

# ETA Engineering & Staffing

## CAE Services

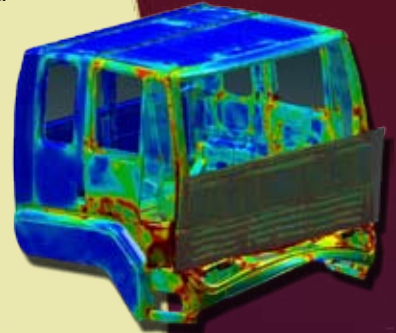
ETA's system-level engineering approach has been adopted by both foreign and domestic auto, bus, heavy truck, aerospace, military and consumer electronic manufacturers to reduce prototyping, time-to-market and cost while improving overall product quality.

Utilizing ETA's Accelerated Concept to Product (ACP) development process; simultaneous engineering, virtual reality and rapid prototyping reduce overall engineering times and offer global potential optimization. A high degree of part-maturity and quality emerge in the early phases with parallel processes in product development, production plant engineering and tooling.

ETA Engineering offers great flexibility in the way it provides consulting services. ETA can support the client's virtual development activities on a scale ranging from a single simulation and design analysis to a complete engineering design scope.

## Expertise

- Full vehicle development programs & components
- Advanced crash & occupant safety simulations
- Durability and NVH solutions
- Concept, development and verification (load and fatigue life)
- Metal forming applications--Stamping effects, tool design
- Pre-production performance--Crash, NVH and durability
- Production support--Manufacturing process simulation



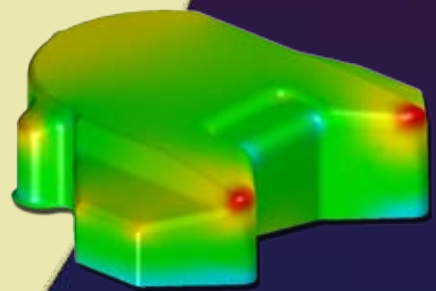
## Specialized Staffing Services

For over 25 years, ETA has consistently supplied its clients with the Engineering and IT professionals necessary to meet their staffing needs.

A strong commitment to long-term partnerships, as well as in-depth knowledge of industry practices, give ETA the ability to proactively and comprehensively understand the client's overall staffing needs and provide cost-effective solutions. ETA's client list includes General Motors, Ford, Chrysler, Mitsubishi Fuso Truck & Bus Corporation, Thomas Built Buses, ICRC and TACOM.

## Areas of staffing specialties include:

- CAE Engineers - Crash, NVH, Durability
- Software Developers
- CAD & Project Management Engineers
- Programmers & Analysts
- Web Developers
- Databases Administrators
- Network Analysts



## ETA, Inc

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*ETA is an EEO/AAP Employer*

# eta

[www.eta.com](http://www.eta.com)

# ETA Software

ETA is proactive in the development and implementation of cutting-edge mechanical analysis methods and software. ETA is the developer of eta/DYNAFORM, a complete die analysis solution, and eta/VPG, an advanced modeling package for system-level simulations.

## eta/DYNAFORM

eta/DYNAFORM is a complete die system simulation solution. The software allows organizations to entirely bypass soft tooling, reducing overall tryout time, lowering costs, increasing productivity and providing complete confidence in die system design. It also allows evaluation of alternative and unconventional designs and materials for an optimal solution.

DYNAFORM encompasses the entire die system process in one simple interface. By simulating every detail during the design stage, it ensures the highest quality formed part and best manufacturing process.

The **Blank Size Engineering (BSE)** module is a complete solution for accurate blank size estimation, nesting to maximize material utilization, piece price and scrap calculation.

**Die Face Engineering (DFE)** Interactively generates binder surfaces, addendum profiles/surfaces, PO Lines and layout drawbeads.

**Formability Simulation (FS)** is a complete incremental die simulation program for quickly generating formability results.

**Die System Analysis (DSA)** is an FEA solution to analyze die system operations including scrap shedding/removal, die structural integrity and sheet metal transferring/handling.

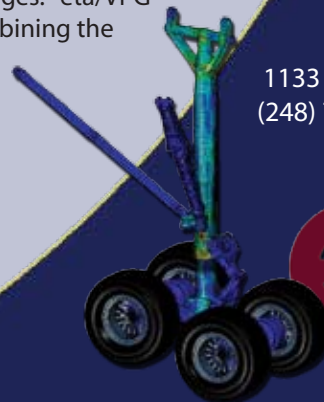
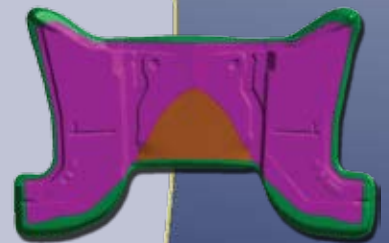
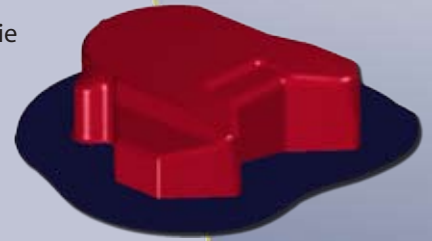
## eta/VPG

eta/VPG is a revolutionary new systems analysis software package which provides an event-based simulation solution of nonlinear, dynamic problems. Applications include vehicle crash, safety, NVH, durability, road load prediction, subsystem, and component analysis.

**VPG/PrePost** provides a wide range of tools that can be used to efficiently create meshes on CAD data, using an advanced automeshing algorithm, which eliminates most manual mesh manipulation.

The **VPG/Structure** module enables users to create unique system level simulations of mechanical systems such as vehicle suspensions and linkages. eta/VPG enables users to include components as flexible bodies, combining the traditional kinematic/dynamic simulation methods with finite element analysis methods.

The **VPG/Safety, Drop Test & ALE/FSI** module contains a complete crash test dummy library, barrier library and airbag folding system and enables users to quickly set-up complex simulations for standard impact, drop and blast simulations.



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