

# Barry Pompea

## Staff / Principal Product Designer · Design Technologist · 0→1 Prototyper

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### PROFILE

Staff/Principal-level product design IC working across ambiguous product direction, interaction design, technical prototyping, design systems, spatial computing, embedded graphics, AI experiences, and production implementation. Barry is strongest where a team still needs to determine what should be built, how it should work, and what evidence is needed before committing.

He moves between research synthesis, workshops, product strategy, visual and interaction design, code, hardware, and cross-functional leadership. He has shipped production code and embedded systems-not only prototypes-and is particularly effective at connecting design intent to technical implementation.

### CORE STRENGTHS

- 0→1 product development & pathfinding
- Technical prototyping in the real medium
- Spatial, automotive, embedded & AI interaction design
- Design systems, tokens & design-to-code
- Product reframing & workshop facilitation
- Production implementation & graphics optimization
- Leadership without management & executive influence
- Formal people management (3-person UX team)

### PROJECT KEY

**SHIPPED** Publicly launched, production-deployed, or released internally

**STEERED** Materially changed product, technical, or business direction

**INCUBATED** Explored or validated a 0→1 direction before broader commitment

## Meta

February 2022 • July 2026

### Senior Product Design Prototyper

Worked across cross-platform design systems, Quest and Horizon spatial products, AI-powered experiences, creation tools, onboarding, and future-of-work pathfi nding. Built high-fi delity prototypes, defi ned interaction and product logic, contributed production code, guided product decisions, and trained designers and prototypers to work closer to implementation.

INCUBATED STEERED SHIPPED **Rapid Creation / Horizon Engine Agentic Tooling**

Challenged an assigned tile-generation exploration and seeded a prompt-based creation direction. Originated the idea of reusable 3D component systems with tunable variants, then helped evolve the work toward orchestration across specialized agents. The broader direction became public product work.

INCUBATED SHIPPED **Smooth Camera for Meta Quest Video Calling**

Defi ned camera behavior and use cases for Zoom-style calls inside a head-worn spatial environment. Ran discovery, built the prototype, validated it with 79 internal users, collaborated with engineering, and shipped production C++ code publicly.

INCUBATED SHIPPED INTERNALLY **Work Design System**

Served as DRI for the 0→1 VR surface and Android system work. Built ~90% of the VR Figma library in one week - library later exceeded 62,000 inserts. Led Android component coverage from ~10% to more than 95% in three weeks while guiding two junior/contract designers. Owned design-token and Figma Variables implementation, semantic color work, font-scaling prototypes, and accessibility improvements.

INCUBATED SHIPPED **Bobber Bay - Fin AI Voice NPC**

Built all three research prototypes for an AI-powered character inside Meta Horizon Worlds. Defi ned voice-response and speaker-attribution requirements for a multiplayer environment and worked with engineering to expose the necessary APIs.

STEERED SHIPPED **Horizon New-User Experience & Onboarding**

Designed spatial locking behavior, haptics, and guiding-toast interactions. In-headset prototyping showed that a proposed visual connector added noise; recommended the simpler no-line direction, which shipped. Broader team outcomes included improved onboarding completion, weekly activity, and retention.

INCUBATED STEERED **Work Home / VR Home for Work**

Collaborated with principal-level designers on a spatial operating-system concept for professional work and co-creation on Quest. Personally built three high-fi delity technical prototypes used to support strategy, research, engineering understanding, and leadership alignment.

## Meta

February 2022 • July 2026

### Senior Product Design Prototyper

INCUBATED SHIPPED INTERNALLY **Cross Screen Tools**

Served as integration DRI for bringing Meta Horizon's desktop world editor into VR. Integrated engineering and prototyping work, resolved rendering and spatial-legibility issues, added supersampling and interaction refi nements, and landed integrated work in production code.

STEERED **Project Runway / Work Product Reframing**

During a workshop focused on combining existing Work products, challenged the premise by asking whether it was actually the product the team wanted to build. The group rejected the original premise and pivoted toward the direction that became Workrooms 2.0.

INCUBATED STEERED **World Communications Exploration**

Helped establish that pursuing mobile feature parity in VR lacked a defensible user need. Recommended stopping investment before unnecessary implementation.

#### ORGANIZATIONAL INFLUENCE

- Created TypeScript and Framer coding workshops for designers.
- Designed an agentic-coding workshop to help prototypers move ideas into the real product stack faster; delivered to director-level leadership.
- Repeatedly received above-expectation performance outcomes. Mentored peers and helped teams bridge design, prototyping, and implementation.

## Altia

August 2018 • February 2022

### Senior Product Designer

Worked directly with automotive, medical-device, and embedded-product customers. Bridged OEM design teams, sales, requirements, embedded engineering, and target-hardware implementation. Ran customer workshops and technical training, translated feedback into product requirements, and implemented experiences under severe graphics and hardware constraints.

SHIPPED **GM EV Cockpit Graphics Platform**

Cadillac LYRIQ · Chevrolet Blazer EV · Buick Electra EV

Optimized one shared production graphics pipeline deployed across three vehicles. Reworked ~200 shaders across 26 3D scenes, consolidated the stack to 34 shaders, reduced boot time by ~2 seconds, achieved ~12% VRAM savings via fragment-shader rendering, and found ETC2 settings delivering ~70% VRAM savings where applicable.

INCUBATED STEERED SHIPPED **CES 2022 Pillar-to-Pillar eCockpit**

Showcased by MediaTek, Green Hills Automotive & Samsung at CES

Originated the modular physical cockpit concept and carried the work from opportunity framing through a functioning partner-facing demonstration. Led research synthesis and stakeholder alignment, defi ned the physical/display architecture, designed the interaction and visual systems, and built the graphics, shaders, gestures, and application logic.

INCUBATED STEERED SHIPPED **CES 2019 NXP 3D Cockpit**

Developed visual direction and use cases through stakeholder alignment; served as primary implementer for a working demonstration of NXP's new OpenGL graphics stack. The demonstration helped open a commercial relationship that later led to production automotive work.

INCUBATED STEERED SHIPPED **CES 2020 NXP Cockpit Refi nement**

Refi ned the 2019 cockpit generation and added tablet-based gestural and highlight-cursor interaction.

INCUBATED STEERED SHIPPED **Hardware as a Service**

Raised the strategic concern that Altia risked becoming too fi xed in its existing business model, earned permission to run a leadership workshop, and facilitated the process that produced a remote-hardware platform concept. Altia later built it.

## Altia

August 2018 • February 2022

### Senior Product Designer

SHIPPED **Triumph Speed Triple RS Instrument Cluster**

Rebuilt the state machine and implemented 16 gauge modes, transitions, and animations on highly constrained motorcycle hardware. Improved on-device performance from ~15 FPS to 35 FPS, making the experience viable for production.

SHIPPED **Fiat 500 Graphics Optimization**

Optimized the embedded graphics implementation from ~28 FPS to more than 300 FPS.

SHIPPED **Hyundai/Kia Center Display**

Implemented the embedded center-display experience and subsequently trained Hyundai/Kia engineers in Seoul.

SHIPPED **LG / Ssangyong Instrument Cluster**

Implemented complex gauge animations and speedometer behavior for LG's Ssangyong Motors program.

SHIPPED **DePuy Synthes Surgical Camera UI**

Implemented an embedded surgical-camera interface on target hardware.

INCUBATED SHIPPED **AR / Automotive HUD Concepts**

Facilitated journey mapping and use-case defi nition, then built high-fi delity holographic HUD experiences on physical target hardware.

## Fruition

July 2017 • August 2018

### Director of UX

Managed a team of three with formal responsibility for people development and delivery. Led client discovery workshops and worked primarily on e-commerce and web experiences. The role added formal UX leadership and management experience while reinforcing that Barry's strongest work lies in technically complex product systems rather than conventional agency production.

## Mercedes-Benz Research & Development

December 2014 • June 2017

### UX Designer, Advanced Pre-Development

Worked on early-stage automotive products and interaction models before production commitment. Facilitated workshops, synthesized contextual research, produced research-ready prototypes, and presented emerging concepts to design leadership and executives, including Mercedes-Benz Head of Design Gorden Wagener.

INCUBATED STEERED SHIPPED **Original MBUX Concept**

MBUX is Mercedes-Benz's in-car operating system. Barry was one of fi ve people on the original concept team that shaped its interaction model. He explored navigation alternatives, contributed to the tab-based model, and integrated the team's concepts into a cohesive research-ready experience. The resulting product direction shipped publicly across Mercedes-Benz vehicles.

INCUBATED STEERED SHIPPED **Generation EQ Infotainment**

2016 Paris Motor Show

Led the infotainment experience for Mercedes-Benz's 2016 Paris Motor Show electric concept vehicle. Participated in contextual customer research, helped develop personas, designed and facilitated the use-case workshop, and translated the collaboratively defi ned opportunities into the public show-car experience.

SHIPPED **Apple Watch Door-to-Door Navigation**

Owned UX for Mercedes-Benz's cross-device navigation application before Apple Watch was publicly announced. Worked with Apple designers as part of the Mercedes team to align with platform patterns. The app launched when Apple Watch went on sale.

INCUBATED **Mercedes-Benz / Garia Concept**

Owned interaction design and UX for the connected golf-cart collaboration.

INCUBATED SHIPPED **Question-First AI Portfolio**

Next.js · React · TypeScript · OpenAI API · Supabase · PostgreSQL

Designed and built this portfolio as an agentic product rather than a conventional collection of case studies. The system interprets hiring questions and dynamically assembles relevant project, metric, and contextual evidence via structured retrieval and tool calling.

INCUBATED **Smart Focus Timer**

ESP32 · Custom PCB · BLE · Swift macOS

Independently designed and built a physical Pomodoro timer using an hourglass-like flip interaction. Developed the ESP32 and motion-sensing behavior, custom PCB, enclosure, Bluetooth communication, and a Swift macOS companion app that could hide distracting windows when a session began. Validated the working product and deliberately chose not to commercialize it.

INCUBATED SHIPPED **Stealth Synth Plugin**

Three.js · HISE · WebGL · API bridge

Originated a sphere-based real-time visual concept, diagnosed a stalled implementation approach, rebuilt the experience in Three.js, and created an API bridge allowing HISE to control and animate it in real time. Delivered a working product integration.

STEERED SHIPPED **Stealth Manufacturing Startup**

$7.5M in private investment raised (company effort)

Translated complex pre-product manufacturing technology into a coherent market and investor story. Owned positioning, messaging, unique value proposition, personas, targeting, brand promise, visual identity, investor deck, website, product storytelling, and technical animations.

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## TECHNICAL RANGE

Tool-agnostic and ramps into the stack required by the product rather than positioning as a career specialist in one language.

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|---|---|
| **Product & Visual Design** | Figma, Figma Variables, Design Tokens, Sketch, Photoshop, Illustrator, After Effects |
| **Web & AI Products** | TypeScript, JavaScript, React, Next.js, Framer, Three.js, WebGL, OpenAI API, Supabase, PostgreSQL |
| **Spatial & 3D** | Unity, C#, Autodesk Maya, Meta Quest and Horizon prototyping stacks |
| **Embedded Graphics** | C++, ANSI C, Control Code, OpenGL ES 2.0, GLSL, ETC2, Altia Design, Altia DeepScreen, Qt |
| **Physical Hardware** | ESP32, Arduino, MPU-6050, BLE, KiCad, PCB design, Rhino, Shapr3D, Ultimaker Cura |
| **Production Workflow** | Mercurial, diff/PR workflows, Protokit, production product codebases |

## LEADERSHIP

- Formal management of a three-person UX team with responsibility for people development and delivery
- DRI ownership and guidance of junior and contract designers
- Executive workshops and product-direction facilitation
- Cross-functional integration across design, engineering, research, product, sales, customers, and hardware partners
- Technical training for designers, prototypers, leadership, and global OEM teams
- Leadership without management through mentoring, implementation support, product reframing, and organizational enablement

## POSITIONING

Staff or Principal Product Designer

Staff or Principal Design Technologist

Staff-level advanced concepts, pathfi nding, or prototyping IC

0→1 product roles combining product judgment, interaction design, and implementation

Barry is seeking a role with a combination of product judgment, systems thinking, technical adaptability, prototyping, visual craft, facilitation, and implementation fluency.

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