

# THE UN OCEAN DECADE CHALLENGES: PLOCAN CONTRIBUTIONS THROUGH ITS LAST 100 PROJECTS

Silvana Neves<sup>1\*</sup>, María Díaz Martín<sup>1</sup>, Tania Montoto-Martínez<sup>1</sup> & José Joaquín Hernández-Brito<sup>1</sup>

<sup>1</sup> Oceanic Platform of the Canary Islands, Canary Islands, SPAIN. \* Correspondence author: [silvana.neves@plocan.eu](mailto:silvana.neves@plocan.eu)

## INTRODUCTION

The United Nations Ocean Decade initiative has set forth 10 critical challenges to guide the addressing of crucial ocean-related issues from 2021 to 2030. As part of the global effort to tackle these challenges, advanced ocean research and innovation facilities play a vital role in developing and implementing sustainable solutions.

In this study, we examine the contribution of the Oceanic Platform of the Canary Islands (PLOCAN), a state-of-the-art facility located in Spain, towards achieving the Ocean Decade's goals, aiming to highlight the facility's efforts in advancing ocean science, technology, and innovation.

## METHODOLOGY

To assess PLOCAN's alignment with the Ocean Decade Challenges, we analyzed the 100 most recent projects. Each project was evaluated using a 1-5 scoring system, with 5 indicating a strong correlation. The scores were not just presented but vividly depicted in a heat map (Fig. 1), which served as a visual guide, identifying patterns, strengths, and areas for improvement in PLOCAN's research and innovation efforts.

## RESULTS

PLOCAN has been instrumental as a central testbed in expediting sustainable technology advancements, logistics, business models, and policy development in line with Ocean Decade Challenges. It has enabled interdisciplinary collaboration, nurturing breakthrough innovations for these complex issues.

The testbeds are critical for legislative refinement, scientific validation, and barrier identification, translating research into practical, policy-supporting actions toward Ocean Decade ambitions. They encourage fast-paced innovation cycles for sustainable solutions, merging rapid trials with iterative enhancements.

PLOCAN also functions as a vocational hub, cultivating essential skills for the ocean's sustainable economy, and acts as a bridge between theoretical research and market realities, ensuring innovations are market ready.

Key initiatives like BlueMissionAA demonstrate PLOCAN's impact on ocean sustainability, ranging from ecosystem restoration to green hydrogen advocacy for decarbonization. The testbed's significance in the Ocean Decade lies in its facilitation of joint efforts and swift progress towards sustainable, impactful outcomes.

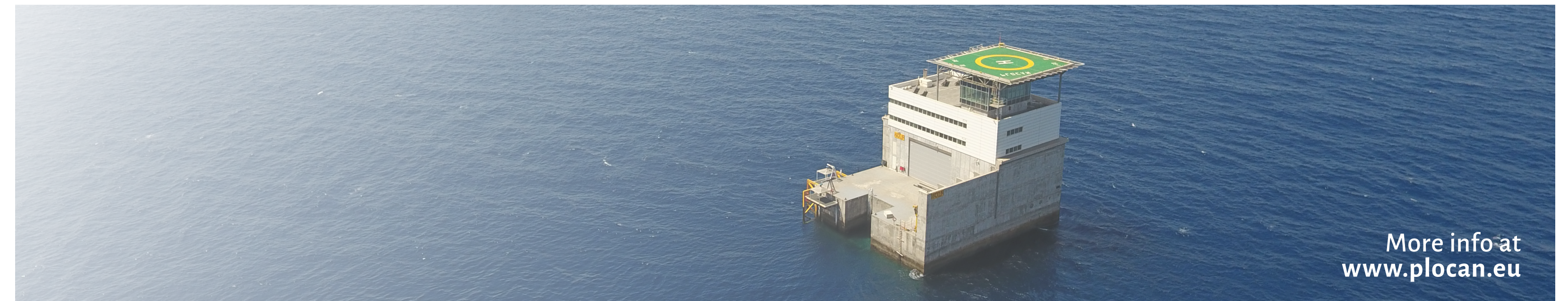
## CONCLUSIONS

The analysis of PLOCAN's projects highlights the critical role of singular scientific infrastructures (ICTS) in advancing the objectives of the Ocean Decade. PLOCAN's testbed facilities have accelerated developing, validating, and implementing sustainable technologies, planning, business models, and policies while fostering interdisciplinary collaboration and innovation. By providing a platform for fine-tuning legislation, generating scientific evidence, and overcoming barriers, PLOCAN has facilitated the translation of research into evidence-based policies and regulations.

Flagship projects at PLOCAN exemplify the testbed's contributions to the Ocean Decade Challenges, focusing on critical areas such as ocean restoration, nature-based solutions, renewable energy, and open science.

## Acknowledgments

This portfolio of projects has been made possible thanks to the support of various national and international funding agencies. Their contributions, spanning both public institutions and competitive project calls, have been instrumental in bringing these initiatives to fruition.



More info at  
[www.plocan.eu](http://www.plocan.eu)

## UN OCEAN DECADE CHALLENGES

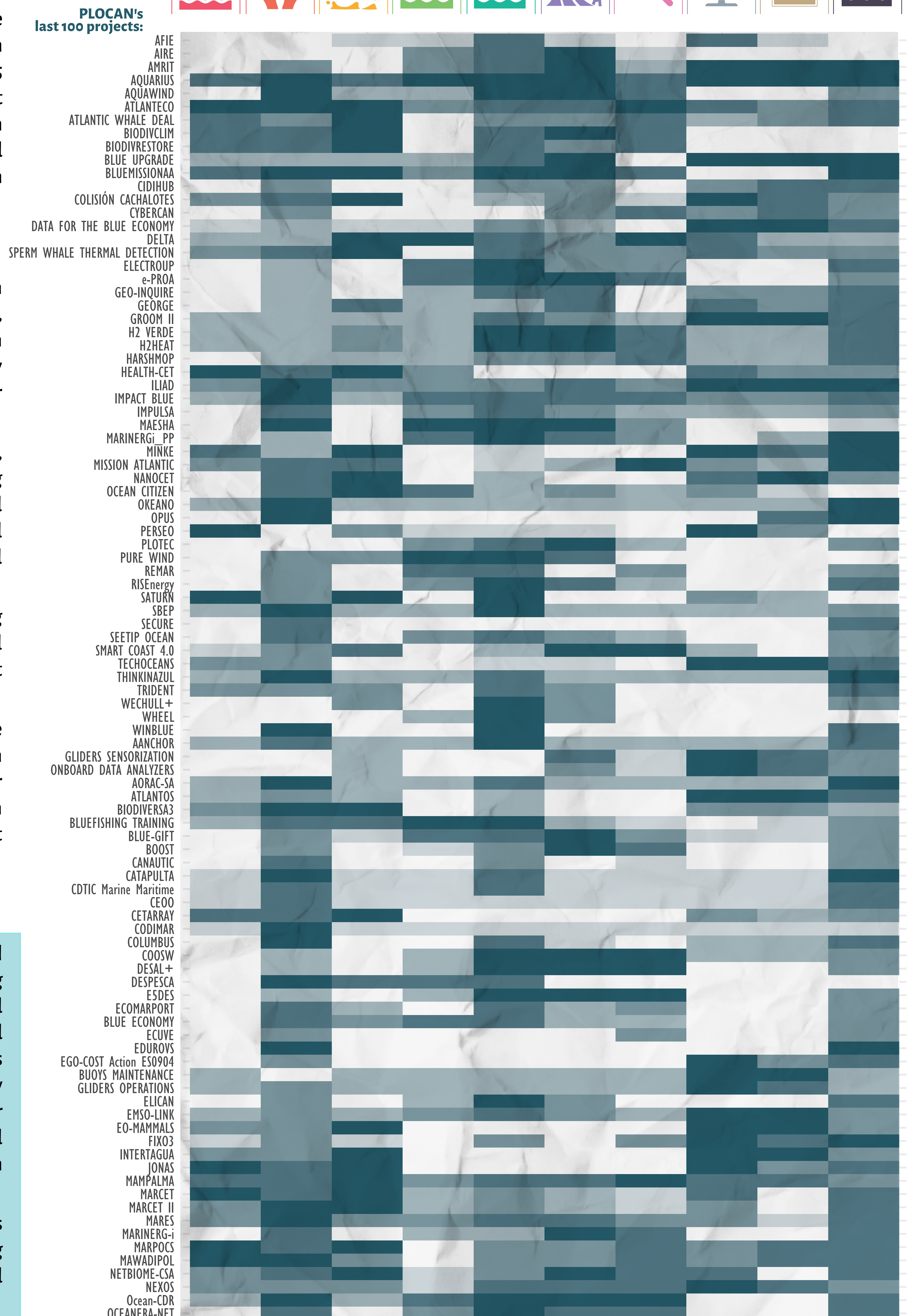
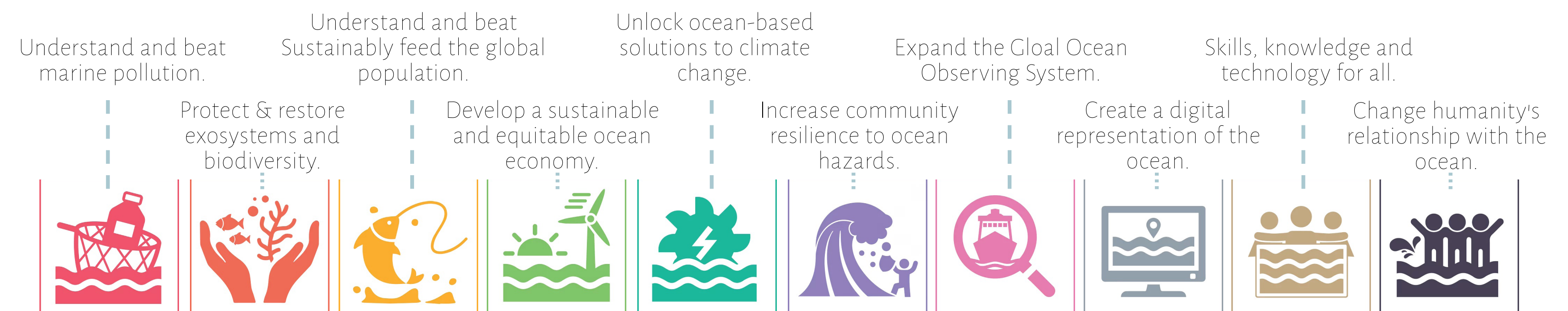


Fig. 1. Heatmap illustrating the interplay between PLOCAN's last 100 projects (represented by their acronyms) and the 10 Challenges of the Ocean Decade. Each tile in the heatmap reflects the alignment of a specific project with a particular challenge. This visual representation underscores PLOCAN's commitment to advancing ocean research, innovation, and sustainability within the framework of the Ocean Decade.