

3D printing in a Public Service

Innovation as a challenge



Who We Are

Aigües de Mataró (AMSA) is a public utility company managing the water cycle in Mataró, Spain. — including drinking water supply, sewerage, laboratory services, and energy management.

We are a **century-old organization**, operating critical infrastructure with planning cycles that extend over **multiple decades**.

Unlike technology-driven companies, our identity is rooted in a **strong service and quality culture**, where reliability and regulatory compliance are key.



Wy ?

In this context, our approach to 3D printing did not emerge from an urgent manufacturing need, but from a deliberate effort to:

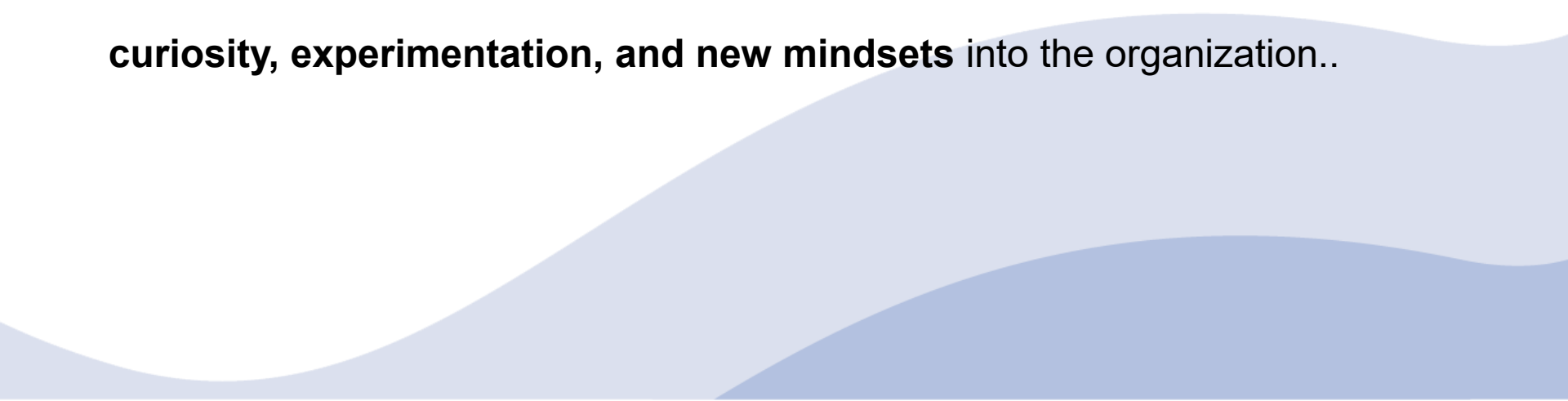
- **Foster** curiosity
 - Encourage hands-on **experimentation**
 - Strengthen an innovation **mindset** within the organization
- 

Why Innovation Matters Here

Our long-term, reliability-driven environment is essential — but it does not naturally raise experimentation.

At AMSA, innovation means **developing culture, not just adopting technology.**

The 3D printing initiative was designed as a **practical way to introduce curiosity, experimentation, and new mindsets** into the organization..



Our Approach: Making Innovation Accessible

We designed the initiative to be **simple, engaging, and inclusive**.

- No prior knowledge of 3D printing was required
- The only requirement: **solve a real problem** from your daily work

To encourage participation, we introduced a **playful competition format**:

- We created a sense of rivalry between teams (in a light, humorous way)
- We promoted the idea of an “exceptional” prize to generate excitement

People genuinely wanted to participate: 5 teams, 13 people, and 6 prototypes

NoWet: Reinventing Legionella sampling

🌊 Problem

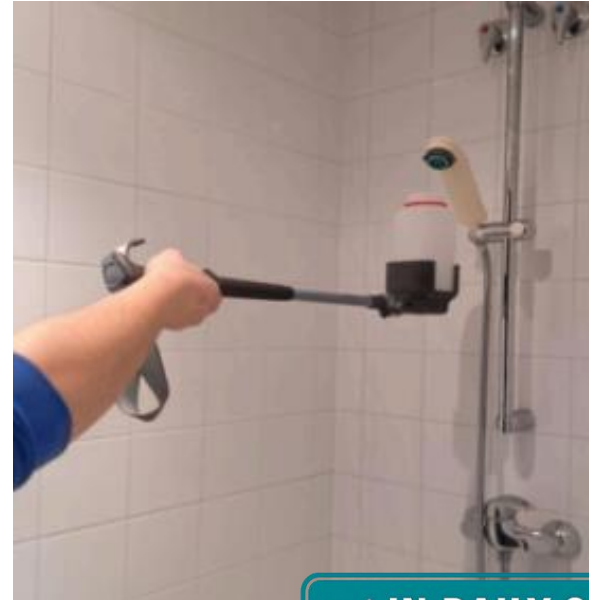
Hot water · Safety risks · Limited existing solutions

🌊 Solution

3D-printed device enabling safe, stable, and flexible sampling

🌊 Benefits

- Safer for technicians
- More efficient process
- Better sample integrity



✓ **IN DAILY OPERATION**

Used by AMSA Sampling Teams

CapNet: Sustainable Coffee Capsule Solution

❧ Problem

Aluminium capsules · Mixed waste ·
User confusion in disposal

❧ Solution

3D-printed device enabling efficient
separation of coffee and aluminium

❧ Benefits

- Easier recycling process
- Reduced environmental impact
- Simple and user-friendly design



We're separating the coffee from the capsule!

Smart Hydrant Signage:

From Static to Connected Infrastructure

Problem

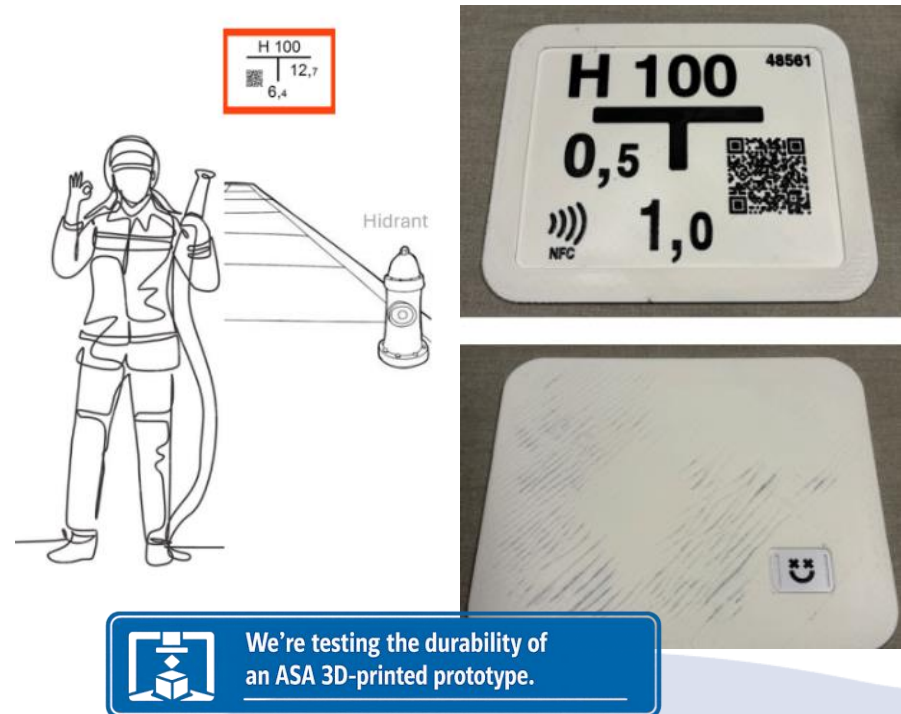
Damaged signs · Outdated information · No digital traceability

Solution

3D-printed signage integrating QR and NFC technologies

Benefits

- Real-time access to information
- Improved maintenance and asset management
- New communication channel with citizen



DIGITAL + PHYSICAL INTEGRATION

RackTracer: Cable Identification

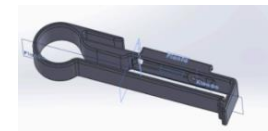
Problem

limited visibility · Complex cable environments · Battery-dependent tools



Solution

3D-printed device using mobile light source (no batteries required)



Benefits

- Reduced operational complexity
- Lower maintenance (no batteries)
- More efficient intervention

LeadFix: Supporting Safe Meter Replacement

Problem

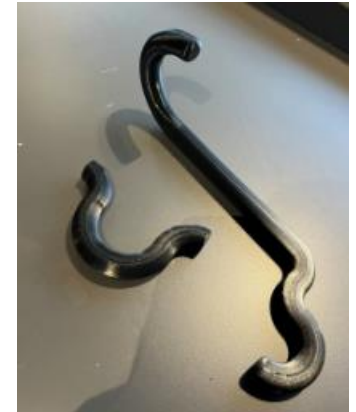
Risk of pipe damage · Water leaks ·
Difficult installation

Solution

3D-printed support to stabilize old
lead pipes during replacement

Benefits

- Prevents breakage and leaks
- Faster installation
- Improved safety for operators



Saving Pipes & Problems Since 2025

Sample Rack System: Improving Sample Handling

Problem

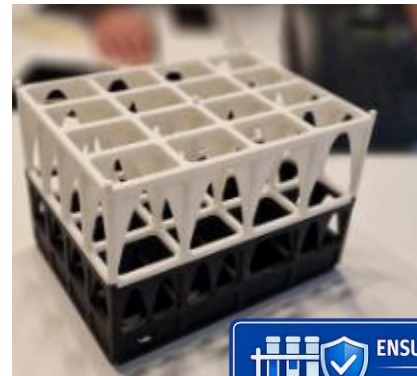
Sample instability · Risk of spills ·
Disorganized storage

Solution

3D-printed modular rack to secure,
organize and transport samples

Benefits

- Improved sample stability
- Reduced contamination and spillage risk
- Better organization in lab and transport



More than a prize

Yes, the winners received:

- A glass water pitcher

And everyone received:

- A team lunch



The strategic message



A new mindset for a long-term organization

In a company built on stability and long-term planning, initiatives like this allow us to:

- Introduce experimentation in a controlled way
- Accelerate learning across teams
- Strengthen our ability to adapt

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gracias OBRIGADO 謝 謝 子文
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hvala **DANKE** *dziękuję* **dziękuję**
THANK YOU
grazie **skösonöm** bedankt
KIITOS Ederim MULTUMESC
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