



In engineering we trust



HALLMARK
ENGINEERING GROUP



ee solutions
engineering

HADFIELD
MANUFACTURING

About us

Hallmark Engineering Group is a group of businesses that are focused on helping our clients to generate more value for their customers utilising our philosophy of “In engineering we trust”.



Revenue 2023
£8M+



Employees
95+



Engineering knowledge
1000 years+

Executive leadership



Spencer Thomas

Chief Executive Officer



Damien Wilson

Chief Operating Officer



Alex Hampton

Commercial Director



Alison Hunt

Finance Director

Core pillars

Quality & Expertise

Upholding superior standards in engineering with solutions crafted by experts.



Social Responsibility

Dedicated to social stewardship, we ensure our operations and initiatives generate a positive impact.



Sustainability

Implementing eco-friendly practices alongside innovative and efficient technologies for a greener future.



Trust

Cultivating enduring relationships with clients through reliability and integrity.



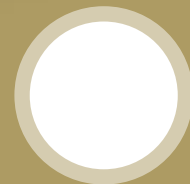


Our journey

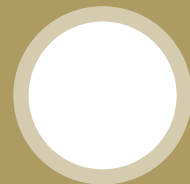
Key Milestones and achievements

Growth

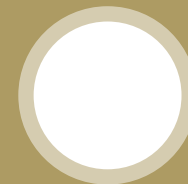
Ken and Sue Lowe take sole ownership of EES Solutions, guiding the company through a decade of growth and success.



2006



2008-2016



2016

Foundation of EES Solutions

EES Solutions is founded by Ken Lowe, Martin Lathbury, and David Williamson, laying the foundation of engineering excellence.

Spencer Thomas takes ownership of EES Solutions, injecting fresh energy and vision into the company, charting a course towards new horizons.

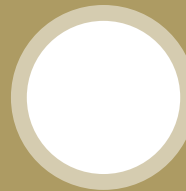
Acquisition of Hadfield Services

Hadfield Services joins thefamily, and Hallmark Engineering Group is formed, marking a new era of collaboration and collective strength in the engineering industry.

2019



2023



2024 / 2025



Leadership growth

With Ken’s retirement, Damien Wilson joins Spencer Thomas as co-owner, starting a new chapter of growth and innovation together.

Hallmark Engineering Group strengthens leadership with new senior roles and relocates to new headquarters. Hadfield

- Services attains BSI 9001 Certification
- Cyber Essentials + Certified



We transform concepts

We cover all aspects of engineering design and development, guiding complex projects from initial concept to production and specialist manufacturing. Driven by a commitment to push the boundaries of engineering, we continually expand our expertise with cutting-edge methods, skilled talent, and future-forward technologies.

Group structure

HALLMARK
ENGINEERING GROUP



HALLMARK

ENGINEERING GROUP



Innovation at Work

Introducing EES Solutions: Our engineering expertise



Electronic & Electrical

Component and Network Design

ADAS & Autonomous Systems

Software Over The Air (SOTA)

Vehicle Engineering

Body, Chassis and Interior Trim

Powertrain Engineering

ICE and EV

System Integration

Functional Safety (ISO 26262)

Project Governance

Warranty Analysis, Structured problem solving



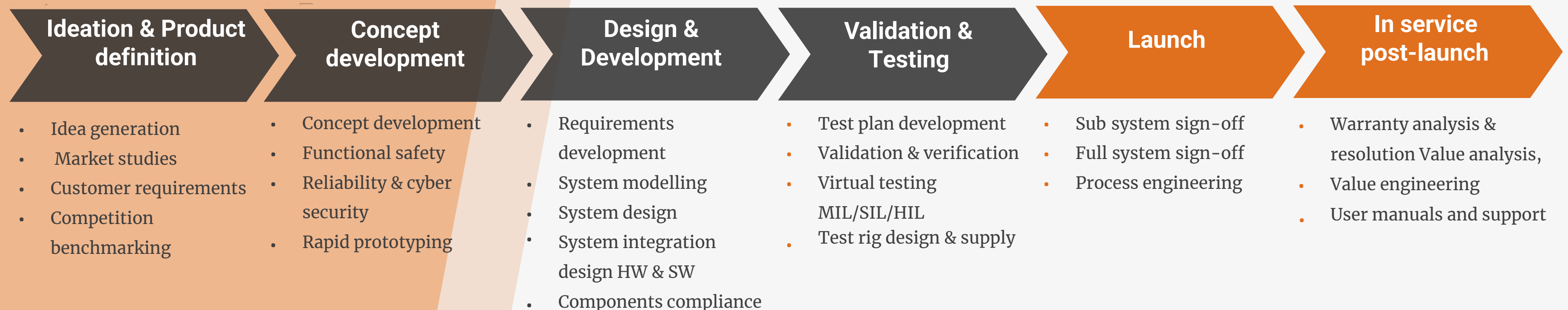
What we do

Through the product development lifecycle



EES Capability

- Supporting OEM's and Tier 1 suppliers since 2006 in all aspects of the design and development of complex systems from concept through to volume production
- Technology agnostic approach, network of suppliers of components and systems ready for re-application



Case Studies



Engineering Projects

- Advanced Driver Assistance Systems (ADAS/ AAD Systems) - Managed Service (T&M) - 13 heads – Integration of all ADAS features into new vehicle architecture – ongoing
- Warranty improvement engineering – Managed Service (T&M) – 30 specialised heads – Route cause analysis – Corrective action delivery – 2015 to present
- Software over the air – Managed Service (T&M) – 5 to 10 heads – Systems engineering project from scope to launch– 2018 to 2023
- Electrical integration and Diagnostic services - Managed Services (T&M) - 5 heads – Definition of process followed by delivery of a validated system. 2 clients
- Special vehicle programme delivery – Fixed price – 8-13 heads – Whole programme delivery, design (mechanical and electrical), validation and launch – to 2023
- Vehicle accessory programme – Fixed price – 10 heads – All vehicle accessories for platform – Concept, design, validation and launch – ongoing
- Feature definition – Managed Service – 8 heads – Systems Engineering – Process development, reverse engineering of current features, definition of future features - Ongoing

Case study

Warranty engineering solution – Phase one

Engineering solution

100%

- Stand-alone EES engineering team based within the centralised customer warranty improvement team, working closely with all stakeholders
- Delivering warranty identification, engineering implementation, and several diagnostics core improvement projects
- Managing project definition letter (PDL) requests submitted by the EES team to the diagnostics service team
- Authoring, reviewing, and clarifying service requirements for the new service tool and supporting infrastructure
- Identifying, developing, and implementing improvements to current service diagnostics toolsets

Project: Warranty analysis solution

Contract type: Fixed price

Service Duration: April 2015 until March 2017

Team Size: 9 engineers

Service delivery

100%

- Project management
- Dealership communications
- Data analytics
- Quality engineering
- Supplier management
- Team collaboration
- Cross-functional teams organised into modules
- Electrical and mechanical design
- Dealership, manufacturing, training, and technical authors
- Data analysis and project management

Case study

Warranty engineering solution – Phase two

Engineering solution

100%

- Stand-alone EES engineering team within the centralised customer warranty improvement team, working closely with all stakeholders
- Focus shifted to analysing warranty data to identify root causes (design, supplier quality, build issues, dealership) and support corrective actions
- Team advanced to support the rollout of the new service tool, including fault diagnosis and prescribed dealer actions
- Continued efforts in data analytics, diagnostics, operator instruction definition, and validation

Project: Warranty solution

Contract type: Managed service model (T&M)

Service Duration: March 2017 until the end of 2019

Team Size: 9 engineers

Service delivery

100%

- Project and supplier management, data analytics, quality engineering
- Cross-functional teams organised into modules
- Electrical and mechanical design
- Dealership, manufacturing, training, and technical authors
- Roles include data analysts and project managers

Case study

Warranty engineering solution – Phase three

Engineering solution

Ongoing

- EES engineering team integrated into the customer CoC teams, working closely with all stakeholders
- Analysing warranty data to identify root causes (design, supplier quality, build issues, dealership) and manage corrective actions

Project: Warranty solution

Contract type: Managed service model (T&M)

Service Duration: March 2024 and on-going

Team Size: 30
engineers

Service delivery

Ongoing

- Project and supplier management, data analytics, quality engineering
- CoC based engineers
- All vehicle engineering disciplines

Case study

Advanced Driver Assistance Systems (ADAS/ AAD Systems)

Engineering solution

100%

- Stand-alone EES systems engineering team integrated into the customer's AGILE team, collaborating with all stakeholders
- Delivering system engineering for client platforms
- Maintaining EVA-Continuum architecture for Assisted and Automated Driving (AAD)
- Integrating new features into current and future architecture supplier switch
- Providing services of Product Owners (x2), System Engineers (x7), Tech. Specialist (x1), and Quality/Defect Manager (x1)



Project: AAD Systems

Contract type: Managed service (T&M)

Service Duration: December 2021 - ongoing

Team Size: 13 engineers

Service delivery

100%

- Dedicated team of skilled system design engineers led by an experienced team leader and technical specialist
- Actively engaged to meet customer timelines, quality targets, and project cost goals
- EES project delivery using a time-and-materials fixed-price model, ensuring controlled flexibility

HALLMARK

ENGINEERING GROUP



Reliable Solutions, Trusted Results

Introducing Hadfield Services: Our Services



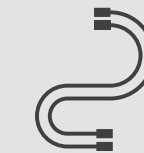
Prototyping

- In-house or on-site rapid prototyping facilities
- Supporting any type of electrical requirement (electrical, electronic, mechanical, software, or test rig)



Electronics controls and software design

- Requirements capture and validation
- Reverse Engineering
- Following ISO 9001 processes from concept to final product



Wire harness design and build

- Designed in-house or built to print
- Capable of handling small to medium production runs, ensuring full traceability and governance
- Adhering to AS9100 standards



Manufacturing

- Manufacturing harnesses and electrical test rigs at our UK facility
- Ensuring all parts meet standards through rigorous testing and quality control



Control module upgrades

- In-house or on-site mass software upgrades for ECUs/Modules
- Automated DID and DTC checking
- Fully traceable records of each ECU's software



Diagnostic specialists

- Providing vehicle electrical diagnostic support
- Testing diagnostic scripts
- Decrypting and analysing data
- Designing system architecture

Streamline Processes

Introducing Hadfield Services: Capabilities and Expertise



Manufacturing Processes:

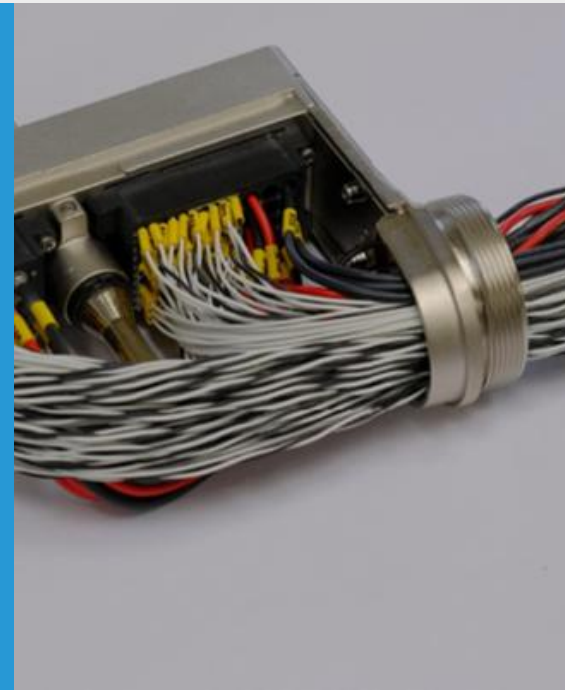
- Electric terminal stamping
- Automated cable cutting
- Ultrasonic welding (up to 30mm)
- Cable cutting & crimping (up to 300mm)
- Soldering and desoldering Systems
- Automated heatshrink system - HaloBlaze
- Label printing
- 3D resin printing for fixtures and manufacturing aids

Testing and Quality Assurance:

- Terminal pull testing facility
- Automated 4-wire harness testing
- High power test rigs (up to 1KV, 1KA)
- Functional testing rigs
- Interface rigs for communications and power
- Software reflashing - 70 setups with CAN/Flexray/LIN/BRR download
- Automated ECU logging/test facilities - fully traceable

Design and Engineering:

- Automated identification system
- Electronic controls and design
- Control module design and reverse engineering
- Wire harnesses - high voltage (HV), low voltage (LV), communications, fibreoptic
- CAD modelling - Solidworks and Fusion 360
- Electronic design and layout - peer review and blueprint-based build
- Software design - embedded systems, Windows GUIs, prototyping
- Proof of concept - mechanical, electrical, software, and wire harnesses



Reliable Solutions, Trusted Results

Introducing Hadfield Services: Quality and Compliance



15+

years in the business



24+

Employees



140+

Bespoke projects delivered



12+

Industry partnerships



Compliance

Ensuring adherence to standards and regulations, including CE/CA compliance.



Service Experience

Harness - Design and Manufacture

Case Study



Wire Harness for 2/3 scale electric car

Bespoke mechanical and electronic assemblies



Specialist Wire Harnesses

Custom build to AS 610-620 quality



RFR Leads

Fast turnaround service, integrated into client's system for connectors supply and harnessing



TEDU / CEDU

Manufacturing and validation of powertrain test rig harness



Aftermarket Requests

Connectors, seals and small wiring harnesses

01

Service Experience

Mass Module Reflashing Case Study

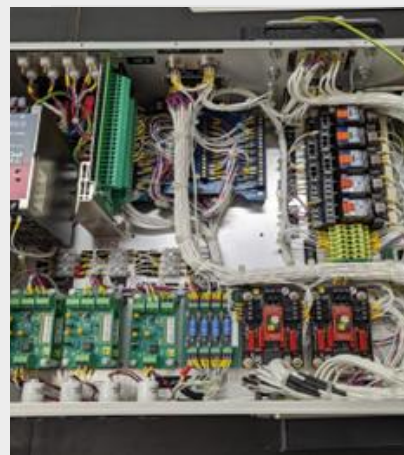


- Direct Module or in car rework solutions available
- Service available at Hadfield service facility or on customer sites
- Automated DID and DTC checking - GO - NO - GO
- Relabelling Service - Barcode & 2d Matrix & data
- Fully traceable records for each ECU's SW change recorded and stored
- UK Bosch software approved supplier



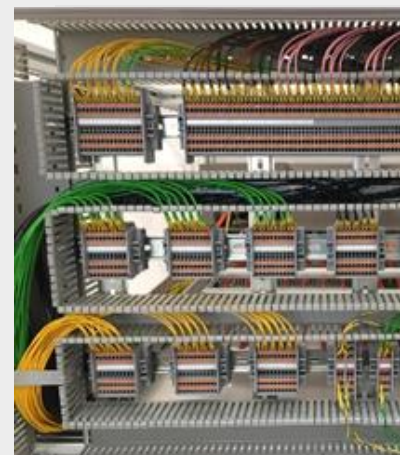
Service Experience

Innovation Projects Case Study



Encoder testing unit

Bespoke assemblies,
mechanical and electronic,
hand built to order



High Power and comms DUT Interfaces

Hadfield Services design and
assembly



Instrument Cluster Interface

10A PSU with CAN, LIN and
Ethernet interfaces for
current and future designs



Ethernet to Broad- R-Reach Module

Design from client
requirements to provide
High-speed data conversion



Power Conditioning Modules

Modular and upgradeable

03

Service Experience

Test Rigs

Case Study

04



Common Architecture Programmer

Electronic module programming system, bespoke GUI, reducing manufacturing from 30 mins per CCA to 6.5 mins for 4.



Mobile Test Rig for Electronic System

- 4 high power supplies
- Power conditioning
- Digital and analog interfaces
- Concurrent computer system



High Power and comms DUT Interfaces

Device under test system - Hadfield design and assembly

We provide full product lifecycle coverage, from the drawing board to manufacturing, integration, and installation.



🌐 hallmarkengineeringgroup.co.uk

✉ info@hallmarkengineeringgroup.co.uk

📍 1150 Elliott Court, Herald Avenue,
Coventry, CV5 6UB

Thank You

Next Steps

We appreciate your interest and attention. Please feel free to ask any questions or discuss potential collaborations as we look forward to exploring opportunities together.

