Open Deep Water — OEM WetEnd Integration Program

> ## Open Science Platform Concept on Raspberry Pi with OEM-WetEnd Support

🏷 1. Introduction

Open Deep Water is a concept for a future open platform for collecting, analyzing, and publishing oceanographic, climate, and environmental data.

The platform is based on **Raspberry Pi** with a hardware **HAT** (Hardware Attached on Top) module and software **NAT** (Native Adapter Translator) adapters to support OEM-WetEnd from any manufacturers.

2. Proposal for Manufacturers

- Based on your specifications, we design an individual **Raspberry Pi HAT** to connect your OEM-WetEnd
- We develop a software **NAT** — a driver that translates your protocol into a unified open format
- Integration into an open scientific ecosystem where your devices can be used by universities, research centers, and citizen science projects

✔ 3. What the Manufacturer Gets

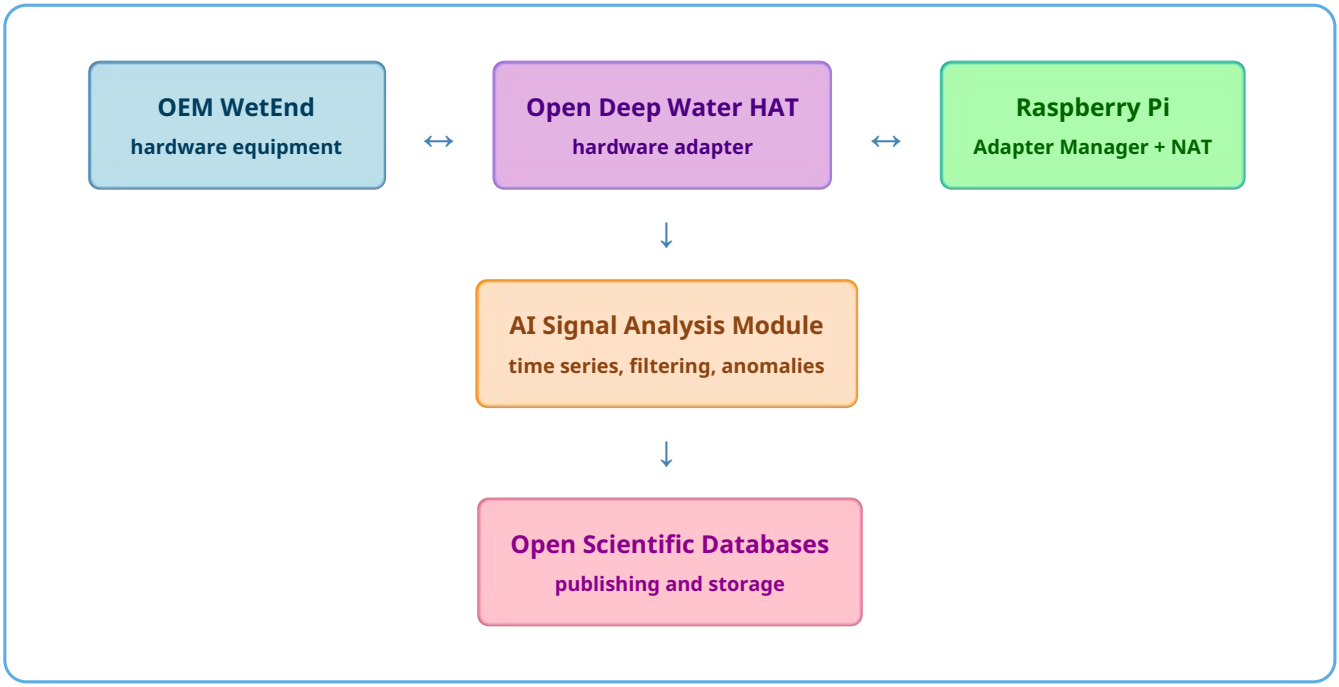
Advantage	Description
HAT Adapter Prototype	For integration with your OEM-WetEnd
💰 Commercial Opportunities	License sales of HAT adapters
💻 Software Interface	Ready-made solution for Raspberry Pi
AI Compatibility	Integration with signal analysis modules
Branding	Mentions in publications and demo projects

🏷 4. Requirements from Manufacturer

Technical Specification for OEM-WetEnd:

- **Power Supply** (voltage, current)
- **Protocol** for WetEnd operation
- **(Optional)** providing a test sample

🏗️ 5. Architecture Concept



6. Participation Advantages

Advantage	Description
Minimal Changes	To current equipment
🌍 International Audience	Access to global market
Standardization	Raspberry Pi HAT compatibility
Scientific Positioning	Brand in open science sphere

7. Strategic Roadmap

Stage 0: Concept and Partnerships (0–6 months)

- Forming initiative group
- Attracting first manufacturers for pilot integration
- Defining HAT architecture and data format

Stage 1: Pilot Prototype (6–12 months)

- Developing and testing first universal HAT
- Creating 1–2 NAT plugins for OEM-WetEnd
- Demonstrating prototype operation in laboratory conditions

Stage 2: Ecosystem Expansion (12–24 months)

- Adding new manufacturers and sensors
- Launching web portal and open data repository
- Implementing AI modules for signal analysis

8. Licensing

Component	License
Code	Apache 2.0 / GPLv3
Hardware	CERN Open Hardware License v2
Data	Creative Commons CC-BY 4.0

💰 9. Funding Sources

9.1 Crowdfunding and Community

- **Kickstarter/Indiegogo** campaign ($50,000-100,000)
- **GitHub Sponsors** for open source development
- **Open Collective** for fund management
- **Donations** from research institutions

9.2 Scientific Grants

- **NSF** (National Science Foundation)
- **EU Horizon Europe** — "Climate, Energy and Mobility" cluster
- **Educational Institution Grants**
- **Regional Environmental Funds**

9.3 Corporate Funding

- **Partnership Agreements** with OEM-WetEnd manufacturers
- **Licensing Royalties** from HAT adapter sales
- **Sponsorship** from technology companies (Raspberry Pi Foundation, Intel, ARM)
- **Venture Capital Investment** in CleanTech

9.4 Budget by Stages

Stage	Budget	Main Expenses
Stage 0 (Concept)	$25,000-50,000	MVP creation, technical documentation, first contacts
Stage 1 (Prototype)	$100,000-200,000	HAT development, NAT programming, laboratory tests
Stage 2 (Ecosystem)	$300,000-500,000	Scaling, web platform, AI modules, marketing

Contact

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Website: (in development)

GitHub: (planned)

Project is at the concept stage, organization is being formed

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