InnerWorkings Case Study:
First Data

"We chose to offer InnerWorkings to our software development staff for continued education focused on the areas that are most important to our business goals and objectives. In addition to enhancing our developers' knowledge and hands-on coding skills, our implementation of InnerWorkings Developer exceeded expectations by fostering teamwork, collaboration and an overall sense of empowerment throughout the team."

Michael Brooks, VP Technology - First Data

Case Study Highlights

- Focused on continuous education for .NET developers in First Data
- Aligned developer training program with software goals and business strategy
- Incorporated InnerWorkings' practice-based methods with traditional training programs
- Adopted a more hands-on approach to learning which boosted information retention and application of concepts
- Pilot test was followed by 100% organization-wide implementation
- Management and implementation 'champions' steered project to success
- Training program was modified based on developer feedback

First Data Benefits

- Gained a foundation in Object Oriented Design & Development and ASP.NET 2.0 Web Development
- Familiarized development teams with Visual Studio 2005 toolset
- Minimal loss in developer productivity or billable hours to training
- Common training methodology increased efficiencies and led to stronger collaboration between development centers within the organization
- New .NET features are actively being integrated into current First Data projects

Teaming Up for Success

First Data Corp. is a leading provider of electronic commerce and payment solutions for businesses worldwide. With operations in 38 countries, First Data serves over 5 million merchant locations, 1900 card issuers and their customers. It powers the global economy by making it easy, fast and secure for people and businesses around the world to buy goods and services using virtually any form of payment. The company's portfolio of services and solutions includes merchant transaction processing services; credit, debit, private-label, gift, payroll and other prepaid card offerings; fraud protection and authentication solutions; receivables management solutions; electronic check acceptance services through TeleCheck; as well as Internet commerce and mobile payment solutions. The company's STAR Network offers PIN-secured debit acceptance at 2 million ATM and retail locations. First Data implemented **InnerWorkings Developer** to enhance the skills of their software teams and improve management insight into their development capabilities.

InnerWorkings helps software development organizations improve their .NET skills in a practice-based learning environment that is fully integrated with Visual Studio. **InnerWorkings Developer** offers hands-on learning 'challenges' covering the latest Microsoft technologies in both C# and VB, organized into programs like ASP.NET, Enterprise Library, WPF, WCF, WF, SQL Server, and .NET 3.5. With InnerWorkings, developers learn by writing code and get instant feedback on their solutions. Help is provided through reference links to Safari Books Online and MSDN articles in addition to a dedicated Personal Tutor service. For software managers, InnerWorkings reports deliver insight into the new skills and capabilities of their software team.

The success of First Data's implementation springs directly from the vision and commitment of three key individuals. Shawn McCarthy (Business Systems Architect) 'discovered' InnerWorkings and drove the initial pilot implementation. Lance Larsen (Senior Application Architect) worked with McCarthy to guide the implementation across multiple software teams and locations. Michael Brooks (VP of Technology) had the vision to expand the implementation across the entire First Data software organization.

Piloting the Program

The initial pilot allowed the implementation team to get a feeling for the InnerWorkings product as well as for the learning process, on a smaller scale. According to Brooks, "One key to the success of the implementation was that it not impact developer productivity or billable hours negatively in any way. Regardless of long-term benefit, no one looks favorably on bad numbers, even in the short term. So creating an initial, provable success on a small scale was fundamentally important." For the pilot program, licenses were allocated to about half of First Data's developers. They focused on InnerWorkings' Object-Oriented Design and Development program, to strengthen the understanding of core concepts and build a foundation for further learning.

Throughout the pilot and into the full implementation of InnerWorkings Developer, the team actively sought feedback from their developers and adapted the program based on feedback received. Initially, the pilot was executed with a minimum of structure, leaving developers to work at their own pace. McCarthy, who had a strong personal commitment to ensure that First Data got real value from the program, says "It quickly became evident that we could significantly increase usage and learning by providing some additional structure." After a bit of trial-and-error, he homed in on a 3 week cycle of learning, practice, and integration of new skills.

In the first week of a cycle, he would lead a 'brown-bag' lunch discussion of all concepts covered in the tasks of a particular InnerWorkings challenge. This was followed by a Q&A lunch during week two. The third and final week consisted of a walk-through of the actual learning tasks. Developers were still responsible to complete the challenges individually. Combining the structured brown bag sessions with self-paced practice produced dramatic increases in developer usage and retention.

Figure 1: First Data Learning Cycle

The coupling of group discussion and individual programming practice proved to offer significant value even beyond accelerating learning. By highlighting coding examples with 'real-life application' to the First Data problem domain, discussions led developers to recognize the relevance to their day-to-day work, motivating them to delve deeper into the InnerWorkings program.

Before the pilot program was completed, the team was committed to moving forward with a full implementation across the entire First Data software group, encompassing multiple U.S. locations.

Here again, developer feedback played a central role, this time in promoting the InnerWorkings ASP.NET 2.0 Web Development program as the next learning focus. Building on the foundation of Object Oriented Design & Development from the pilot, the ASP.NET 2.0 Program offered skills most relevant to their developers and defined business goals.

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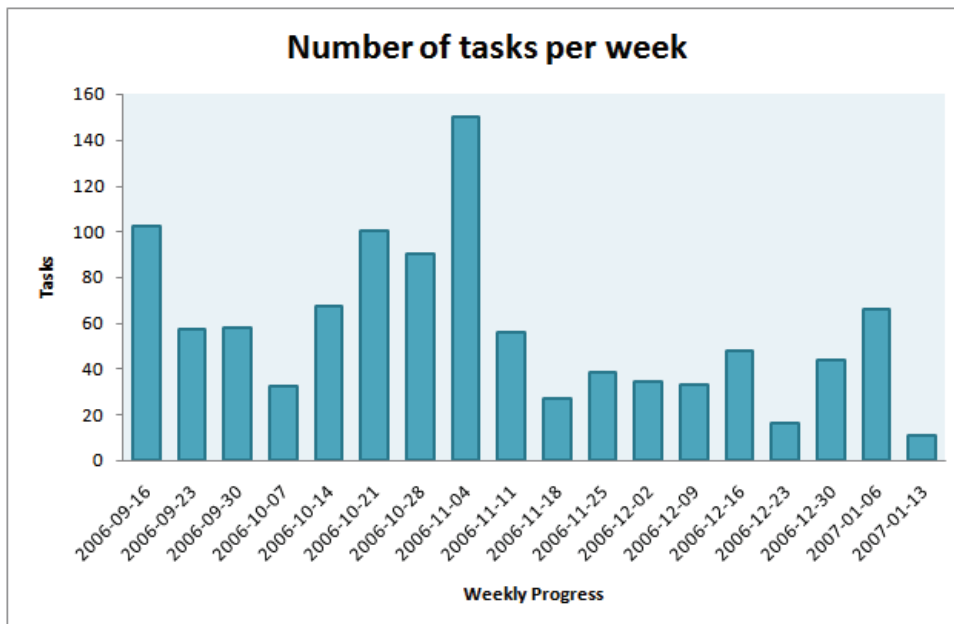
Transitioning into Full Implementation

Michael Brooks championed the case for full implementation to First Data executive management, stressing the benefits of reduced defect rates, a uniform learning process across development teams, and improved management insight into developer skills. His data was so compelling that the full implementation began before the pilot was even completed. Based on business needs, the decision was made to focus on ASP.NET 2.0 Web Development for the next phase.

At this point, Lance Larsen (Senior Application Architect) joined the effort, helping to put McCarthy's 3-week learning cycle on the road by bringing it to developers in all First Data locations. Together, they brought the entire development organization up to speed on Object Oriented Design & Development and then began walking all the developers through the InnerWorkings ASP.NET 2.0 Web Development program.

According to Larsen, "Having one common method for training across all the development organizations has brought our groups even closer together. Building a strong methodology and a solid common ground for all software teams has directly resulted in stronger collaboration between the development centers within our organization."

Organization Report: First Data

Number of tasks per week

- Number of 'challenges' or tasks completed: 1046
- Average minutes per 'challenge' or task: 35.6
- Steps accessed: 34.3%
- Average # attempts per task: 1.27
- Total time spent: 151 days
- Total hours coding practice: 620+

Figure 2: InnerWorkings reports make it easier to track your team's progress

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Reaping the Benefits

Today, First Data is starting to realize all the benefits of their implementation. By integrating InnerWorkings Developer into their entire development organization, they have achieved significantly more than the improvement in developer skills they originally sought.

According to McCarthy, "Often the discussion morphs into a conversation about how a topic can be integrated into specific projects that we are working on right now, leveraging abstract learning into direct results that offer immediate benefit. And features like access to books online and the search functionality make the InnerWorkings toolset more than just a learning facility. For us it has become a problem resolution tool in the "heat" of the design and development of work related tasks."

More 'formal' learning sessions are planned to follow the ASP.NET program. In the meantime, developers automatically turn to InnerWorkings when they need to learn new .NET skills or brush up on old ones. New developers will be guided through the same sets of learning challenges and discussions to ease their transition into the First Data culture.

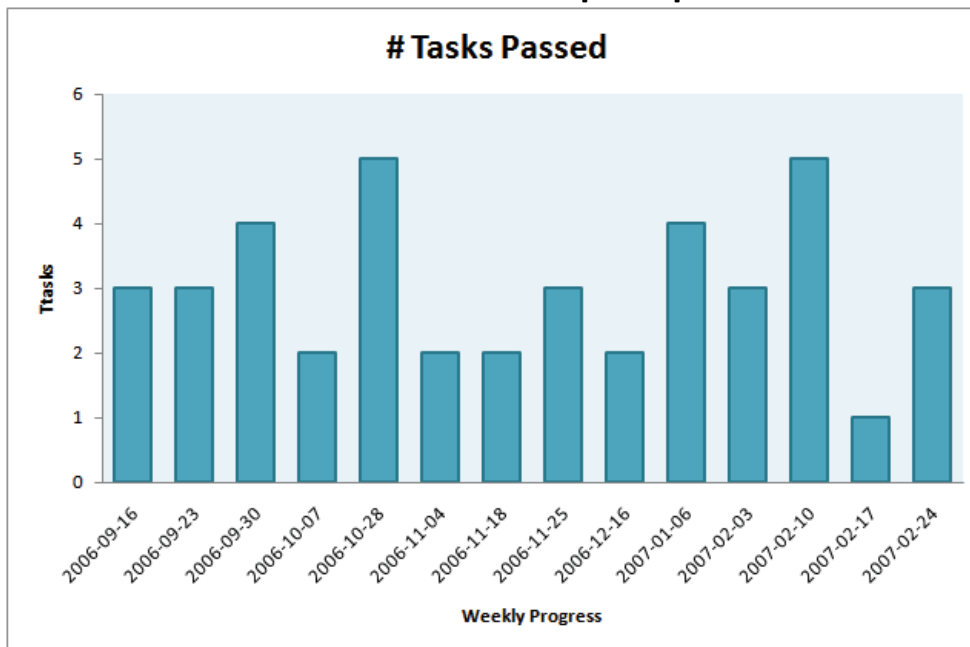Brooks says, "I look at this program as a real benefit to employees - it shows our management commitment to employees and to training. InnerWorkings' licensing model gives every developer access to all 500 hours of .NET training in the catalog. Our developers really appreciate the opportunity to pursue learning beyond the 'job at hand', in areas of interest to them."

"Having the entire InnerWorkings catalog available also allows the more seasoned professionals to independently explore deeper topics that are of interest to them. Access to 'advanced' content and the ability to use the toolset within a structured environment is really one of the biggest benefits of this program. The InnerWorkings toolset has been a great asset to our learning and teaching approach."

With InnerWorkings Reporter, now it's also easy for Brooks to keep a handle on developer skills, make better-informed decisions when staffing new projects, and have ready answers for management questions. And as they move forward, management is also monitoring quality metrics to track tangible improvements.

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Developer Report: ID 10448

 # Tasks Passed

- Number of tasks attempted: 42
- Number of tasks completed: 42
- Average minutes spent per task: 41.7
- Number of unique reference links accessed: 30
- Steps accessed: 0%
- Average # attempts per task: 1.6
- Total time spent: 169 days
- Total coding time: >29 hours

Figure 3: Detailed Reports give insight into individual developer skills

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Making it Work for You

To achieve benefits like these, it isn't necessary to initiate a massive corporate resolution, revolutionize your entire training program, or sacrifice short-term productivity. The InnerWorkings Developer Implementation Checklist offers step-by-step guidance for successful implementation. First Data's impressive results can be directly linked to several simple but key factors.

Starting with a manageable training program makes it easier to fine-tune and adapt to feedback in real-time. And having an implementation champion like Shawn McCarthy, whose commitment to the program extends beyond simply following implementation guidelines, keeps the project moving forward. Shawn's ability to assess and adjust the program was fundamental in driving adoption.

A management champion like Michael Brooks, who kept management informed and enthusiastic throughout the implementation and created the space for developers to make time for learning, makes the priority high so the program doesn't get lost.

Finally, a culture which respects developers and is prepared to act on their feedback gave First Data the flexibility to assess and adapt learning programs on the fly without wasting time or losing developer interest.

Want to learn more?

Visit our website at www.innerworkings.com to learn more.

For information about our team, products, and learning philosophy, go to www.innerworkings.com/about.

For a quick 'guided tour' of InnerWorkings Developer, go to www.innerworkings.com/tour.

To discuss setting up a free evaluation of InnerWorkings Developer for your team, email us at iw_info@innerworkings.com or call us at (925)-737-0600 and press Option 2 to speak with a company representative.

First Data Key Success Factors

Implementation Champion	Management Champion	Learning Culture
• To assess & adapt	• To prioritize & focus	• To encourage & motivate

"Developers will benefit greatly from having such an integrated learning solution for Visual Studio. The capabilities of InnerWorkings Developer are a natural complement to the powerful Visual Studio integrated development environment, and will help increase productivity for developers building applications with Visual Studio."

Soma Somasegar, Corporate VP, Microsoft Developer Division

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