



With Help from MindMatters Technologies, Dana Takes Innovation to the Next Level

Dana Profile

- Founded in 1904
- \$8B company with facilities in 30 countries
- One of world's most influential automotive suppliers

Innovator Benefits for Dana

- Ability to capture ideas from external sources
- Receive 15-20 ideas per month vs. 40 per year
- No need to increase staff
- 25 product ideas have entered Dana's product development process
- 5 have already moved on to stage 2

"Dana Corporation has enjoyed a proud legacy of innovation, delivering leading edge products to the marketplace for over a century."

"Our customers expect innovation. In the past they told us what they needed, and we made it. But now they are pushing development back into the supply base - back to us."



CASE STUDY

About Dana

Dana Corporation is a global leader in the design, engineering and manufacture of products for automotive, commercial, and off-highway vehicles. With facilities in 30 countries, Dana's operations employ over 45,000 people and have achieved a staggering \$8 billion in revenues for 2003.

The company recently celebrated its 100th anniversary. As one of the world's most influential automotive suppliers, Dana has been an integral part of some of history's greatest vehicles, including the Model T, World War II era Jeep, London Taxi cabs, and every car on the NASCAR racing circuit.

Today, Dana continues to advance the science of mobility by producing a wide range of value-added products, including drive shafts and axles, vehicle architecture, brake and chassis, and bearings and sealing products for manufacturers such as BMW, Caterpillar, Ford, General Motors, DaimlerChrysler, Toyota and Volkswagen.

The Opportunity

Dana Corporation has enjoyed a proud legacy of innovation, delivering leading edge products to the marketplace for over a century. Coined "Dana Style", the company seeks to create an environment that fosters and rewards creativity and innovation at all levels. Its strategic goals include 25% of sales from products less than 2 years old, and 75% of sales from products less than 5 years old.

Barry Lloyd, Senior Technology Manager and IAM Team Champion of Dana states, "Our customers expect innovation. In the past they told us what they needed, and we made it. But now they are pushing development back into the supply base - back to us."

Dana is fueled by its continued desire for both new innovative technology to offer to their client base, and by finding ways to accelerate the delivery of these innovations to the market. In 2001, Dana's Speed to Market Council created a new product development template. At this time, they began to focus more tightly on the front end, or idea generation segment, of the process. Dana recognized that all innovation starts with a simple idea, but that idea must first be heard, and then given the attention and resources it needs to further develop it into a viable product.

Transformation 2005

"Growth through Innovation"

We will lead in the transformation of the industry value chain to generate exceptional benefits for our customers and our shareholders.

Through innovation and technology we will be the global leader in providing value-added products, systems, and services focused on the vehicular industry.

STRATEGIC GOALS

- ◆ We will achieve superior returns through disciplined asset utilization and capital efficiency.
 - 10% top-line growth
 - 15% bottom-line growth
 - 15% return on invested capital after tax
- ◆ We will use innovation and technology to not only meet, but also to anticipate, the needs of our customers so at least:
 - 25% of sales are from products less than 2 years old
 - 75% of sales are from products less than 5 years old
- ◆ The Dana Style will be fully implemented, creating an environment that encourages and rewards creativity and innovation at all levels:
 - Strengthened by diversity
 - 2 ideas/person/month with 80% implementation
 - 40 hours of education/person/year
- ◆ We will transform our industry's value chain by being the innovation leader in each of our product/market segments:
 - 5% of revenue from fees for value-added services (assembly fees, engineering fees, technical assistance fees, etc)
 - 100% connectivity
- ◆ We will support our global customers and pursue our chosen markets where we can achieve an appropriate return on our investment:
 - 65% of business opportunity outside U.S.
 - Share leaders in chosen products/markets
 - Returns commensurate with risk



Dana developed a process similar to Stage-Gate® to assess the current crop of ideas and to identify those that should be looked into further. However, the collection and management of these ideas were not as efficient as they would have liked. Dana was looking for ways to improve their efficiencies in the front end to the product lifecycle management (PLM) process; by introducing more ideas into the pipeline, managing those ideas more efficiently, and increasing collaboration, more innovations would begin to emerge.



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In addition, Dana wanted to spend more time looking outward. Historically, many automotive industry players were not very receptive to ideas brought in externally, and having grown to such a large size, Dana had ample internal resources to draw upon. However, Dana recognized that external ideas were a large untapped resource for the company, and that it could open the door to more innovation by increasing its outward focus.

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The industry was becoming more receptive to technologies they did not create, but how were they to capture those ideas?

MindMatters Solution

With its dedication to innovation, Dana was the perfect environment for the MindMatters' Innovator product. MindMatters was brought in for a presentation by Dana's Speed to Market Council. After demonstrating the user friendly interface, automation capabilities, metrics, collaborative features and Intellectual Property management, the Council moved forward with a pilot program.

Barry Lloyd stated that "Innovator was up and running almost immediately. We're still not sure how MindMatters did it. It usually takes a ton of resources and time to implement a package like this. After a few days we were able to start reviewing data, and it was real data!"

The pilot drew out untapped external ideas by inviting inventors to submit their ideas through an Innovator web form on the Dana web site. Dana used a contest and a series of advertisements to introduce the new initiative. An advertisement published

in Automotive News stated that -- "Dana is always looking for new ways to address challenges in fuel economy, emissions, drivability, ride and handling, mobility, predictive performance and safety, recyclability and sustainability plus noise, vibration and harshness." Another advertisement introducing Dana's contest is shown below. Inventors were encouraged to visit the Dana site and submit their ideas. After signing a legal agreement, the inventor submits his/her product idea(s) to the Dana team, who then processes and reviews the submissions.

WANTED: Automotive Inventors

If you have an innovation or concept that you would like to present to engineering executives of a major Tier 1 automotive supplier, please visit www.dana.com/technology/inventor.shtml to submit them. All submissions received by Feb. 27 will be reviewed, and a select number of finalists will be invited to present their ideas to a panel of Dana Corporation engineers at the company's booth at the SAE World Congress March 8-11 at Cobo Hall.



Innovator's flexible and easy-to-use web tool replaced what was previously compiled in notes and spreadsheet programs by the internal staff. It automated the submission and management of ideas and provided the framework for applying metrics, allowing the ideas to flow through the process quickly and economically. Lloyd stated, "We have access to metrics and coordination of workflow that we never thought possible. Innovator introduced a whole new conduit for collaboration."

Results

"We were looking for a way of tying our idea submission process (both externally and internally) and our New Product Development processes together enterprise-wide", said Lloyd. "Innovator was able to handle both processes as well as add a sophisticated layer of intellectual property management into the entire system."

Before the Innovator deployment, Dana was developing 40 external ideas per year, and collecting these ideas using various notes and spreadsheet programs. Since deployment, Dana has been receiving 15-20 ideas per



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month. The pipeline has expanded, but the increased number of ideas are managed without increasing the size of the review team due to Innovator's efficient methods of management and review. "We have increased our product ideas immensely, but with Innovator, the same review team is actually able to better manage the review process", said Lloyd. With built-in Intellectual Property management, Innovator addressed all of Dana's needs and helped them bring the "fuzzy front end" into focus.

As of spring 2004, Dana had moved 25 new ideas from Innovator into the next stage of their product development process. Out of those 25, 5 have passed the first gate and have moved on to stage 2. At this stage, the ideas have been assigned a sponsor, or project manager. Barry expects 2 of these 5 concepts to move on to stage 3 where they will be assigned to a development team.

The movement of these ideas through various stages of the pipeline is very exciting for Dana, as it is instrumental in meeting their strategic goals.

John Gabrick, CEO of MindMatters commented, "Now that Dana is using Innovator, ideas are effortlessly routed and channeled through the appropriate analysis and review steps. With higher visibility and increased collaboration, ideas are given the attention they need to succeed and move on to the next level of product development."

Throughout their relationship, Dana has been impressed with MindMatters' excellent service and response time. Lloyd noted that, "As Dana would approach MindMatters about a component modification, MindMatters would quickly respond and develop the customization that we needed."

The successful deployment of the initial pilot, coupled with the strength of the developing relationship between the two companies, has paved the way



Barry Lloyd, Dana Corporation (right) and John Gabrick, MindMatters Technologies (left)

for expanding the use of Innovator. Dana is in discussions to use Innovator for capturing ideas for cost savings and merging the tools used by both external submitters and the internal team. Lloyd commented that "a bright future lies ahead. I envision a level of collaboration between different business units that was never before possible."

About MindMatters

MindMatters Technologies, Inc., helps organizations stimulate, capture, validate, protect and profit from innovative product ideas created by employees, customers, suppliers and business partners. The front end to your product lifecycle management (PLM) process, MindMatters' patent pending technology solution, Innovator™, is the only enterprise-level system that helps business managers effectively determine which ideas are most likely to turn into profitable products. Companies like 3M, Dana, Johnson Controls, Respirationics, and PPG rely upon Innovator to support their product innovation and growth strategies. To learn more, visit us at www.us-mindmatters.com.

MindMatters Technologies, Inc.

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