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NEWS RELEASE

Why the Software-Defined Vehicle Needs an AI-Defined Strategy

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For years, the shift to software-defined vehicles has dominated conversations across the automotive industry — and with good reason. The move from mechanical systems to digital architectures has fundamentally changed how we design, build, and upgrade automotive technology.

But software is just the foundation. What happens next depends on intelligence.

From Computing Power to Intelligence

The history of personal computing has followed a clear arc: from local, stand-alone machines, to cloud computing that delivered scale and access to vast amounts of information, to mobile computing that put this power in our pockets. Each step increased access but not necessarily insight. Connecting the dots hidden in oceans of data remained out of reach.

Artificial intelligence promises to close that gap. It makes devices almost sentient — able to perceive, learn, and respond in a human-like way. I like to think of AI as a “super butler”: a brain that sits above the information, anticipating needs and making complex tasks simple and intuitive.

Software Alone Doesn’t Make a Vehicle Smart

In automotive, we have traditionally thought in terms of features and functions.

- IVI systems deliver information, entertainment, and connectivity while keeping drivers safe.
- ADAS features add awareness of the road and environment, improving active safety.
- Body systems enhance comfort and convenience, from climate to access to automated controls.

The first technology-led transformation was making all these features software-driven. Tesla pioneered over-the-air updates, showing how cars could evolve after they left the factory, and Chinese OEMs scaled the approach quickly.

That shift was transformative. But now the challenge is different: making this vast amount of in-vehicle software easier and more intuitive to use. And this is where generative AI becomes complementary to SDV. It gives vehicles the ability to understand context, anticipate driver needs, personalize the cabin environment, and improve over time. The cockpit becomes dynamic. The vehicle becomes aware. That's a leap — and it's not something you can patch in after the fact.

The real potential of AI is unlocked when it's treated as part of the platform, not an accessory.

Designing Vehicles for Intelligence

Rethinking in-cabin systems starts with treating them not just as a collection of features, but as intelligent, adaptable platforms. AI can:

- Learn driver and passenger preferences over time, personalizing experiences in ways that static rule-based systems cannot.
- Deliver context-aware UX, where the interface adjusts based on behavior, preferences, or real-world conditions.
- Improve driver productivity, anticipating daily routines and integrating tools seamlessly.
- Enhance vehicle health and diagnostics through predictive insights.

At Visteon, we're treating intelligence as a core part of the cockpit architecture, built to support a range of evolving use cases over time. And we're tackling one of the hardest challenges: running Gen-AI models efficiently inside the vehicle and connecting them to the full IVI system so that tasks are carried out intuitively and responsibly. This requires balancing on-device processing for responsiveness, edge learning for personalization, and fleet-level insights for continuous improvement.

We see AI as the next big technology wave in automotive — just as Android reshaped how cockpit systems were built a decade ago. Then, as now, we're focused not on choosing sides but on making the underlying technology practical, efficient, and scalable for OEMs.

Why It Matters

Soon, the intelligence behind the cockpit will matter as much as the motor under the hood. As electrification and connectivity become standard, the in-cabin experience becomes the ultimate differentiation — where brands will win trust, loyalty, and margin.

We also need to be realistic: AI introduces new challenges. Around trust. Privacy. Regulation. Part of our responsibility as leaders is ensuring that these systems are not only smart, but responsible, with explainable models, clear safeguards, and a design philosophy that keeps humans at the center.

Where We Go from Here

As the lines blur between machine learning and human behavior, one thing is clear: the vehicles of the future won't just run on software. They'll think with it. And at Visteon, we're building for it.