



# DEMATERIALIZING REGULATORY INFORMATION

ERSAR'S EXPERIENCE

## **RegTechs: Feedbacks from First Experimentations**

# **ERSAR**

ENTIDADE REGULADORA  
DOS SERVIÇOS DE ÁGUAS E RESÍDUOS

*THE WATER AND WASTE SERVICES  
REGULATION AUTHORITY*

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RegTechs

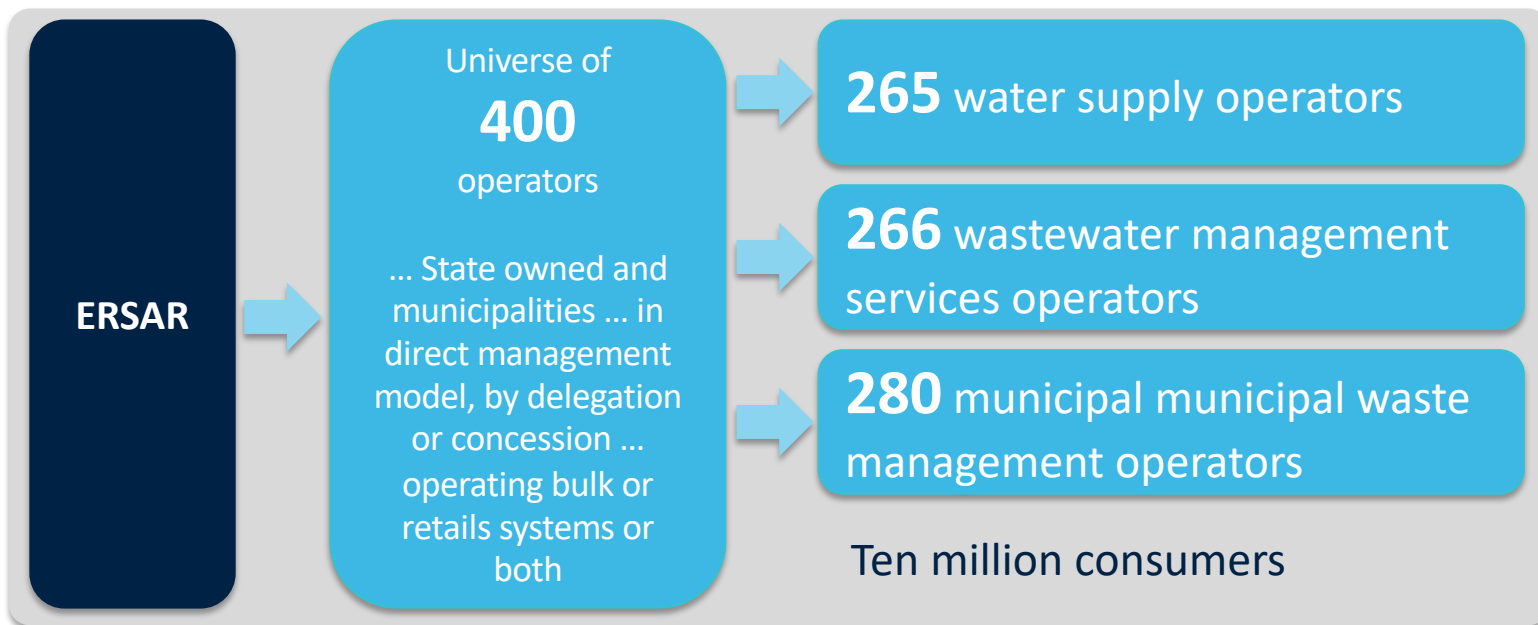
Paris-Dauphine University

November 27<sup>th</sup>, 2018

# ABOUT ERSAR



ERSAR regulates three services: drinking water supply, wastewater management and municipal waste management. The size and diversity of the regulated operators are vast, spanning state owned companies and numerous municipalities.



# PORTAL ERSAR

## A PLATFORM FOR REGULATORY INFORMATION



ERSAR has developed a centralized platform for gathering all the regulatory information about the operators, aiming to simplify the interactions and the compliance with regulatory requirements.

Main characteristics:

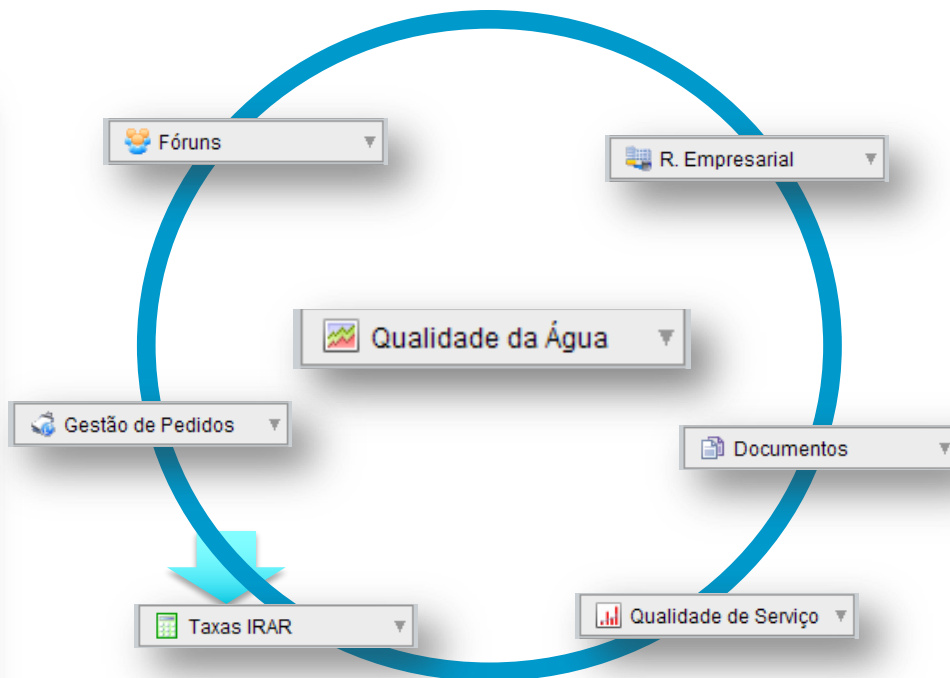
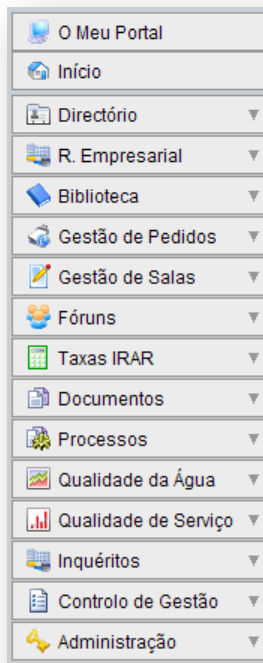
- **A platform for interaction with the operators ("single sign on")**
- **Information reported uniformly**
- **Optimized internal and external procedures, which are uniformly adopted**
- **Automatized pre-validation of information gathered**
- **Centralized information to support decisions**
- **Ability to obtain information at all management levels**
- **Helpdesk focused on procedures and practices**



- **Increased efficiency of operators' procedures**
- **Increased effectiveness and efficiency of ERSAR's procedures**
- **Improved quality of ERSAR's service to society**

# PORTAL ERSAR

## INTEGRATED INFORMATION



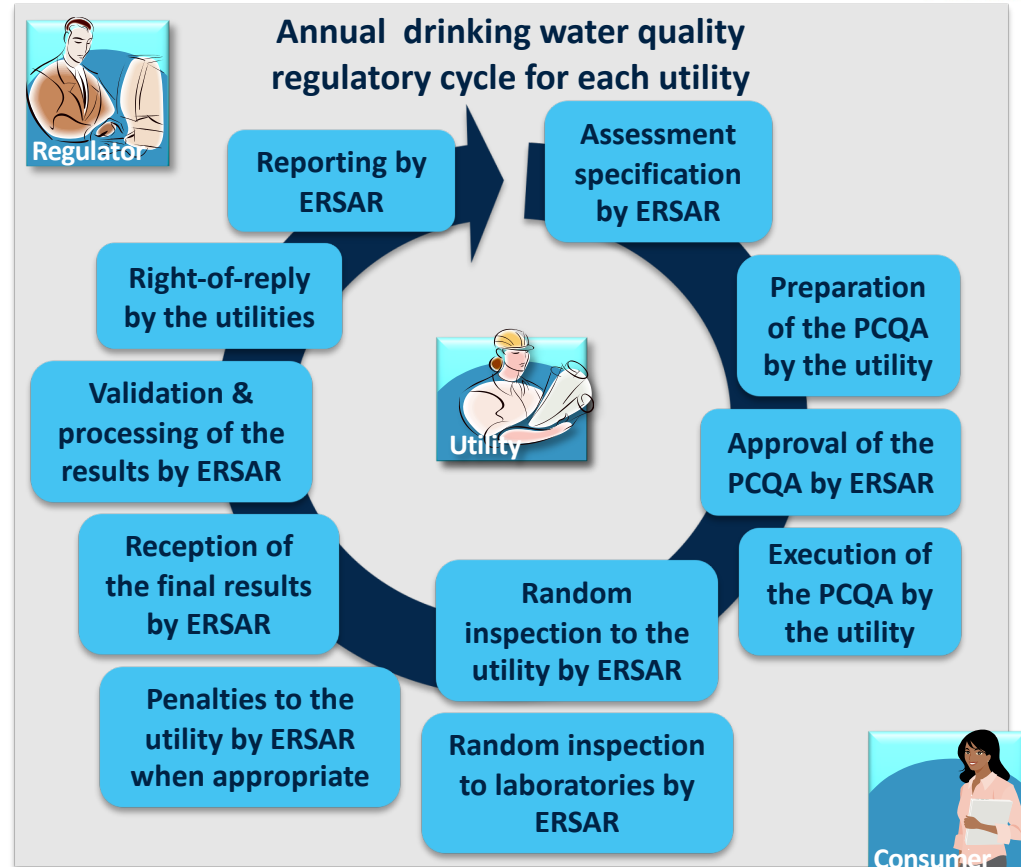
# DRINKING WATER QUALITY REGULATION

Regulatory model where ERSAR plays a pivotal role in ensuring an adequate implementation of the legislation by each operator.

Very important activity because of its relation with public health.

Three main pillars:

- **Planning of quality control analysis – PCQA (year n-1)**
- **Implementation of the plan and reporting of non-compliances in 24 hours (year n)**
- **Reporting of full stack of analysis (year n+1)**



# DRINKING WATER QUALITY REGULATION

## PAPER BASED PROCESS

Previously:

- Paper based documentation
- Checking the compliance of the plan with the legislation was done manually
- Non-compliances were reported by fax or letter (sometimes by e-mail) which did not allow for a rapid intervention
- Ad-hoc reports and data analysis compiled manually
- Very difficult to perform inspections which required documental data to be brought to premises
- Very difficult to prove compliance with EU legislation



# DRINKING WATER QUALITY REGULATION

## PORTAL ERSAR



Now – Planning stage (year n-1):

**Detailed information about water sources, including:**

- Unequivocal reference
- Type of source
- Volumes abstracted
- Geographic coordinates
- Relation with agricultural uses and other uses affecting the source
- Geographic area served
- Type of treatment applied

# DRINKING WATER QUALITY REGULATION

## PORTAL ERSAR



Now – Planning stage (year n-1):

**Detailed information about water supply zones, including:**

- Unequivocal reference
  - Population served
  - Volumes supplied
  - Functioning period
  - Water sources
  - Geographic area served
  - Parameters
  - Sampling locations
- 
- Automatic calculation of number of analysis to be performed and check of compliance with legislation

[Voltar](#)

Zonas de Abastecimento

Descrição: Zona de Abastecimento 1 \*

Código EG: ZA 1

População: 2000 \*

Volume Estimado? ☐

Volume (m³/dia): \*

População flutuante

Acréscimo de população: 100

Período (meses): 2 [Adicionar](#)

População	Período (meses)
100	2

Períodos de Funcionamento da ZA

Data de início: 2008-01-01 [Calendário](#)

Data de fim: 2008-12-31 [Calendário](#)

[Sem Registos...](#)

Informação da zona de abastecimento:

- Designação
- População
- Volume
- Período de funcionamento
- Origens de água
- Concelho
- Parâmetros
- Pontos de amostragem
- Calendário

[Voltar](#) | [Editar ZA](#)

Zona de Abastecimento - Zona de Abastecimento 3

[Dados Gerais](#) | [Origens](#) | [Concelhos](#) | [Controlos](#) | [Comentário](#)

[Parâmetros](#)

Frequências

Análises agendadas (Análises obrigatórias)

CR1	0 (12)
CR2	0 (4)
CI	0 (1)

Controlo de Rotina 1

[Sem Registos...](#)

Controlo de Rotina 2

[Sem Registos...](#)

Controlo de Inspeção

[Sem Registos...](#)



# DRINKING WATER QUALITY REGULATION

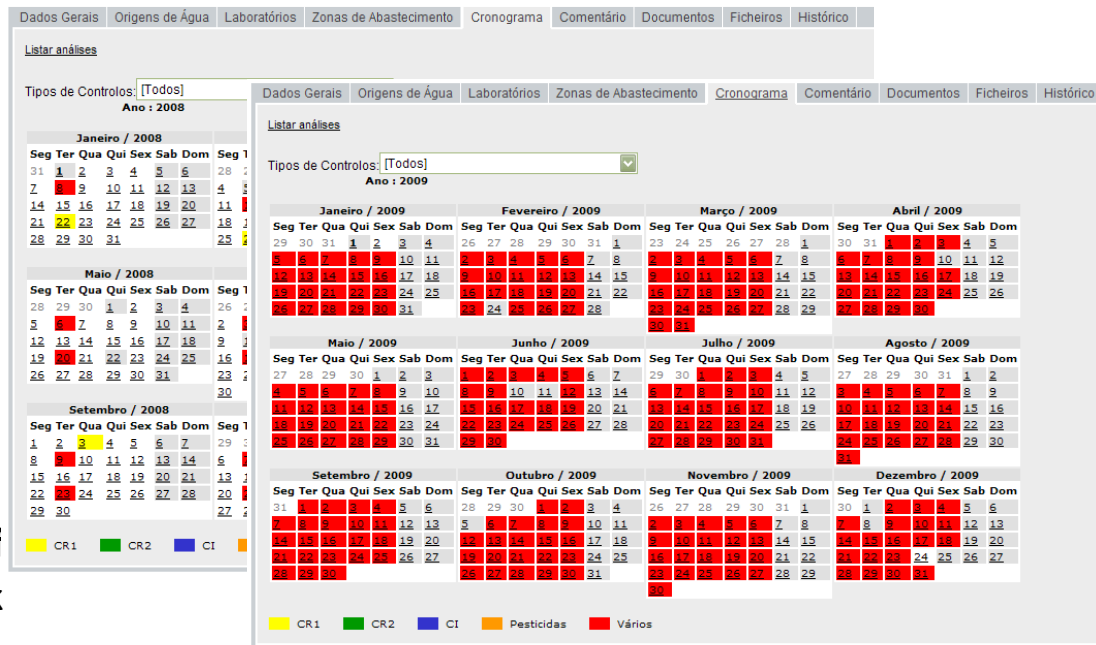
## PORTAL ERSAR



Now – Planning stage (year n-1):

**Detailed information about the planned sampling calendar, including:**

- Unequivocal reference
  - Type of quality control
  - Parameters checked
  - Sampling locations
  - Dates for sampling
  - Laboratories responsible for checking the samples
- 
- Automatic calculation of number of analysis to be performed and check of compliance with legislation
  - Pre- validation of information



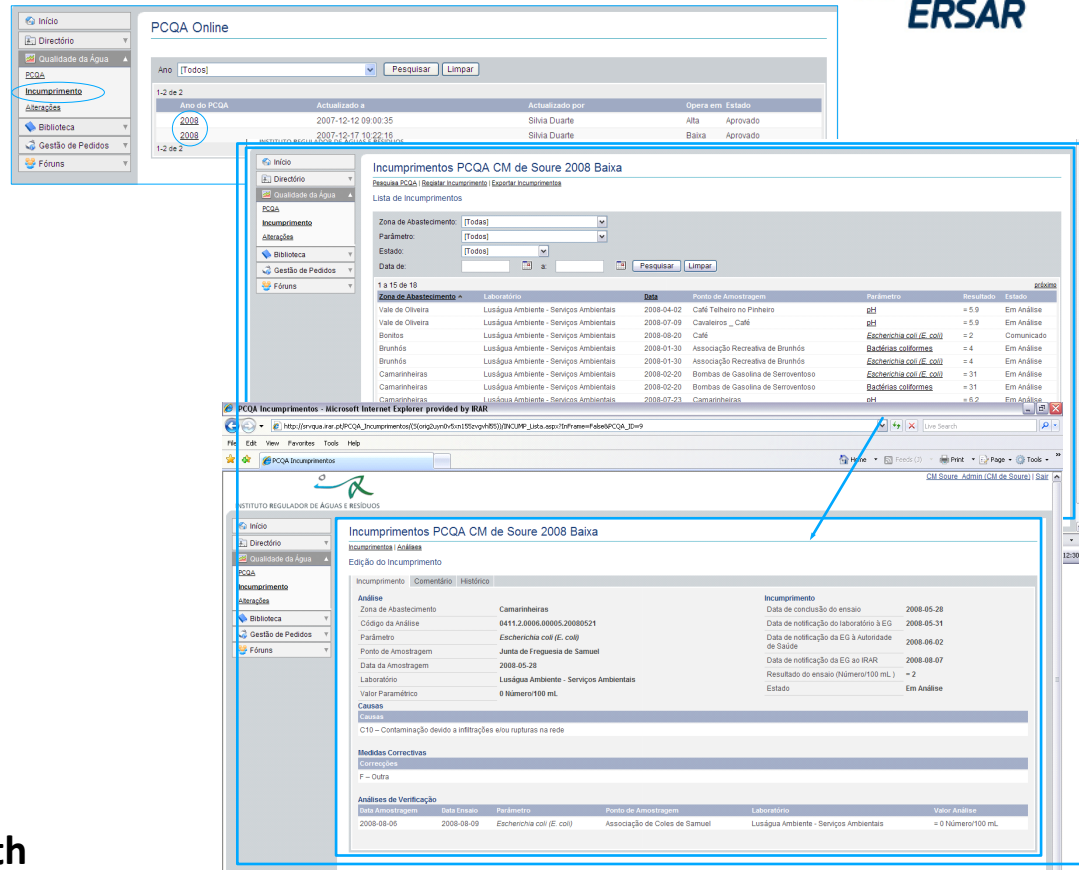
# DRINKING WATER QUALITY REGULATION

## PORTAL ERSAR

Now – Implementation stage (year n):  
**Reporting of non-compliances**  
 with a maximum delay of 24 h.

Detailed information about the non-compliance, including:

- Unequivocal reference
- Immediate relation with the planned sampling calendar (sampling location, date and laboratory)
- Parameters with non-compliance
- Causes for non-compliance
- Correction measures
- Verification sampling and health authorities opinion



The screenshot displays the PCQA Online portal interface. The top navigation bar includes links for Início, Directório, Qualidade da Água, PCQA, Incumprimento, Alterações, Biblioteca, Gestão de Pedidos, and Fóruns. The main content area is titled 'PCQA Online' and shows a list of non-compliances for the year 2008. A table lists the following data:

Ano do PCQA	Actualizado a	Actualizado por	Opera em	Estado
2008	2007-12-12 09:00:35	Silvia Duarte	Alta	Aprovado
2008	2007-12-17 10:22:16	Silvia Duarte	Baixa	Aprovado

Below this, a detailed view of a non-compliance is shown for 'Zona de Abastecimento' (Zona de Abastecimento) and 'Parâmetro' (Parâmetro). The table lists the following data:

Zona de Abastecimento	Parâmetro	Data	Resultado	Estado	
Vale de Oliveira	Lusdqua Ambiente - Serviços Ambientais	2008-04-02	Cañ Teheiro no Pinheiro	+ 5.9	Em Análise
Vale de Oliveira	Lusdqua Ambiente - Serviços Ambientais	2008-07-09	Cavaleiros _ Café	+ 5.9	Em Análise
Bombas	Lusdqua Ambiente - Serviços Ambientais	2008-08-20	Cañ	+ 2	Comunicado
Bombas	Lusdqua Ambiente - Serviços Ambientais	2008-09-10	Associação Recreativa de Bombas	+ 4	Em Análise
Bombas	Lusdqua Ambiente - Serviços Ambientais	2008-01-30	Associação Recreativa de Bombas	+ 4	Em Análise
Bombas	Lusdqua Ambiente - Serviços Ambientais	2008-02-20	Bombas de Gasolina de Serroventoso	+ 31	Em Análise
Bombas	Lusdqua Ambiente - Serviços Ambientais	2008-02-20	Bombas de Gasolina de Serroventoso	+ 31	Em Análise
Bombas	Lusdqua Ambiente - Serviços Ambientais	2008-07-21	Caminharinas	+ 6.2	Em Análise

The bottom section of the screenshot shows a detailed view of a non-compliance for 'Zona de Abastecimento' (Zona de Abastecimento) and 'Parâmetro' (Parâmetro). The table lists the following data:

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Bombas	Lusdqua Ambiente - Serviços Ambientais	2008-07-21	Caminharinas	+ 6.2	Em Análise

# DRINKING WATER QUALITY REGULATION

## PORTAL ERSAR



Now – Reporting stage (year n+1):

**Reporting of all sample results every year in March.**

**Detailed information about the results of each parameter in each sample, allowing:**

- Generation of standardized reports
- Immediate relation with the planned sampling calendar (sampling location, date and laboratory)
- Identification of non-compliance results
- Assessment of drinking water quality per supply zone

Parâmetro	Valor
Análises Agendadas CR1	216
Análises Agendadas CR2	224
Análises Agendadas CI	22
Frequência mínima de análises CR1	216
Frequência mínima de análises CR2	224
Frequência mínima de análises CI	22
Incumprimentos em parâmetros CR1	1
Incumprimentos em parâmetros CR2	6
Incumprimentos em parâmetros CI	9
Análises em falta de parâmetros CR1	1
Análises em falta de parâmetros CR2	1
Análises em falta de parâmetros CI	0
Análises realizadas com valor parâmetros CR1	144
Análises realizadas com valor parâmetros CR2	192
Análises realizadas com valor parâmetros CI	16

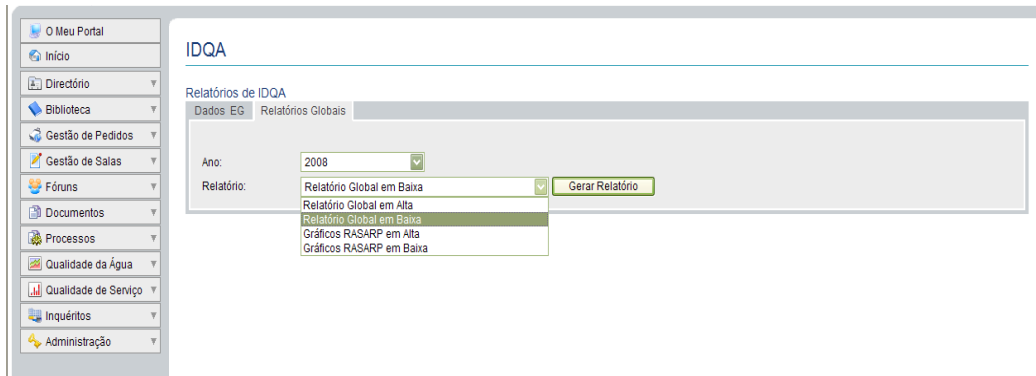
# DRINKING WATER QUALITY REGULATION

## PORTAL ERSAR

Now – Reporting stage (year n+1):

**Allows ERSAR to produce the necessary regulatory information to:**

- **Assess the results of each operator and compare them with each other**
- **Assess the results per geographic area in order to make it available to the population**
- **Publish the annual report on the drinking water quality control**
- **Assess the results nationwide to report the compliance of EU directive**



# DRINKING WATER QUALITY REGULATION

## PORTAL ERSAR



Main benefits:

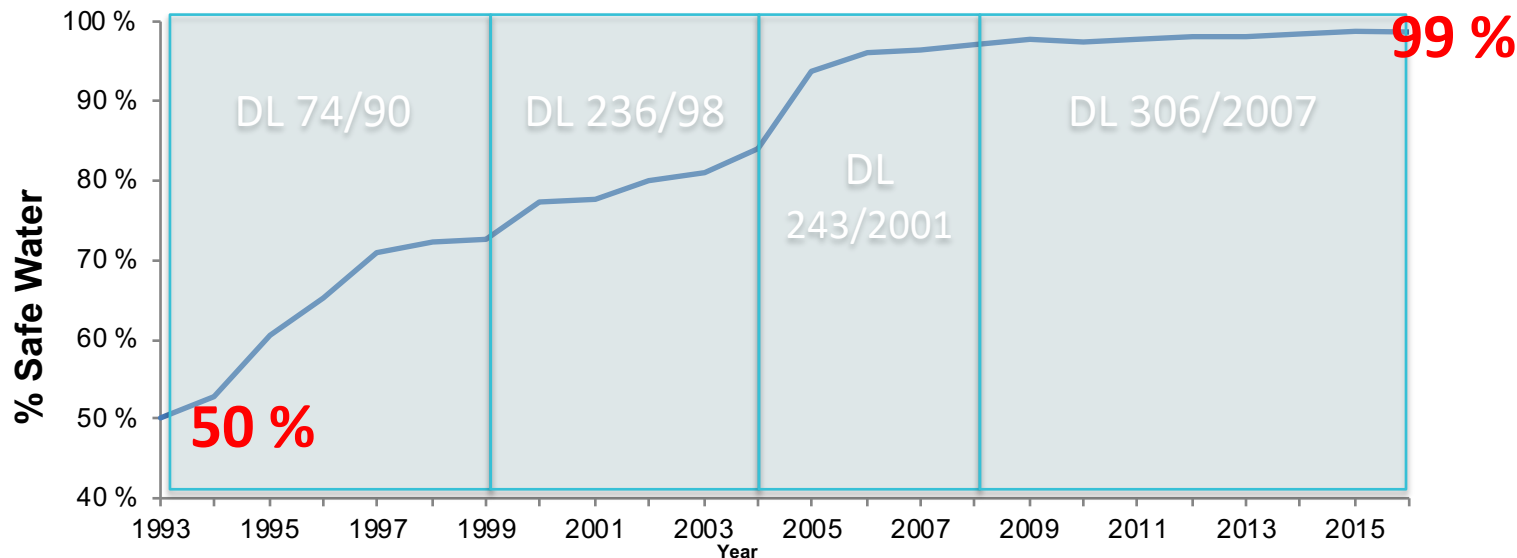
- **Harmonized information**
- **Pre-validation of data prior to submission**
- **E-mail notifications (immediate information)**
- **Management tool for both Regulator and operators**
- **Easier information production and analysis**
- **Information portability to support reporting and on field inspections**

# DRINKING WATER QUALITY REGULATION

## EVOLUTION AND RESULTS

In Portugal, it is now completely safe to drink tap water, in line with the best results worldwide.

The drinking water controlled and with quality according the European requirements improved 49 p.p. between 1993 and 2017 (includes all drinking water suppliers and all water supply zones):





Thank you!

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