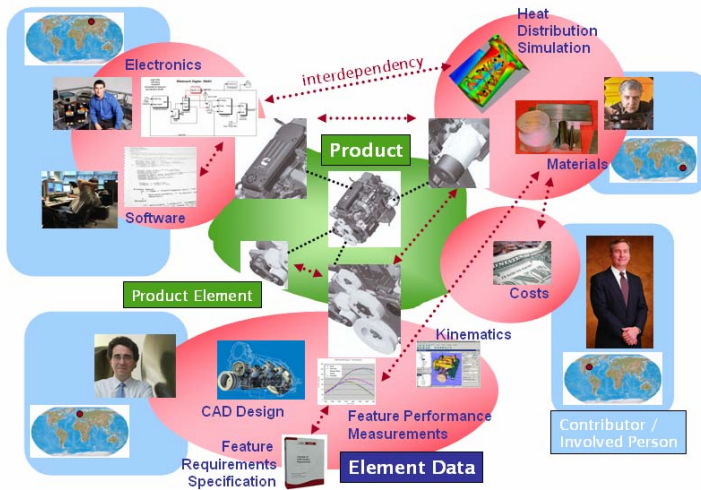


# Semantic Web meets Product Engineering

It does make a lot of SENSE!

„The goal of the SENSE project is to develop a Semantic Web within an enterprise. Product engineering is taken as the central use case.”

## Product Engineering is a complex & ubiquitous task ...



- **Ubiquitous:** Products can be anything, in any industry
- **Complex products** consisting of many parts
- **Manifold interdependencies** between elements & data
- **Data Heterogeneity:** Multiple different tools involved
- **Multi-disciplinary:** Various views on product elements. People are only interested in parts of the information space that is relevant to their specific task
- **Collaborative and concurrent engineering** in distributed. Interaction can be hard and time-consuming.
- **A lot of interaction between participants** is needed
- **Interdependencies amongst subtasks** of the Design Process
- **Design from scratch vs. Redesign & Product Variants**

## ... Engineering Processes are massively knowledge-driven

**Globalization:** Markets get more & more dynamic. Companies are urged to provide cheaper products and shorter time-to-market.

## What is SENSE-ful Engineering ?

- **Proactive environment** to improve communication between people involved in an engineering process
- **Support the information needs** of individuals (over time & space) in regards of their current task
- Investigates the **potential of Semantic Web Technologies** to achieve improvements

## The SENSE Environment

- **Agent Layer:** Agents provide proactive support to users, according to their specific tasks. Take into account user specific-perspective on the information space & user profiles. Agent-interaction by direct inter-agent communication or strongly decoupled via the Semantic Space.
- **Semantic Layer:** Weaves resources into a global semantic network. Allows semantic-based access and views on the Web of resources. Semantic-space with event-notification mechanism as a elegant architectural metaphor for a distributed middleware. Ontologies as a technical means for interoperation on a knowledge level.
- **Web Layer:** Creates a Web of Resources that provides uniform access to heterogeneous data elements managed by disparate applications.

