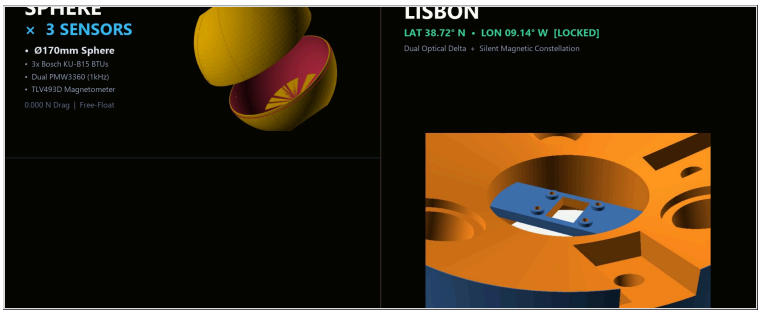
Tangible Cartographic Interface · Portugal Exhibition Build

An interactive electronic astrolabe bridging Portuguese navigational heritage and contemporary computational narrative. Visitors spin the sphere to maritime coordinates, dial their date of birth on concentric brass rings, and leave with a printed Age of Exploration crew assignment rooted in their personal temperament.

`SPHERE (PMW3360 + TLV493D) + 5 ZIGGURAT DIALS + LANGUAGE ENGINE → 58MM EXPEDITION ROLE TICKET`



EXHIBITION HOOK (VISITOR EXPERIENCE)

Guests approach a single tactile plinth anchored to the Armillary Sphere tradition. Spinning the free globe selects an expedition harbor (`Lisboa 38.72°N, 09.14°W`); clicking the five stepped rings sets their birth date (`DOB`).

Behind the scenes, deterministic calculation maps behavioral patterns in plain human prose onto a historical post (Navigator, Expedition Financier, Spice-Route Broker, Harbor Chronicler, Shipwright) — matching personal temperament cleanly with maritime history.

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Video Demo:
https://www.thearenatheory.com/astrolobe/
Live Engine:
https://www.thearenatheory.com/chat.html
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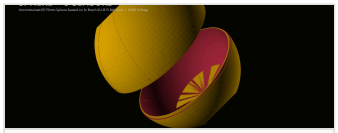
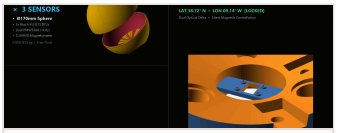
KINEMATIC INTERACTION GRAMMAR



STEP 01

Free-Spin Globe

Unconstrained 170mm sphere rests on three ball transfers for tactile exploration.



STEP 02

Harbor Lock

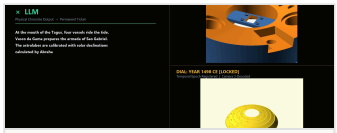
Dual orthogonal PMW3360 optics resolve Atlantic and Mediterranean coordinates live.



STEP 03

Visitor DOB Rings

Visitor dials concentric Ziggurat rings to enter Day, Month, Year, and Hour.



STEP 04

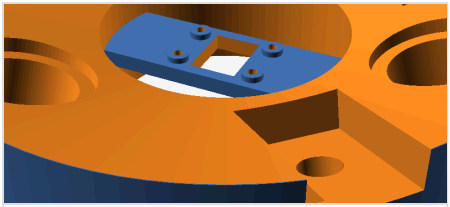
Printed Pass

Display streams the maritime role rationale while printing a 58mm takeaway pass.

PORTUGUESE INSTITUTIONAL ALIGNMENT

INSTITUTION	TARGET TRACK	PROGRAMMATIC FIT
gnration (Braga)	`Binário` Call (Dec 29, 2026) `Laboratórios de Verão`	Co-production grant bridging optical sensing electronics, sculptural CAD fabrication, and live generative narrative.
Museu de Marinha (Belém)	Temporary Exhibition Commission	Connects navigational globes and brass astrolabes directly to modern interactive visitor casting in Belém.
Pavilhão do Conhecimento	Interactive Pilot Exhibit	Physical computing demo turning angular velocity, optical mice optics, and magnetic Hall sensors into public science curiosity.
Gulbenkian / MAAT / CCB	Art-Technology Showcase	Investigates tactile human-machine interaction outside screens and keyboards in gallery exhibition contexts.
A Oficina (Guimarães)	`MICA` Craft Residency	Pairs Portuguese ceramic/mineral globe casting with contemporary embedded computation.

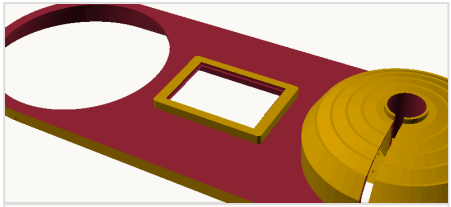
HARDWARE ARCHITECTURE (UNIFIED BUILD)



Bay 01 · Sphere Cradle: Three ball transfer units + dual PMW3360 optical mounts + TLV493D magnetometer.



Bay 02 · Stepped Time Rings: Five concentric date/time dials read via internal 45° optical camera.



Bay 03 · Unified Enclosure: Houses display output, compute unit, and embedded 58mm ticket printer cleanly.

SPECIMEN EXHIBITION PRINTOUT (58MM VISITOR TICKET)

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HARBOR : LISBOA · 38.72°N 09.14°W
VISITOR : 06 JUN 1979
EXPEDITION POST : VOYAGE FINANCIER &
RISK ASSAYER
----------------------------------------
WHY YOU FIT THIS POST:
You evaluate pooled capital and shared
stakes under high pressure carefully
before cargo moves. Routine margins pull
away cleanly once terms are documented
across trusted partners.
----------------------------------------
ONBOARD THRESHOLD: Slow commitment
turns abrupt if terms turn opaque.
----------------------------------------
MUSEUM EDITION // THEARENATHEORY.COM
```

SITE SPEC & PRODUCTION COLLABORATION ASK

Power Supply	Standard museum socket (`100–240V AC` stepped cleanly internally)
Consumables	Standard `58mm` BPA-free thermal receipt rolls (seconds to swap)
Reliability	Auto-boot appliance service + local cached engine resilient to Wi-Fi drops
Co-Production Ask	Residency studio access + hardware fabrication grant for gallery finish unit, OR temporary exhibition loan agreement
Readiness	Functional table-top electronics, optical pipeline, and live AI engine available immediately for curatorial demonstration

DIRECT CONTACTS & IMMEDIATE SUBMISSIONS

gnration (Braga): `geral@gnration.pt` (Binário Call · Deadline **Dec 29, 2026**) · **Museu de Marinha:** `geral.museu@marinha.pt` · **Pavilhão do Conhecimento:** `info@cienciaviva.pt` · **Gulbenkian / CAM:** `info@gulbenkian.pt` · **MAAT:** `maat@edp.pt` · **CCB / MAC:** `mac@ccb.pt` · **A Oficina:** `geral@aoficina.pt`