Detroit Engineered Products (DEP) is an engineering services, product development, software development, consulting, and talent acquisition company. Since its inception in 1998 in Troy, USA, DEP is now a global company with footprints in Europe, China, Korea, Japan, and India. DEP uses an accelerated and transformed product development process accomplished by utilizing our proprietary platform, DEP MeshWorks, which rapidly reduces the development time of products for all industry segments.

Modern vehicles are equipped with a multitude of electronic control units (ECUs) and sensors that work together to manage everything from engine performance to advanced driver assistance systems (ADAS). The E/E architecture encompasses both hardware and software elements, creating a sophisticated interconnected system that ensures optimal vehicle operation enhancing the overall driving experience. With a strategic focus on providing these future-ready solutions, DEP addresses the challenges posed by the evolving complexity of E/E cluster through dynamic and scalable engineering processes. Across value chains, DEP ensures clarity in objectives and maximizes product efficiency, by carefully choosing technology frameworks for domains like infotainment, connectivity, power & body electronics, charging, telematics, etc. As the digitization of auto components accelerates, DEP is committed to achieving excellence through system level optimization achieved by unified and efficient engineering methodology for specific E/E architectural requirements.



A comprehensive and strategic approach is adopted by DEP experts during the entire product development lifecycle. This includes full vehicle electronics solutions comprising hardware design & analysis, firmware, middleware, AutoSAR, model-based design, functional safety, V&V and development support. Collaboration with DEP empowers customers to achieve business excellence while meeting evolving market needs for future-proof E/E systems. With complete adherence to industry standards, the DEP services for the E/E segment is efficient, reliable, safe, and up-to-date. Our team of experts had extensive experience working with major automotive OEMs and Tier-1 suppliers in creating futuristic, ADAS and in-vehicle infotainment to telematics and navigation systems that enhance user experience and safety. The two decades of industry experience and partnerships in hardware and software technologies positions us as a trusted partner in developing sophisticated automotive electronics solutions.



















AUTOMOTIVE ELECTRICAL/ELECTRONICS

- Design & Develop vehicle electrical Components and Subsystems
- Climate Control and Body Electronics
- Chassis Electronics and Power Distribution
- Electrical & Electronics Schematic System Design

- Electrical Component selection
- Wiring Harness Design
- 2D & 3D Wiring Harness Routing
- Value Analysis / Value Engineering

Vehicle Electronics













Driver Assistance System





E/E Architecture Design, Development & Integration for Complete Vehicle

- Vehicle electrical & distribution system
- Energy Management
- Network design & implementation
- Diagnostic development & End of line systems
- Test Management
- Fleet Validation & Management
- EMI/EMC design
- Vehicle homologation & compliance management

Systems/Features Design & Integration

- Body electronics & Driver assistant systems
- Infotainment & Telematics systems
- Powertrain & Chassis systems
- Alternative drive systems
- Comfort & vehicle safety systems
- Lighting systems

Software Development & Integration

- Control algorithms development
- Integration of modules for AUTOSAR standard







Engineering Design and Development Workflow

System Requirements

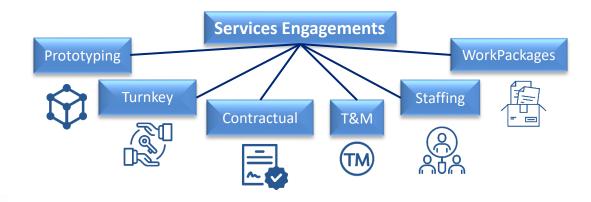
Architecture Design

HW / SW Design

V&V

Expertise – Advanced Mobility

Systems	Integration	Software	Test
 MBSE Architecture DFMEA Requirements HARA/TARA FTA/FMEA Robustness Reliability 	 S/w integration H/w integration E/e integration CAN integration Mechanical system integration Proto Vehicle build High Voltage System 	 Modeling & Simulation Autocode & Handcode Scripting (AI/ML) Algorithm/Logic Diagnostic stack CAN stack AUTOSAR Feature software 	MILSILPILHILVILTrackAutomation



Flexible Engagement Model

- Offshore Engagement
- Onsite Engagement
- Hybrid Engagement
- Offshore Dedicated Centre (ODC)
- Interchange & modification possibilities



Cost- efficiency

Suitability

