

NX

Motorsport Engineering Teams

Andretti Autosport, Hendrick Motorsports and Joe Gibbs Racing speed software learning curve using online tools

Industry

Automotive

Business challenges

Get new users up-to-speed on software use as quickly as possible

Refresh software knowledge for occasional users

Cut down on travel and time away from the shop

Keys to success

Efficient use of training options and materials

Self-paced learning

"Training the trainers"

Results

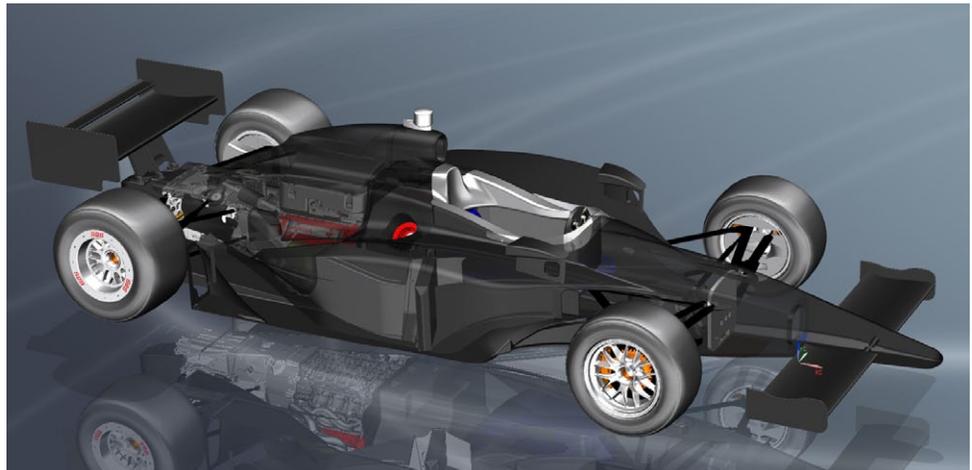
New hires quickly gain proficiency on software use

Occasional users of software stay up-to-date and sharp

Advanced users gain new application know-how, including training skills

Engineers remain in-house and on-car, increasing productivity/innovation

Racing teams deliver faster cars



Learning Advantage helps IndyCar and NASCAR teams train new users and keep them up-to-date on software enhancements

It's all about speed

Speed is the essence of auto racing. The first car to the finish line wins, so it is the responsibility of every crew member – including those who work at team headquarters designing and building parts and systems – to do whatever they can to help make the cars go faster. Engineers, designers and machinists work year-round, improving and refining their team cars' engine and drive train performance, fabricating parts and systems, and responding to rule changes from racing governing bodies, such as IndyCar and NASCAR.

Siemens PLM Software helps racing teams achieve their goal of making cars go faster by providing a variety of tools to help users get up-to-speed on using its software systems, including Learning Advantage, an Internet-based learning management system. Learning Advantage is a convenient, easy-to-use e-Learning portal that provides cost-effective and time-efficient methods for users to gain skills and knowledge of Siemens PLM Software solutions. This system provides access to an unparalleled library of self-paced courses and assessments, as well as management tools for companies to measure learning progress and to administer learning programs.

When you can't get to a class right away

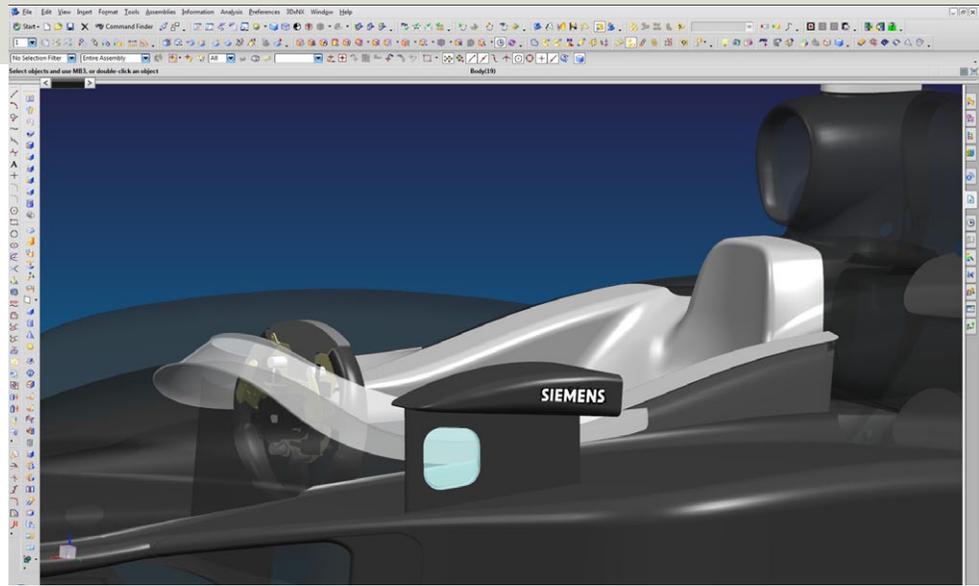
"Hectic racing schedules can make it tough to attend traditional classroom training,"

“Learning Advantage has made training possible even in the middle of the racing season.”

Scott Graves
Engineering Operations
Manager
Andretti Autosport™

“Learning Advantage is also great for advanced CAD users who are familiar with other systems, but new to NX. They can pick and choose the courses that will benefit them the most. And it’s always there to go back to as a refresher, or reference tool.”

Jon Rittle
Engineering Designer,
Vehicle Dynamics Group
Joe Gibbs Racing



says Scott Graves, Engineering Operations Manager at Andretti Autosport™, an IZOD IndyCar Series™ team. “Learning Advantage has made training possible even in the middle of the racing season.”

“Sometimes new employees will not have an opportunity to attend a class right away based on course or workload schedules, and Learning Advantage will get them up-to-speed until a live course is available,” says Jon Rittle, engineering designer, Vehicle Dynamics Group at Joe Gibbs Racing, a NASCAR team. “Learning Advantage is also great for advanced CAD (computer-aided design) users who are familiar with other systems, but new to NX. They can pick and choose the courses that will benefit them the most. And it’s always there to go back to as a refresher, or reference tool.”

Hendrick Motorsports, another NASCAR team, has similar experience with Learning Advantage. “We use Learning Advantage almost daily,” says Jim McKenzie, engineering applications manager at Hendrick Motorsports. “All of our licenses are in use constantly.”

Racing teams often field multiple cars in each race, and the lifespan of an engine is usually one race or less. So, shop crews are constantly fabricating parts and building new engines for their own teams, and in the case of Hendrick Motorsports, building engines for other teams. Over the course of a season, racing teams build hundreds of engines, not to mention numerous other car parts and systems.

Program expansion and new hires create an ongoing need for training. “As employees are promoted throughout the company, and we hire new employees, the need arises for more training,” says Rittle. “Like a lot of companies, we haven’t the resources that we would like to have, so we try to schedule our in-house ‘core functionality’ training classes quarterly, when possible. That said, there can be a gap in time from when a training need arises and when the next scheduled class is available. At times like this, we leverage the capabilities of Learning Advantage to help get users up-to-speed and proficient in their daily duties, and to prepare them for the in-house training classes when they become available.”



“Every minute that we are able to train in-house and not traveling to an off-site training facility is another minute that we can apply to making the cars go faster.”

Jim McKenzie
Engineering Applications
Manager
Hendrick Motorsports

A continuous need for training

Even trained users need additional training. “Several of our engineers are occasional users and online training enables them to quickly brush up on features that they haven’t used recently,” says Graves. “They can also broaden their skills at their own pace.”

Training can help users renew their skills, as well. Graves notes, “Recently we hired a new designer who had been away from NX for several versions. He easily picked up with the current version using online training as a refresher course.”

Teams also have to train the trainers. “We are constantly looking to upgrade and expand into new areas of the software,” says McKenzie, “This creates a need for more training as well. Obviously we need to ‘train the trainers’ as well as our end-users, so having the Learning Advantage and course material tools available to us is a huge advantage.”

Rittle can relate. “Learning assembly sequences was a big one for me,” he says. “Suddenly, I was able to put the engine internal systems in motion and check clearances and fit-ups much quicker. It was exciting to see the parts animated. Learning Advantage was very helpful for freeform modeling. It helped explain the differences between different types of surfaces quickly, and how I could create them. I was learning it at the same time I was using it for creating complex parts. Without Learning Advantage, it would have taken much longer with less impressive results.”

“If you’re in a hurry and need some guidance to get you through the job on time, either because you’re using a new area of NX, or just haven’t used it in a long time and need a refresher, Learning Advantage is a great tool to have,” Graves says. “You can quickly zero-in on your area of interest and see how NX can help you in a rather quick time frame, using hands-on examples and not just by reading a menu of instructions. It allows us to get changes and new ideas to the track faster, helping to improve our performance every race weekend.”

Solutions/Services

Learning Advantage
e-Learning Portal
www.siemens.com/plm/learningadvantage

NX
www.siemens.com/nx

Customer's primary business

Andretti Autosport™, 2012 IZOD IndyCar Series Champions, fields multiple entries in the IndyCar Series and campaigns multiple cars in the Firestone Indy Lights, Star Mazda Championship and USF2000 National Championship.

www.andrettiautosport.com

Hendrick Motorsports fields four NASCAR Sprint Cup Series teams and supplies engines to other NASCAR organizations.

www.hendrickmotorsports.com

Joe Gibbs Racing, owned by former Washington Redskins coach Joe Gibbs, competes in the NASCAR Sprint Cup and Nationwide series.

www.joegibbsracing.com

Customer location

Andretti Autosport
Indianapolis, Indiana
USA

Hendrick Motorsports
Concord, North Carolina
USA

Joe Gibbs Racing
Huntersville, North Carolina
USA



"Siemens PLM Software training is very important early-on to employees' tenures," says Rittle. "It reduces time spent trying to do something they might have done differently on another system in the past, or have never done before. There are many ways to get the same result in NX, and the courses can help explain the best method for a particular task."

The bottom line of applying Learning Advantage is that it provides a real advantage in keeping the racing teams as productive and creative as possible. "Every minute that we are able to train in-house and not traveling to an off-site training facility is another minute that we can apply to making the cars go faster," McKenzie says.

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