

# PROFICIENCY IN PRODUCTION

GKN Automotive, Inc.



**Location:** Auburn Hills, Michigan

**Industry:** Automotive

**Task:** Collaboration with OEMs on driveline components.

**CAD Systems:** Pro/ENGINEER  
I-DEAS  
Unigraphics  
CATIA

**Immediate Business Goal:**

- Reduce product development costs

**Technical Goals:**

- Achieve core design strategy
- Reduce re-mastering
- Deliver customer data in required format

**Estimated Savings:**

- 50% improvement in designer efficiency

**Strategic Benefits:**

- Achieve operational excellence
- Reduce CAD overhead costs
- Deliver 3D models to OEMs

*"After an extensive evaluation of the competitive technologies in the market, we selected Proficiency's Collaboration Gateway because it best matches our core product design strategy: allowing us to author designs in our preferred CAD tool, yet deliver them to our OEM customers in their required format."*

Tom Stimson, Vice President of Engineering for GKN.

**Overview**

When GKN Automotive strategically selected a core product design solution to help achieve product and technological leadership, a revolutionary approach was required to exchange data with their Original Equipment Manufacturers or OEM customers. The OEMs utilizes different CAD applications while GKN designs in another. To satisfy requirements, GKN must deliver native parametric models in each of the OEMs preferred formats.

GKN Automotive chose Proficiency to provide the key functionality required to make their core product design strategy successful. Engineers at GKN will complete designs in PTC's Pro/ENGINEER™ and deliver feature-based models to the OEMs in EDS PLM Solutions' I-DEAS® and Unigraphics® as well as Dassault Systemes CATIA®. As a result, they expect to eliminate the preponderance of manual re-mastering to create customer models. Additionally, they recognize many strategic benefits to having a usable, parametric model of driveline components.

**Background**

GKN Driveline is the corporation's largest business unit, with sales in 2001 of £1.78 billion. It is a world leader in the design and manufacture of driveline system products. Most leading vehicle manufacturers worldwide use driveline components made by or under license from GKN Driveline, resulting in 42% of the world market by volume for constant velocity joints.



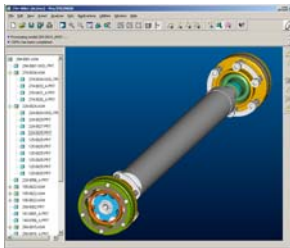
Becoming the leading driveline systems products supplier to the world's automotive markets requires a commitment to exceeding customer expectations. In the automotive market however, the Original Equipment Manufacturers or OEMs have increasingly high expectations and exert pricing pressure on suppliers. Proficiency's solutions enable GKN Driveline to respond to this pressure by improving productivity, developing product and process technology and pursuing new growth markets.

## Implementation Goals

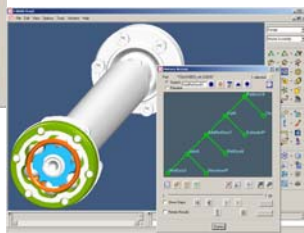
GKN Driveline has divisions in several countries to directly address OEM customer requirements. Each of these divisions has a core design solution in which their designers are most productive. The phased implementation plan is to roll out improved customer compliant data exchange processes in North America, then deploy access in Europe and Asia. The Collaboration Gateway's web-based architecture enables easy access and deployment to any division on the GKN network.

## Revolutionizing Design Practices

In order to deliver designs in their customer's format, GKN Driveline traditionally had little choice but to manually re-master models following completion in the core design system. IGES or STEP could be used to deliver "dumb" solids as a starting point, but parametric features would then need to be added. Depending upon the complexity of the component, many times designers would just start over from scratch in the customer's design system. GKN's core design strategy allowed more efficiency during the initial design process, but much of these gains were lost in time-consuming and labor-intensive preparation of the final customer models. The delay for final translation also placed unnecessary time constraints on development projects.



*A CVJ as designed in Pro/ENGINEER*



*As converted to I-DEAS*

GKN Driveline chose Proficiency to revolutionize their design practice for delivering customer CAD and eliminate the inefficiencies in their current core design process. With the Collaboration Gateway, their Pro/ENGINEER models are automatically converted to I-DEAS, Unigraphics, CATIA v4, or CATIA v5 models to satisfy any customer requirements. The models maintain assembly structure, features, history, constraints, and

dimensions. GKN Driveline's initial pilot project on Collaboration Gateway 1.5 proved a 15% improvement in designer efficiency over their traditional approach. Collaboration Gateway 2.0 widened the improvement to 50%.

## Further Strategic Benefits

Beyond improving the efficiency of their core design strategy, GKN Driveline's vision is that having the ability to quickly respond with parametric 3D models will make them more competitive, allowing penetration of new growth markets. Detailed driveline component changes to accommodate specific needs of prospects will be far more efficient using the 3D feature-based models.

## Proficiency Support

The Collaboration Gateway implementation at GKN is an example of how Proficiency works closely with customers to achieve their objectives. During the pilot and implementation phase, Proficiency personnel were frequently on-site to install software, support the product, and – most importantly – to understand and address GKN's processes and needs. Subsequent versions of the software have incorporated functionality added specifically to accommodate the best design practices in place at several GKN divisions.



For more information about Proficiency solutions, please visit:

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