"Software will eat the world. Artificial Intelligence will eat Software. And Culture will eat all of your Strategy for breakfast." (M. Andreessen + J. Huang + P. Drucker mashup)

Our workplace and work dynamics have significantly changed and now more than ever (post-pandemic), some radical culture and business shifts might also do a company some good.

Over my past few years of working with global Automotive and Mobility OEMs, suppliers and software integrators, it is clear that a few strategic decisions could streamline activities and influence future prosperity. Here are some for your consideration - covering near-term actions, evolved culture and guiding principles.

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Advancing the Human-Vehicle System: Near-term Actions

Build an A/B vehicle testing fleet

You need a quick way to test physical and digital concepts "on the road" – especially if the maturity of your rich data collection and over-the-air (OTA) capabilities are still a few years away. Make a flexible, drivable vehicle your platform of constant and iterative experimentation and learning. Every day that you do not collect consumer data, you fall further behind. OTA and analytics are the fertilizer of value and trust. Adopt & embrace the Android Automotive OS Your current in-house or supplier provided infotainment system cannot keep-up with the data, service and reach of Google. Consumer expectations will continue to keep pace with modern software platforms and connected systems.

Over-index on smartphone

integration 1/3 of the world's population now carries them with them wherever they go including into their vehicles. Design systems within your portfolio that enable vehicle access, payments for goods and service, communication and identity management, contact integration, memberships and subscriptions and so much more.

Reassess and take a break from introducing new features For at least one cycle of new vehicles. Understand and invest in those features that matter the most to your consumers. Then significantly improve the ease, speed and richness of them. Become the leader in a specific experience domain. Reveal what is hidden or unknown regarding what the vehicle can do. Invest in enabling vehicle intelligence. **Stop wasting your time on the design of a gesture vocabulary** Pick a single best way for customers to interact with your vehicle's functions, most likely direct touch and physical control manipulation. From kitchen & living room products to everyday mobile interactions to in-vehicle, users try them once, show their friends, use 2-3 for a few months and then stop altogether. Natural language voice and interpreting context and intent will evolve quickly.

Design & build fewer vehicles

Consider the design of one sedan, one CUV, one SUV, one performance vehicle, one pickup, one commercial vehicle (or fewer) – each designed and built on a platform of significant customer-driven modularity, flexibility and extensibility of both physical & digital components and systems. Design flexible spaces, surfaces, home screens and interior lighting. Ensure mental comfort with the safe and familiar.

Advancing the Human-Vehicle System: Evolving the Culture

Assign one-person to oversee all vehicle interaction This single individual has the responsibility of resolving conflict, vetoing decisions and final decision making and say over all design, interaction and experience design decisions for all vehicles – or said another way, everything that a human interacts with. This person should not be an Engineer, Software Architect, Vehicle Dynamics Expert, Business Analyst or Project Manager by background. **Go all-in on all things digital** Digital transformation is now a business imperative. Put a disproportional amount of spending and resources on developing a mature digital infrastructure, robust cloud, deep analytics, automation and evolving intelligence. Put more emphasis on learning versus making. The prototype is the requirements and the specifications. Hire digital natives that have grown-up digital and let challenge your assumptions and lead.

Do more with what you have Too much uncertainty and misunderstanding exists amongst consumers regarding what their vehicle can do. Particularly when it comes to features related to Driver Assistance, Drive Modes and Connectivity. Shift your focus to a process of gaining a thorough understanding of consumers and then incrementally improving. Resist that need to constantly add something new.

Put the system before the vehicle

We chose a mobile phone because it enables entertainment, productivity and connections to other devices, places and services. Treat your products and services as modes within a system and let that guide your decision making. Connected emotional system design is the future of product and service design.

Make revenue generating services more important than vehicles

Automotive OEMs need to create valuable service businesses. Beyond vehicle enhancements like selling map updates, enabling auto pilot or taking a cut of each parking fee, they need to put all assets to work. Real-estate, a diverse work force, dealer networks, financial arms all need to be part of the experimental mix of new services. Be unwavering in displaying your

core values Be transparent, deliver on promises, be consistent and reliable, put your customer before you, show compassion, kindness and respect. Know what you stand for, how you want to be perceived and be true to your values – particularly when faced with challenges or times of crisis. Your business exists in-service of the needs of others. Enact enterprise-wide decision making guidelines that are informed by these values.



Advancing the Human-Vehicle System: Some Guiding Principles

Design for extensibility, flexibility and modularity of systems Design and develop digital platforms for learning and constant improvement. Coding to fixed requirements and detailed specifications is too rigid. Consider a software code based and system architecture that can be extended to other system nodes with minimal disruption. Design vehicle zones, surfaces, empty spaces and components that adjust to specific needs and contexts. **Ensure stability and reliability of connectivity & awareness** The expectation of the stability of future connectivity is that it is like the air that we breathe – always there and always on. Ensure that your systems deliver on that promise. Do not design sensors and audio warnings that are annoying to customers. Do not trigger an Off button when it is actuated assuming that the consumer might find it annoying.

Design for a multi-modal mobility

world The future of movement for individuals and businesses blends personal, commercial and civic mobility systems of various shapes & sizes. Consider solutions for each multi-modal journey. Enable dealers to move beyond Sales, Service & Parts and focus on engagement and experiential value for their customers. Integrate diverse mobility services into each personal customer experience.

Keep the driver + passengers in complete control Design near-term adaptive systems that step-in and mitigate unsafe situations and at the same time provide consumers the amount of control over the systems that they expect. This negotiation will lead to customers feeling in control of intelligent & autonomous systems. Explore alternatives to "locking-out" functions and rigidly adhering to diverse regional regulations.

Support flexible access, ownership, vehicle acquisition & usage

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Contactless purchase and service, home delivery, trial "test drive" periods and more are now priority consumer needs. New ownership support models, subscription models, on-demand access, usage-based fees, personalized services and more should be ingredients of everyday experimentation and exploration – as consumers demand new business models.

Design & build various purpose-built vehicles on a shared EV platform

Design a model of "fit-for-purpose" that includes the sharing of numerous components and systems. Then consider the sharing of platforms, powerplants, components and other foundational elements to offset costs with industry peers. Put your time and attention towards developing compelling, efficient and pleasurable driving and riding experiences.

