



THE UNIVERSITY
OF BIRMINGHAM

AUTOTRAIN CODESIGN: Improving the Design and Development Capabilities of SME Automotive Suppliers in the West Midlands

Since the trend for cascading the design responsibilities of vehicle systems continues, Tier 1 suppliers are now challenging their Tier 2 and 3 suppliers to increase their design and development expertise to contribute to functional, durable and low cost products.

Suppliers familiar with a "make to drawing" role now need to understand the function of their part or tool in its subsystem and to contribute to improved design with reduced product cost and increased quality.

As nearly 80% of the cost and quality of a component is determined at the design stage, suppliers are encouraged to use the power of computer aided engineering to make effectiveness even more applicable and possible. Through CODESIGN, vehicle manufacturers and Tier 1 companies will work with their suppliers and sub-suppliers to develop and execute training plans to fill the gaps in knowledge and ability required to be effective in designing, developing, proving and delivering products with their customers.

CODESIGN proposes a review of current issues affecting the automotive supplier:

- SUPPLIER ISSUES

CODESIGN has special interest in diagnosing the main issues that concern suppliers on QCD. We want to know what the supplier thinks the issues are and, with regard to the supplier selections process, we need to agree how the selection is done and on what basis.

- PRODUCT ISSUES

As far as the product is concerned, CODESIGN focuses on how the supplier is involved in product development, shared product plans and shared product specifications. Our goal is to offer optimised solutions for SMEs to achieve product quality, to reduce product cost and to achieve improved product delivery to meet the needs of the customer.

- PROCESS ISSUES

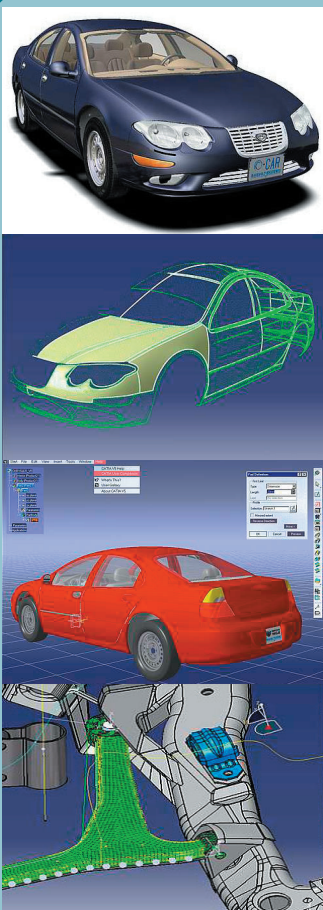
How is the process selected?; How is the supplier involved in the Process?; How does the Product Development Process involve the supplier?; How is the supplier involved in the process to achieve the end product QCD? CODESIGN facilitates improvement in process selection and implementation.

- IMPROVEMENT ACTIONS

In order to improve the current situation of suppliers in the automotive sector, CODESIGN proposes to act on: Shared targets for QCD Performance and Measurement; Communications to and from suppliers; Shared improvement plans; Measures of performance; Concern issues and resolution via joint analysis.

The CODESIGN Project Management Team includes:

- Dr. Cedric Ashley, Director of Euromotor and Former Director of MIRA, Lotus Engineering and BICERI
- Mr. Ian Milburn, Consultant and Former Deputy Managing Director of NISSAN Technology Centre-Europe and Leader of NISSAN's COGENT Project (aimed at supplier co-design)
- Eur Ing Chris Bale, Consultant, Euromotor Programme Executive and Former Technical Director of Federal-Mogul and Tickford



www.autotrain.org
www.autotrain-europe.org



How does the CODESIGN Project help?

- It develops face-to-face and on-line courses, guided by the needs of the customers and the suppliers, which are introduced through a series of networks
- Specialist trainers, colleges and universities will train 200 people from 50 SMEs in the West Midlands through five to seven networks
- The project is linked to the Accelerate Program and has been approved by the European Social Fund under Objective 3 funding, with a grant for two years based on its proposal to improve business competitiveness in the region

CODESIGN offers training to SMEs including the following areas:

Manufacturing, Design and Control:

- Vehicle System Understanding
- DFM / DFA
- Value Engineering
- Dimensioning, Tolerancing, Performance Specifications
- Material Selection
- Process Design and Control
- Dimension Control
- Problem Solving and Decision Analysis
- Design Verification and Product Validation

Product Planning

Project Management:

- QFD
- FMEA

Supply Chain Management:

- Supplier Selection
- Supplier Assessment
- Supplier Control

e-Design and e-Manufacture:

- CAE
- CAD
- CAM

Course contents will be tailored to suit the needs of customers and suppliers working in collaboration.

If you are an automotive industry customer or supplier and you would like to reduce component costs and increase quality through this programme, please contact **Euromotor** on **+44 (0)121 414 3695** or email **autotrain@autotrain.org**

How to contact us

Dr. Cedric Ashley
Project Manager EUROMOTOR
University of Birmingham
Edgbaston, Birmingham B15 2TT
Tel: +44 (0)121 414 7623
Fax: +44 (0)121 414 7151
Email: autotrain@autotrain.org

Websites: www.autotrain.org www.euromotor.org