Limited access to advanced testing equipment and technology Balancing performance with fuel efficiency Meeting strict emissions regulations Dealing with constantly changing technology and software updates Finding qualified and skilled employees Managing tight project deadlines Balancing cost constraints with innovation Resolving conflicts between design and engineering teams Addressing safety concerns in vehicle design Ensuring compatibility with existing infrastructure Managing supplier relationships and quality control Dealing with complex supply chain logistics Resolving compatibility issues with other vehicle systems Addressing ergonomic concerns for drivers and passengers Managing vehicle weight and aerodynamics Addressing noise, vibration, and harshness (NVH) issues Balancing performance and durability in component design Addressing thermal management challenges Managing vehicle electrification and hybridization Addressing cybersecurity concerns in vehicle systems Managing vehicle recalls and warranty issues Balancing vehicle performance with cost considerations Addressing manufacturing constraints and limitations Managing vehicle testing and validation processes Addressing software integration challenges

Balancing vehicle design with regulatory requirements Managing vehicle maintenance and servicing challenges Addressing vehicle connectivity and communication issues Managing vehicle autonomy and automation challenges Balancing vehicle design with customer preferences and market trends Addressing vehicle energy efficiency and sustainability concerns Managing vehicle production and assembly challenges Balancing vehicle performance with environmental impact Addressing vehicle materials and component sourcing challenges Managing vehicle compatibility with new technologies and innovations Balancing vehicle design with cost-effective manufacturing processes Addressing vehicle durability and reliability concerns Managing vehicle customization and personalization challenges Balancing vehicle aesthetics with functional design requirements Addressing vehicle software updates and maintenance challenges Managing vehicle safety and crashworthiness concerns Balancing vehicle performance with driver comfort and convenience Addressing vehicle design obsolescence and technological advancements Managing vehicle regulatory compliance and certification challenges Balancing vehicle design with global market demands and preferences Addressing vehicle user interface and infotainment challenges Managing vehicle resale value and depreciation concerns Balancing vehicle design with energy efficiency and sustainability goals Addressing vehicle data privacy and security concerns Managing vehicle design and engineering team collaboration and communication challenges