iPoint Compliance Agent

Your Key to Integration

MAGNA STEYR Success Story • Issue 7/2009

Legally Compliant and Sustainably Designed Products

MAGNA STEYR

For MAGNA STEYR, duty is an opportunity for innovation

Car manufacturers around the globe know MAGNA STEYR as a leading partner in the development and production of complete vehicles. Their range of services includes concept stage designs, control units and systems development, as well as the development of complete vehicles.

Backed by many years of experience in the development of vehicles and components, and by many awards that attest to the quality of their products, MAGNA STEYR is the first port of call for OEMs worldwide. The European ELV and RRR Directives (end-of-life vehicles/reusability, recyclability and recoverability) represent a particularly challenging set of environmental regulations, which range from hazardous substance restrictions for the materials and parts contained in vehicles, to the collection and verification of material and weight data along the supply chain, to the calculation of recycling and recovery rates for the complete vehicle.

To meet all these environmental targets, MAGNA STEYR made it their priority to have an adequate software tool available which would support them in making the calculations required by environmental laws. An additional requirement was the ability to access existing information stored in external databases, which would be used to make these calculations within one efficient and complete solution.

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Many Requirements – A Single Solution

For MAGNA STEYR, the ability to facilitate compliance with regulations governing material recycling and recovery using a capable software tool was the main motivation for a joint development project with iPoint and KERP. However, a steadfast commitment to the environment begins with the development of Green Products while considering each individual life cycle stage – from raw and semi-finished materials production, to manufacturing and the utilization phase, to final recovery. This is why MAGNA STEYR considered it important to have the right piece of software available during the initial stages of product development in order to assess a product's environmental impact by performing life cycle assessments (LCAs). These requirements are met by two Compliance Agent modules – RRR and LCA – which were jointly developed by MAGNA STEYR, KERP and iPoint.

On the one hand, lengthy and costly disassembly tests to establish the disassemblability and recyclability of a vehicle can be avoided. On the other hand, it is possible to perform an LCA and assess a vehicle's environmental impact early on, which helps to identify and implement ecological enhancements in the product's design.

Integration of Existing Databases

Since the required vehicle and component data tends to be very complex, and since it is commonly stored in different systems, it is of particular importance to integrate such existing systems. For MAGNA STEYR, this connectivity to existing databases helps to greatly simplify operations. A PDM/CAD interface is used to achieve this goal, making RRR and LCA assessments available early on during product development.

Applications of iPoint RRR & iPoint LCA

Thomas Leitner, CEO of KERP Center of Excellence Electronics & Environment:
"In a joint effort with MAGNA STEYR, we have successfully developed iPoint RRR. This tool greatly reduces the time needed to calculate recycling and recovery rates, allowing simulations of different recycling scenarios while emulating novel recycling technologies. On the one hand, the user is presented with a detailed analysis of a product's recyclability. On the other, the tool also generates ISO compliant reports needed e.g. for vehicle type approvals."

”iPoint RRR and LCA has enhanced our product development efforts by enabling us to simulate a vehicle’s environmental impact within a feasible timeframe, while generating high-quality assessment data.“

Hannes Rabitsch
Head of Environment & Materials,
Engineering – Vehicle Development, MAGNA STEYR

Additionally, iPoint LCA provides information about all processes which occur throughout a product’s life cycle (raw materials production, processing, utilization and recovery) and displays the resulting environmental impact data. By comparing different product design solutions which may focus on e.g. lightweight construction, disassemblability, hazardous substance content or engine concept, the designer is in the position to factor in environmental impact across the entire product life cycle.

iPoint LCA supports both generic initial estimates during early stages of development, as well as detailed analyses later on. Calculations are possible in all relevant categories, especially in the range of CO2 emissions und global warming potential. The calculations are based on the scientifically validated Ecoinvent database and on valid vehicle-specific data. The user-friendliness of the tool provides a distinct added value. It is possible to import product models and structures with modular BOMs.

Additionally, generic process chains provide a ready-made, yet user-configurable template for material production and processing. This helps ensure comparable results, regardless of the individual software user.

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Using iPoint RRR and LCA, MAGNA STEYR can now efficiently and reliably evidence compliance with the legal requirements of the ELV Directive. However, the regulatory focus on a product’s recovery stage is not sufficient. A proper environmental assessment must factor in all stages of a product’s life cycle. Not only does this tool help companies design products that are in compliance with Directives – it ensures true product sustainability. And this is what gives MAGNA STEYR an environmental competitive edge.

iPoint RRR

> **Full material flow balance of product recovery**

> **Calculates recycling and recovery rates according to ISO 22628**

> **Simulates recycling steps**
- **Pretreatment**
- **Disassembly**
- **Shredder**
- **Post-shredder Treatment**

> **Flexible reporting features**

iPoint LCA

> **Product life cycle analysis**

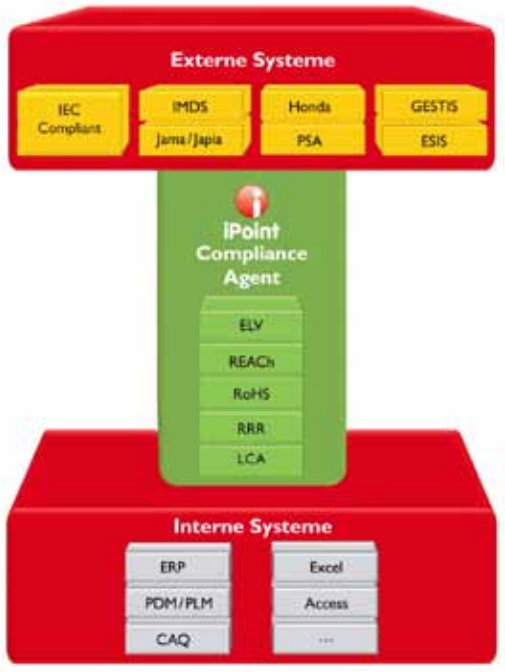
> **Simulates a product's environ mental impact across its entire life cycle to ensure better environmental sustainability**

> **Comparative environmental assessment of product variations**

> **Easy import of external ecobalance data (Ecoinvent 2.0 comes included)**

> **Integrates with the virtual product design process**

> **PDM and CAD interfaces**



Besides iPoint RRR and iPoint LCA, the Compliance Agent by iPoint also includes the ELV, REACh, RoHS and DfE modules.

These features allow manufacturers to meet all requirements pertaining to legal compliance, sustainable product design and life cycle assessment.

The Compliance Agent supports, facilitates and automates in-house data collection and maintenance, as well as the subsequent provision of data in external systems.

KERP Center of Excellence in Electronics & Environment assists companies in the electronics, automotive and aerospace sectors with sustainable product development, legal compliance and end-of-life product management.
As a result of cooperative research conducted jointly by science and industry, our products and services are under constant development.
This enables us to provide application and practice-oriented model solutions.

KERP is a member of iPoint Systems Group, an established and specialized provider of IT integration.

iPoint is the undisputed leader in web technology integration for the automotive sector, as well as a global partner in software development and consulting on the integration of company-wide business processes.
Our mission is to help our customers develop sustainable products.
Our solutions increase network support and enterprise value.

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