

Designing for Adaptive Futures: Exploring Human-AI Collaboration in Sustainable Floating Cities

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CHALLENGE

By the year 2070, the world has been drastically reshaped by the ongoing effects of climate change. Coastal regions have been hit the hardest — vast areas of land have disappeared beneath the water, forcing humanity to adapt to entirely new living conditions.

In response, a global network of so-called Nomadic Floating Cities has emerged. These are not static, fixed structures, but mobile, self-sustaining urban entities capable of moving across the oceans. People must adapt and become accustomed to this new way of living. New laws and social standards shape everyday life on the floating cities.

Question: How can we find a way to motivate the modern nomads to integrate into this new diverse social surrounding and how are they able to improve the floating city as a community?

Creating a System based on
personal developments,
not hierchies!

LumenLoop bracelets
to visualize personal
progress

Floating City
Jakarta 2070

THE PROCESS: JOURNEY TO 2070

- 1 The research followed a speculative design and foresight-based approach, combining trend analysis, persona development, and narrative prototyping to investigate future relationships between mobility, knowledge, and technology.
- 2 **Signal & Trend Scanning:**
The process began with identifying global signals related to water resilience, migration, and technological adaptation. These trends shaped a narrative world where climate-driven nomadism becomes the new normal.
- 3 **Persona Development:**
The team created Tariq, a 32-year-old engineer from coastal Indonesia displaced by sea-level rise. His story of loss, ambition, and adaptation in Dhaka's floating districts, humanized abstract global trends and anchored the design process in lived experience.
- 4 **Worldbuilding & Design Iteration:**
Using speculative storytelling, the team envisioned a utopian world where cities move with the tides and learning replaces currency. This narrative led to Lumen Loop, a bracelet symbolizing the wearer's evolving knowledge and civic contribution.
- 5 This methodology merges human-centered design with futures thinking, using narrative and persona-driven storytelling to translate complex environmental shifts into relatable human experiences.

LUMEN LOOP

The Lumen Loop is not a tracking device but an emotional-cognitive companion that supports learning, reflection, social connection, and emotional wellbeing through gentle light, subtle vibration, and soft sound. Its glowing element visualizes mental and emotional states using color, brightness, and movement — never for evaluation or performance ranking, but as calm self-awareness. When two wearers meet, their loops briefly synchronize, blending colors

to represent human connection without sharing personal data. During conversations, the Emotional Mirror System softly aligns rhythms and hues to encourage empathy and emotional attunement. All interactions remain optional and privacy-controlled. The Lumen Loop represents a future of education centered on human growth, awareness, and meaningful connection.

IMPACT & CONVIVIALITY

LumenLoop supports a more aware and cooperative learning environment by making cognitive and emotional states gently visible without assigning status. Its shaers light patterns encourage moments of alignment and mutual unders-

tanding, helping groups navigate social and learning contexts with greater ease. In this way, the device strengthens conviviality by reinforcing empathy, presence, and shared engagement.

