Water Supply and Sanitation Sector in Portugal

PPPs – Private Concessions

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Global Index

1 – MANAGEMENT MODELS

Operators may adopt 3 different management models – direct management, delegation and concession – in both State-owned systems and Municipal or Intermunicipal owned systems. The private sector only intervenes through 2 models.

Source: ERSAR.

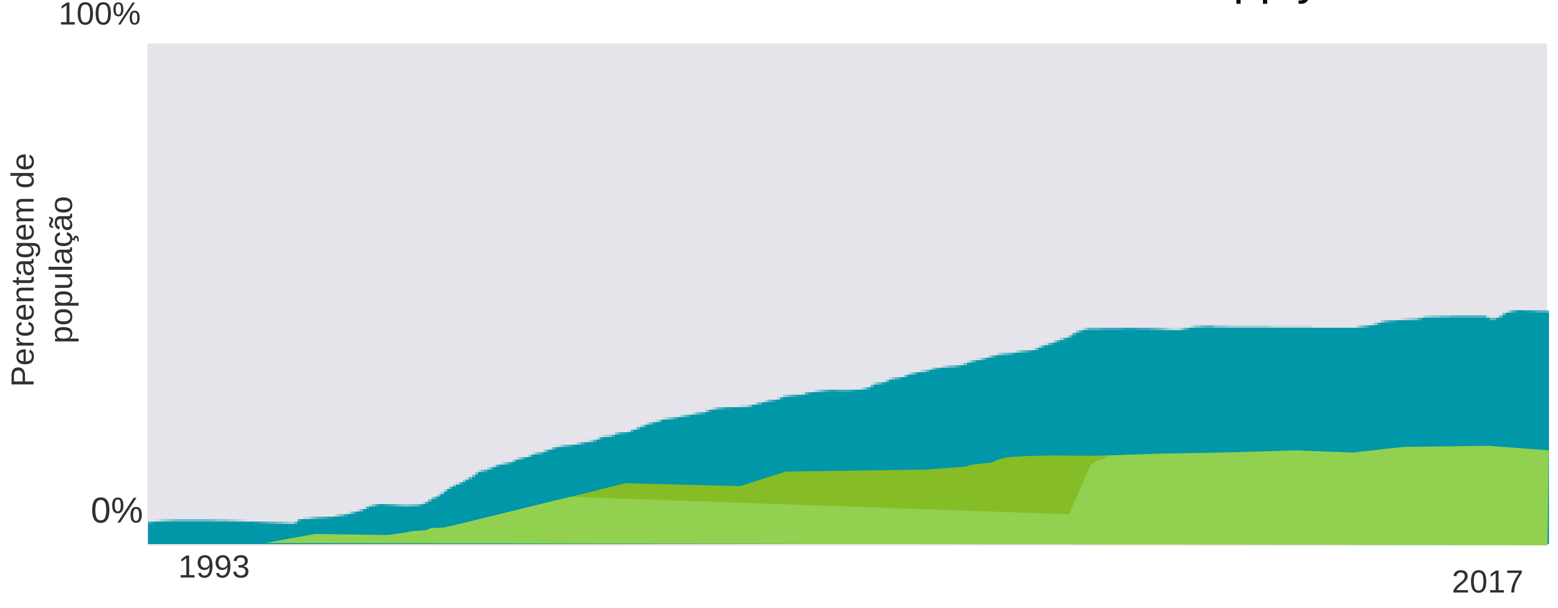
Management Model	Operator	Description	Private Sector participation
State-owned systems			
Direct management	State	• State is the operator itself (there is currently no case).	✖
Delegation	State-owned company	• State is the owner but the entity has an independent management (EPAL is the only example).	✖
Concession	Multimunicipal concessionaire	• State and municipalities participate in the capital of the concession.	✖
Municipal or Intermunicipal owned systems			
Direct management	Municipal services	• Services are directly managed by the Municipalities, having no administrative and financial autonomy.	✖
	Municipalized services	• Services have administrative and financial autonomy and are managed by its Board of Directors but have no legal personality.	✖
	Association of municipalities (intermunicipalized services)	• Collaborative public management body in which several municipalities take part.	✖
Delegation	State/ Municipality partnership	• State and municipalities participate in the capital of the company.	✖
	Municipal owned company	• One or several municipalities participate in the capital of the company (privates can have up to 49% - PPP model).	✔
Concession	Municipal concessionaire	• Concession by the Municipality to a third party, public or private, through a concession contract.	✔

Typical features of Concession Contrats

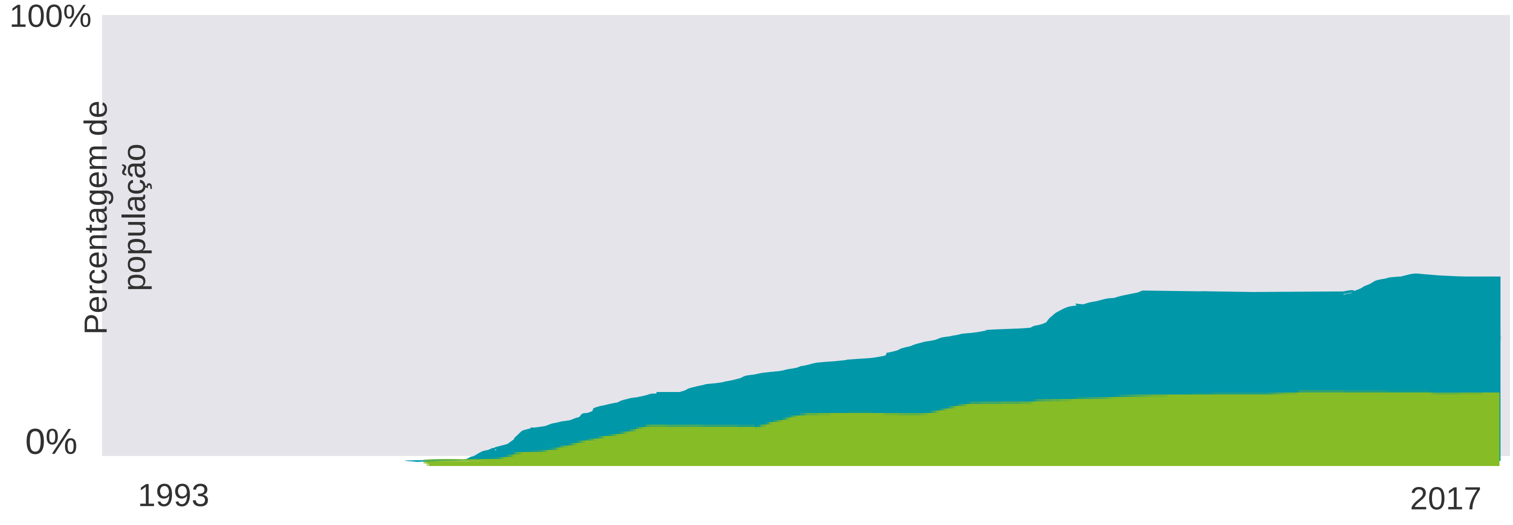
Length	25 to 50 years.
Activities	Development of networks. Manage Water supply and Wastewater collection.
Objectives	Expansion investments, reinvestment (upgrades) and operation efficiency.
Concession fee	Annual rent.
Performance security	Bank guarantee and shareholders guarantee.
Concessionaire compensation	Through tariff collection to the clients.
Financial rebalancing	Trigger events (significant deviations from Base Case): - Water consumption volume – Investment plan – Legal and regulatory changes – Others Rebalancing through: - Tariffs; - Concession fee; - Length of concession; - Direct financial compensation; - A combination of the above.

Currently, water and sanitation concessions cover, more or less, 20% of the population, being dispersed throughout the national continental territory

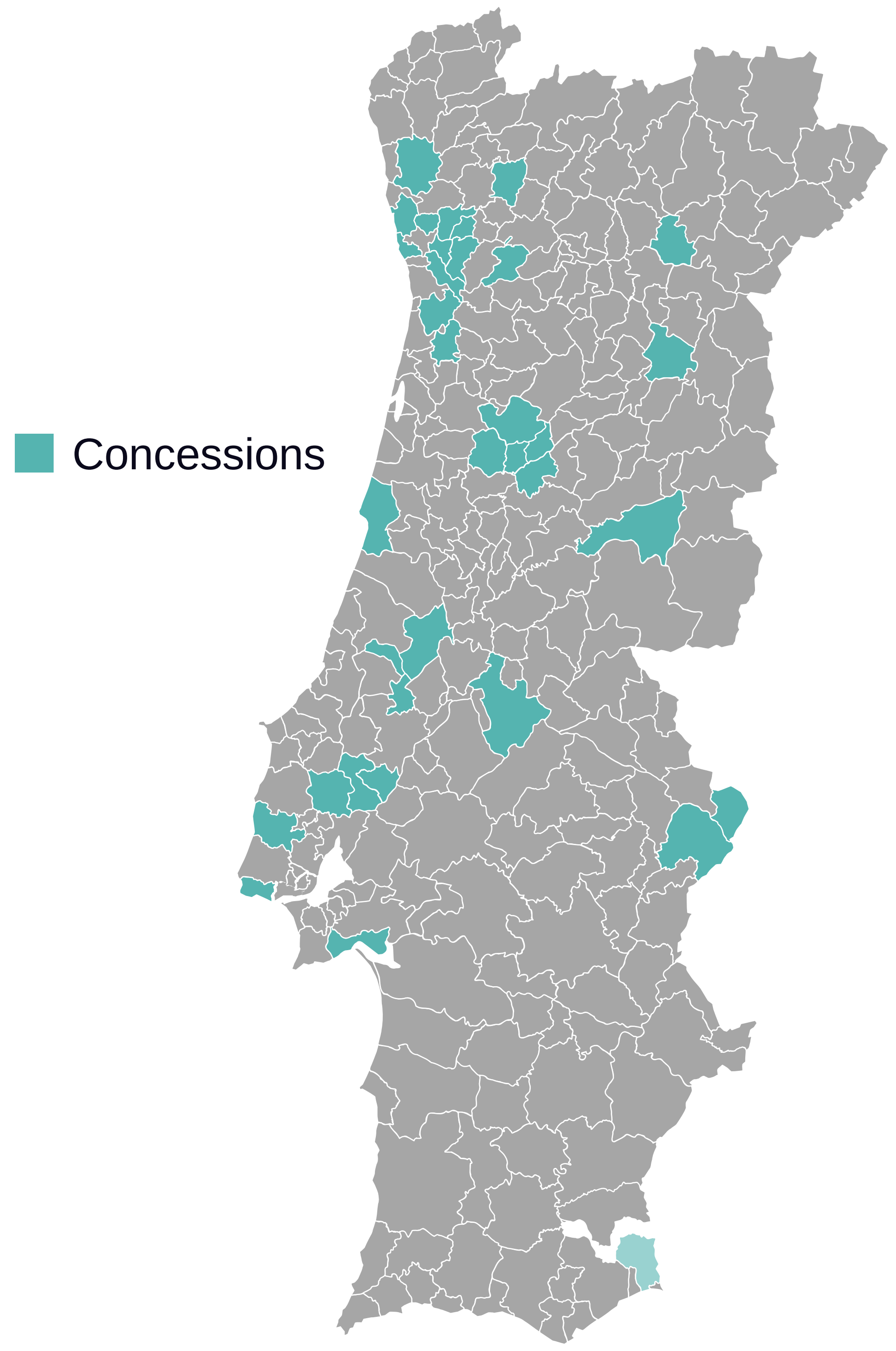
Evolution of the sector related to the water supply



Evolution of the sector related to urban wastewater sanitation



Municipal management Delegated management Private concession



It is noted that the national impact of private municipal concessions, socially and financially, is significant

investments	Population covered by water supply	Population covered by wastewater sanitation	Water supply staff	Wastewater sanitation staff
1.200 M€	20%	17%	1.250	650

The Concession award procedure follows the provisions of the Public Procurement Code and counts on the involvement of several entities in their different phases

The decision to award the concession of a municipal service must be preceded by a study that demonstrates the financial viability of the concession resulting from the development of the activity through this management model

I – Decision to contract

Deliberation of the Municipal Assembly - competent to authorize the expenses inherent to the contract to be celebrated

II – Regulater opinion on the tender

The municipality must take into account the recommendations of the regulator

III – International public tender

The tender bust be under the provisions of the Public Procurement Code

IV – Regulater opinion on draft contrat

V – Contrat approval

VI – Contrat celebration

VII – Opinion court of Auditors

In addition to municipal entities and competitors, the concession process also counts on the participation of ERSAR and the Court of Auditors

In summary, the tender process is transparent, scrutinized by several entities, attracting many entities, namely foreign

Regulation by contract

Long-term contracts between a private entity and a public entity, where the regulator verifies if the contract is being complied with, in particular as regards the revision of tariffs

Municipality ⟷ **Contrat** ⟷ **Concessionaire**

- Contracts subject to competitive processes -
- Rates and review mechanisms defined in the contract -
- Technical requirements and quality of service defined by the Municipality -
- Contractual review and conflict resolution follow the rules defined in the contracts -

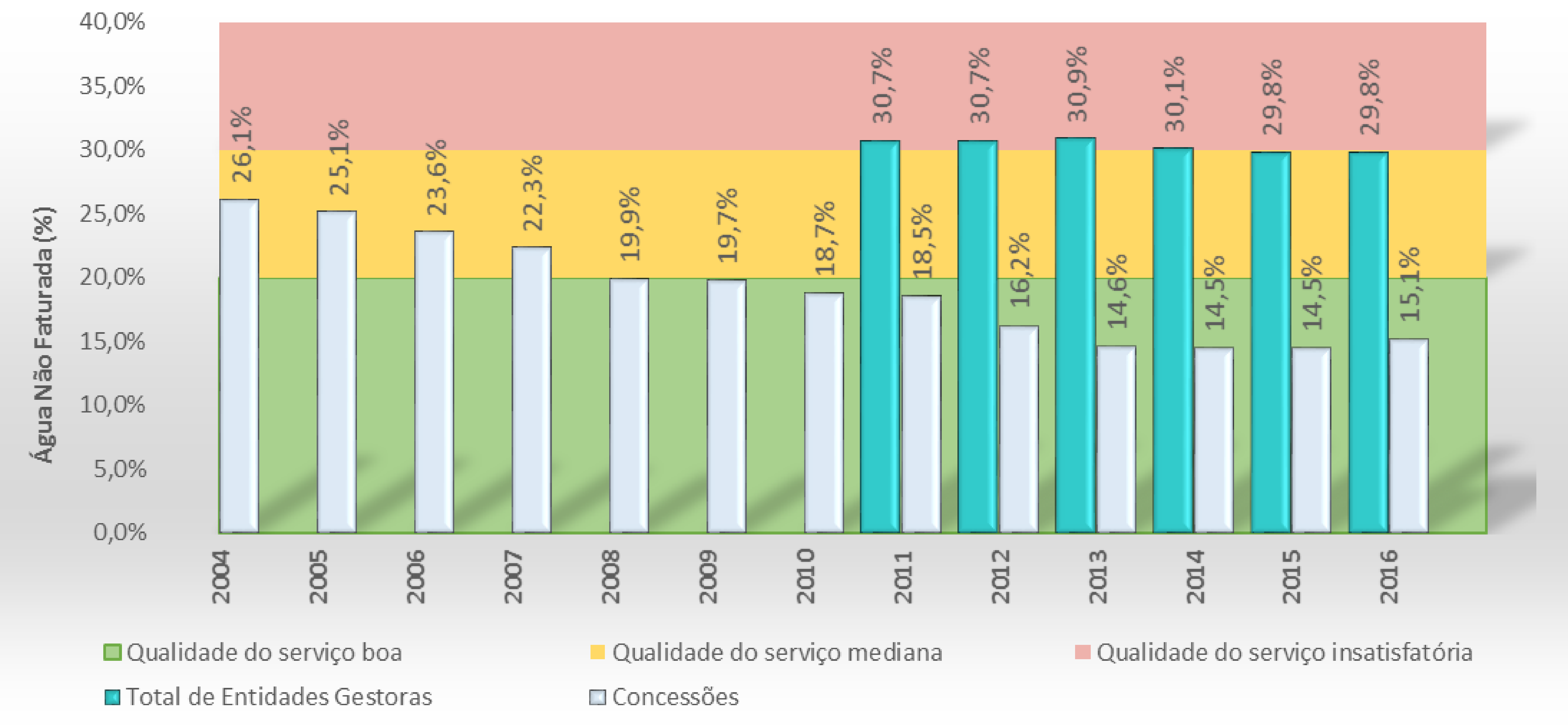
The performance of the private sector is positive in relation to the established objectives, presenting values higher than the public sector in most of the categories

Performance

- The private sector performs well in the various quality of service categories, with emphasis on water quality, wastewater quality, customer service, service failures and water losses.
- The concessions have cost coverage levels above 100%
- The economic accessibility of the service in private concessions is satisfactory

Information presented by the Regulator - Evolution of key indicators

AA08 indicator – Non Revenue Water (NRW)



PENSAAR 2020

Progress of performance indicators

Public and Private entities

Part 3 - PENSAAR 2020 Progress of performance indicators

Parcial Index

Framework
Objectives, scope and methodology

Evolution of water supply (last 7 years)
Analysis of indicators for water services. Comparison of performance of public and private management entities - retail systems (water supply)

Evolution of Wastewater Collection (last 7 years)
Analysis of indicators for Wastewater Collection. Comparison of performance of public and private management entities - retail systems (Wastewater Collection)

Considerations on Water Management efficiency
ındicators and other elements that influence the efficiency of systems

Conclusions
Overall performance of public and private entities

1 Present the comparison of the performance between the public and private sector according to PENSAAR indicators

2 Present the performance and contribution of the private sector to the evolution of the PENSAAR 2020 indicators

FRAMEWORK - Scope

Here we analyzed some of the Portuguese Regulator performance indicators, selected in PENSAAR to measure the evolution in the quality of service in water and wastewater, comparing between public and private water utilities .

WATER SUPPLY SYSTEM

- AA12 – Real Water Losses
- AA03 – Supply Failures
- AA11 – Breakdowns in Pipelines
- AA02 – Economic Service Accessibility

Public

Private

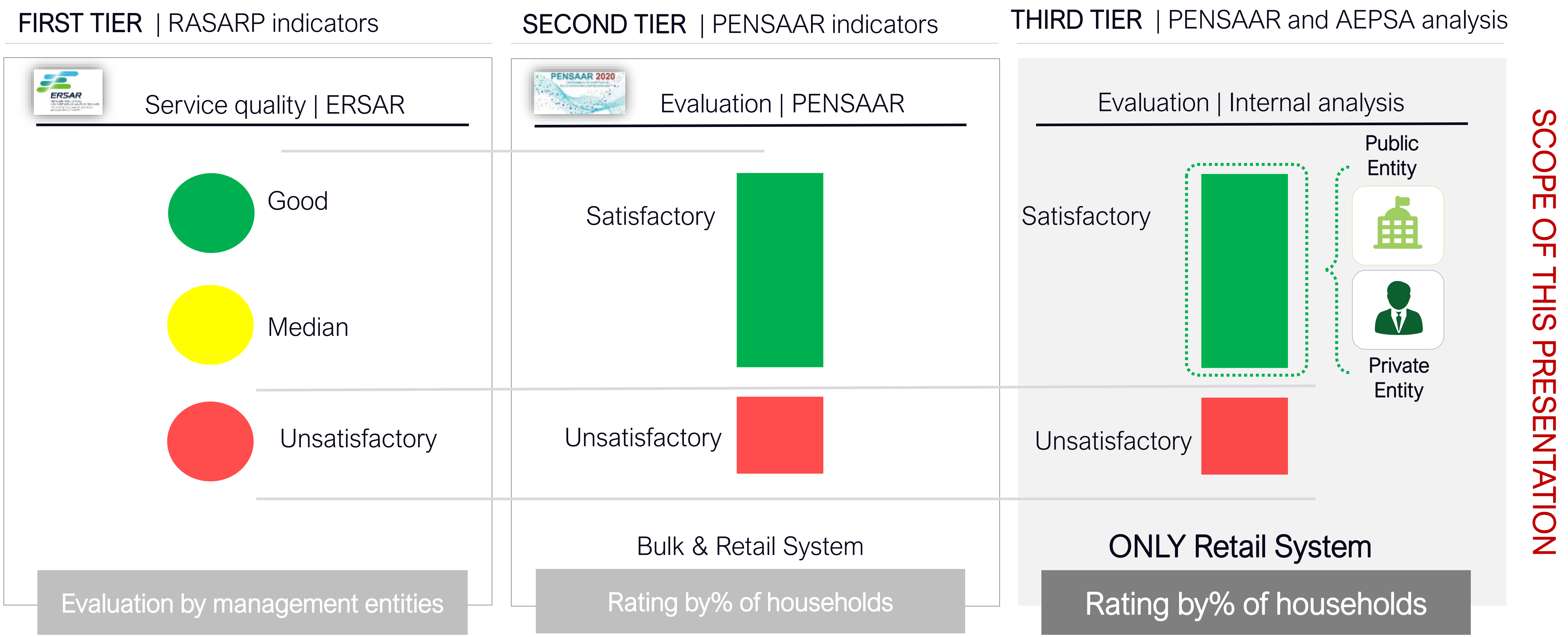
WASTEWATER COLLECTION

- AR14 – Wastewater Analysis
- AR15 – Compliance with Discharge Parameters
- AR12 – Adequate Waste Water Destination
- AR09 – Occurrence of Structural Collapse in Collectors

3 – PENSAAR 2020 – progress of performance indicators

FRAMEWORK - Metodology

We use the same assumptions considered by the support group responsible for the PENSAAR 2020 evaluation. This rationale allows us to make a direct comparative study between public and private management. The scope is limited to the retail system excluding bulk water utilities (exclusively public).



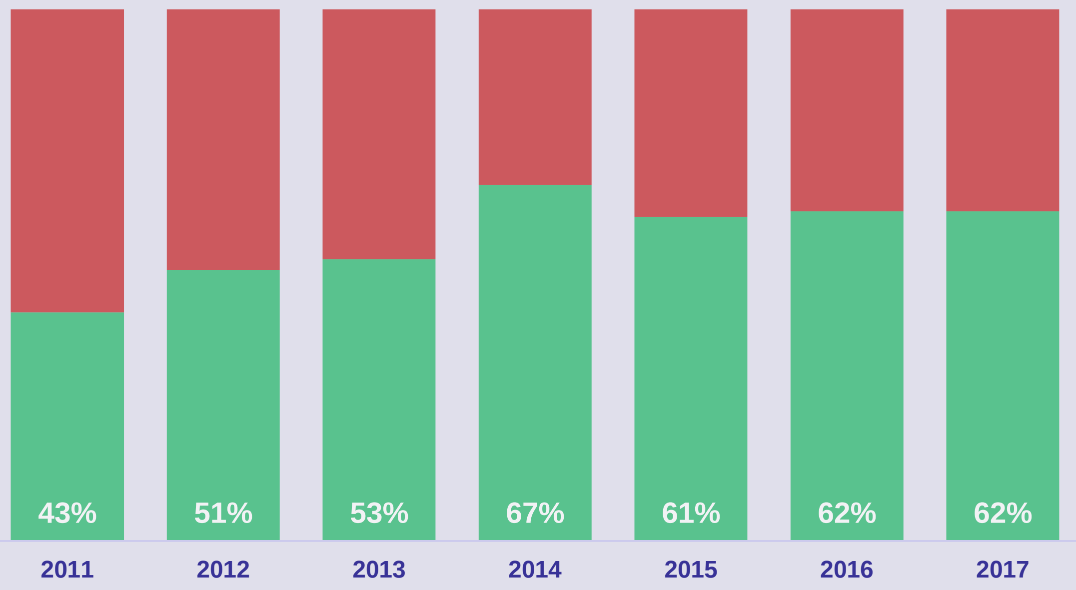
3 – PENSAAR 2020 – progress of performance indicators

EVOLUTION OF WATER SUPPLY SYSTEM

AA12	REAL WATER LOSSES	% of households covered by Management Entity with a satisfactory valuation in the real water losses	TARGET (2020) ➡ 80%

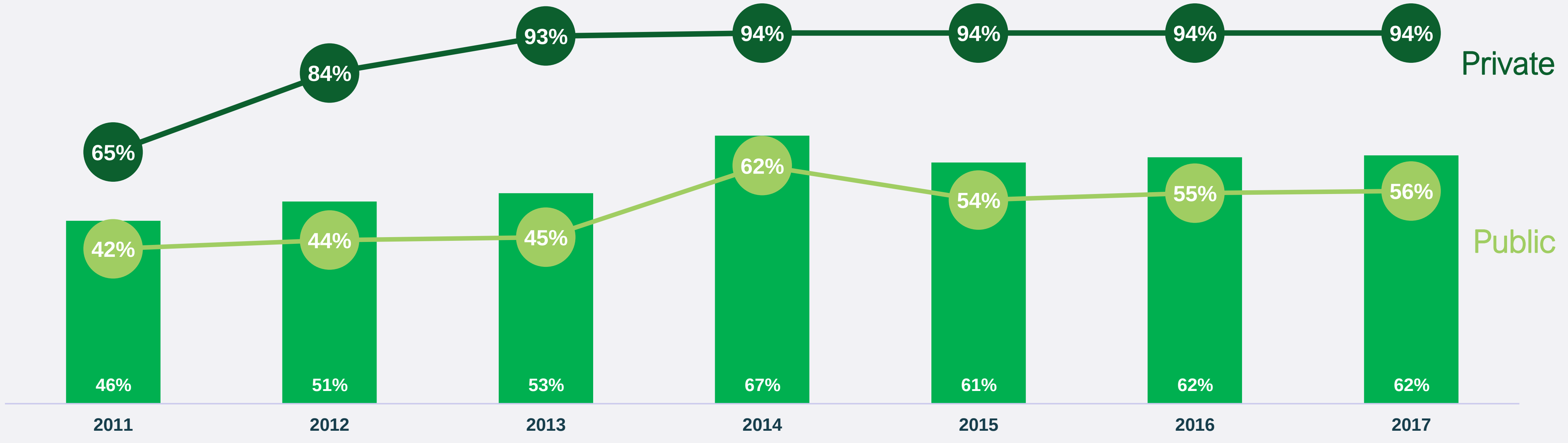
RETAIL SYSTEM

Source: data from PENSAAR 3rd report



ONLY PRIVATE vs PUBLIC SECTOR

(Satisfactory Evaluation only)



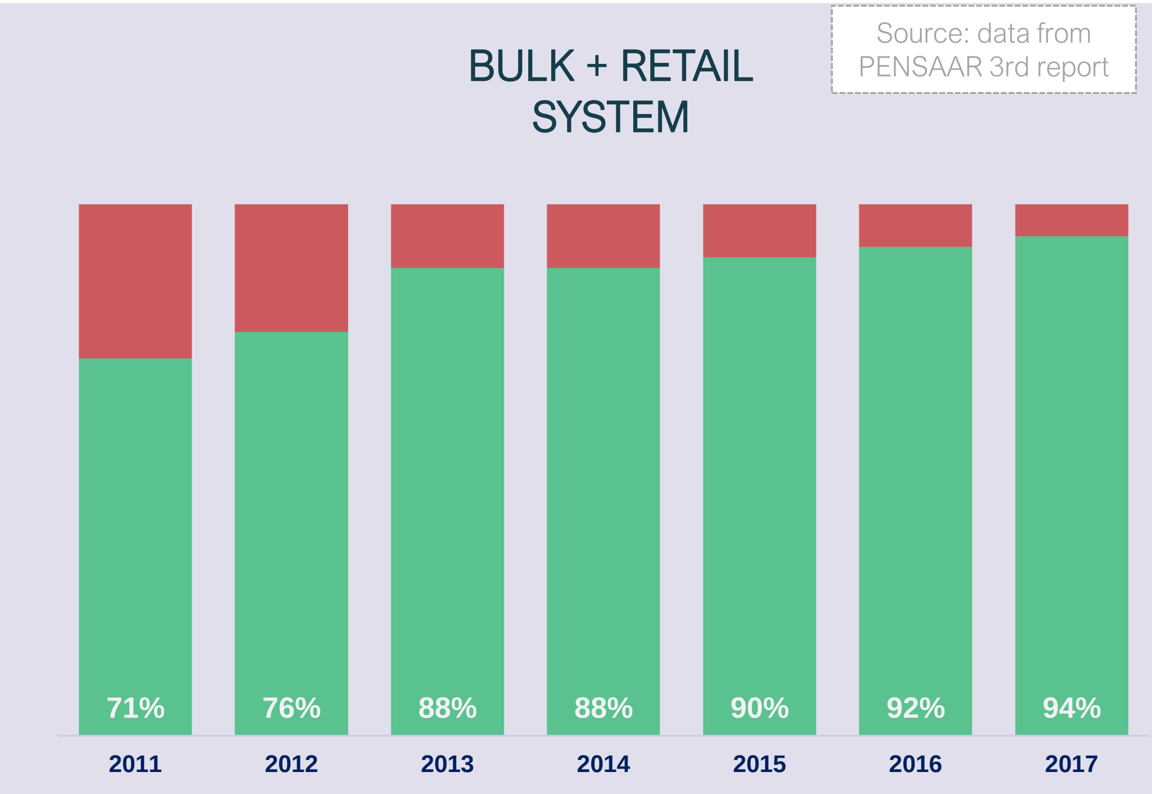
- Regular growth rate over the years with a peak in 2014 to achieve a satisfactory evaluation in 2017 of 62% of households;
- Private sector with much higher score over the years (37% on average) and above the 2020 target. Public sector still behind and 24% below 2020 target;
- Private sector contributed to this KPI with 94% of households served by private entities with a satisfactory evaluation;
- Excluding the contribution of the private sector this KPI would reach a poor rate of 56% of compliance in 2017.

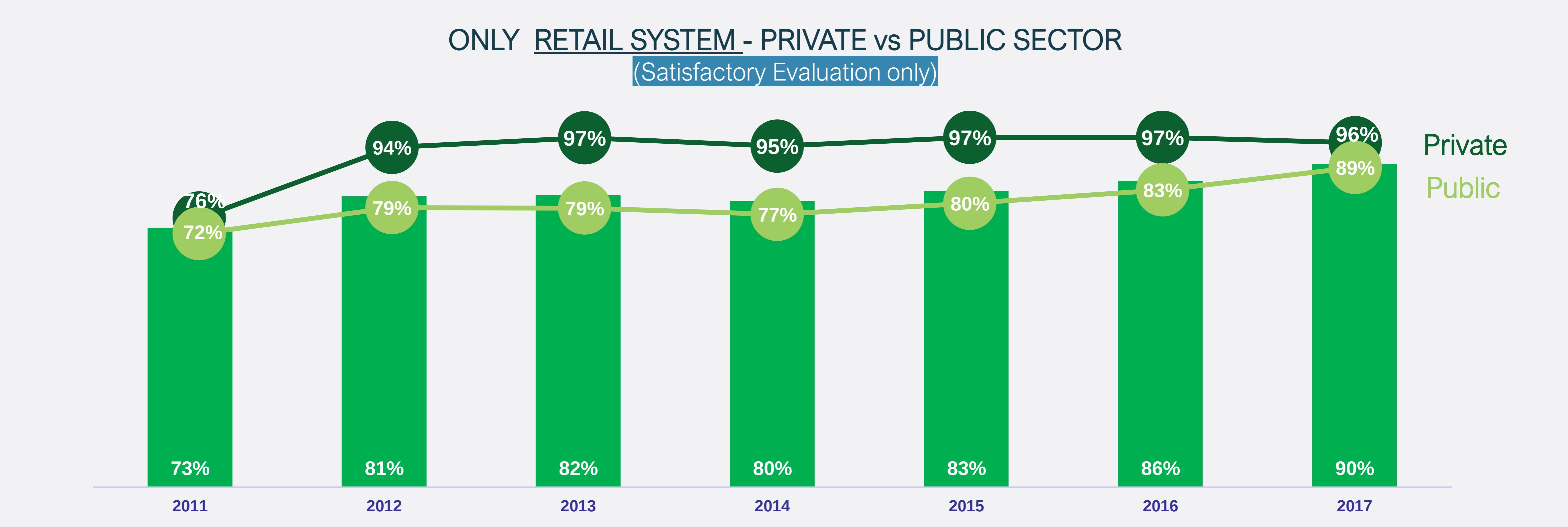
SATISFACTORY EVALUATION
average 2011-2017

Public Sector	51%	~37%
Private Sector	88%	

3 – PENSAAR 2020 – progress of performance indicators
EVOLUTION OF WATER SUPPLY SYSTEM

AA03	SUPPLY FAILURES	% of households covered by Management Entity with satisfactory evaluation in the occurrence of supply failures	TARGET (2020) ➡ 100%





- The joint assumption in this KPI of bulk + retail raises the level of compliance from to 94%. If exclusively considered the retail performance satisfaction level would drop 4% to 94% overall;
- Private sector with regular scores, always higher than public sector (13%% on average) and close to the 2020 target. Public sector with regular growth and getting closer to the target;
- Private sector contribution is of 96% of households covered while public sector contributes with 89% to the same indicator.

Satisfactory Evaluation average 2011-2017

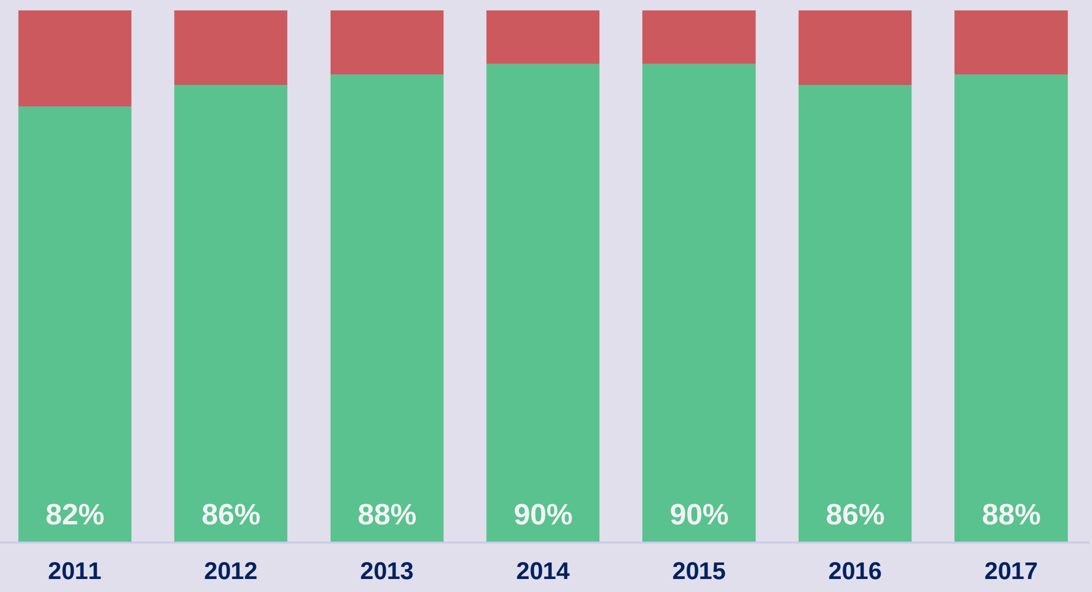
Public Sector	81%	~12%
Private Sector	93%	

EVOLUTION OF WATER SUPPLY SYSTEM

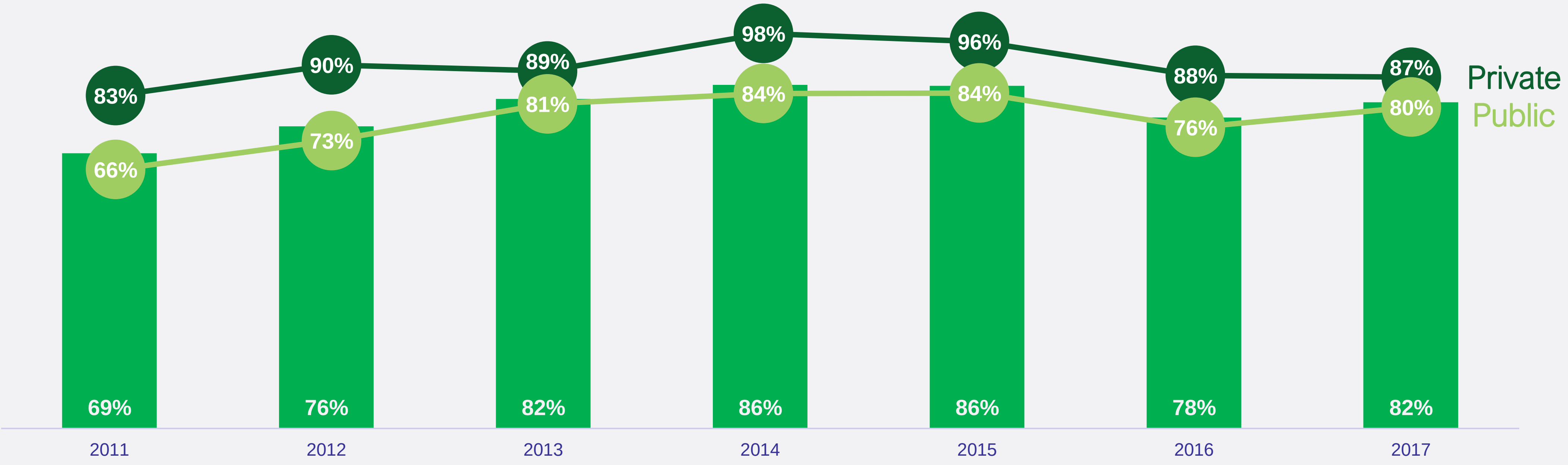
AA11	BREAKDOWNS IN PIPELINES	% of households covered by Management Entity with satisfactory evaluation in the occurrence of Breakdowns in Pipelines	TARGET (2020) ➡ 90%

Source: data from PENSAAR 3rd report

BULK + RETAIL SYSTEM



ONLY RETAIL SYSTEM - PRIVATE vs PUBLIC SECTOR
(Satisfactory Evaluation only)



- Both private and public sector with regular scores, but private always higher than public sector (12%% on average). Private sector really close to the target (3% down only);
- Regular scores over the years and really close to the 2020 target. Only one down in 2016;
- Excluding bulk, the KPI drops from 88% to 82% compliance;
- For that 82% compliance rate, the private sector contributes with 87% of households covered with a satisfactory evaluation.

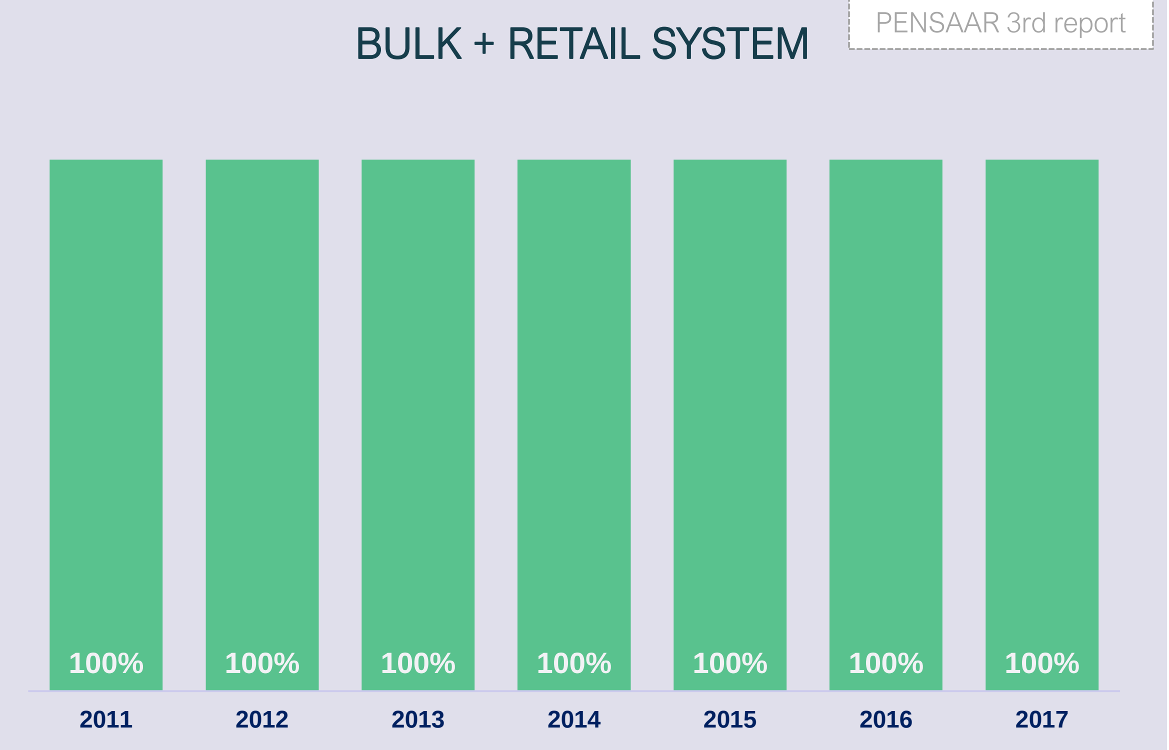
Satisfactory Evaluation
Average 2011-2017

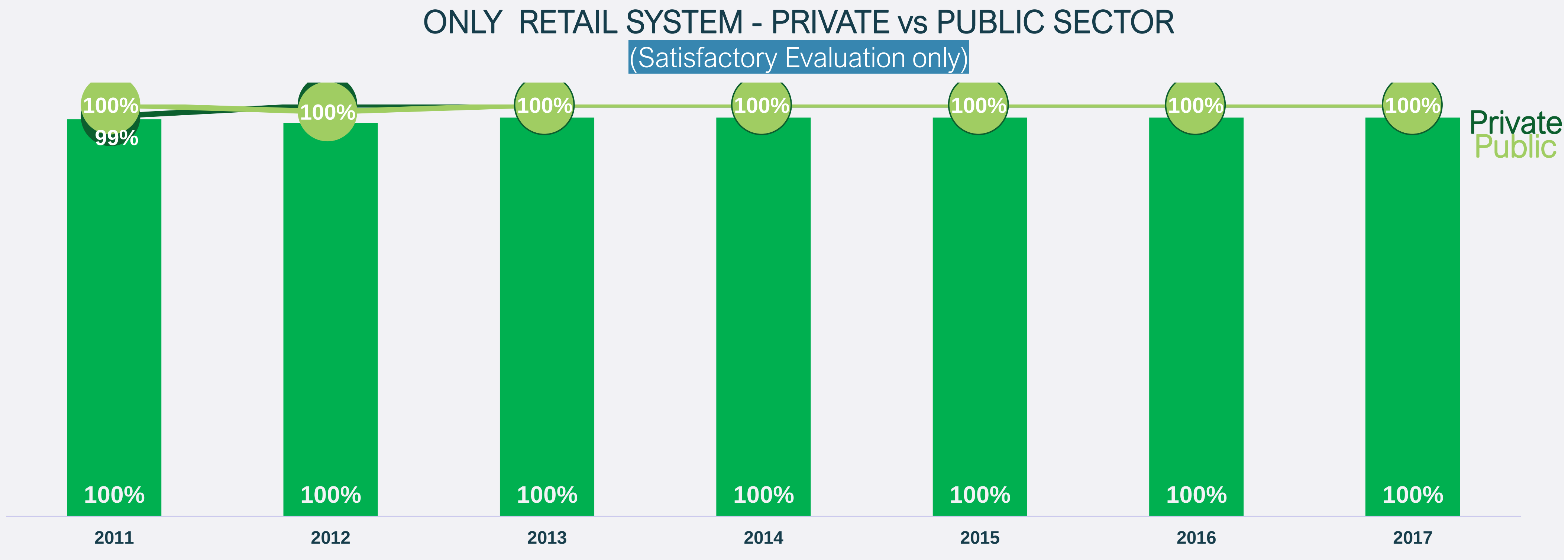
Public Sector	78%	~12%
Private Sector	90%	

3 – PENSAAR 2020 – progress of performance indicators
EVOLUTION OF WATER SUPPLY SYSTEM

AA02	ECONOMIC SERVICE ACCESSIBILITY	% of households covered by Management Entity with satisfactory evaluation of the economic accessibility of the service	TARGET (2020) ➡ 100%

Source: data from PENSAAR 3rd report





- Both private and public with the maximum score of 100% over the years;

Satisfactory Evaluation
Average 2011-2017

Public Sector	100%	~0%
Private Sector	100%	

3 – PENSAAR 2020 – progress of performance indicators
EVOLUTION OF WATER SUPPLY SYSTEM - OVERVIEW

The private sector presents in 2017 higher scores and is very close to achieve the 2020 target score.

WATER SUPPLY SYSTEM		TARGET	BULK + RETAIL	RETAIL		
2017		2020	Total	Total	Private	Public
AA12	REAL WATER LOSSES	80%	-	62%	94%	56%
AA03	SUPPLY FAILURES	100%	94%	90%	96%	89%
AA11	BREAKDOWNS IN PIPELINES	90%	88%	82%	87%	80%
AA02	ECONOMIC SERVICE ACCESSIBILITY	100%	100%	100%	100%	100%

Variation < 10%

Variation > 10% e < 20%

Variation > 20%

Notation: all the numbers are form 2017 (Satisfactory Evaluation)

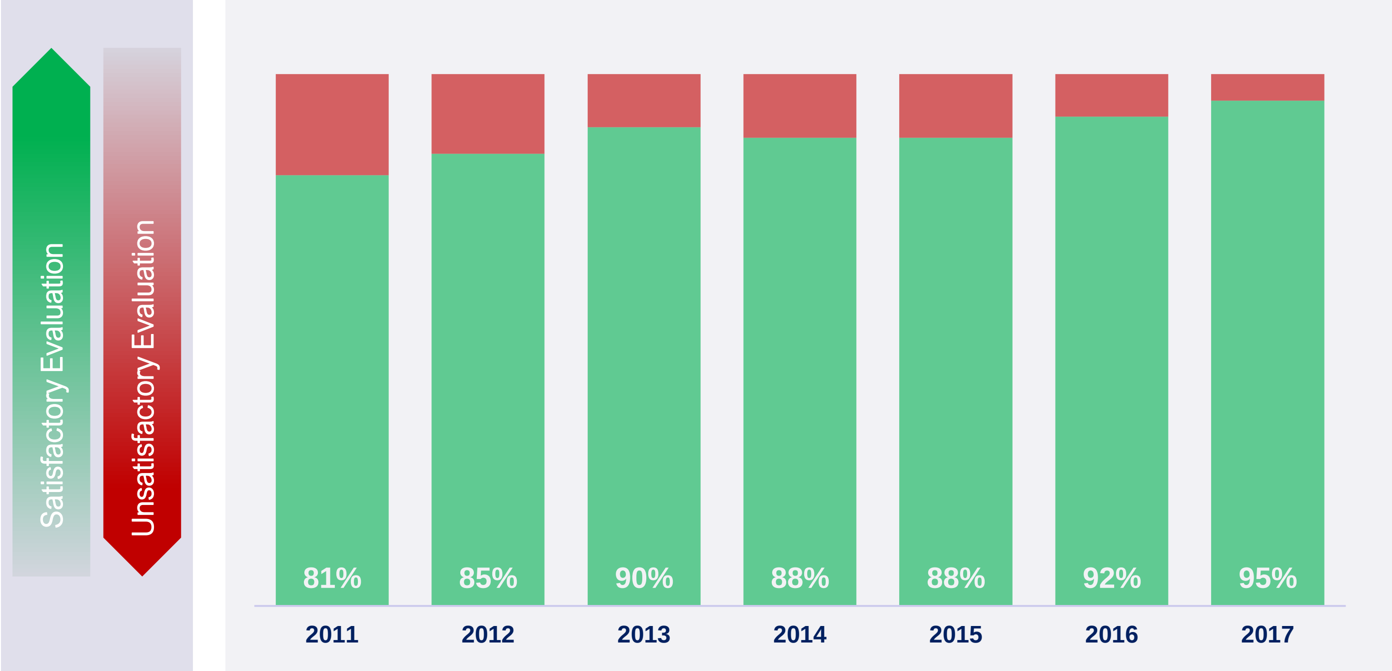
3 – PENSAAR 2020 – progress of performance indicators
EVOLUTION OF WASTEWATER COLLECTION

AR14	WASTEWATER ANALYSIS	% of households covered by EG with satisfactory evaluation in the indicators Wastewater analysis	TARGET (2020) ➡ 100%

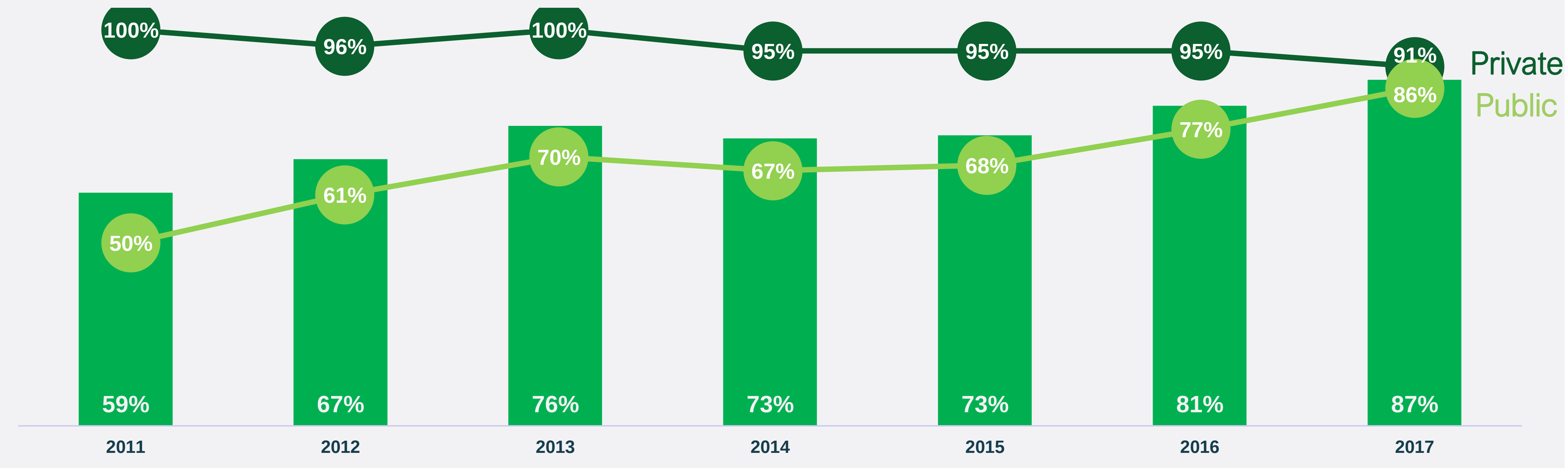
Label

BULK + RETAIL SYSTEM

Source: data from PENSAAR 3rd report



ONLY RETAIL SYSTEM - PRIVATE vs PUBLIC SECTOR
(Satisfactory Evaluation only)



KEY FINDINGS

BULK + RETAIL SYSTEM	RETAIL SYSTEM – Global	RETAIL SYSTEM – Private Vs Public
Regular high scores over the years, growing since 2015. Really close to the 2020 target.	Good growth rate over the years, especially in the last 2 years. Not so far to he 2020 target.	Private sector with regular high scores, always higher than public sector (28% on average) and close to the 2020 target. Public sector with good growth since 2015 and getting closer to the private sector and target.

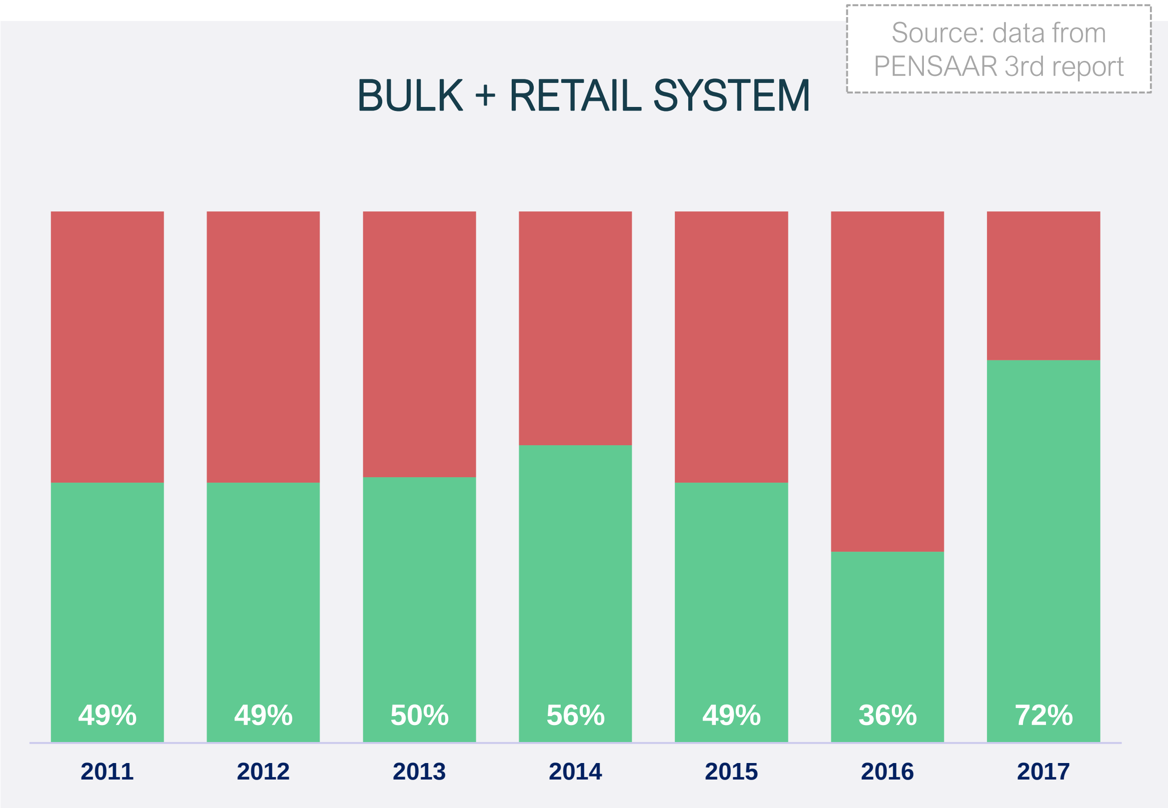
Satisfactory Evaluation
(average 2011-2017)

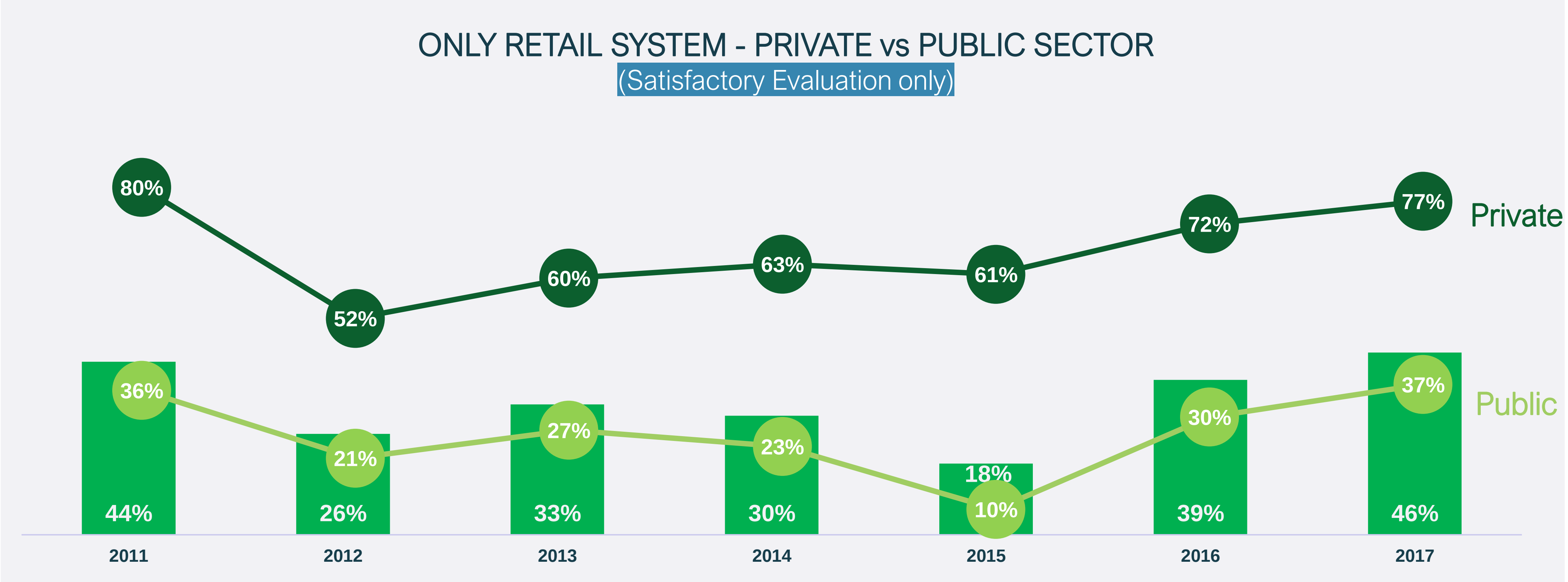
Public Sector	68%
Private Sector	96%

~28%

3 – PENSAAR 2020 – progress of performance indicators
EVOLUTION OF WASTEWATER COLLECTION

AR15	COMPLIANCE WITH DISCHARGE PARAMETERS	% of households covered by EG with satisfactory evaluation in compliance with the discharge parameters	TARGET (2020) ➡ 80%





KEY FINDINGS

BULK + RETAIL SYSTEM	RETAIL SYSTEM – Global	RETAIL SYSTEM – Private Vs Public
Regular scores over the years a high growth in 2017, getting very close to the 2020 target.	Lower scores than the “bulk + retail system”. Ups and downs over the years but growing since 2015. Still very far from the 2020 target.	Private sector with much higher score over the years (41% on average) and very close to the 2020 target. Public sector with ups and downs, good growth since 2015 but still very far form 2020 target.

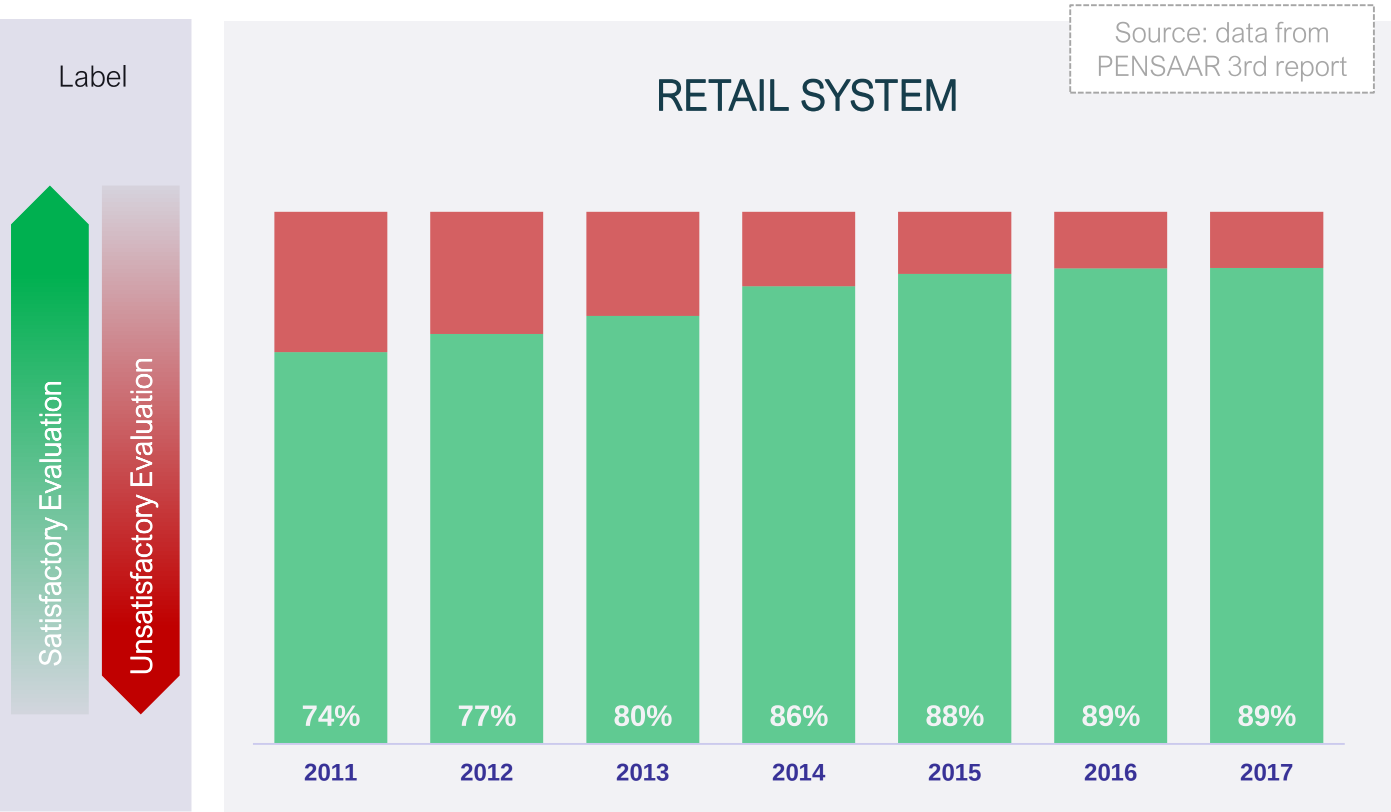
Satisfactory Evaluation
(average 2011-2017)

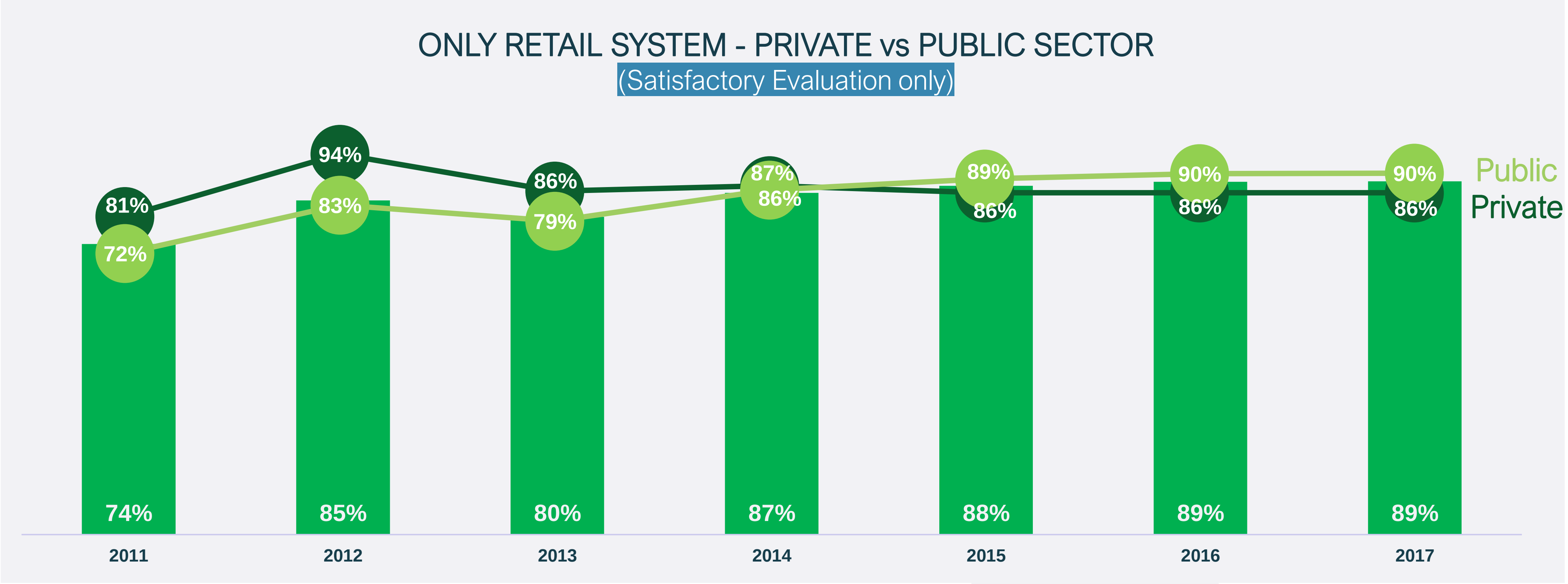
Public Sector	26%	~41%
Private Sector	67%	

3 – PENSAAR 2020 – progress of performance indicators
EVOLUTION OF WASTEWATER COLLECTION

AR12	ADEQUATE WASTE WATER DESTINATION	% of households covered by EG with satisfactory evaluation in the appropriate waste water destination	TARGET (2020) ➡ 100%

Source: data from PENSAAR 3rd report





KEY FINDINGS

BULK + RETAIL SYSTEM	RETAIL SYSTEM – Global	RETAIL SYSTEM – Private Vs Public
N/A	Regular scores over the years and really close to the 2020 target.	Both private and public sector with good scores over the years. In the last 3 years the public sector presents a slightly higher score. Both getting closer to the 2020 target.

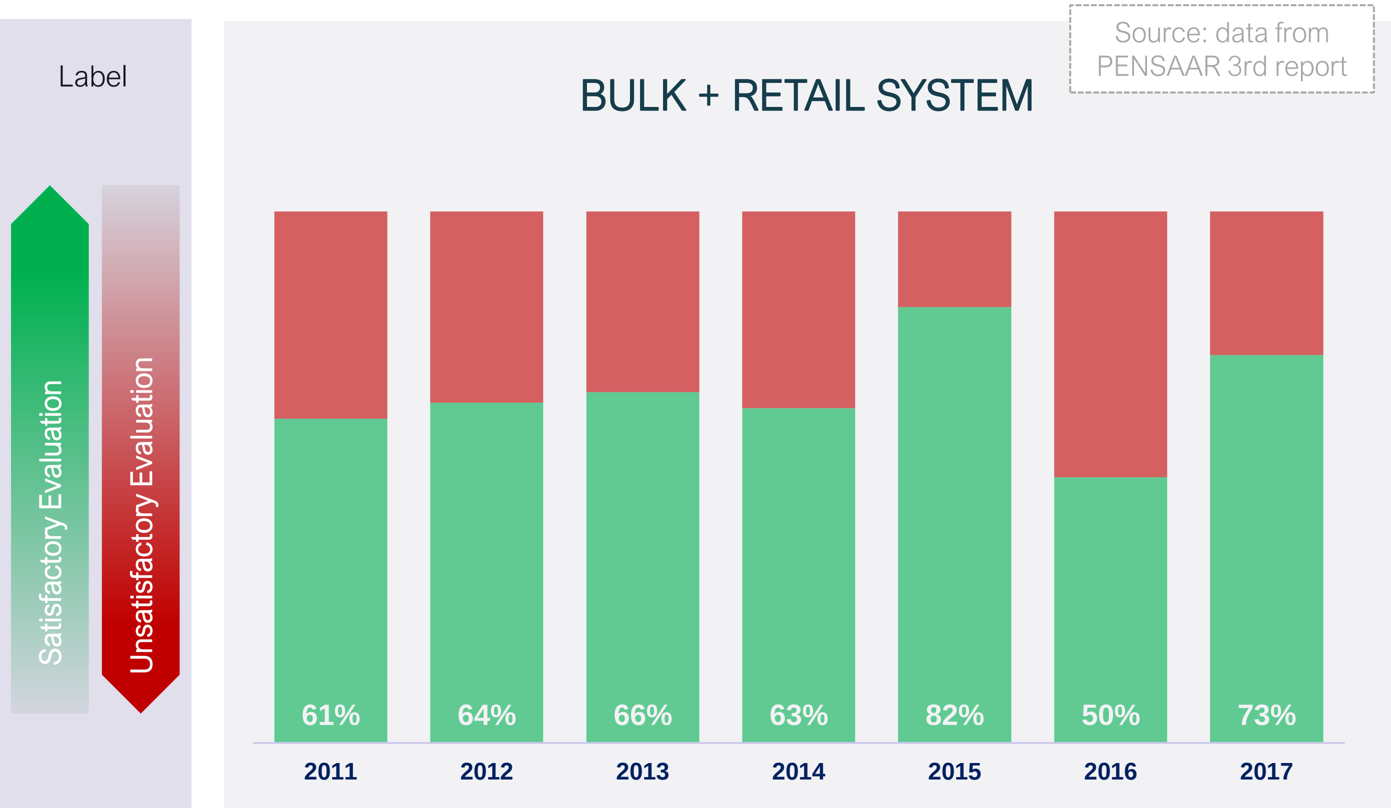
Satisfactory Evaluation
(average 2011-2017)

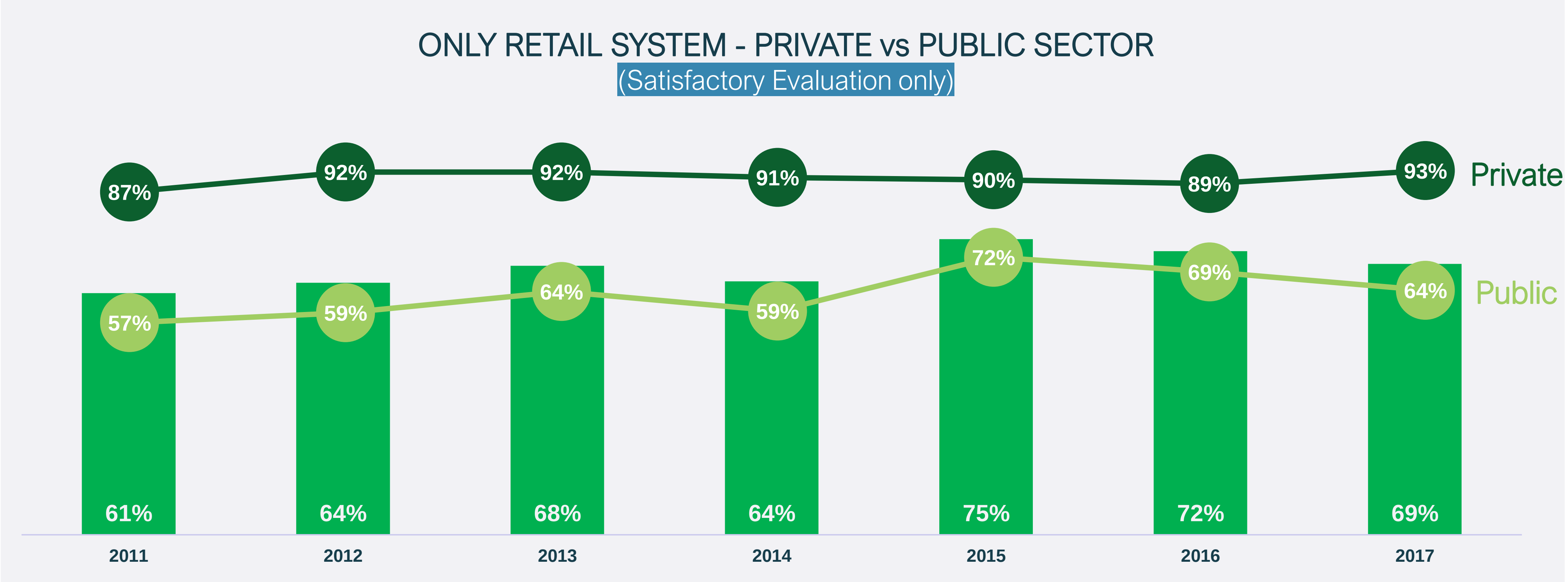
Public Sector	84%
Private Sector	86%

~2%

3 – PENSAAR 2020 – progress of performance indicators
EVOLUTION OF WASTEWATER COLLECTION

AR09	OCCURRENCE OF STRUCTURAL COLLAPSE IN COLLECTORS	% of households covered by EG with satisfactory evaluation in Occurrence of structural collapses in collectors	TARGET (2020) ➡ 80%





KEY FINDINGS

BULK + RETAIL SYSTEM

Regular scores over the years. A big down in 2016 but a good recovery in 2017. Very close to the 2020 target.

RETAIL SYSTEM

Global

Regular scores over the years, although in the last 2 years the score has been decreasing. Not so far from the 2020 target.

Private Vs Public

Private sector with much higher score over the years (28% on average) and above the 2020 target. Public sector with ups and downs, decreasing since 2015. Not so far from the 2020 target.

Satisfactory Evaluation
(average 2011-2017)

Public Sector	63%
Private Sector	91%

~28%

EVOLUTION OF WASTEWATER COLLECTION - OVERVIEW

The private sector presents in 2017 higher scores and is very close to achieve the 2020 target score.

WASTEWATER COLLECTION		TARGET	BULK + RETAIL	RETAIL		
2017		2020	Total	Total	Private	Public
AR14	Wastewater Analysis	100%	95%	87%	91%	86%
AR15	Compliance with Discharge Parameters	80%	72%	46%	77%	37%
AR12	Adequate Waste Water Destination	100%	-	89%	86%	90%
AR09	Occurrence of Structural Collapse in Collectors	80%	73%	69%	93%	64%

Variation < 10%

Variation > 10% e < 20%

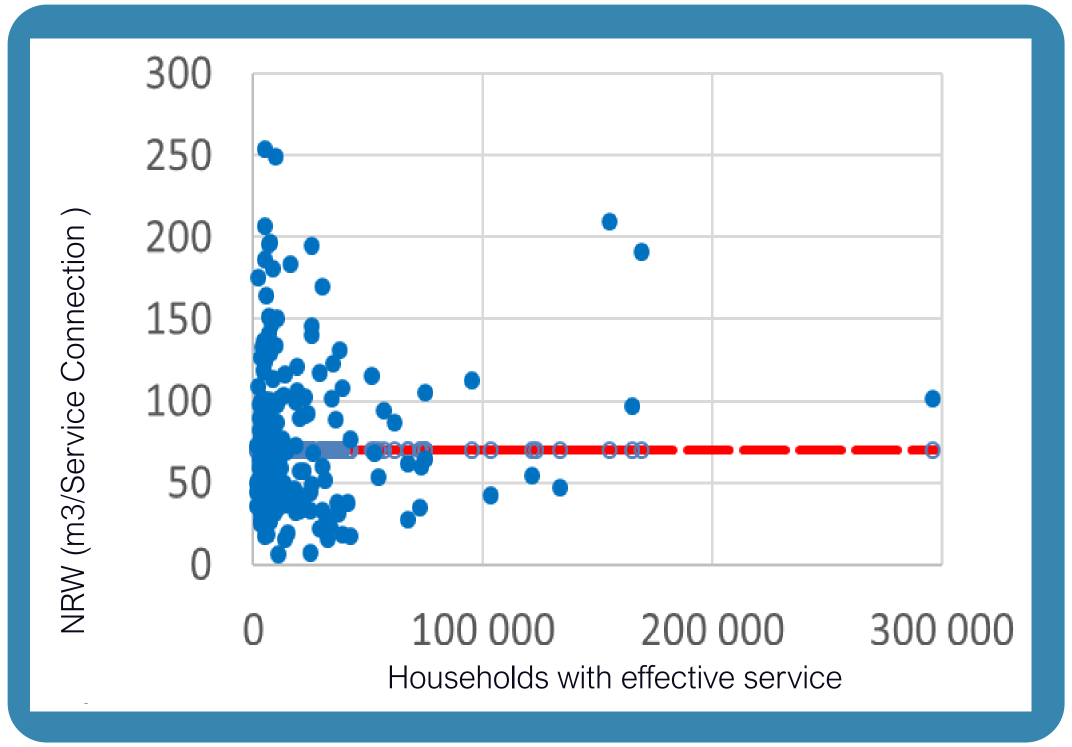
Variation > 20%

Notation: all the numbers are form 2017 (Satisfactory Evaluation)

CONSIDERATIONS ON WATER MANAGEMENT EFFICIENCY

There are indicators that usually are considered critical to achieve the efficiency of NRW, but when we analyze the reality, we find that some of them don’t really have a direct impact on this specific KPI. It is clear that the element which has a bigger influence on the NRW performance is the Management Model.

01 ONE — DIMENSION

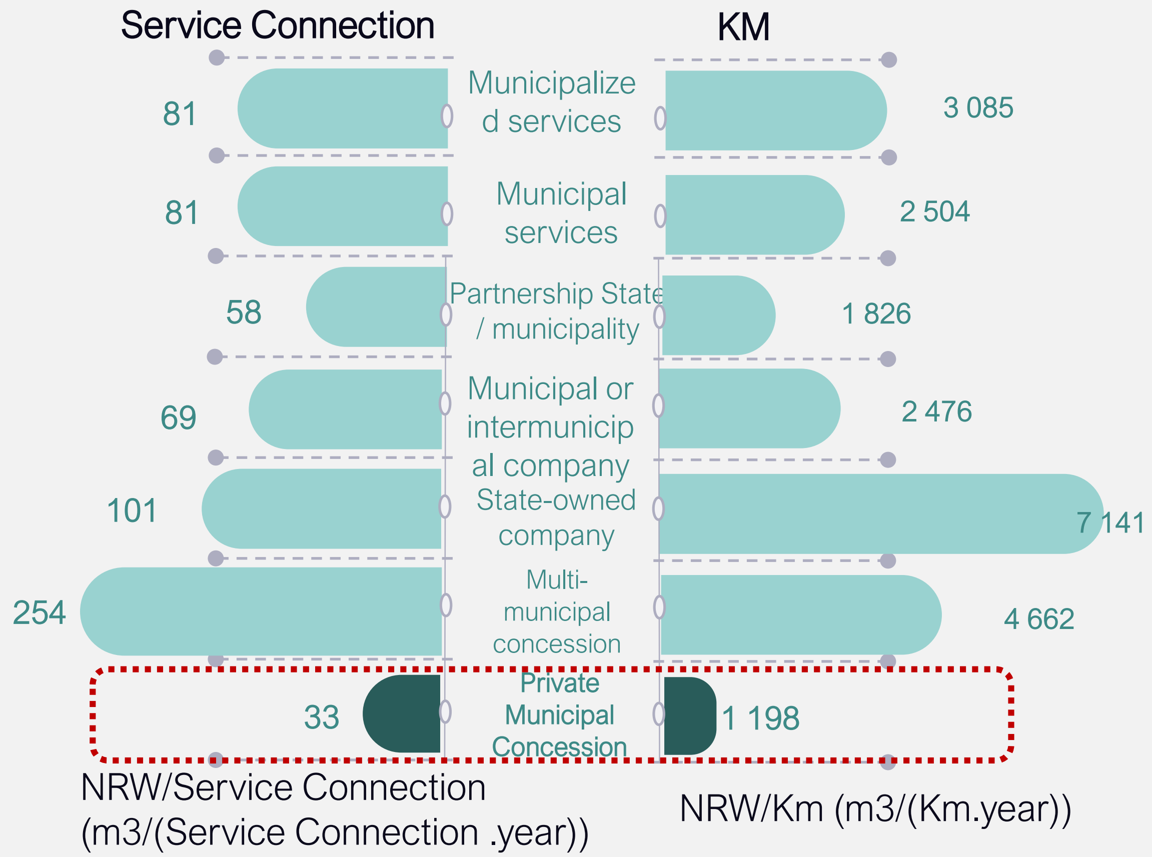


THERE IS NO RELATIONSHIP BETWEEN DIMENSION AND PERFORMANCE IN TERMS OF NRW

02 TWO — GEOGRAPHIC LOCATION

THE GEOGRAPHICAL LOCATION OF THE ENTITIES DOES NOT AFFECT THEIR PERFORMANCE

03 THREE — MANAGEMENT MODEL



THE MUNICIPAL CONCESSION MODEL IS THE ONE WITH THE BEST PERFORMANCE

MAIN CONCLUSIONS

01/ Globally, performance indicators for water supply and wastewater systems that have been on the rise since 2011 are fully leveraged in the positive performance of private management entities

02/ Some indicators have been showing a tendency of stagnation. It means that private entities have achieved maximum efficiency, which good practice recommends, and so can no longer contribute more significantly to the level of national satisfaction

03/ PENSAAR 2020 is not achieving the recommended results, because the water and wastewater sector in Portugal has a very significant weight of public entities (80%) in favor of private entities (20%), which is fully efficient

04/ The balance of public and private management entities in the sector in Portugal is desirable and recommendable, that is, in the short term, greater penetration of the private sector so that Portugal can make the qualitative leap to the level of a more adequate and efficient management of water resources.

05/ The outstanding performance of the private sector is leveraged by the technological solutions it has, the operational expertise, leadership and management experience, greater agility and the introduction of international best practices

The Portuguese water sector is expected to continue to privatize in coming years, creating opportunities for existing players to strengthen their hold on the concession market

THANK YOU!

For more information, please contact AEPSA

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