DTS AutoStage on the BMW Platform

Designing the Content-First Connected Car Experience

A Case Study in Automotive UX Leadership & Cross-Functional Execution

Alex Liston | VP of Product Design & UX Innovator

The Shift: From Dashboard to Living Room

Context

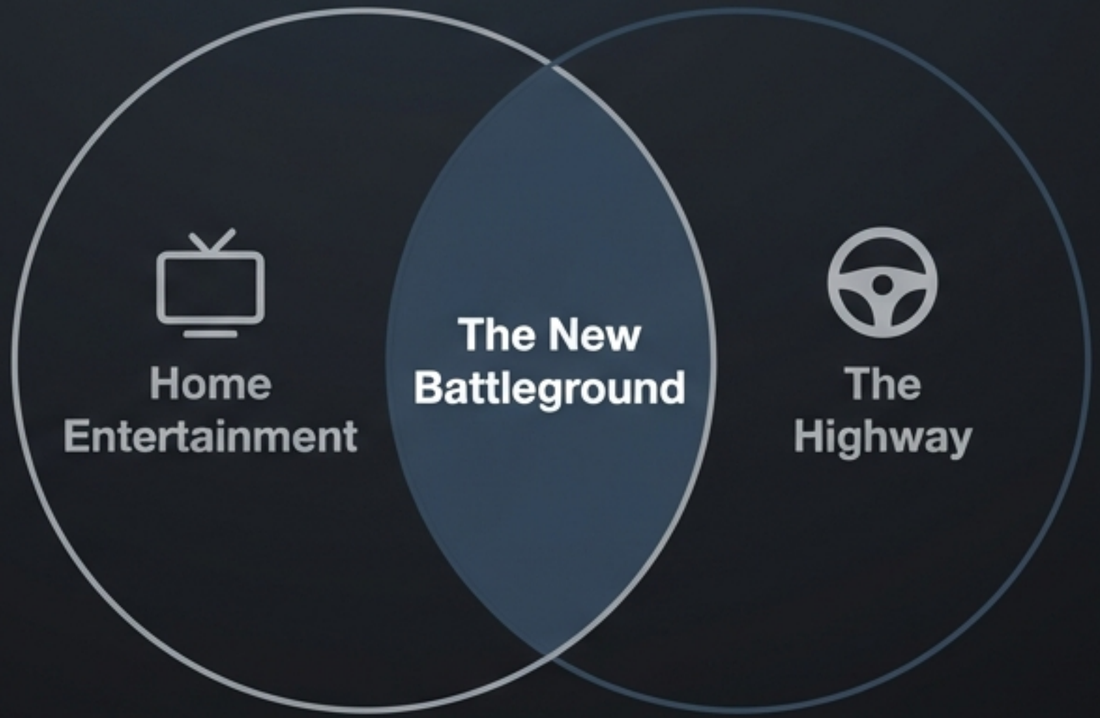
The boundaries between home and highway are dissolving. Consumers now demand the same personalized, high-quality media in their vehicles as they have on their smart TVs.

The Problem

Information overload. Users are frustrated by siloed apps and the cognitive heavy lifting required to find content—a friction point magnified dangerously in the driver's seat.

The Opportunity

Establish DTS AutoStage as the leading global, content-first entertainment platform, unlocking recurring revenue streams for OEMs like BMW.



The HMI Constraint Box

How do we deliver infinite entertainment without compromising life-or-death safety?

Constraint 1: Distraction.

Driver gaze is intermittent and ephemeral. Complex UI is a safety hazard.

Constraint 2: Hardware.

Interaction is touch-only. The screen is a massive, highly specific 3:1 ultrawide ratio (2880 x 960).

Constraint 3: Speed.

Video UI can only be fully engaged when stationary or moving <= 3 km/h.



Alex Liston | VP of Product Design & UX Innovator

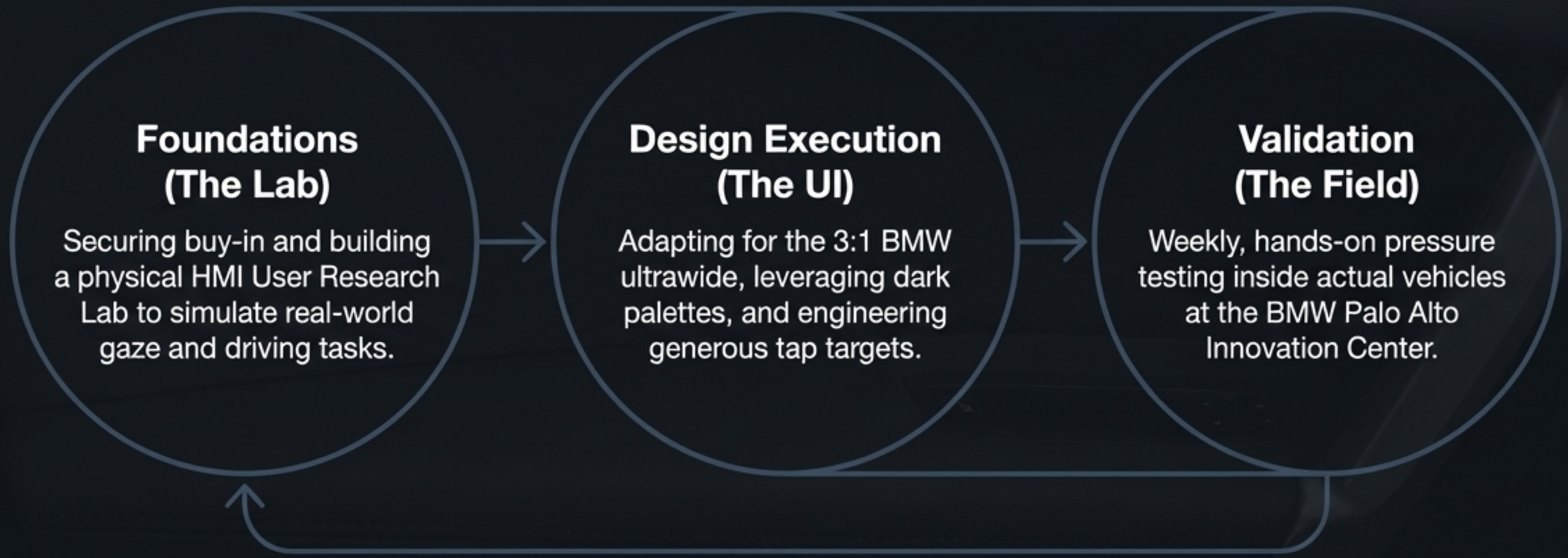
The Paradigm Shift: App-Centric vs. Content-Forward

	App-Centric (The Old Way)	Content-Forward (The AutoStage Way)
Architecture	Siloed content. Users must hop between specific apps to find shows.	Aggregated. All content from all sources (TiVo+, Pluto, BMW Rideview) in one unified interface.
Cognitive Load	High. Requires multiple taps and deep menu diving.	Low. Personalized top-level browsing. 1-tap playback.
FTUX	Blank slate requiring manual configuration.	‘This-or-That’ onboarding for instant, proactive personalization.

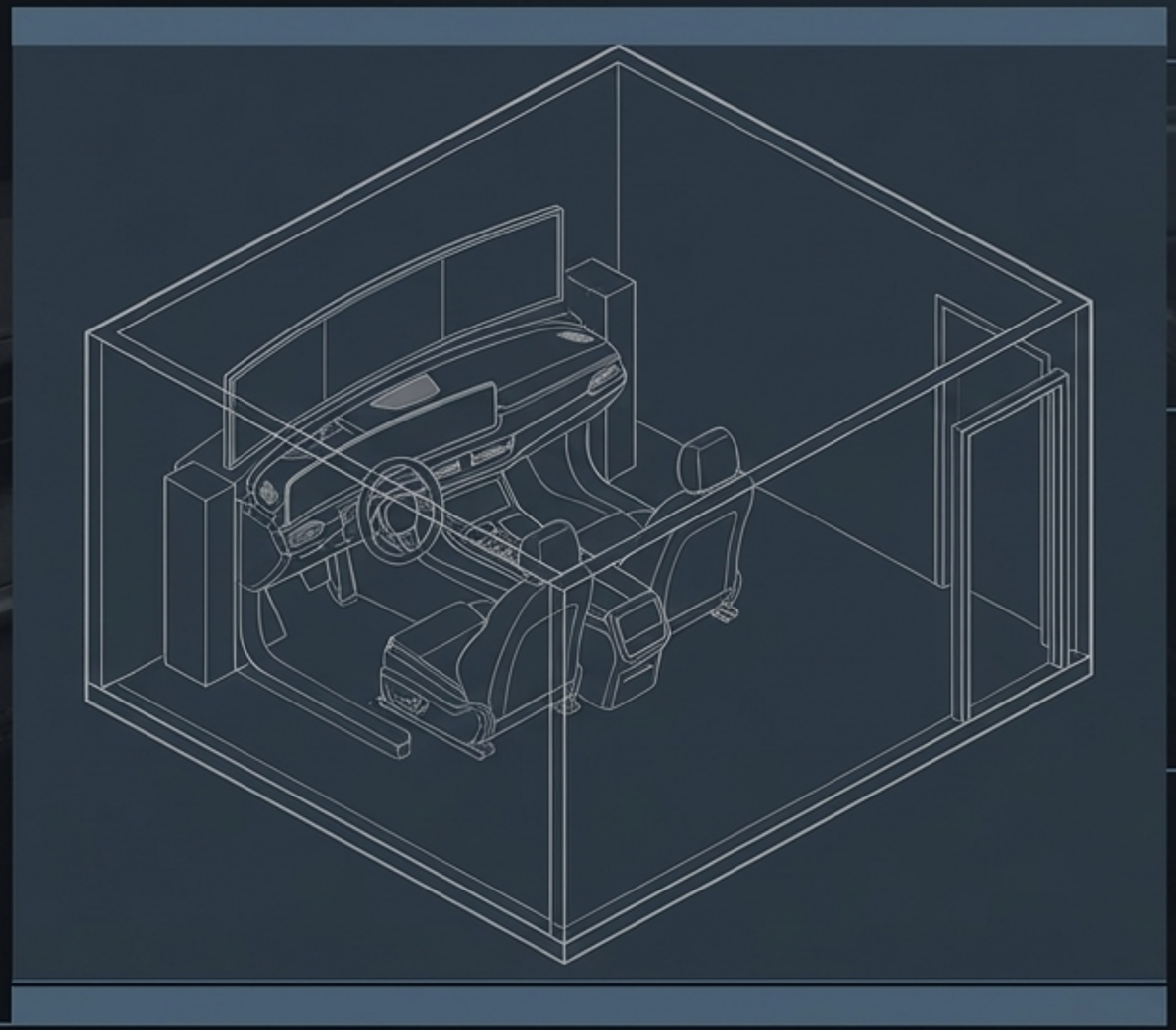
The Mandate

Role:	VP of Design & Research
Objective:	Lead system-level UX for the integration of DTS AutoStage into BMW’s in-car Human-Machine Interface (HMI).
The Challenge:	Translate the ‘Mercury’ Smart TV design language into a native automotive experience that scales globally.
The Timeline:	7 months from initial ideation to production.

The Rapid Validation Loop



Foundations: “Design Without Research is Guessing”



The Initiative

Proposed, pitched, and secured funding from the CPO and Automotive GMs to build a dedicated HMI User Research Lab.

The Execution

Built a simulated automobile cockpit outside the main cafeteria—serving as both a testing facility and a highly visible centerpiece for the company’s user-centered ideology.

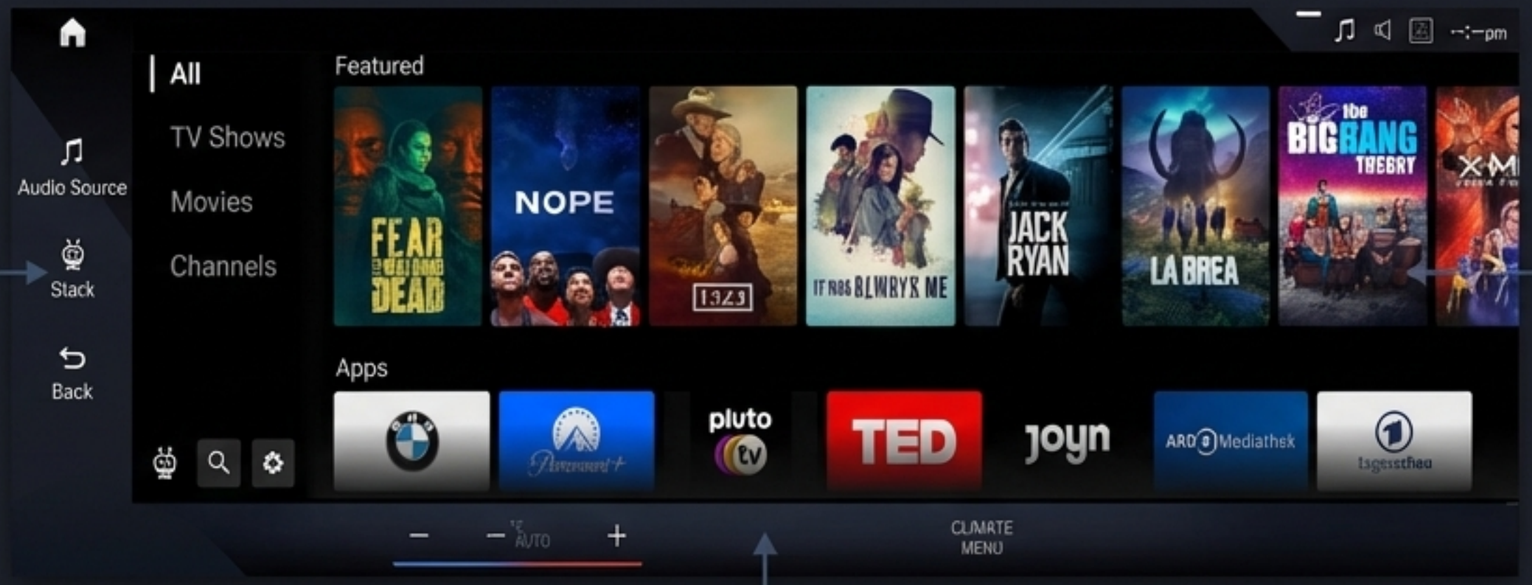
The Impact

Enabled primary research on driver gaze and task analysis, directly influencing the size, placement, and navigation hierarchy of the final UI.

Anatomy of the 3:1 Ultrawide HMI

Persistent Left Navigation

Replaced wrap-around scrolling with a fixed guide, ensuring users never lose their sense of place.



Content-First Aggregation

Curated combinations of TV Shows, Movies, and Channels displayed side-by-side, regardless of the source app.

Hardware Integration

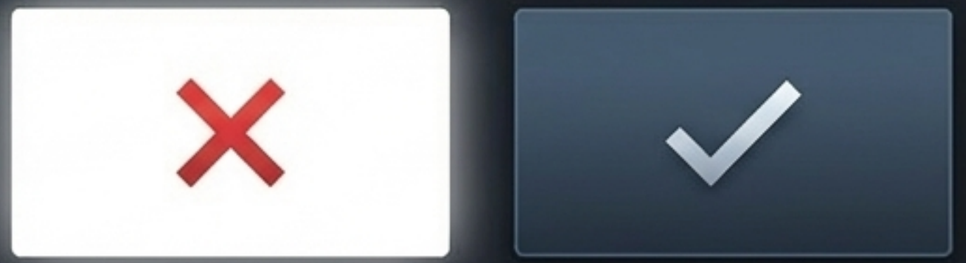
Seamlessly respecting the persistent BMW climate and global menu zones (usable UI area: 2592 x 764).

Alex Liston | VP of Product Design & UX Innovator

Designing for the Glance

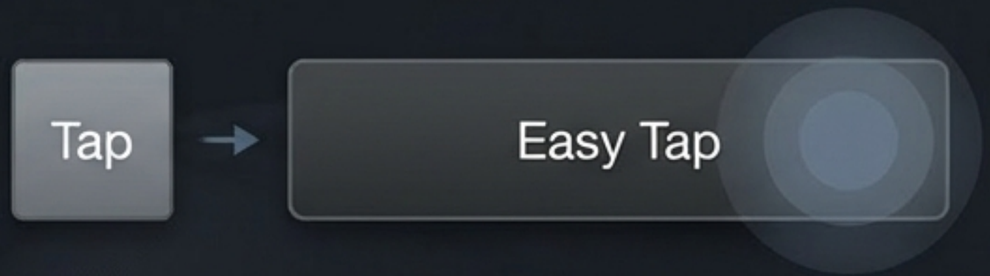
Dark Mode by Default

White backgrounds cause severe glare in vehicles and make the transition to playing video jarring. The UI utilizes deep, dark palettes with high-contrast, large typography for instant, comfortable legibility.



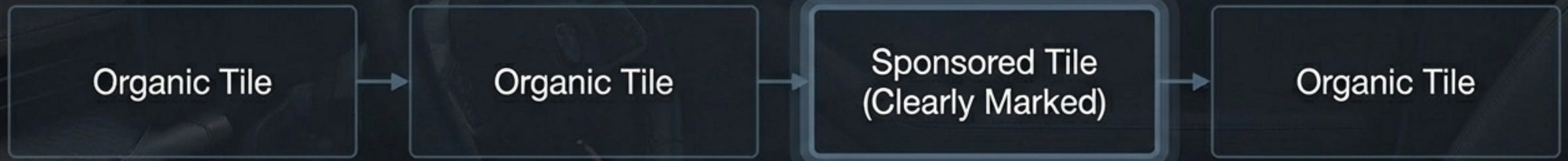
Generous Tap Targets

In a moving vehicle, a touch screen acts fundamentally differently than a stable tablet. All interactive elements feature expanded hit states and simplified scrolling patterns (locking to a single directional axis) to prevent the user from getting lost in a grid.



Monetization Without Distraction

The Challenge: Integrate non-intrusive revenue streams (like sponsored background hero images and display ads) while maintaining strict HMI safety.

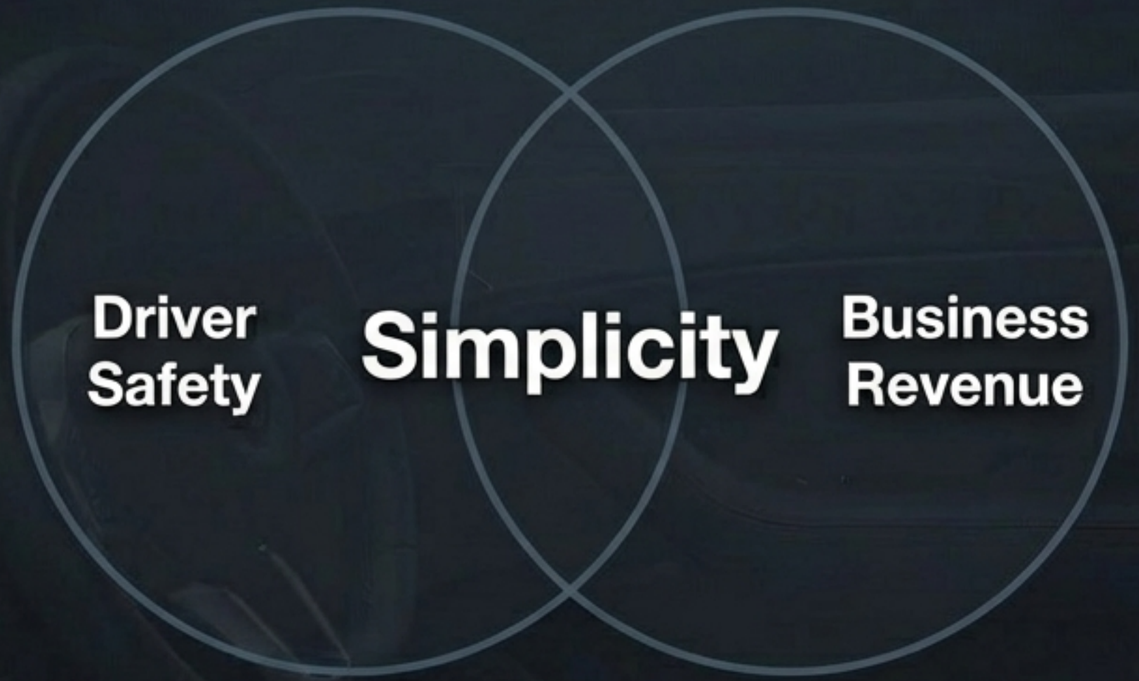


The Rules of Engagement

Clear marking of ‘Sponsored’ content to build trust and meet regulatory standards (e.g., German ad laws).

Limit screen updates: Background hero images and main home screen content only refresh every 10-12 minutes to prevent visual distraction while driving.

The Synthesis Arc



Core Insight

Safety and Monetization are not mutually exclusive; they are linked by Simplicity.

The Mechanism

By engineering dark modes, massive tap targets, and content-forward layouts, we drastically reduced cognitive load.

The Result

Removing friction for safety simultaneously removed friction for content consumption. This naturally increased user engagement, unlocking highly integrated, non-intrusive monetization opportunities. The design solved the user's problem and the business's goal at the exact same time.

Validation: The Reality Check



The Lab: Rigorous continuous testing in our custom HMI simulator to track intermittent gaze and usability metrics.



The Field: Weekly on-site testing in actual vehicles at the BMW Palo Alto Innovation Center. Working side-by-side with engineering to address bugs swiftly and ensure the final build faithfully reflected the design intent.

Driving Cross-Functional Alignment

Systems Thinking	Evaluated the underlying technology to balance design trade-offs, enabling tactical execution without losing the strategic roadmap.
Disciplined Prioritization	Conducting impact assessments with Division GMs. Staffed the project with top-tier talent—not just available headcount—to ensure Design stayed ahead of Development.
Agile Execution	Leveraged and adapted the existing Mercury Design system (built for Smart TVs) to accelerate the automotive build, eliminating redundant cycles.

Global Impact & Scale

7

Months from initial ideation to the rapid launch of the TiVo Media Platform UX on BMW.

10M+

Vehicles globally integrated with DTS AutoStage today.

146

Countries reached, delivering a unified, personalized, and safe entertainment ecosystem worldwide.

Outcome: Accelerated market adoption, generated new recurring non-intrusive revenue streams, and established Xperi/DTS as the leading content-first connected car platform.

The Final Takeaway

“Capability without judgment is just a faster way to produce nothing useful.”

Design leadership in the automotive space is not just about managing complexity; it is about deciding exactly where complexity belongs, and where it doesn’t.

Vision tells you why. Strategy tells you how. Execution delivers the 10 millionth car.