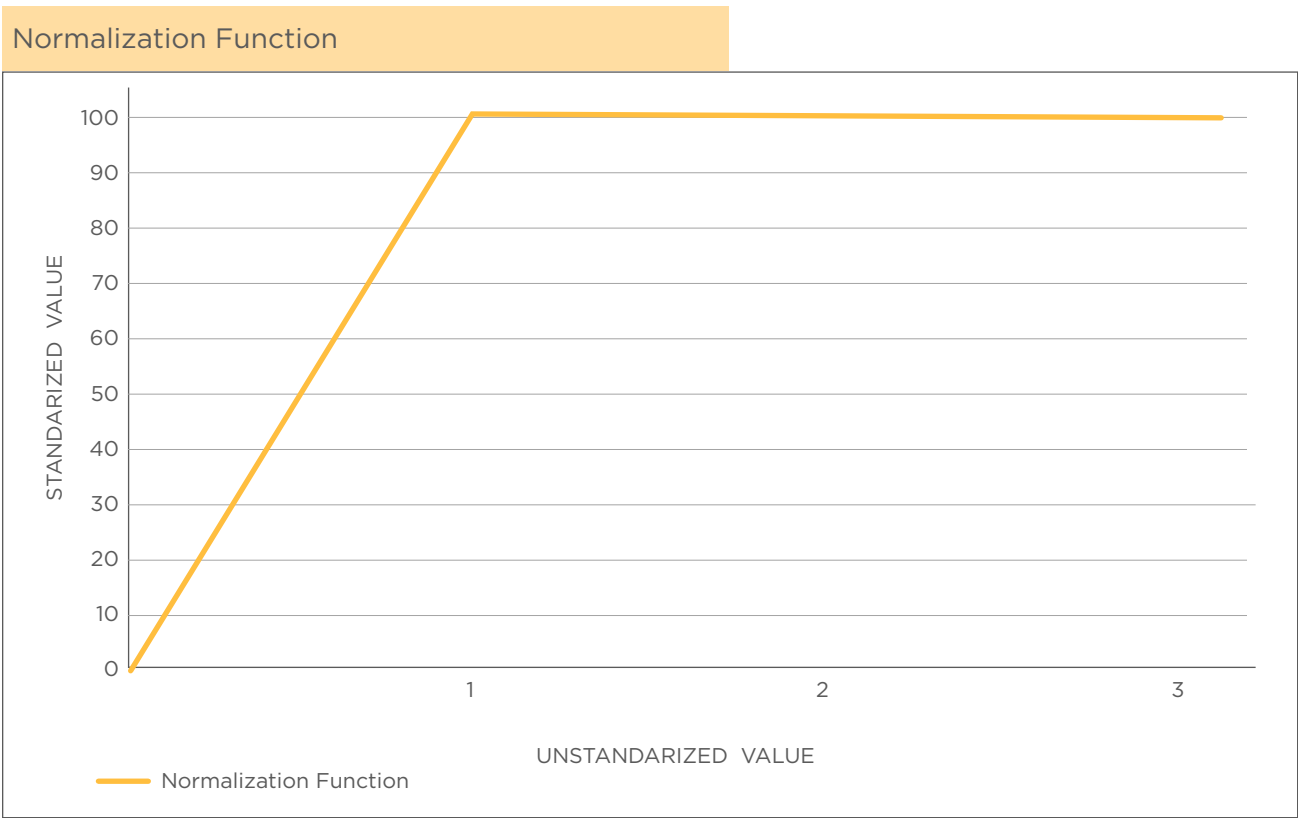
Reliability — Table 71

IN2.1.2 Percentage of the workforce dedicated exclusively to innovation which also holds a Master's or PhD degree

Definition — Evaluates the effort of human resources dedicated exclusively to the work of innovation management in the company.

Type — Indicator

Formula — $([IN2-V2]/[EG4-V4])*100$ Unit: Percentage



Variables

[IN2-V2] Number of people who are dedicated exclusively to innovation and its management, with a Master's or PhD, by the end of the last calendar year.

Definition — People with a permanent contract or temp contract who are integrated into the innovation management unit or who are integrated into other units whose dedication to innovation represents more than 95% of its time, can be counted. The same criteria will be applied to people who hold a contract in the form of a scholarship, who have carried out their functions in the same company and have at least a year in employment. People whose principal areas of responsibility include ICT will not be counted.

Units — N°

Reliability — Table 308

[EG4-V4] Total staff

Definition — Average total of “own staff” for the year of rating.

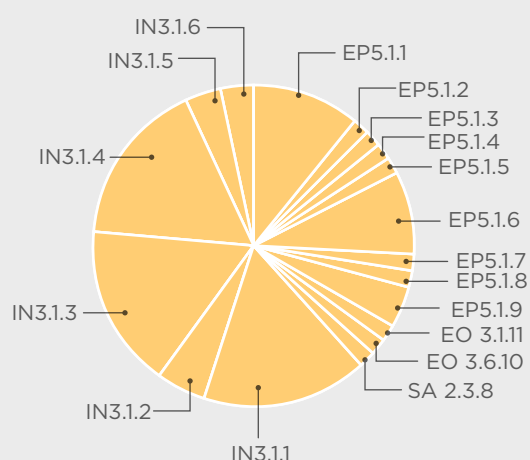
Units — N°

Reliability — Table 71



Management of research, development, and creativity in the utility

IN3.1 Innovation management



Type ————— Best Practices
Normalization ————— Weighted by practice

AR	Group	Element	Descripción	Reliability	Peso
	EP5.1	EP5.1.1	An R&D plan exists that contains: general and specific objectives, lines of work, goals, budget and staff responsible for it.	T.2	1.3
	EP5.1	EP5.1.2	R&D activities include systematic collection and processing of information in order to improve internal practices.	T.2	0.2
	EP5.1	EP5.1.3	R&D activities include some form of proprietary research or contribution to it.	T.2	0.2
	EP5.1	EP5.1.4	A system exists that provides access to documents and publications and includes subscriptions to the main trade magazines and online information services.	T.2	0.2
	EP5.1	EP5.1.5	At least one person is in charge of gathering and communicating relevant news about R&D in the sector.	T.2	0.2

AR	Group	Element	Descripción	Reliability	Peso
	EP5.1	EP5.1.6	A formal continuing profesional development program exists for professionals and technicians: courses, conferences, specialist postgraduate studies, etc. (Note: this is a specific subset of general training).	T.2	1
	EP5.1	EP5.1.7	Specific actions are taken to share experiences with other utilities by means of study visits, seminars, etc.	T.2	0.2
	EP5.1	EP5.1.8	Research and development agreements exist with local or international entities.	T.2	0.2
	EP5.9	EP5.1.9	An R&D activities monitoring system exists.	T.2	0.5
	EO3.1	EO 3.1.11	A line of research or analysis is conducted on the performance and service life of the equipment and infrastructure.	T.6	0.2
	EO3.6	EO 3.6.10	A line of research or analysis is conducted on the performance and service life of the equipment and infrastructure.	T.6	0.2
	SA2.3	SA 2.3.8	Research projects with principally environmental aims are financed, promoted or implemented.	T.2	0.2
	IN3.1	IN3.1.1	Number of active innovation projects annually, averaged over the past three years. Projects that are directly related to the acquisition or implementation of ICT solutions will not be counted	T.310	2
	IN3.1	IN3.1.2	Has protocols for the protection of intellectual property	T.311	0.6
	IN3.1	IN3.1.3	There is some type of system, whether internal or contracted, of technological surveillance	T.312	2
	IN3.1	IN3.1.4	The company has a procedure for the validation, applicability, and efficacy of innovative technologies and solutions	T.313	2

AR	Group	Element	Descripción	Reliability	Peso
+	IN3.1	IN3.1.5	A system for identifying the challenges and threats to fulfillment of the company's mission exists and is applied	T.314	0.4
+	IN3.1	IN3.1.6	There is an objective, or a specific part of the company's training plan, for the development and management of talent related to innovation training	T.315	0.4

IN3.1.2

It will be considered valid when the company has some type of procedure or protocol for protecting intellectual property of projects that are developed with the company's involvement.

IN3.1.3

It will be considered valid if the company has, or if it has contracted or has commitments from other entities, a service that, with a stipulated frequency and method of identifying thematic areas, conducts an evaluation of the state of the art of market consolidation. It will be valid if this service is contracted directly and exclusively, or if it is carried out in a shared manner with some other company, group of companies, or association.

IN3.1.4

It will be considered valid if the company has a procedure that is documented and which has evidence of its application, within the past three years, for evaluating opportunities or proposals for implementing technologies or technological solutions of applicability and efficacy that are not yet known by the company, either because there is not reliable information about its application in other companies in the sector, because the technology is not fully consolidated, or because there is uncertainty about its effective application in the particular context of the company.

IN3.1.5

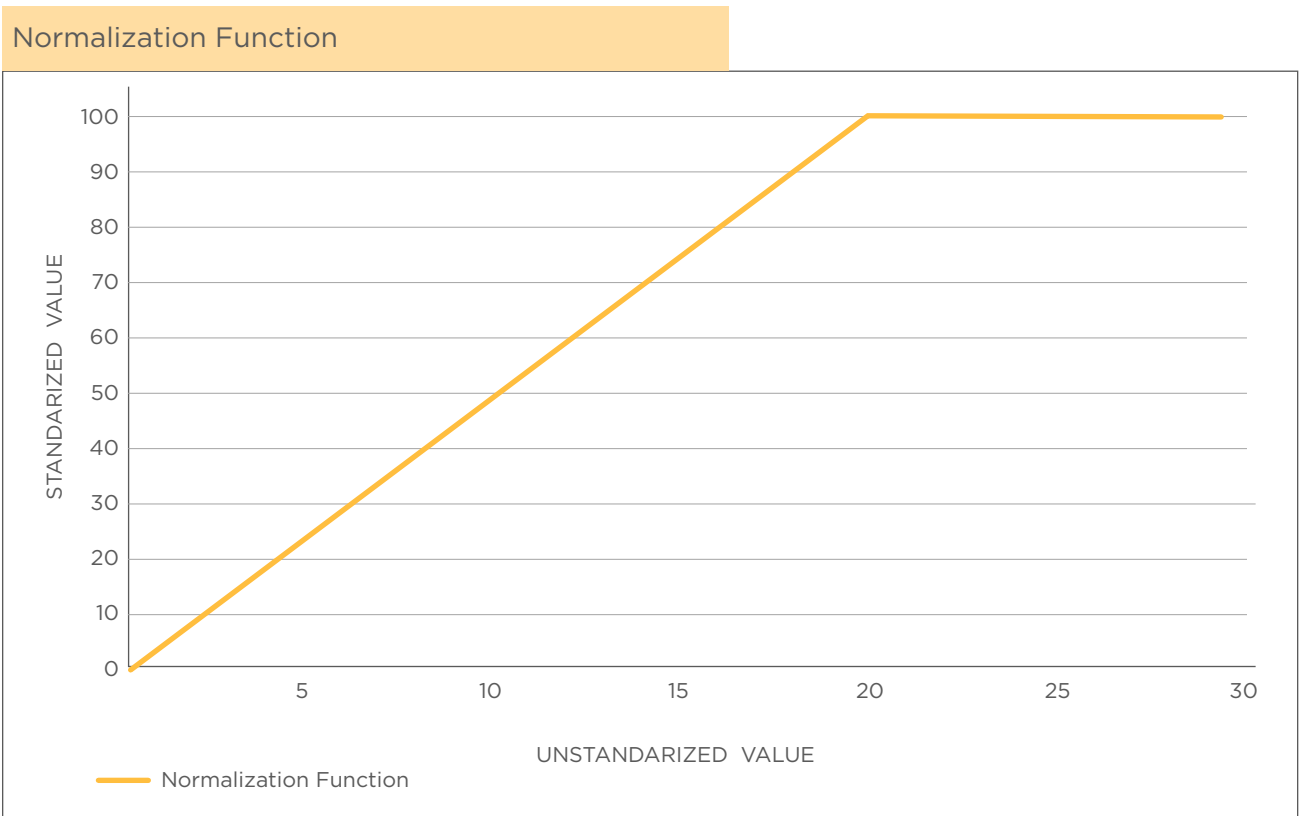
It will be considered valid if a procedure or method exists to review national, international, and local contexts on at least a biennial basis to assess possible future threats and challenges for the company. It will be valid if this exercise includes some kind of planning document that is reviewed at least biennially.

IN3.1.6

It will be considered valid when there is evidence of a particular approach indicated within the programming or planning documents for company training or education, and that there is evidence of its application and fulfillment.

IN3.1.1 Number of annual innovation projects averaged over the last three years. Those that are directly related to the acquisition or implementation of ICT solutions are not counted.

- Definition** — All projects that are classified as being innovative from their origin and which follow innovative project management procedures will be considered. Those that are carried out with their own resources, as well as those developed in collaboration with other entities, will be considered. In no case will the acquisition of new solutions by the company (which are accounted for in other sections) be counted, nor will the results of contracting services for new projects or solutions in which the company’s own involvement has been limited to the direction of the work. All experiments or pilot projects that have a method of testing and analysis of final results will be counted.
- Type** — Indicator
- Formula** — Will be assimilated to a single variable. Years without data will be noted as zero.
Unit: Percentage



Variables

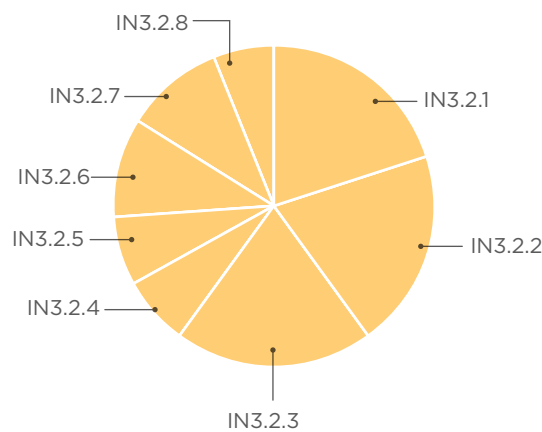
[IN3-V1] Number of active innovation projects annually

Definition — Average number of active projects in the last three years. Those that are directly linked to the acquisition or implementation of TIC solutions are not counted.

Units — N°

Reliability — Table 310

IN3.2 Evidence of innovation management



Type — Best Practices

Normalization — Weighted by practice

AR	Group	Element	Descripción	Reliability	Peso
+	IN3.2	IN3.2.1	Number of innovation projects developed with own resources and completed successfully (average over the past three years)	T.316	2
+	IN3.2	IN3.2.2	Number of innovation projects developed in collaboration and completed successfully (average over the past three years)	T.316	2
+	IN3.2	IN3.2.3	Number of patent applications submitted, or attained, over the past three years	T.317	2
+	IN3.2	IN3.2.4	Professionals in the company participate in an active way within national forums for the diffusion of innovative solutions, by way of offering presentations, articles, posters, roundtables, etc	T.318	0.7
+	IN3.2	IN3.2.5	Professionals in the company participate in an active way in international forums in the region, diffusing innovative solutions, by way of offering presentations, articles, posters, roundtables, etc	T.318	0.7
+	IN3.2	IN3.2.6	Professionals in the company participate in an active way in international forums beyond the region, diffusing innovative solutions by way of offering presentations, articles, posters, roundtables, etc	T.318	1
+	IN3.2	IN3.2.7	Number of documents that diffuse innovative projects or initiatives that have been published and disseminated beyond the company environment each year	T.319	1
+	IN3.2	IN3.2.8	The company itself, or one of its employees representing the company, participates in and sponsors or co-sponsors associations, groups, or forums for innovation development or start-ups	T.318	0.6

IN3.2.4

It will be considered valid when evidence of the participation of company employees is documented and appears in programs of events in which experiences related to innovative solutions is shared in national forums, in an average of at least four events per year.

IN3.2.5

It will be considered valid when evidence of the participation of company employees is documented and appears in programs of events in which experiences related to innovative solutions is shared outside the company's own country, but within its region, in an average of at least three events per year.

IN3.2.6

It will be considered valid when evidence of the participation of company employees is documented and appears in programs of events in which experiences related to innovative solutions is shared outside the company's own country and beyond its own region, in an average of at least two events per year.

IN3.2.8

It will be considered valid if there is evidence of the company's participation in associations or forums for innovation development, such as technological centers or start-up developments.

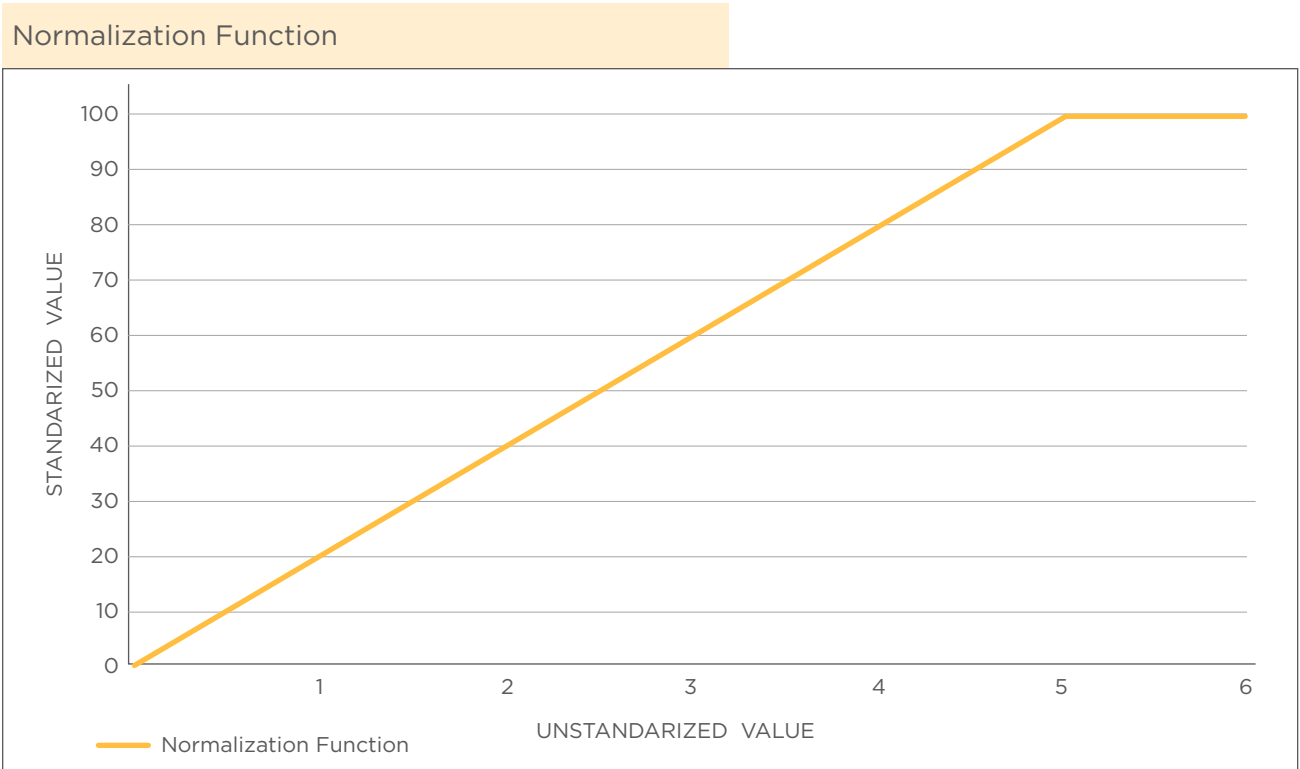


IN3.2.1 Number of innovation projects developed with the company’s own resources and successfully completed (average within the past three years)

Definition — All projects that are classified as innovative from their origin and which follow innovative project management procedures will be considered. Only those projects that have been developed exclusively with the company’s own resources will be counted, with those whose acquisition of contribution of resources external to the company do not represent more than 25% of the total cost of the project being counted. The determination of the project’s success must be substantiated by the achievement of its initial objectives and the implementation and compliance and total satisfaction of the beneficiaries and users of the resulting project within the company.

Type — Indicator

Formula — [IN3-V2] It is assimilated to a single variable. Years without data will be counted as zero. Unit: N°



Variables

[IN3-V2] Number of innovation projects developed with the company's own resources

Definition — Innovation projects developed with the company's own resources and completed successfully (averaged over the past three years)

Units — N°

Reliability — Table 316

IN3.2.2 Number of innovation projects developed in collaboration and successfully completed (averaged over the past three years)

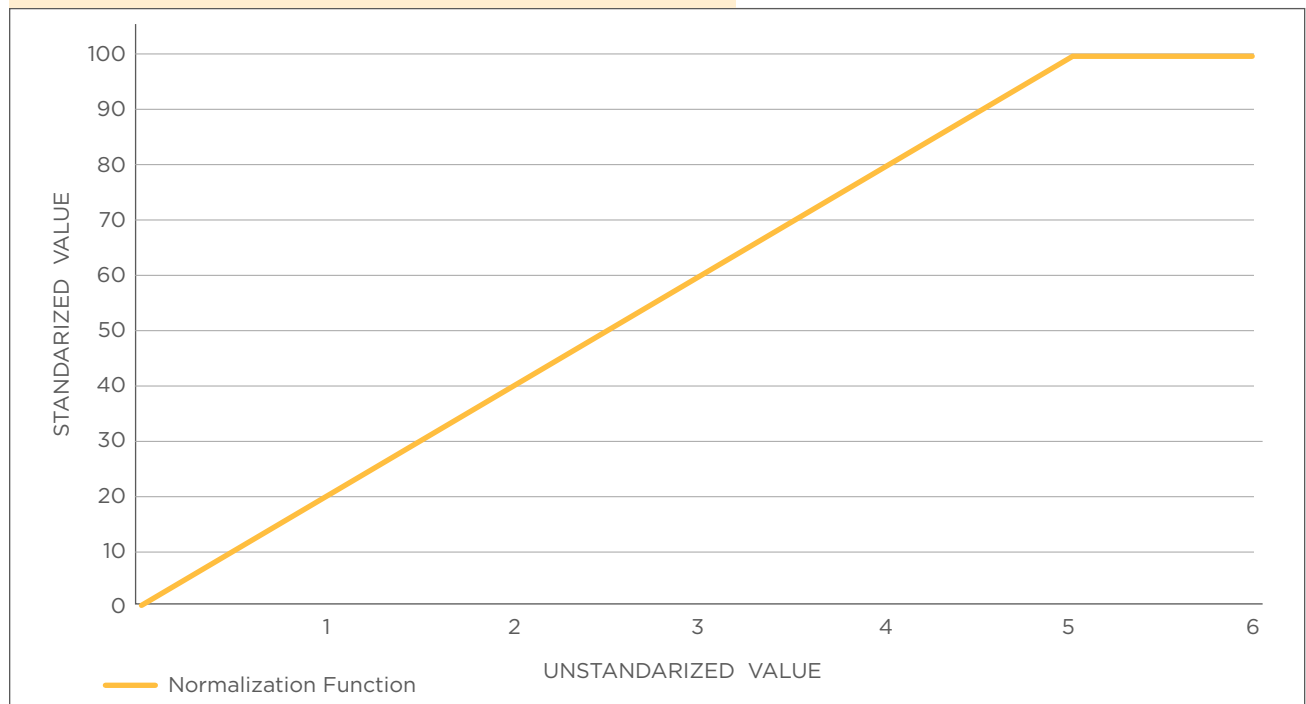
Definition — All projects that are classified as innovative from their origin and which follow innovative project management procedures will be considered. Only those projects that have been developed in collaboration or in alliance with other entities and from which the company receives some acknowledgement with respect to intellectual property resulting from the project will be counted. The company's contribution to the total cost of the project cannot exceed 90%, as in such case, it must be counted as an acquisition or implementation of technological solutions. The determination of the project's success must be substantiated by the achievement of its initial objectives and the implementation and compliance and total satisfaction of the beneficiaries and users of the resulting project within the company.

Type — Indicator

Formula — [IN3-V3] It is assimilated to a single variable. Years without data will be counted as zero. Unit: N°



Normalization Function



Variables

[IN3-V3] Number of innovation projects developed in collaboration and completed successfully

Definition — Innovation projects developed in collaboration and completed successfully (averaged over the past three years)

Units — N°

Reliability — Table 316

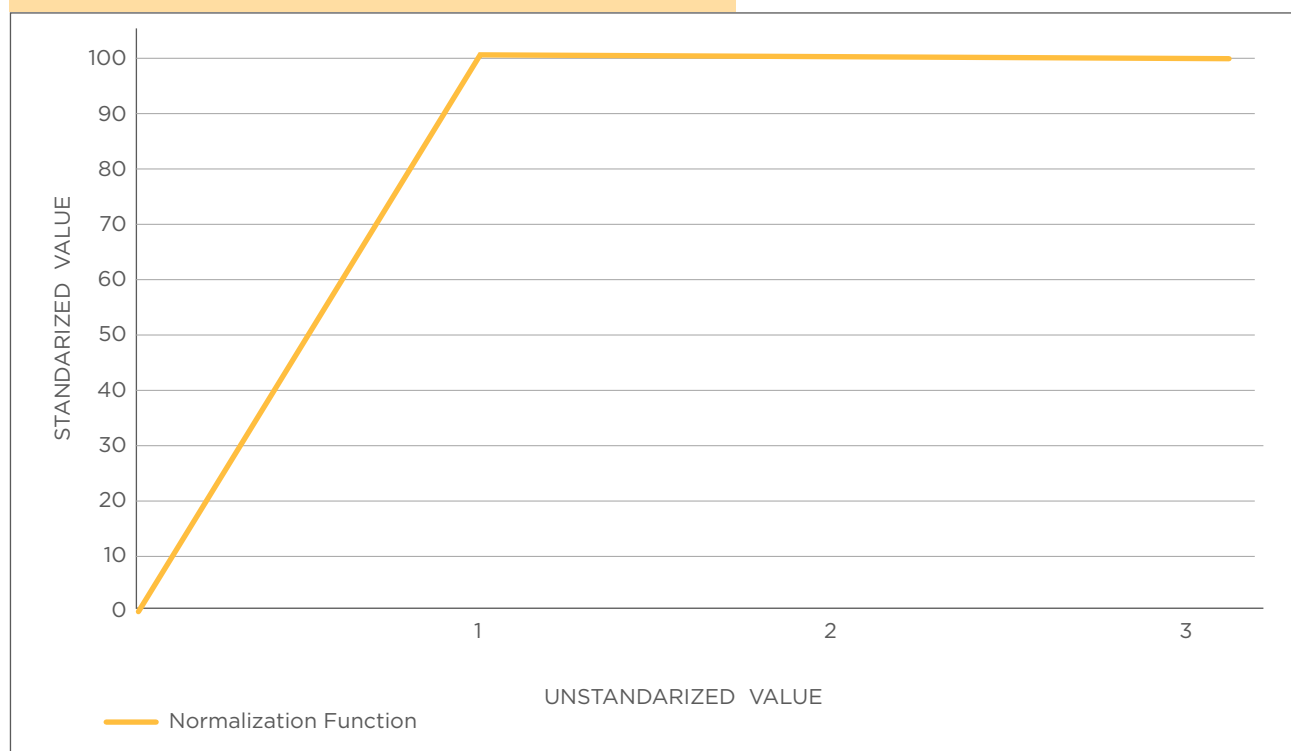
IN3.2.3 Number of patent applications submitted, or obtained, within the past three years

Definition — Evaluates the effort that human resources dedicates to the company with respect to tasks that are exclusively related to innovation management.

Type — Indicator

Formula — [IN3-V4] It is assimilated to a single variable. Years without data will be counted as zero.
Unit: N°

Normalization Function



Variables

[IN3-V4] Number of patents submitted for attainment, or obtained

Definition — Patents submitted for attainment or obtained over the past three years

Units — N°

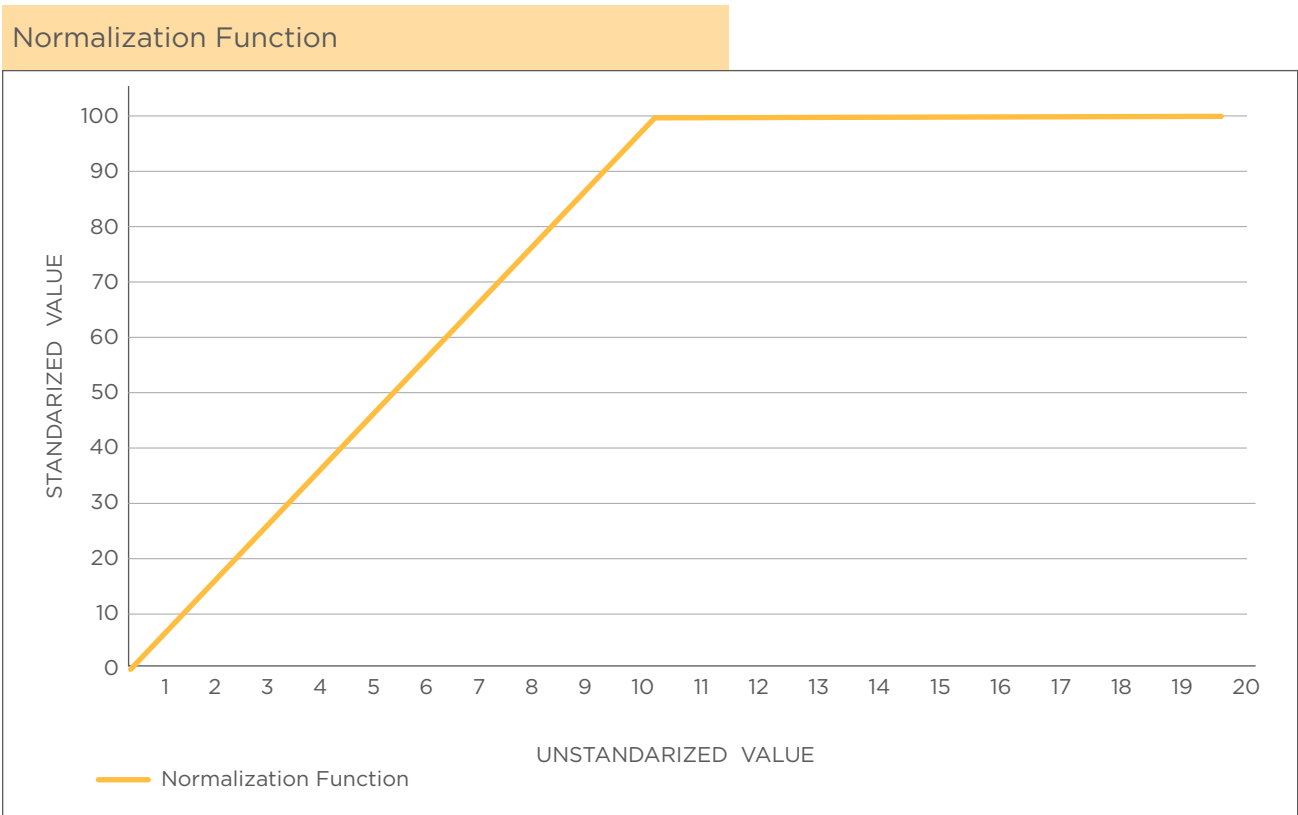
Reliability — Table 317

IN3.2.7 Number of documents related to innovative project or initiative diffusion, published and disseminated during the year outside the company's own area

Definition — Those documents, books, chapters, or articles about innovative projects or initiatives developed, whether independently or in collaboration, by the company, and disseminated outside the company's own area will be considered. Only those documents with an author and with proven dissemination (whether in print or online), in forums within the sector or in publications within the scientific and innovative sector, will be counted. Publication in indexed publications will not be required in order to be counted. This is an average value over the past three years.

Type — Indicator

Formula — [IN3-V5] It is assimilated to a single variable. Years without data will be counted as zero. Unit: N°



Variables

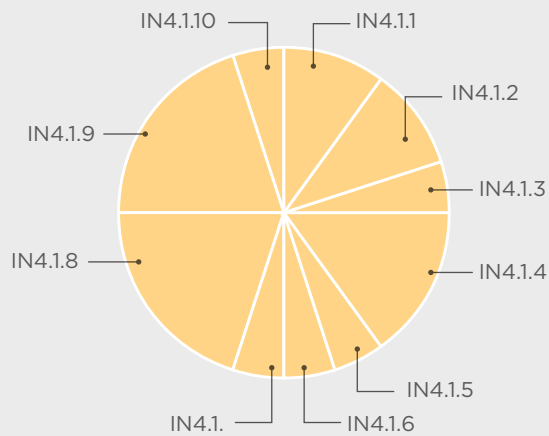
[IN3-V5] Number of documents disseminated related to innovation projects or initiatives published and disseminated within the year, outside the company’s area.

- Definition** — Documents disseminated related to innovative projects or initiatives that are published and disseminated during the year, outside the company’s area.
- Units** — N°
- Reliability** — Table 319



Innovative culture of the utility. Practices and results

IN4.1 Innovative culture of the utility. Practices and results



Type ———→ Best Practices
Normalization —→ Weighted by practice

AR	Group	Element	Description	Reliability	Peso
+	IN4.1	IN4.1.1	There are incentives for individual or group creativity	T.320	1
+	IN4.1	IN4.1.2	Innovation, whether individual or group, is included in the performance evaluation system	T.321	1
+	IN4.1	IN4.1.3	Time is formally authorized (within established conditions) for the development of and participation in innovative projects or initiatives	T.322	0.5
+	IN4.1	IN4.1.4	There is a system implemented to capture and manage ideas regularly	T.323	1.5
+	IN4.1	IN4.1.5	The internal dissemination of projects and results is conducted in a systematic manner	T.324	0.5
+	IN4.1	IN4.1.6	Number of internal dissemination events per year related to innovative projects or initiatives	T.325	0.5
+	IN4.1	IN4.1.7	Internal-level publications publish the results of innovation projects	T.326	0.5
+	IN4.1	IN4.1.8	There is a plan for the development of creativity or innovative culture within the company and there is a method, which is applied at least once a year, to assess its development and the measurement of innovative culture in the company	T.327	2
+	IN4.1	IN4.1.9	Value of the parameter quantifying the company's innovative culture	T.328	2
+	IN4.1	IN4.1.10	Existence of a community of innovation	T.329	0.5

IN4.1.1

It will be considered valid if the company has a system for promoting creativity within the company, both at the individual level as well as the departmental or interdepartmental level, which recognizes creativity with some type of incentive or stimulus, regardless of the type and amount. The practice will only be considered fulfilled if there is evidence of the incentives' materialization within the past three years.

IN4.1.2

It will be considered valid if the company has a system for evaluating performance and, within the structure of the evaluation system, the involvement in innovation-related initiatives and projects is included and valued. It will only be considered valid if there is evidence of consideration (positive or negative) of the innovation in performance evaluations of at least 30% of the employees within the past three years.

IN4.1.3

It will be considered valid when there is formal evidence of recognition from those responsible for human resources or from upper management to allocate time each month for work or initiatives related to innovation, within the work day. This recognition of time must exist for at least 30% of the employees.

IN4.1.4

It will be considered valid when a system for collecting ideas about opportunities for project development and new innovative initiatives for the company exists and is applied in at least two campaigns per year. These opportunities and initiatives must solve problems or challenges or simply represent a potential opportunity better performance or efficiency in the company. Both intensive campaigns, with a limited number of participants, as well as broader campaigns with a large number of participants, both in and outside the company, will be considered valid. Only those campaigns that in addition to collecting ideas, analyze them and transform them into proposals for future consideration will be considered valid, independent of whether they are actually materialized in concrete actions.

IN4.1.5

It will be considered valid if there is evidence that dissemination activities have been carried out within the company, monographic publications of an internal character, open meetings, or events with its own staff, with the purpose of disseminating and sharing experiences and the results of innovation projects. It will be considered valid when the dissemination activities correspond to at least 50% of the projects completed in the course of the year (independent of the success achieved), and have been accessible to more than 10% of the employees. An internal, non-confidential publication (whether print or digital) should be accessible to all employees.

IN4.1.8

It will be considered valid if there is a plan to develop creativity or innovative culture, and a method to evaluate the degree of innovative culture within the company, which is applied at least annually. There will be a descriptive document of the plan for developing the innovative culture (whether as an independent document or a section differentiated within the innovation plan) that describes objectives and deadlines, as well as a method and criteria for evaluating the innovative culture of the company and evidence of its application that demonstrates its validity and representativeness of the evaluation and its result, as well as the evaluation of the trend and evolution in the different aspects that comprise it and in the global context.



IN4.1.10

It will be considered valid if an innovation community exists and is maintained, as a group of company staff who demonstrate interest in innovation and are available to at least be informed about matters linked to innovation. The innovation community must maintain a database of the members, must identify a person responsible for keeping the community active, and show evidence of said maintenance. The innovation community must be comprised of at least 5% of the company's employees, on average, each year.

IN4.1.6 Number of annual internal dissemination events about innovation projects or initiatives

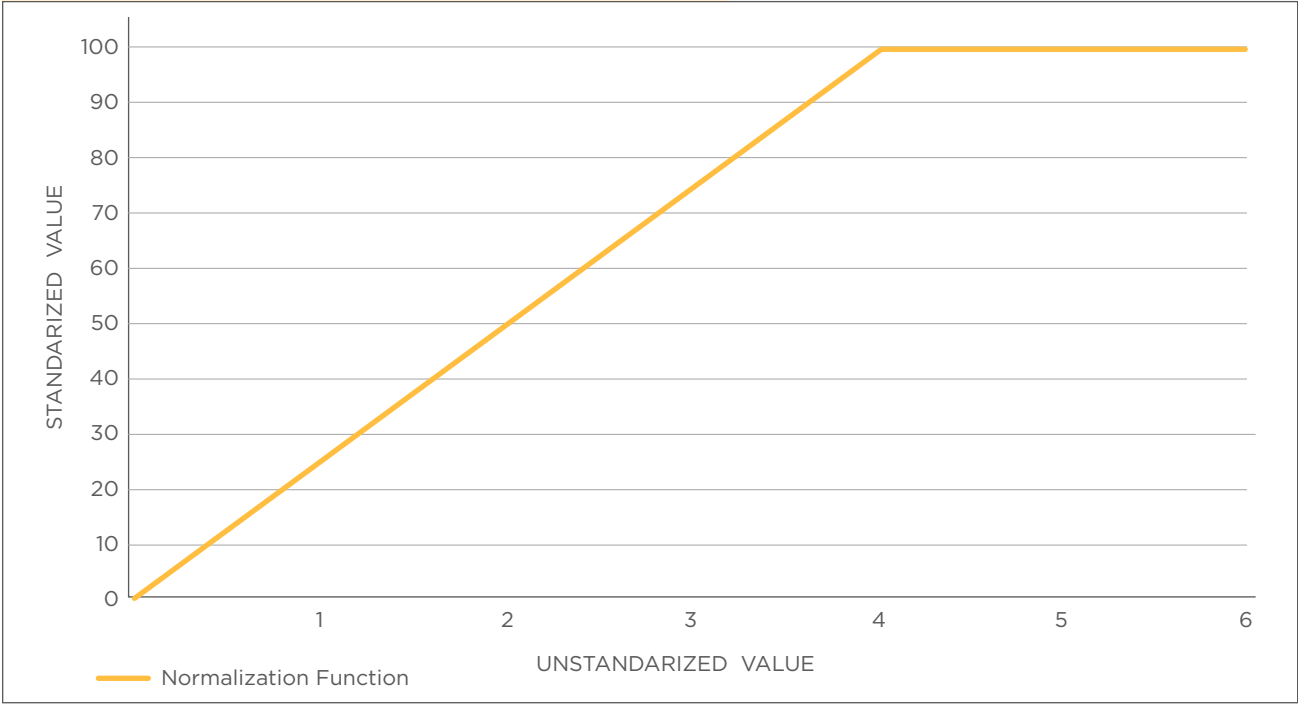
Definition — All meetings of dissemination related to innovation projects or initiatives in which the company has participated and which are restricted to company employees, will be considered. In order to be considered, meetings must have been accessible to employees who were not involved directly in project development.

Type — Indicator

Formula — [IN4-V1] It is assimilated to a single variable. Unit: N°



Normalization Function



Variables

[IN4-V1] Number of annual dissemination events related to innovative projects or initiatives

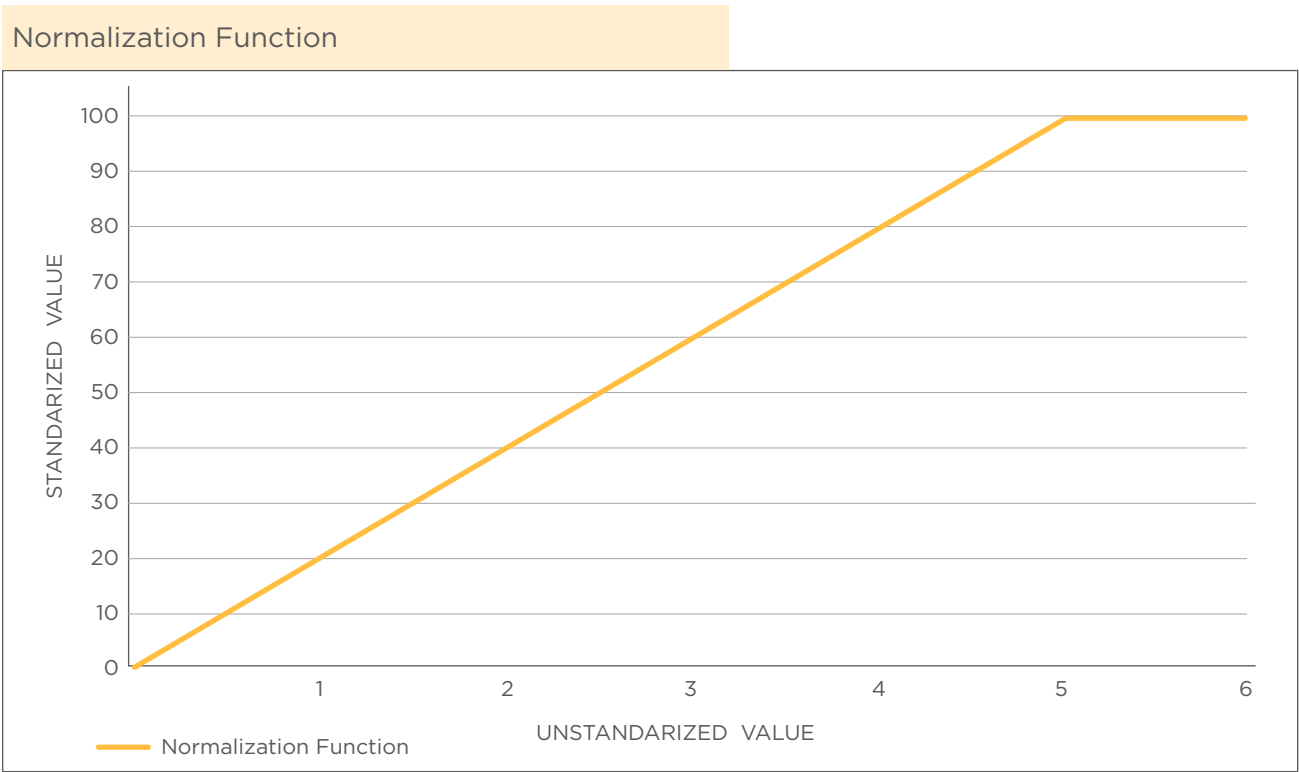
- Definition** — Annual dissemination events related to innovative projects or initiatives
- Units** — N°
- Reliability** — Table 325

IN4.1.7 Internal publications about the results of innovation projects

Definition — Those documents, books, notebooks, or informative reports about innovative projects or initiatives developed independently by the company or in collaboration and disseminated exclusively within the company, whether because of their style or the confidential nature of the subject or result, or other reason, will be considered. Only those documents with an author and with proven dissemination (whether in print or online) will be counted. This will be an average value of the past three years.

Type — Indicator

Formula — [IN4-V2] It is assimilated to a single variable. Unit: N°



Variables

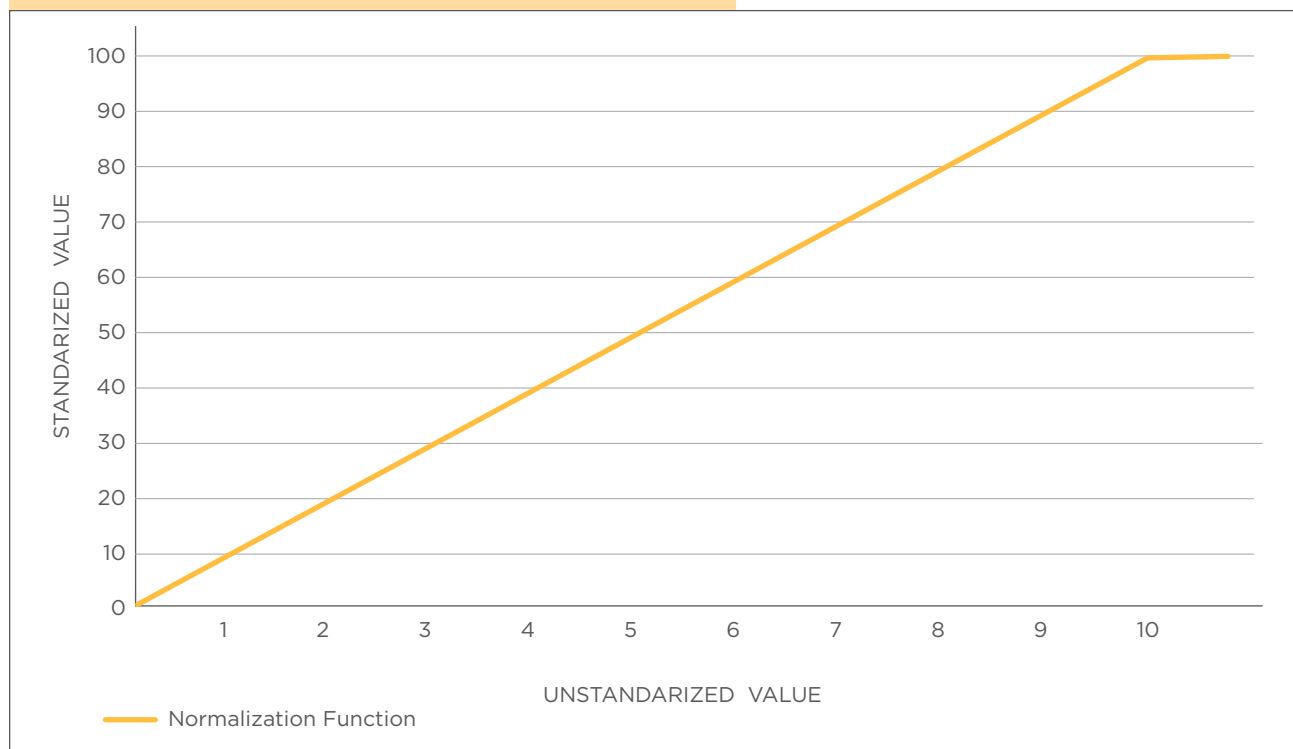
[IN4-V2] Number of publications at the internal level

- Definición** — Publications at the internal level related to the results of innovation projects
Unidades — No.
Fiabilidad — Tabla 326

IN4.1.9 Value of the parameter of quantification of innovative culture in the company

- Definition** — It will quantify the degree of innovative culture and its evolution, resulting from the application within the past year, of a well-defined method of evaluation.
Type — Indicator
Formula — [IN4-V3] It is assimilated to a single variable. Unit: N°

Normalization Function



Variables

[IN4-V3] Score from 1 to 10 of the level of company culture

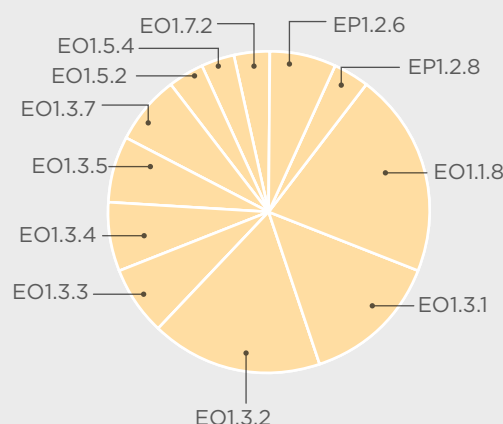
Definition — Normalization to a scale of 0 to 10 of the evaluation parameter resulting from the application of the method defined for the company, with 10 corresponding to the maximum possible value.

Units — N°

Reliability — Table 328

Implementation of innovative solutions for efficiency

IN5.1 Implementation of innovative solutions for hydraulic efficiency



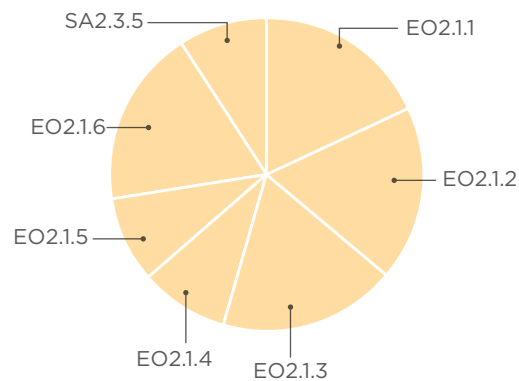
Type — Best Practices
Normalization — Weighted by practice

AR	Group	Element	Description	Reliability	Peso
	EP1.2	EP1.2.6	Consumption histories (daily per capita water consumption rate) exist by user type and consumption projections according to changes in income levels, water use technologies, demand management programs and other relevant factors are documented.	T.25	1
	EP1.2	EP4.1.4	A detailed water balance as per the IWA classification or similar exists (with differentiation between apparent and real losses and authorized and unauthorized consumption).	T.25	0.5

AR	Group	Element	Descripción	Reliability	Peso
	EO1.1	EO1.1.8	Water supply and controlled consumption balances for all sectors are calculated and documented at least once a month, with consumption being calculated pro rata if consumption records are required for greater time intervals.	T. 6	3
	EO1.3	EO1.3.1	A utility unit is responsible for managing real losses or a well-defined operating procedure exists.	T.25	2
	EO1.3	EO1.3.2	A procedure exists for estimating real loss volumes based on standard criteria (IWA or similar, with differentiation between apparent and real losses and between authorized and unauthorized consumption) to estimate uncontrolled water components. Real loss volumes are computed at least once a month.	T.6	2.5
	EO1.3	EO1.3.3	The efficiency of different techniques used to detect, locate and repair sources of real losses is analyzed and compared for each sector or zone in which uncontrolled water balances are calculated.	T.2	1
	EO1.3	EO1.3.4	Performance levels and reference parameters are determined in order to guide practice and scope of identifying and reducing real losses (evaluation and tracking at least once a year).	T.2	1
	EO1.3	EO1.3.5	Real loss reduction is one of the considerations and objectives of infrastructure renewal and pressure management policies.	T.2	1
	EO1.3	EO1.3.7	Evaluation of real losses for the geographical area to be rated is based, at the very least, on balance contrasting and minimum flow rates for the entire geographical area or for the sum of smaller areas that make up the geographical area to be rated.	T.6	1

AR	Group	Element	Descripción	Reliability	Weight
	EO1.5	EO1.5.2	A detailed criterion exists for determining volumes lost in each operation based on the length of the operation which loses water and working pressures or on occasional flow rate measurements.	T.6	0.5
	EO1.5	EO1.5.4	A procedure or plan exists for explicit reduction of water used in operation.	T.6	0.5
	EO1.7	EO1.7.2	A differentiated tariff for “reclaimed water” is applied.	T.2	0.5

IN5.2 Implementation of innovative solutions for energy efficiency

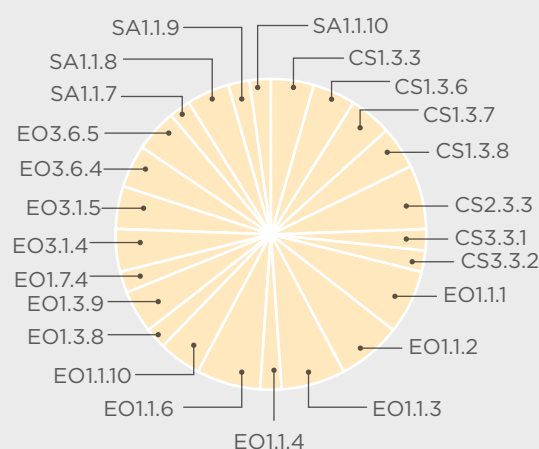


Type ————— Best Practices
Normalization — Weighted by practice

AR	Group	Element	Description	Reliability	Weight
 Q	EO2.1	EO2.1.1	Energy audits that include all energy-consuming facilities in the “system” are carried out at least once every five years.	T. 47	2
 Q	EO2.1	EO2.1.2	Measures and recommendations proposed in energy audits are implemented, at least in facilities that account for 90% of total recommendations as measured by energy consumption.	T. 47	2
 Q	EO2.1	EO2.1.3	Plans exist for optimizing energy consumption in operation of drinking water supply, treatment, and distribution “systems” and in operation of wastewater collection and treatment systems.	T. 2	2
 Q	EO2.1	EO2.1.4	Energy optimization is considered during the infrastructure and equipment design phase.	T. 2	1
 Q	EO2.1	EO2.1.5	Energy optimization is considered when planning operation of facilities and of the “system” as a whole.	T. 2	1
 Q	EO2.1	EO2.1.6	A plan exists for improving and reducing unit energy consumption and includes annual objectives and monitoring of objective fulfilment.	T. 2	2
 Q	SA2.3	SA2.3.5	Energy efficiency improvement programs exist.	T. 2	1

Implementation of technologies

IN6.1 Implementation of monitoring technologies



Type ————— Best Practices
Normalization — Weighted by practice

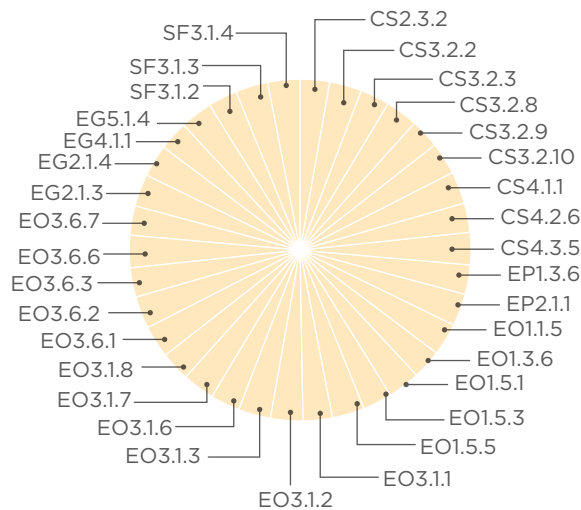
AR	Group	Element	Description	Reliability	Weight
	CS1.3	CS1.3.3	Operational equipment measuring physical and chemical parameters is available in all water treatment plants (either as at inlet and outlet and in intermediate processes).	T.1	0.5
	CS1.3	CS1.3.6	Remote control systems are available to manage processes and internal parameters of treatment facilities.	T.3	0.5
	CS1.3	CS1.3.7	Automatic water quality monitoring stations are available (in at least 50% of the zone supplied) at the outlets of the treatment plants or tanks.	T.1	0.5

AR	Group	Element	Description	Reliability	Weight
	CS1.3	CS1.3.8	A network of stationary facilities exists to facilitate collection of water quality samples with a representativeness of at least 1 per 20,000 inhabitants as per census population.	T.8	0.5
	CS2.3	CS2.3.3	Early warning mechanisms are available 24/7 (remote control and receipt of warnings referring to supply and distribution “systems”).	T.3	0.75
	CS3.3	CS3.3.1	Devices to measure flow rates in the wastewater collection network and collector mains are available (at least one device per 20,000 inhabitants).	T.1	0.25
	CS3.3	CS3.3.2	A “real-time” telemetry system is available to manage the wastewater collection network.	T.3	0.25
	EO1.1	EO1.1.1	Individual water flow rate or volume-metering devices (micro-metering) are installed at all points of use and consumption and these are read and the data recorded at least once a quarter.	T.1	0.75
	EO1.1	EO1.1.2	Water flow rate or volume-metering devices are installed at all “entry points to the water supply system” and these are read and the data recorded at least once an hour.	T.1	0.75
	EO1.1	EO1.1.3	Policies exist for dimensioning and renewing individual metering devices (micro-metering) that focus on maintaining the error levels or confidence intervals established in the regulations and on homogenizing metrological classes.	T.6	0.75
	EO1.1	EO1.1.4	Policies exist for dimensioning, renewing and verifying water flow rate or volume-metering devices at the “entry points to the system” that focus on maintaining the error levels or confidence intervals established in the regulations and that tend to homogenize classes, types and brands.	T.6	0.25

AR	Group	Element	Descripción	Reliability	Peso
	EO1.1	EO1.1.6	Distribution networks are sectorized and inflow volumes to sectors are measured frequently (at least once an hour). Sector scope does not exceed 10,000 “properties”. This practice is only considered to be complied with if more than 90% of network length is sectorized.	T.3	0.75
	EO1.1	EO1.1.10	Reliability indicators exist for measurements of flow supplied to sectors and to the whole “system”.	T.6	0.5
	EO1.3	EO1.3.8	Reliability indicators exist for measurements of minimum night flow rates supplied to sectors or to points where they are recorded and used for loss management.	T.2	0.25
	EO1.3	EO1.3.9	Procedures exist for monitoring (at least once a day) fluctuations in average and minimum flow rates at sector level to support loss reduction actions.	T.6	0.5
	EO1.7	EO1.7.4	A system exists to monitor “reclaimed water” quality.	T.2	0.25
	EO3.1	EO3.1.4	A remote control system exists that relays the operational status of at least 20% of maneuverable devices and equipment positioned in strategic parts of the “system”.	T.3	0.5
	EO3.1	EO3.1.5	An early warning system exists to identify “incidents” (remote control, sectoring, online indicators).	T.3	0.5

AR	Group	Element	Descripción	Reliability	Peso
 Q	EO3.6	EO3.6.4	A remote control or equivalent online system exists to relay the operational status of maneuverable devices and equipment in the wastewater or drainage network. (In “systems” with networks that do not include maneuverable devices or equipment, this practice is considered complied with at maximum reliability level).	T.3	0.5
 Q	EO3.6	EO3.6.5	Early warning mechanisms are available 24/7 (remote control and receipt of warnings referring to supply and distribution “systems”).	T.3	0.5
 Q	SA1.1	SA1.1.7	Protocols exist for effluent self-assessment, performed daily or more frequently than required by applicable regulations.	T.2	0.25
 Q	SA1.1	SA1.1.8	“Real-time” inflow and outflow gauging equipment exists.	T.1	0.5
 Q	SA1.1	SA1.1.9	Equipment exists to measure physical and chemical parameters at inlet and outlet and in intermediate processes.	T.1	0.25
 Q	SA1.1	SA1.1.10	A record of measurements and of operating parameter controls (flows and parameters stipulated by standards) is kept.	T.2	0.25

IN6.2 Implementation of digital technologies



Type ————— Best Practices
Normalization ————— Weighted by practice

AR	Group	Element	Description	Reliability	Weight
	CS2.3	CS2.3.2	GIS tools are available to support isolation, repair and resolution of “contingencies” in supply and distribution “systems”.	T.3	0.3
	CS3.2	CS3.2.2	A computerized system to manage “preventive maintenance” of the wastewater collection “system” exists and is used.	T.3	0.3
	CS3.2	CS3.2.3	Specific equipment is available to permit inspection of difficult-to-access zones of the wastewater collection network.	T.1	0.3
	CS3.2	CS3.2.8	A computerized system for recording and managing anomalies in the wastewater collection “system” is available	T.3	0.3
	CS3.2	CS3.2.9	A GIS covering the entire wastewater collection network and its elements exists, as do protocols to update it systematically.	T.3	0.3

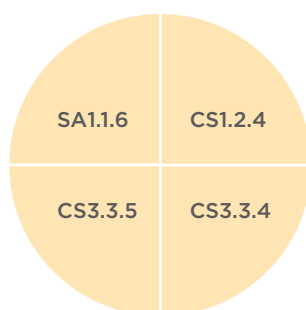
AR	Group	Element	Descripción	Reliability	Weight
	CS3.2	CS3.2.10	A system exists to record and manage anomalies in the GIS, which also shows users connected to the wastewater network.	T.3	0.3
	CS4.1	CS4.1.1	An integrated complaint management system is in place which besides recording “complaints” (by any means) also tracks complaint resolution.	T.3	0.3
	CS4.2	CS4.2.6	The website is operative and at least 4 of the following procedures can be performed online: (i) Check account/bill; (ii) Make payment online; (iii) Submit a “complaint”; (iv) Establish a new contract; (v) Request a service feasibility check; (vi) Request service stoppage/termination.	T.5	0.3
	CS4.3	CS4.3.5	Users are informed about progress and expected resolution of unforeseen “contingencies” (e.g. by means of automated calls or text messages to users’ phones, automated responses from the utility’s user service line, website, etc.).	T.2	0.3
	EP1.3	EP1.3.6	Possible solutions are subject to assessment of alternatives that uses duly calibrated and updated tools to analyze hydraulic or hydrological behavior and employs geo-referenced database systems.	T.25	0.3
	EP2.1	EP2.1.1	An “integrated monitoring system” exists that monitors investment plan projects formulated in year 0 and projects or “works” resulting from it.	T.3	0.3
	EO1.1	EO1.1.5	Information on the location of all points of use and consumption is available in a geographical database of the distribution infrastructure.	T.3	0.3
	EO1.3	EO1.3.6	References and records of water loss “incidents” are available in geographical databases.	T.3	0.3

AR	Group	Element	Descripción	Reliability	Weight
	EO1.5	EO1.5.1	A geo-referenced database exists for recording drainage, tank-emptying and filter-washing operations.	T.3	0.3
	EO1.5	EO1.5.3	A system exists for recording substitution or installation of new infrastructure that enables evaluation of the water used in infrastructure start-up.	T.3	0.3
	EO1.5	EO1.5.5	A system exists for contrasting expected and real flow rates at zone or sector level and is used to validate operational water balances.	T.6	0.3
	EO3.1	EO3.1.1	Geo-referenced databases (GIS) for all infrastructure are available.	T.3	0.3
	EO3.1	EO3.1.2	A unit is specifically responsible for maintaining and updating infrastructure information in the GIS.	T.6	0.3
	EO3.1	EO3.1.3	Procedures are used to ensure updating of information in the GIS regarding infrastructure characteristics and include a commitment to update within a stipulated timeframe.	T.6	0.3
	EO3.1	EO3.1.6	An integrated system exists to manage inspection and “preventive maintenance”.	T.3	0.3
	EO3.1	EO3.1.7	A system to manage pressure in the distribution network is available and implemented.	T.3	0.3
	EO3.1	EO3.1.8	An integrated system exists to manage anomaly reporting and resolution linked to the operation and warnings and complaints areas.	T.3	0.3
	EO3.6	EO3.6.1	Geo-referenced databases (GIS) for all infrastructure are available.	T.3	0.3
	EO3.6	EO3.6.2	A unit is specifically responsible for maintaining and updating infrastructure information in the GIS.	T.6	0.3

AR	Group	Element	Descripción	Reliability	Weight
	EO3.6	EO3.6.3	Procedures are used to ensure updating of information regarding infrastructure characteristics and include a commitment to update within a stipulated timeframe.	T.6	0.3
	EO3.6	EO3.6.6	An integrated system exists to manage inspection and “preventive maintenance”.	T.3	0.3
	EO3.6	EO3.6.7	An integrated system exists to manage anomaly reporting and resolution linked to the operation and warnings and complaints areas.	T.3	0.3
	EG2.1	EG2.1.3	A management “control system” exists that establishes goals for the indicators that measure key aspects such as access to service, service quality, management efficiency, environmental sustainability and financial sustainability, and which allows regular monitoring and evaluation of the degree of goal fulfilment.	T.3	0.3
	EG2.1	EG2.1.4	A management “control system” exists that allows regular monitoring and assessment of fulfilment of objectives and goals established in the utility’s strategic plan. The system is deployed across all organizational levels and units to guarantee fulfilment of objectives and goals.	T.3	0.3
	EG4.1	EG4.1.1	A human resources information system exists that, besides personal data and remunerations, contains information on staff skill profiles, qualifications, age, experience, years of service, training, and ratings (results of staff performance appraisals).	T.3	0.3

AR	Group	Element	Descripción	Reliability	Weight
	EG5.1	EG5.1.4	Purchases of goods and services are made, in accordance with the standards that govern the utility, via an open and transparent online computerized system, through which interested suppliers have access to tender conditions, terms of reference and other conditions which regulate each purchase process.	T.74	0.3
	SF3.1	SF3.1.2	The user register and classification is updated within 10 days of establishment of a service agreement or of deactivation of a connection	T.94	0.3
	SF3.1	SF3.1.3	A user register exists that includes information concerning user type, service status (active/inactive), meter data, “property” data and other information necessary for billing the service.	T.33	0.3
	SF3.1	SF3.1.4	Data scanners with a magnetic interface to the billing system or remote meter-reading technologies are in use.	T.95	0.3

IN6.3 Implementation of automatization technologies

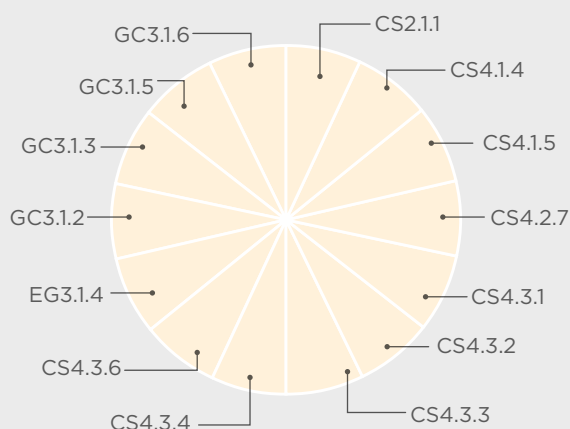


Type ————— Best Practices
Normalization ——— Weighted by practice

AR	Group	Element	Descripción	Reliability	Weight
	CS3.3	CS1.2.4	Automated processes exist in water treatment plants serving more than 5,000 inhabitants to ensure operation in the absence of personnel, or personnel are on duty 24/7 if automated processes do not exist.	T.5	2.5
	CS3.3	CS3.3.4	Flow-regulating elements (e.g. remotely controlled gates) exist in the collector mains or wastewater collection network.	T.1	2.5
	CS3.3	CS3.3.5	Systems exist to support decision-making in regular and exceptional operation of the drainage or wastewater collection network.	T.3	2.5
	SA1.1	SA1.1.6	Wastewater treatment plants serving more than 5,000 inhabitants are equipped with automated operation systems.	T.1	2.5

Application of advanced procedures

IN7.1 Application of advanced procedures in the customer area



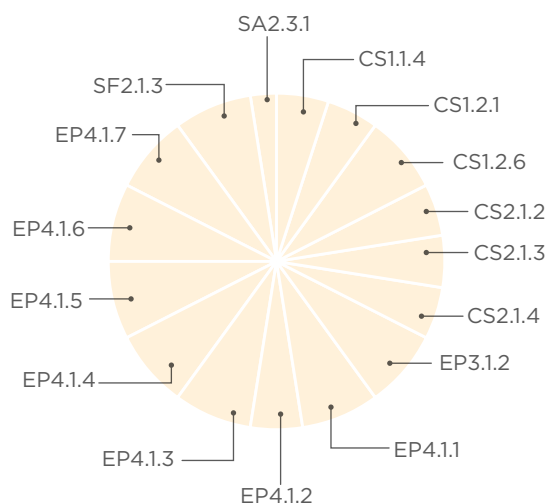
Type ——— Best Practices
Normalization — Weighted by practice

AR	Group	Element	Descripción	Reliability	Weight
	CS2.1	CS2.1.1	Standard service pressure and continuity values for water supply and distribution are accepted and applied.	T.2	1
	CS4.1	CS4.1.4	A user satisfaction survey is conducted once a year among utility service users. It complies with the following characteristics: (i) The survey is statistically representative of the user population; (ii) The survey methodology is stable and reproducible; (iii) The survey is conducted by a group/organization with appropriate “technical expertise”; (iv) The survey is conducted by a third party.	T.2	1

AR	Group	Element	Descripción	Reliability	Weight
	CS4.1	CS4.1.5	Satisfaction with resolution of user “complaints” is monitored constantly (representative sample of all users making complaints).	T.6	1
	CS4.2	CS4.2.7	The utility admits at least 3 of the following payment channels: (i) Internet (institutional website and others); (ii) Automatic payment charged to bank account or credit card; (iii) Telephone; (iv) Payment centers (at utility’s offices or other defined locations).	T.5	1
	CS4.3	CS4.3.1	A customer/user ombudsman exists.	T.2	1
	CS4.3	CS4.3.2	A duly publicized commitment charter exists (e.g. published on the website, sent to users, etc.) establishing the utility’s commitment to respond to “complaints” within the timeframe established by the regulator in applicable cases.	T.2	1
	CS4.3	CS4.3.3	The utility commits to compensate users in the event of non-compliance with the terms established in the commitment charter.	T.2	1
	CS4.3	CS4.3.4	Users are notified at least 48 hours in advance of programmed service stoppages and planned interruptions, receiving notification at their homes or buildings or by any other means of communication that ensures that users receive notification. For wide-area notification, the utility may use radio and television broadcasts. A complete database for managing communication with users exists and procedures are in place to ensure it is up to date.	T.2	1

AR	Group	Element	Descripción	Reliability	Weight
	CS4.3	CS4.3.6	Critical users (hospitals, schools, high-volume consumers, etc.) are identified and a special procedure is in place to provide them with timely information about interruptions, expected service impact and progress and expected resolution of unforeseen “contingencies”.	T.2	1
	EG3.1	EG3.1.4	The current organizational structure is user-oriented (user or customer support or service units are located at the second or third level of the organizational structure and have the authority to provide service information to users; to receive, answer and resolve standard requests and problems related to these services; and to manage and monitor related processes, such as service availability requests, service connection and disconnection, and billing, among others) and/or based in business units (it is divided or structured into units that can be measured by their economic income - revenue minus expenses).	T.56	1
	GC3.1	GC3.1.2	User rights.	T.108	1
	GC3.1	GC3.1.3	Utility obligations regarding service quality (drinking water and/or wastewater).	T.108	1
	GC3.1	GC3.1.5	Information related to service delivery, such as service interruptions, works on public thoroughfares, etc.	T.108	1
	GC3.1	GC3.1.6	Number of “complaints” and time taken to resolve them.	T.108	1

IN7.2 Application of advanced procedures in risk management



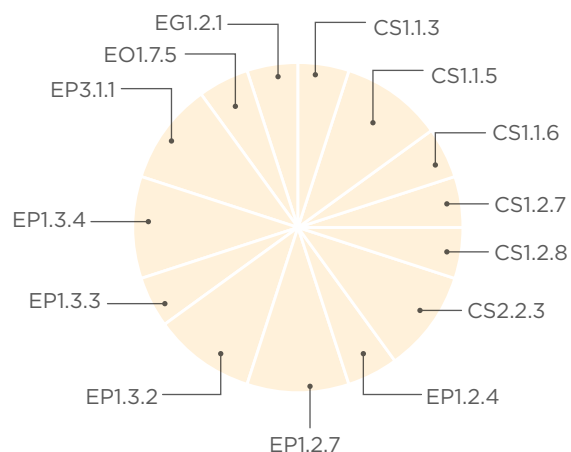
Type ————— Best Practices
Normalization — Weighted by practice

AR	Group	Element	Descripción	Reliability	Weight
	CS1.1	CS1.1.4	Analyses are carried out to identify “zones at risk of not complying” with drinking water quality standards, and, if this is the case, appropriate actions are identified.	T.4	0.5
	CS1.2	CS1.2.1	Protection measures exist at all raw water intakes (signage, perimeter protection, fencing, etc.) for sources of raw water incorporated into the “system” rated.	T.4	0.5
	CS1.2	CS1.2.6	Safety plans exist for “contingencies” regarding water quality.	T.2	0.75
	CS2.1	CS2.1.2	Water supply and distribution infrastructure design is conceived to minimize impact due to “contingencies” and to comply with service standards.	T.2	0.5

AR	Group	Element	Descripción	Reliability	Weight
	CS2.1	CS2.1.3	Plans to renew supply and distribution “system” elements adopt criteria that take into account the risk of impact on service continuity.	T.2	0.5
	CS2.1	CS2.1.4	Planning and adjustment of water supply and distribution infrastructure adopt criteria to prevent risk of service interruption and unintended variations in pressure.	T.2	0.5
	EP3.1	EP3.1.2	A plan exists for maintenance and replacement of fixed physical assets based on failure risk analysis, costs, etc.	T.2	0.75
	EP4.1	EP4.1.1	An analysis exists detailing the main risks the utility faces, including the corresponding probability of occurrence.	T. 37	0.75
	EP4.1	EP4.1.2	A vulnerability analysis exists specifying the “system” elements potentially most affected.	T. 37	0.5
	EP4.1	EP4.1.3	Mitigation measures to reduce “system” vulnerability have been identified and implemented and are incorporated in the investment plan.	T. 38	0.75
	EP4.1	EP4.1.4	An “emergency” plan exists identifying the entities responsible for issuing alerts and staff have been assigned to monitor them.	T. 37	0.75
	EP4.1	EP4.1.5	An “emergency” plan exists that includes an incident command group and prior coordination agreements with other entities, and identifies users assigned high priority for service restoration.	T. 37	0.75
	EP4.1	EP4.1.6	The “emergency” plan is comprehensively updated in the wake of the last event that affected the utility, following modifications of conditioning factors, or is validated with pre-established regularity.	T. 37	0.75

AR	Group	Element	Descripción	Reliability	Weight
	EP4.1	EP4.1.7	The “emergency” plan has been widely communicated to staff, who are trained to implement it.	T. 4	0.75
	SF2.1	SF2.1.3	A financial risk management policy exists based on financial risk analysis. This considers use of hedging instruments to mitigate interest rate and foreign currency risk. (This practice is considered complied with at maximum reliability level if the utility has not entered financial liabilities in its financial statements in the year of rating and the 2 preceding years).	T.2	0.75
	SA2.3	SA2.3.1	Environmental and social impacts and hazards are assessed for all works and projects subject to such assessment under applicable legislation.	T.2	0.25

IN7.3 Application of advanced procedures in planning and design

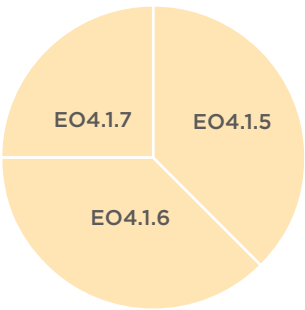


Type — Best Practices
Normalization — Weighted by practice

AR	Group	Element	Descripción	Reliability	Weight
	CS1.1	CS1.1.3	Alternative “treatment” facilities exist to provide drinking water in hydraulically independent zones with populations of over 100,000 inhabitants. At least 50% of the population of such zones will have more than one source of drinking water. In “systems” in which these circumstances do not apply, this practice is considered complied with at maximum reliability level.	T.8	1
	CS1.1	CS1.1.5	Distribution network design criteria exist that consider water quality issues (such as time that water remains in the network, removal of blanked pipe sections, etc.).	T.2	2
	CS1.1	CS1.1.6	Studies are carried out to identify zones in which disinfectant concentrations are at risk of falling below levels established in applicable regulations and to define measures to ensure minimum and more homogeneous disinfectant concentration in distribution networks.	T.4	1
	CS1.2	CS1.2.7	In “systems” with various alternative supply sources, protocols exist to assure water quality on initial use of new supply sources (wells or surfacewater); otherwise, this practice is considered complied with at maximum reliability level.	T.120	1
	CS1.2	CS1.2.8	Protocols exist to assure water quality when integrating new infrastructure.	T.120	1
	CS2.2	CS2.2.3	Supply and distribution “system” elements are differentiated and those of fundamental or strategic importance are highlighted. Such differentiation must be stated in all infrastructure databases used for planning and operation and must be indicated on-site on all visible or maneuverable system elements.	T.4	2
	EP1.2	EP1.2.4	Coverage and service quality goals exist. These are equal to or higher than those set by the authority (governing entity and/or regulatory entity), if applicable. If individual solutions are considered, the number of households served per solution type is specified.	T.25	1

AR	Group	Element	Descripción	Reliability	Weight
	EP1.2	EP1.2.7	Daily and hourly consumption coefficients, average annual and maximum volumes, infiltration rates and others are documented and supported by empirical information based on specific studies.	T.25	2
	EP1.3	EP1.3.2	Possible solutions are subject to multi-criteria assessment of alternatives that explicitly analyzes the available options, taking into consideration definition and assessment of the available project options in terms of configuration, sizing, analysis horizon, technological options, environmental or other restrictions, service delivery and environmental regulations, optimal date of operation start-up, restrictions due to preparation and implementation times, etc.).	T.25	2
	EP1.3	EP1.3.3	Possible solutions are subject to assessment of alternatives that applies algorithms to minimize investment costs and incremental operating and maintenance costs.	T.25	1
	EP1.3	EP1.3.4	Possible solutions are subject to assessment of alternatives that applies facility and service safety, risk and vulnerability criteria.	T.25	2
	EP3.1	EP3.1.1	A set of rules, regulations and standards specific to “reclaimed water” infrastructure exists.	T.33	2
	EO1.7	EO1.7.5	The plan was generated by utility staff (at the very least involving management staff up to the third hierarchical level, if this level exists in the organization) through a formal participatory process.	T.2	1
	EG1.2	EG1.2.1	El plan fue generado a través de un proceso participativo formal del personal del prestador (involucrando al menos a las jefaturas hasta el tercer nivel jerárquico, en el caso que se contemple dicho nivel en la organización).	T.54	1

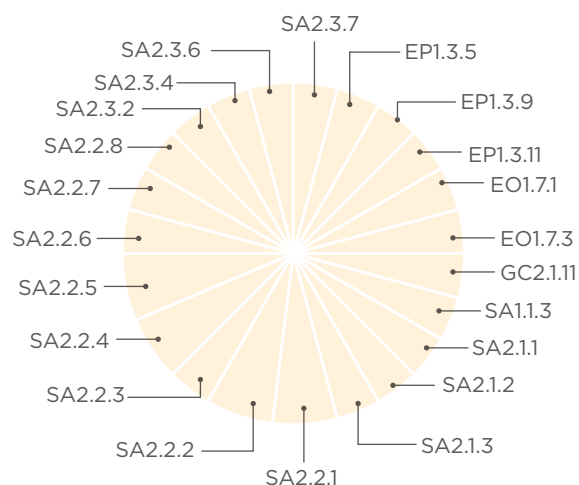
IN7.4 Application of advanced procedures in operation



Type ————— Best Practices
Normalization — Weighted by practice

AR	Group	Element	Descripción	Reliability	Weight
	EO4.1	EO4.1.5	Operating cost optimization is included in the infrastructure and equipment design phase.	T.6	3
	EO4.1	EO4.1.6	Operating cost optimization is considered when planning facility operation and operation of the “system” as a whole.	T.6	3
	EO4.1	EO4.1.7	A plan exists to reduce operating unit costs and includes annual objectives and monitoring of their fulfilment.	T.6	2

IN7.5 Application of advanced procedures in environmental management



Type ————— Best Practices
Normalization ————— Weighted by practice

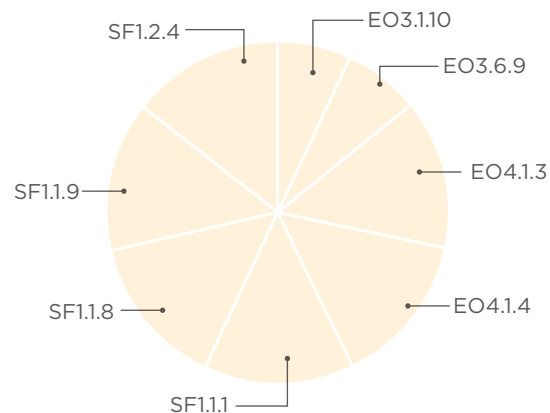
AR	Group	Element	Descripción	Reliability	Weight
	EP1.3	EP1.3.5	Possible solutions are subject to assessment of alternatives that takes into consideration life cycle assessment (LCA), CO2 emissions, environmental sustainability and mitigation of other externalities.	T.25	0.5
	EP1.3	EP1.3.9	In sections that concern sanitation, analysis of wastewater is carried out to determine treatment level and impact of discharges on the receiving body.	T.25	0.5

AR	Group	Element	Descripción	Reliability	Weight
	EP1.3	EP1.3.11	In the overall configuration of the plan, the solution considered the best alternative is the one with the lowest cost at present value that complies with all restrictions concerning demand, environment and other applicable requirements. It specifically includes explicit presentation of the selected alternative and the corresponding minimum overall cost analysis.	T.25	0.5
	EO1.7	EO1.7.1	A plan is in force for direct reuse of wastewater.	T.2	0.5
	EO1.7	EO1.7.3	Incentivization measures are applied to promote the use of “reclaimed water” in the public and private spheres.	T.2	0.5
	GC2.1	GC2.1.11	A policy exists and is applied to promote public participation including, among other elements, meetings or consultations with citizens’ representatives at least once a year.	T.2	0.5
	SA1.1	SA1.1.3	Stormwater tanks exist to buffer peak pollutant flows from the urban drainage system and these tanks are equipped with a system to manage treatment of the volumes of stormwater stored in the wastewater treatment plants.	T.3	0.5
	SA2.1	SA2.1.1	The utility has a department or unit that deals exclusively with environmental issues.	T.6	0.5
	SA2.1	SA2.1.2	Commitments, protocols or internal procedures with a clear environmental focus exist.	T.6	0.5

AR	Group	Element	Descripción	Reliability	Weight
	SA2.1	SA2.1.3	Drinking water supply and/or wastewater collection and/or treatment facilities (according to the services to be rated) hold certification to a recognized environmental standard, such as ISO 14001. Certification extends to facilities that represent at least 80% of installed capacity in the geographical area to be rated or 80% of the length of linear systems (pipes or sewers). Certification will always extend to the following: wastewater “systems” and wastewater treatments plants handling >300 m ³ /hour, facilities linked to the drinking water supply “system” handling >100 l/s.	T.6	0.5
	SA2.2	SA2.2.1	Strategic planning establishes environmental goals and mechanisms for following up and monitoring deviation.	T.2	0.5
	SA2.2	SA2.2.2	Explicit plans or policies exist that address climate change mitigation or adaptation to climate change.	T.2	0.75
	SA2.2	SA2.2.3	Strategic or managerial objectives include compliance with goals for wastewater discharge quality that are more stringent than those established by law.	T.2	0.75
	SA2.2	SA2.2.4	Environmental and social costs are considered in assessment of all alternatives (initiatives, projects and works) planned or in planned operation.	T.2	0.5
	SA2.2	SA2.2.5	Planning considers wastewater reuse systems and the decision is substantiated by complete comparative analyses.	T.2	0.75
	SA2.2	SA2.2.6	Individual or collective “recycling” systems and use of non-conventional water sources are promoted or financed, provided their efficiency is substantiated.	T.2	0.75

AR	Group	Element	Descripción	Reliability	Weight
	SA2.2	SA2.2.7	Mechanisms to facilitate public participation (civil society, environmental groups) in decisions that have environmental and social implications are considered.	T.2	0.5
	SA2.2	SA2.2.8	In the area influenced by management of the drinking water and/or wastewater “system” to be rated, “bodies of water” and ecosystems linked to them are classified on the basis of ecosystem quality and value in terms of biodiversity, singular species, area of high environmental value, etc.	T.2	0.5
	SA2.3	SA2.3.2	A set of indicators to monitor and assess the environmental sustainability of system management is systematically applied.	T.2	0.5
	SA2.3	SA2.3.4	As a minimum, environmental training programs exist for staff.	T.2	0.5
	SA2.3	SA2.3.6	Water use efficiency and water demand management programs exist.	T.2	0.5
	SA2.3	SA2.3.7	An environmentally responsible culture is promoted.	T.2	0.5

IN7.6 Application of advanced procedures in financial management

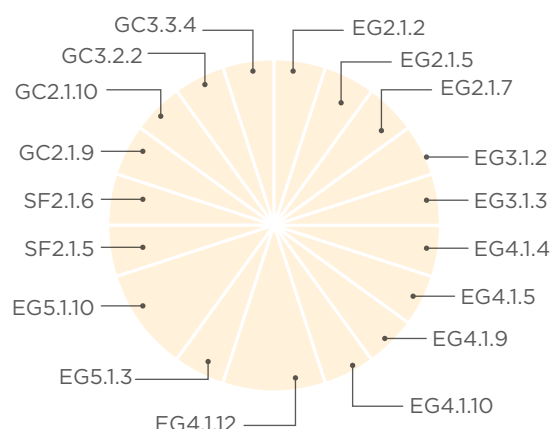


Type ————— Best Practices
Normalization — Weighted by practice

AR	Group	Element	Descripción	Reliability	Weight
	EO3.1	EO3.1.10	"Preventive" and "corrective" maintenance costs are monitored and controlled.	T.6	1
	EO3.6	EO3.6.9	"Preventive" and "corrective" maintenance costs are monitored and controlled.	T.6	1
	EO4.1	EO4.1.3	Individual monthly accounting analyses are carried out for main system facilities. These comprise, at the very least, all water treatment plants, wastewater treatment plants, main pumping stations, water distribution and wastewater collection networks and "systems" supporting operation.	T.6	2
	EO4.1	EO4.1.4	Individual and segregated monthly accounting analyses are carried out for the main components of these operating costs: staff, reagents, energy consumption and third-party services.	T.6	2

AR	Group	Element	Descripción	Reliability	Peso
Q	SF1.1	SF1.1.1	Tariffs are calculated to cover the “total long-term costs” of service delivery for a period not shorter than 15 years. These tariffs are determined on the basis of a study completed within the year of rating and the preceding years and considering an “adequate rate of capital cost”.	T.83	2
Q	SF1.1	SF1.1.8	A cost system exists that delivers information by cost center, “service stage” (drinking water production, drinking water distribution, wastewater collection, wastewater treatment and discharge) and “activity”.	T.3	2
Q	SF1.1	SF1.1.9	The accounting system provides reports on revenue, expenditure and income by business unit/locality and by type of service delivered.	T.3	2
Q	SF1.2	SF1.2.4	Revenue from delivering drinking water and/or wastewater services covers “operating expenses”, including depreciation and amortization, and also covers “financial expenses”.	T.88	2

IN7.7 Application of advanced procedures in governance and management



Type — Best Practices
Normalization — Weighted by practice

AR	Group	Element	Descripción	Reliability	Weight
	EG2.1	EG2.1.2	Reports on the utility's management are prepared at least once a quarter and include indicators that measure key aspects such as access to service, service quality, management efficiency, environmental sustainability and financial sustainability.	T.58	0.5
	EG2.1	EG2.1.5	Indicators considered in the management "control system" are measurable, pertinent (relevant, specific), verifiable and reasonable in number (not more than 20).	T.59	0.5
	EG2.1	EG2.1.7	Management progress and results are monitored monthly by senior management and at least quarterly by the utility's "board of directors".	T.61	0.5
	EG3.1	EG3.1.2	The current organizational structure is documented in a handbook that contains the functions of the different units, general qualifications for positions and the functions, responsibilities, authority and job descriptions for each position.	T.63	0.5

AR	Group	Element	Descripción	Reliability	Weight
	EG3.1	EG3.1.3	The current organizational structure meets the following conditions: (i) it is consistent with the role and objectives defined in the applicable legal provisions and/or in the institution's articles of incorporation and bylaws (i.e. the functions of the organizational structure reflect the functions and objectives established in the legal documents that created the organization), and (ii) it includes the changes defined in the strategic plan, in the case that modifications to the organizational structure have been defined in the plan.	T.56	0.5
	EG4.1	EG4.1.4	Results of implemented training programs are assessed.	T.4	0.5
	EG4.1	EG4.1.5	A defined remuneration policy that considers incentives for performance and results exists and is applied.	T.6	0.5
	EG4.1	EG4.1.9	Surveys are conducted to gauge staff satisfaction and/or assess workplace atmosphere and staff perceptions of change.	T.4	0.5
	EG4.1	EG4.1.10	Staffing levels and composition are reviewed at least every 3 years according to the "job descriptions" required to fulfill the institution's objectives and to productivity analysis, all of which is recorded.	T.66	0.5
	EG4.1	EG4.1.12	Measures are implemented to prevent occupational hazards and professional diseases and to ensure occupational health.	T.67	1

AR	Group	Element	Descripción	Reliability	Weight
	EG5.1	EG5.1.3	New goods, services and alternative supply sources are studied, based on existing options in the market, at least once a year for goods and services which altogether represent more than 70% of the total amount of purchases used in operations in the rating year. Options are considered to exist in the market if there is more than one supplier of the goods and services used in operations, considering both national and international markets. In the case that there is only one supplier for a certain good or service, this will be documented.	T.4	0.5
	EG5.1	EG5.1.10	The degree of internal users' satisfaction with the services provided by the procurement area is assessed.	T.4	1
	SF2.1	SF2.1.5	A duly approved internal audit handbook or rules of practice is available.	T.90	0.5
	SF2.1	SF2.1.6	The internal audit unit issues report on reviews. The observations are followed up and evidence exists that the issues have been addressed, or justifications are given when an issue has not been addressed.	T.4	0.5
	GC2.1	GC2.1.9	The utility has a written code of ethics approved by the "board of directors" that includes measures to prevent and detect corruption and is signed by all members of the board of directors and by all staff.	T.2	0.5
	GC2.1	GC2.1.10	A unit exists which, among its functions, ensures compliance with the code of ethics.	T.105	0.5
	GC3.2	GC3.2.2	The utility's code of ethics, duly approved.	T.108	0.5
	GC3.3	GC3.3.4	An internal audit unit exists that reports to the board of directors/"board of directors"" audit committee.	T.2	0.5

APPENDIXES

Reliability Tables Incorporated into the AquaRating evaluation system

Table 1

Reliability Levels		Factor
1	Existence of equipment cannot be verified.	0
2	Equipment exists physically, it can be verified that it has the indicated characteristics and that the rated utility is authorized to use it (property, invoice, delivery note, rent receipt or other evidence).	0.6
3	In addition to fulfilling the requirements for level 2, operation manuals and personnel trained to use and maintain the equipment exist.	0.7
4	In addition to fulfilling the requirements for levels 2 and 3, calibration of at least 60% of the equipment is certified (by an accredited laboratory in the case of equipment for measuring physical and chemical parameters) and accuracy is systematically verified.	0.8
5	In addition to the fulfillment of requirements for levels 2 and 3, for 100% of the equipment, calibration is certified (by an accredited laboratory in case of equipment for measuring physico chemical parameters) and accuracy is systematically verified.	0.95
6	In addition to fulfilling the requirements for levels 2, 3 and 5, it is part of the instrumentation audited, at least internally, according to an accreditation standard.	1

Table 2

Reliability Levels		Factor
1	The practice is not documented.	0
2	The practice is documented, but there is no evidence of its application either in the rating year.	0.5
3	The practice is documented and evidence exists of its application in the rating year.	0.7
4	The practice is documented, and evidence exists of its application at the rating year as well as in the calendar year preceding that date.	1

Table 3

Reliability Levels		Sum
1	Documents describing the system exist, as do handbooks for its use and maintenance.	0.25
2	Staff are available to use and maintain it.	0.25
3	It is permanently installed on all relevant workstations or can be accessed from them.	0.25
4	Records of its systematic use exist.	0.25

Table 4

Reliability Levels		Factor
1	There is no evidence of its application.	0
2	Evidence exists of its application at the year of rating or the calendar year preceding that date.	0.7
3	Evidence exists of its application at year of rating as well as in the calendar year preceding that date or in the 2 calendar years preceding the year of rating.	1

Table 5

Reliability Levels		Factor
1	There is no evidence of its application.	0
2	Evidence exists of its application in the year of rating.	0.7
3	Evidence exists of its application in the rating year.	0.8
4	Evidence exists of its application in the rating year as well as in the calendar year preceding that date.	0.9
5	Evidence exists of its application in the year of rating as well as in the 2 calendar years preceding that date.	1

Table 6

Reliability Levels		Factor
1	The practice is not documented.	0
2	The practice is documented, but there is no evidence of its application.	0.5
3	A documented procedure exists and evidence exists of its application.	0.7
4	A documented procedure exists and evidence exists of its application in the year of rating	0.8
5	A documented procedure exists and evidence exists of its application in the year of rating as well as in the preceding calendar year.	0.9
6	A documented procedure exists and evidence exists of its application in the year of rating as well as in the 2 preceding calendar years.	1

Table 8

Reliability Levels		Factor
1	Existence of the facilities cannot be verified.	0
2	Facilities exist physically, they may be visited, it can be verified that they have the indicated characteristics and that the rated utility is authorized to use them (property, lease, or concession agreement).	0.6
3	In addition to fulfilling the requirements for level 2, operation protocols and staff trained to use and maintain the facilities exist.	0.7
4	In addition to fulfilling the requirements for levels 2 and 3, proper operation of all the facilities has been verified according to an established protocol.	0.95
5	In addition to fulfilling the requirements for levels 2, 3 and 4, they are part of the facilities audited, at least internally, according to an accreditation standard.	1

Table 25

Reliability Levels		Factor
1	No documentation exists.	0
2	Existing documentation was approved more than 5 years ago.	0.5
3	Existing documentation was approved less than 5 years ago.	1

Table 33

Reliability Levels		Factor
1	It cannot be corroborated or it was approved more than 4 years ago.	0
2	It is available and was approved between 3 and 4 years ago.	0.5
3	It is available and less than 3 years old, but it is not up to date at the end of the year of rating.	0.7
4	It is available and less than 3 years old and it is up to date at the end of the year of rating.	1

Table 37

Reliability Levels		Factor
1	The practice is not documented or it was reviewed and/or updated more than 3 years ago.	0
2	The practice is documented and there is evidence that it was reviewed and/or updated two years before the year of rating.	0.5
3	The practice is documented and there is evidence that it was reviewed and/or updated one year before the year of rating.	0.7
4	The practice is documented and there is evidence that it was reviewed and/or updated at the rating date or in the year of rating.	0.9
5	The practice is documented and there is evidence that it was reviewed and/or updated at the rating date, in the year of rating and the year preceding the year of rating.	1

Table 38

Reliability Levels		Factor
1	The practice is not documented or it was reviewed and/or updated more than 3 years ago.	0
2	The practice is documented and there is evidence that it was reviewed and/or updated two years before the year of rating.	0.5
3	The practice is documented and there is evidence that it was reviewed and/or updated and implemented or incorporated into the investment plan, if applicable, one year before the year of rating	0.7
4	The practice is documented and there is evidence that it was reviewed and/or updated and implemented or incorporated into the investment plan, if applicable, in the year of rating.	0.9
5	The practice is documented and there is evidence that it was reviewed and/or updated and implemented or incorporated into the investment plan, if applicable, in the year of rating or in the year preceding the rating date.	1

Table 39

Reliability Levels		Factor
1	The data is an estimate without any support in the utility's accounting system.	0
2	The data is estimated on the basis of ex-post classification of certain generic expenditures in the utility's accounting system, or on other substantiating documents.	0.6
3	The data come from the utility's accounting system, which segregates R&D costs, but the financial statements are not audited by external auditors.	0.7
4	The data come from the utility's accounting system, which segregates R&D costs (cost center, cost type), but their "consistency" with the information in the financial statements audited by external auditors ("registered" or non-registered) cannot be verified.	0.8
5	The data come from the utility's accounting system, which segregates R&D costs, and is "consistent" with the information in the financial statements audited by non-"registered" external auditors.	0.9
6	The data come from the utility's accounting system, which segregates R&D costs, and is "consistent" with the information in the financial statements audited by "registered" external auditors.	1

Table 54

Reliability Levels		Factor
1	It cannot be corroborated or there is evidence that not more than 20% of staff at the levels specified participated.	0
2	Evidence exists that between 20% and 50% of staff at the levels specified participated.	0.5
3	Evidence exists that more than 50% of staff at the levels specified participated.	0.8
4	Evidence exists that more than 80% of staff at the levels specified participated.	1

Table 56

Reliability Levels		Factor
1	No supporting documents exist.	0
2	Supporting documents exist.	1

Table 58

Reliability Levels		Factor
1	Cannot be corroborated.	0
2	It is documented, but there is no evidence of regular application.	0.5
3	It is documented and evidence exists of regular application.	0.9
4	It is documented and evidence exists of regular application at the rating date and in the year of the rating.	0.95
5	It is documented and evidence exists of regular application in the year of the rating and in the previous calendar year.	1

Table 59

Reliability Levels		Factor
1	Cannot be corroborated.	0
2	A list of indicators used for management control exists indicating their objective and computation formula, or there are documents that describe the “management control system’s” indicators, but there is no evidence of their application.	0.5
3	Evidence of evaluation of the management indicators exists in the year of rating, but there are no documents describing the “management control system”.	0.7
4	Documents describing the “management control system’s” indicators exist specifying the objective, substantiation, computation formula, intervening variables and information sources for each one, and evidence exists of their evaluation in the year of rating.	0.9
5	Documents describing the “management control system’s” indicators exist specifying the objective, substantiation, computation formula, intervening variables and information sources for each one, and evidence exists of their evaluation in the year of rating and the preceding year.	0.95
6	Documents describing the “management control system’s” indicators exist specifying the objective, substantiation, computation formula, intervening variables and information sources for each one, and evidence exists of their evaluation in the rating year and 2 previous calendar years.	1

Table 61

Reliability Levels		Factor
1	Cannot be corroborated.	0
2	Evidence exists in minutes or summaries of meetings, or in any other medium that certifies it was carried out in at least one of the 3 months or quarters of the year of rating, depending on whether it is the chief executive office or the “board of directors”, respectively.	0.6
3	Evidence exists in minutes or summaries of meetings, or in any other medium that certifies it was carried out in at least 2 of the 3 months or quarters of the year of rating, depending on whether it is the chief executive office or the “board of directors”, respectively.	0.9
4	Evidence exists in minutes or summaries of meetings, or in any other medium that certifies it was carried out in the 3 months or quarters of the year of rating, depending on whether it is the chief executive office or the “board of directors”, respectively.	1

Table 63

Reliability Levels		Factor
1	No supporting documents exist.	0
2	The contents of the handbook include, at the very least, descriptions of functions, responsibilities and authority.	0.5
3	The handbook includes the description of all aspects indicated in the practice.	1

Table 66

Reliability Levels		Factor
1	Cannot be corroborated.	0
2	Evidence exists of its implementation at least once in the year of rating or 3 preceding years.	0.7
3	Evidence exists of its implementation at least 2 times in the year of rating or 3 preceding years.	0.9
4	Evidence exists of its implementation at least 3 times in the year of rating or 3 preceding years.	1

Table 67

Reliability Levels		Factor
1	Cannot be corroborated.	0
2	It is documented, but no evidence exists of its application at the rating date or in the preceding calendar year.	0.5
3	It is documented and evidence exists of its application.	0.8
4	It is documented and evidence exists of its application in the year of rating.	0.9
5	It is documented and evidence exists of its application in the year of rating and in the preceding calendar year.	1

Table 71

Reliability Levels		Factor
1	No record exists.	0
2	An annual report exists of the number of utility staff and of the number of staff joining and leaving the entity, classified by type of contract.	0.4
3	A quarterly report exists of the number of utility staff and of the number of staff joining and leaving the entity. It is classified by type of contract (permanent, temporary, other) and is supported by data in the human resources information system.	0.8
4	A monthly report exists of the number of utility staff and of the number of staff joining and leaving the entity. It is classified by type of contract (permanent, temporary, other) and is supported by data in the human resources information system.	1

Table 74

Reliability Levels		Sum
1	Existence of the system cannot be verified.	0
2	Documents describing the system exist, as do handbooks for its use and maintenance. (Maintenance criteria are not enforceable if the utility uses a system provided by the government).	0.25
3	Staff are trained to use and maintain it.	0.25
4	It is permanently installed on all relevant workstations.	0.25
5	Records exist of its systematic use for purchases of goods and services by tender.	0.25

Table 83

Reliability Levels		Factor
1	The practice is not documented.	0
2	A documented procedure exists, but there is no evidence of its application.	0.5
3	A documented procedure exists and “total long-term costs” studies and/or worksheets are available.	0.7
4	A documented procedure exists and applicable tariff studies and/or worksheets are available, including detailed “total long-term costs”. The tariff calculation model and its results are reviewed by an external body.	0.8
5	A documented procedure exists and applicable tariff studies and/or worksheets are available, including detailed “total long-term costs”. The tariff calculation model and its results are approved by the regulatory body, if applicable, or are audited by an independent external entity.	1

Table 88

Reliability Levels		Factor
1	The financial statements are incomplete or unaudited, or are audited and include a disclaimer of opinion or an adverse opinion.	0
2	Financial statements audited by non-“registered” external auditors that include a qualified opinion related to this indicator	0.3
3	Financial statements audited by “registered external auditors” that include a qualified opinion related to this indicator	0.4
4	Financial statements audited by non-“registered” external auditors that include an unqualified opinion or a qualified opinion not related to this indicator.	0.8
5	Financial statements audited by “registered external auditors” that include an unqualified opinion or a qualified opinion not related to this indicator.	1

Table 90

Reliability Levels		Factor
1	The practice is not documented.	0
2	A handbook or rules of practice exist, but there is no record of their approval.	0.5
3	Evidence exists of their approval by senior management.	0.8
4	Evidence exists of their approval by the “board of directors”.	1

Table 94

Reliability Levels		Factor
1	Cannot be corroborated.	0
2	The practice is documented, but no evidence exists of its application.	0.5
3	The practice is documented and evidence exists of its application in the billing period preceding the rating date.	0.7
4	The practice is documented and evidence exists of its application in the 3 billing periods preceding the rating date.	1

Table 95

Reliability Levels		Factor
1	Cannot be corroborated.	0
2	The practice is documented, but no evidence exists of its application.	0.5
3	The practice is documented and evidence exists of its application at the end of the year of rating.	1

Table 105

Reliability Levels		Factor
1	No supporting instruments or documents exist.	0
2	Applicable supporting instruments or documents, duly approved by the competent bodies, exist.	1

Table 108

Reliability Levels		Factor
1	No evidence exists of “publication on the institutional website” or in other media.	0
2	Evidence exists of “publication on the institutional website” or in traditional media at the rating date, but the information is out of date.	0.2
3	Evidence exists of “publication” of up-to-date information on the institutional website or in traditional media at the rating date, but the information published is not approved by the competent external authority/internal unit responsible (as appropriate).	0.4
4	Evidence exists of publication of up-to-date information in traditional media at the rating date, and the information published is approved by the competent external authority/internal unit responsible (as appropriate).	0.9
5	Evidence exists of “publication” of up-to-date information on the institutional website at the rating date, and the information published is approved by the competent external authority/internal unit responsible (as appropriate).	1

Table 120

Reliability Levels		Factor
1	The practice is not documented.	0
2	The practice is documented, but there is no evidence of its application even though it should have been applied in the year of rating and the 2 preceding years.	0.5
3	The practice is documented and evidence exists of its application in the rating year, if applicable.	0.7
4	The practice is documented and evidence exists of its application in the rating year and in the calendar year preceding such date, if applicable. Or, the practice was not applicable in that period.	0.9
5	The practice is documented and evidence exists of its application at the rating year and in the 2 calendar years preceding such date, if applicable. Or, the practice was not applicable in that period.	1

New Reliability Tables incorporated into the analysis of the current Focused Analysis

Table 301

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence of the existence of the unit within the past year, but it does not have its own budget nor is it comprised of more than 0.5% of the workforce	0.3
3	Evidence of existence of the unit within the past two years, but it does not have its own budget nor is it comprised of more than 0.5% of the workforce	0.4
4	Evidence of existence of the unit within the past three years, but it does not have its own budget nor is it comprised of more than 0.5% of the workforce	0.5
5	Evidence of the existence of the unit within the past three years, with its own budget, and comprised of more than 0.5% of the workforce	0.8
6	Evidence of the existence of the unit within the past year, with its own budget and comprised of more than 0.5% of the workforce	0.9
7	Evidence of the existence of the unit within the past three years with its own budget and comprised of more than 0.5% of the workforce	1

Table 302

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence of the committee's existence within the past year, with evidence that confirms the frequency of its meetings and the scope of its debates and decisions	0.8
3	Evidence of the committee's existence within the past two years, with evidence that confirms the frequency of its meetings and the scope of its debates and decisions	0.9
4	Evidence of the committee's existence within the past three years, with evidence that confirms the frequency of its meetings and the scope of its debates and decisions	1

Table 303

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence of the existence of the protocol and its application within the past year	0.8
3	Evidence of the existence of the protocol and its application within the past two years	0.9
4	Evidence of the existence of the protocol and its application within the past three years	1

Table 304

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence of the existence of the function, responsibilities, and performance within the past year	0.8
3	Evidence of the existence of the function, responsibilities, and performance within the past two years	0.9
4	Evidence of the existence of the function, responsibilities, and performance within the past three years	1

Table 305

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence in the past year of the existence of people with said commitment and their activity, at least with respect to the distribution of information in the management of and participation in meetings	0.8
3	Evidence in the past two years of the existence of people with said commitment and their activity, at least with respect to the distribution of information in the management of and participation in meetings	0.9
4	Evidence in the past three years of the existence of people with said commitment and their activity, at least with respect to the distribution of information in the management of and participation in meetings	1

Table 306

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence within the past year of the existence of the procedure or the unit, office, or department, whose functions include the specific follow-up and management of I+D+i projects, as well as evidence of having carried out said follow-up and management	0.8
3	Evidence within the past two years of the existence of the procedure or the unit, office, or department, whose functions include the specific follow-up and management of I+D+i projects, as well as evidence of having carried out said follow-up and management	0.9
4	Evidence within the past three years of the existence of the procedure or the unit, office, or department, whose functions include the specific follow-up and management of I+D+i projects, as well as evidence of having carried out said follow-up and management	1

Table 307

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence based on the justification of the diagram of units, functions, and people who comprise it	1

Table 308

Reliability Levels		Factor
1	There is no evidence	0
0	Evidence based on the justification of the diagram of units, work manual, and people who comprise it. Contrasted with profile descriptions and staff training	1

Table 309

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence that appropriate proposals for national or international innovation stimulus programs have been submitted, or that some support has been received for at least one innovation project within the past three calendar years	1

Table 310

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence of the cataloging and relating of projects within the past year	0.8
3	Evidence of the cataloging and relating of projects within the past two years	0.9
4	Evidence of the cataloging and relating of projects within the past three years	1

Table 311

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence of intellectual property protocols from within the past year	0.8
3	Evidence of intellectual property protocols from within the past two years	0.9
4	Evidence of intellectual property protocols from within the past three years	1

Table 312

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence of the availability of the service within the past year	0.8
3	Evidence of the availability of the service within the past two years	0.9
4	Evidence of the availability of the service within the past three years	1

Table 313:

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence of the protocols and of their application within the past year	0.8
3	Evidence of the protocols and of their application within the past two years	0.9
4	Evidence of the protocols and of their application within the past three years	1

Table 314

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence of application in the past two years	0.9
3	Evidence of application in the past four years	1

Table 315

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence of said planning and application in the past year	0.8
3	Evidence of said planning and application in the past two years	0.9
4	Evidence of said planning and application in the past three years	1

Table 316

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence in the past year of the cataloging and relation of projects, but without evidence of the formal evaluation of its success	0.3
3	Evidence in the past two years of the cataloging and relation of projects, but without evidence of the formal evaluation of its success	0.4
4	Evidence in the past three years of the cataloging and relation of projects, but without evidence of the formal evaluation of its success	0.5
5	Evidence in the past year of the cataloging and relation of projects, with evidence of the formal evaluation of its success	0.8
6	Evidence in the past two years of the cataloging and relation of projects, with evidence of the formal evaluation of its success	0.9
7	Evidence in the past three years of the cataloging and relation of projects, with evidence of the formal evaluation of its success	1

Table 317

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence in the past year of the formal submission for a patent before the relevant office or organism	0.8
3	Evidence in the past two years of the formal submission for a patent before the relevant office or organism	0.9
4	Evidence in the past three years of the formal submission for a patent before the relevant office or organism	1

Table 318

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence of participation within the past year	0.8
3	Evidence of participation within the past two years	0.9
4	Evidence of participation within the past three years	1

Table 319

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence in the past year of publications, of which at least 30% are in English	0.8
3	Evidence in the past two years of publications, of which at least 30% are in English	0.9
4	Evidence in the past three years of publications, of which at least 30% are in English	1

Table 320

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence in the past year of materialization of the incentives	0.8
3	Evidence in the past two years of materialization of the incentives	0.9
4	Evidence in the past three years of materialization of the incentives	1

Table 321

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence in the past year of the evaluation of innovation in the performance of more than 30% of employees	0.8
3	Evidence in the past two years of the evaluation of innovation in the performance of more than 30% of employees	0.9
4	Evidence in the past three years of the evaluation of innovation in the performance of more than 30% of employees	1

Table 322

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence in the past year of at least one annual campaign	0.3
3	Evidence in the past two years of at least one annual campaign	0.4
4	Evidence in the past three years of at least one annual campaign	0.5
5	Evidence in the past year of at least two annual campaigns	0.8
6	Evidence in the past two years of at least two annual campaigns	0.9
7	Evidence in the past three years of at least two annual campaigns	1

Table 323

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence in the past year of at least one annual campaign	0.3
3	Evidence in the past two years of at least one annual campaign	0.4
4	Evidence in the past three years of at least one annual campaign	0.5
2	Evidence in the past year of at least two annual campaigns	0.8
3	Evidence in the past two years of at least two annual campaigns	0.9
4	Evidence in the past three years of at least two annual campaigns	1

Table 324

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence in the past year of the dissemination of formats and accessibility	0.8
3	Evidence in the past two years of the dissemination of formats and accessibility	0.9
4	Evidence in the past three years of the dissemination of formats and accessibility	1

Table 325

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence in the past year of the carrying out of these internal dissemination events, with the attendance of at least 10% of staff	0.8
3	Evidence in the past two years of the carrying out of these internal dissemination events, with the attendance of at least 10% of staff	0.9
4	Evidence in the past three years of the carrying out of these internal dissemination events, with the attendance of at least 10% of staff	1

Table 326

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence in the past year of the internal publication of results of innovation projects	0.8
3	Evidence in the past two years of the internal publication of results of innovation projects	0.9
4	Evidence in the past three years of the internal publication of results of innovation projects	1

Table 327

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence in the past year of the existence of the method and evaluation criteria, and evidence of their application at least once a year	0.8
3	Evidence in the past two years of the existence of the method and evaluation criteria, and evidence of their application at least once a year	0.9
4	Evidence in the past three years of the existence of the method and evaluation criteria, and evidence of their application at least once a year	1

Table 328

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence in the past year of the carrying out of these evaluations with the participation of at least 10% of the workforce, including in that number, representatives from every level of the hierarchical structure	0.8
3	Evidence in the past two years of the carrying out of these evaluations with the participation of at least 10% of the workforce, including in that number, representatives from every level of the hierarchical structure	0.9
4	Evidence in the past three years of the carrying out of these evaluations with the participation of at least 10% of the workforce, including in that number, representatives from every level of the hierarchical structure	1

Table 329

Reliability Levels		Factor
1	There is no evidence	0
2	Evidence in the past year of the active existence of the unit of innovation with a number that represents, on average, 5% of the employees	0.8
3	Evidence in the past two years of the active existence of the unit of innovation with a number that represents, on average, 5% of the employees	0.9
4	Evidence in the past three years of the active existence of the unit of innovation with a number that represents, on average, 5% of the employees	1

Glossary

Regenerated water

Water that, after its use and collection in the sewerage networks, is treated until it meets certain standards of quality that make it capable of being used for other specific purposes.

External registered auditors

These correspond to entities registered in some multilateral financing institution or in the respective superintendence of joint stock companies or the equivalent public body. Furthermore, in the case of small companies (those with less than 10,000 connections to water), the figure of the Fiscal Auditor is considered by the laws of some countries (Colombia, for example), equivalent to external registered auditors.

Consistency of accounting information that is not derived from financial statements

Accounting data from a source other than the financial statements of the provider are considered consistent with these if any of the following conditions are met: i) the total of amounts contained in the auxiliary records from which the information is derived is consistent with the respective amount indicated in the financial statements; ii) the amount of the concept used to calculate the indicator is derived from an accounting source that is, at the same time, contained in one of the concepts that forms part of the financial reports; or iii) the sum of the amounts from the distinct areas or cost centers into which the items are broken down matches the amount contained in the financial statements.

For the application at the level of the evaluative scope of this definition, the following should be considered:

- i) The reference made in the table to the financial statements is at the company level; however, if audited financial statements are also presented at the evaluation level, the opinion of the external auditors regarding the statements must be taken into account at both levels, always applying the one that is most restrictive when it is relevant.
- ii) The consistency of the values that are not derived from the financial statements should be met, both with respect to the financial statements at the level of the evaluative scope, as well as at the company level.



Consistency of financial statements at the evaluative scope level

The financial statements at the evaluative scope level are considered consistent with the financial statements of the provider if the line by line horizontal sum of the financial statement components match the values of the respective components of the financial statements at the company level, once any transactions between areas have been accounted for.

Contingency

Circumstances in which conditions and factors that affect service have been modified, and may cause a disruption in quality or continuity.

Long-term total costs

Investment costs for expansion and replacement of existing assets, and optimized operation and maintenance to satisfy the demand for services over the long-term, for a horizon no less than 15 years.

Directorate

(also referred to as: board of directors):

The board of directors is a necessary and permanent, collegial body whose members are appointed periodically by shareholders or by the body that represents the owners, and whose role is to carry out all ordinary and extraordinary acts of administration, representing the provider before third parties and assuming joint responsibility for infractions of those duties that are imposed by law, regulations, and statutes.

Emergency

An unforeseen or unplanned event that can significantly impact the water and/or sanitation service quantity or quality for users. It can be minor and localized, or major and extensive; it can originate in natural causes (earthquakes, hurricanes, floods, forest fires, droughts, freezes, etc.), or by human action (error, transportation accidents, vandalism, civil disorder, terrorism, etc.).

In real time

For the purposes of this document, this term refers to data transmission with time lags of less than one minute.

Corrective maintenance

Set of inspection and repair actions that are carried out in response to a malfunction, anomaly, or incident in the operation or provision of normal services, that is either detected or about which the company is notified.



Preventive maintenance

Set of inspection and repair actions that are carried out on a scheduled basis, prior to the manifestation of or notification about any anomaly or malfunction.

Job description

Set of general and specific characteristics that a person must possess in order to perform a job. For the purposes of measuring the indicator, the institution is required to have specified the minimum requirements of education, experience (general and specific), and technical skills required for the performance of the job.

Technical expertise

Skills and knowledge necessary for the performance of a task.

Publication on the institutional webpage

Information is understood to be published when it is accessible on the website of the service provider, whether directly or whether through reference and/or a link to a webpage of a competent entity that allows the user to access said information.

Recycled

The term “recycled” is often used for the reuse of water within private areas at the level of housing, industry, or community owners.

Claim

Notification of a user/customer regarding a perception of an anomaly in any of the processes that constitute the service, including those related to business management.

Claim of a business nature

Notification, complaint, or request referring to an alleged malfunction of processes related to business management and which are not related to the availability of the water supply or collection service.

System

Set of infrastructure, installations, and equipment used by or available for the provision of water supply services (collection of residual water) in a part of or in the entire service area, which has topological and hydraulic continuity. A system will always be related to the territorial area it serves.

Management control system

Set of processes aimed at the treatment of data and information (not necessarily computerized) which, supported by indicators, indices, and tables that are produced in a systematic and periodic way, allow monitoring performance of the organization to achieve the desired results.



Own workers

This term comprises the total number of staff who are hired directly by the provider, under any legal form (employee, honorary, permanent worker, temporary worker, etc.). In the case of part-time personnel, their full-time equivalence must be established. (If there is staff who work at the corporate level in companies that carry out other business in addition to water and/or sanitation, said staff must be distributed in proportion to the number of workers in each business for the calculation of the Productivity Indicator).

Conventional purification treatment

Set of processes to make raw water suitable for human consumption, which incorporates a process beyond those of disinfection and filtration.

Registered user

Service user who is individually identified in any of the records or databases.

Areas at risk of non-compliance with safe drinking water regulations

Areas within the scope of service responsibility that have a probability of non-compliance with the values established in the regulations, higher than the thresholds set for their users. In the absence of reference values or thresholds for probability or scope of the condition, the probability will be calculated using as a reference the records of non-compliance recorded within the year of evaluation and the year prior to the evaluation.

C. New elements of analysis not included in the AquaRating structure

IN1. Structure for innovation management

IN1.1 Structure for innovation management

AR	Group	Element	Description	Reliability
+	IN1.1	IN1.1.1	There is a unit with exclusive responsibility for innovation	T.301
+	IN1.1	IN1.1.2	There is an innovation committee that reviews and keeps current with innovation management	T.302
+	IN1.1	IN1.1.3	There is a system or protocol for establishing priority initiatives and projects and making decisions about innovation proposals	T.303
+	IN1.1	IN1.1.4	There is a person or unit with primary or exclusive responsibility for communication about innovation projects and dissemination of results related to said projects	T.304
+	IN1.1	IN1.1.5	In every department, there is at least one person with the responsibility of liaising with the innovation unit	T.305
+	IN1.1	IN1.1.6	There is a procedure or office specifically for the management of innovation projects, with follow-up and evaluation of results	T.306

IN2. Resources and economic efforts in the development of creativity and experimentation RE

IN2.1 Resources and economic efforts in the development of creativity and experimentation

AR	Group	Element	Description	Reliability
+	IN2.1	IN2.1.1	Percentage of the workforce dedicated exclusively to innovation	T.71 y T.307
+	IN2.1	IN2.1.2	Percentage of the workforce dedicated exclusively to innovation, who also hold a Master's or PhD	T.71 y T.308
+	IN2.1	IN2.1.3	Funding or grants for innovation are sought or obtained	T.309

IN3. Management of research, development, and creativity in the company

IN3.1 Innovation management

AR	Group	Element	Description	Reliability
+	IN3.1	IN3.1.1	Average number of active annual projects over the past three years. Those that are directly linked to the acquisition or implementation of ICT solutions are not counted	T.310
+	IN3.1	IN3.1.2	There are protocols for the protection of intellectual property intellectual	T.311
+	IN3.1	IN3.1.3	There is some type of system, whether internal or shared with other entities, for technological surveillance	T.312
+	IN3.1	IN3.1.4	There is a validation, applicability, and efficacy procedure for innovative technologies and solutions for the company	T.313
+	IN3.1	IN3.1.5	A system exists and is applied for identifying threats and challenges to the proper fulfillment of the company's mission	T.314
+	IN3.1	IN3.1.6	There is an objective, or specific section with the company's training plan, for the promotion and management of talent related to innovation training	T.315

IN3.2 Evidence of innovation management

AR	Group	Element	Description	Reliability
+	IN3.2	IN3.2.1	Number of innovation projects developed with the company's own resources and completed successfully (average over the past three years)	T.316
+	IN3.2	IN3.2.2	Number of innovation projects developed in collaboration and completed successfully (average over the past three years)	T.316
+	IN3.2	IN3.2.3	Number of patent applications submitted or obtained over the past three years	T.317
+	IN3.2	IN3.2.4	The company's professionals participate actively in national forums for the diffusion of innovative solutions, vis-à-vis speaking or panel presentations, articles, poster sessions, roundtables, etc.	T.318
+	IN3.2	IN3.2.5	The company's professionals participate actively in international forums in the LAC region, regarding the diffusion of innovative solution, vis-à-vis speaking or panel presentations, poster sessions, roundtables, etc	T.318
+	IN3.2	IN3.2.6	The company's professionals participate actively in international forums beyond the LAC region, regarding the diffusion of innovative solution, vis-à-vis speaking or panel presentations, poster sessions, roundtables, etc.	T.318
+	IN3.2	IN3.2.7	Number of documents published regarding innovative projects or initiatives, and disseminated outside the company	T.319
+	IN3.2	IN3.2.8	The company or some of its employees representing the company, participate in and sponsor or are associates of organizations or forums for innovation development or start-ups	T.318

IN4. The company's innovative culture. Practices and results

IN4.1 The company's innovative culture. Practices and results

AR	Group	Element	Description	Reliability
+	IN4.1	IN4.1.1	There are incentives, whether individual or group, for creativity E	T.320
+	IN4.1	IN4.1.2	Individual and group innovation are included in performance evaluations	T.321
+	IN4.1	IN4.1.3	There is time that is formally allotted (in established conditions) for the development of and participation in innovation projects or initiatives	T.322
+	IN4.1	IN4.1.4	There is an implemented system for the capture and management of ideas that is in regular use	T.323
+	IN4.1	IN4.1.5	The internal dissemination of projects and results occurs in a systematic way	T.324
+	IN4.1	IN4.1.6	Number of internal dissemination events regarding innovation projects or initiatives that are held during the year	T.325
+	IN4.1	IN4.1.7	Internal-level publications dissemination the results of innovation projects	T.326
+	IN4.1	IN4.1.8	There is a plan to develop creativity and innovative culture in the company, and there is a method for evaluating its development and the measurement of innovative culture within the company, which is applied with a frequency of at least once a year	T.327
+	IN4.1	IN4.1.9	Value of the parameter of quantification of the company's innovative culture	T.328
+	IN4.1	IN4.1.10	Existence of an innovation unit	T.329

