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Training the Extended Enterprise

NCR Delivers Customer and Partner Training
from a Single Learning Platform

– **Chris Howard**, *Principal Analyst* | June 2006

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▶ ## IN THIS CASE STUDY

This case study examines how NCR defines its extended enterprise learning platform as a sole source for partners and customers to access learning content and information about learning opportunities. A single learning management system (LMS) is used for building, deploying, managing, and measuring blended learning programs aimed at both extended enterprise audiences and NCR's internal employees.

In all, the LMS database supports more than 46,000 NCR users, using business rules to ensure that each audience sees a different interface and set of learning options. This case study focuses on the best practice models that NCR follows to deliver training to strategic partners who play a key role in the sale of solutions, the customization or development of software, and the delivery of services.⊷

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NCR Overview

NCR Corporation is a global technology company. NCR's Teradata data warehouses, ATMs, retail systems, and IT services provide solutions that maximize the value of customer interactions and help organizations create a stronger competitive position.

NCR is a leader in self-service solutions, with ATMs in every corner of the globe, including "off-premise" locations such as grocery stores and transportation terminals. NCR's Store Automation services helps retailers respond to individual customers with solutions such as self-service check-out, electronic shelf labeling, and interactive Web kiosks.

NCR's Teradata Active Data Warehouse solution is designed to help businesses manage the huge volume of information that is available to them. In addition, NCR offers an array of software applications, including customer relationship management (CRM) and decision-support applications.

Based in Dayton, Ohio, NCR employs approximately 28,500 people worldwide. NCR's 2005 revenues were $6.028 billion.

Business Environment

Extended enterprise learning is a key component of NCR's strategy for finding success in the competitive markets in which it operates. As a provider of hardware, software, and services, NCR has a multitude of solutions that address a diverse, global customer base. NCR also pursues strategic alliances and partnerships that broaden its solution offerings. This approach enables NCR to complement its horizontal offerings and offer customers seamless, integrated solutions.

> NCR offers a **variety of products** through a global network of **value-added resellers** and distributors.

In the United States, partner organizations include systems integrators, value-added resellers, and distributors, which are responsible for a significant segment of overall sales volume. In countries in which NCR has no direct presence, the company is represented by independent, third-party distributors that sell and service all of NCR's offerings. The company also relies on approximately 8,000 outsourced employees worldwide to support functions such as financial administration and information technology.

Each of these audiences—customers, contractors and other outsourced employees, service partners, and channel sales partners—requires learning. For customers, product training means lower support costs and higher retention and satisfaction. Training service partners allows them to develop deep core competencies focused on NCR products and services. For sales channel partners, training means gaining product knowledge and sales skills. In all cases, training also means greater brand exposure and mindshare for NCR.

Each audience also requires different levels of site and content access, curricula focus, and tuition costs. To make certain that these diverse constituencies are well served, NCR established the Teradata Education Network (TEN) for customers and the NCR University for partners, as well as a separate Web portal for employees/contractors. The portals provide pre-profiled employees, customers, and partners with NCR's Web-delivered training, orderable learning materials, classroom course registration, and personal learning plans.

> NCR's training programs address many **different internal and external audiences** with **diverse learning requirements**. By maintaining **separate learning portals for each group**, NCR ensures that everyone gets what they need.
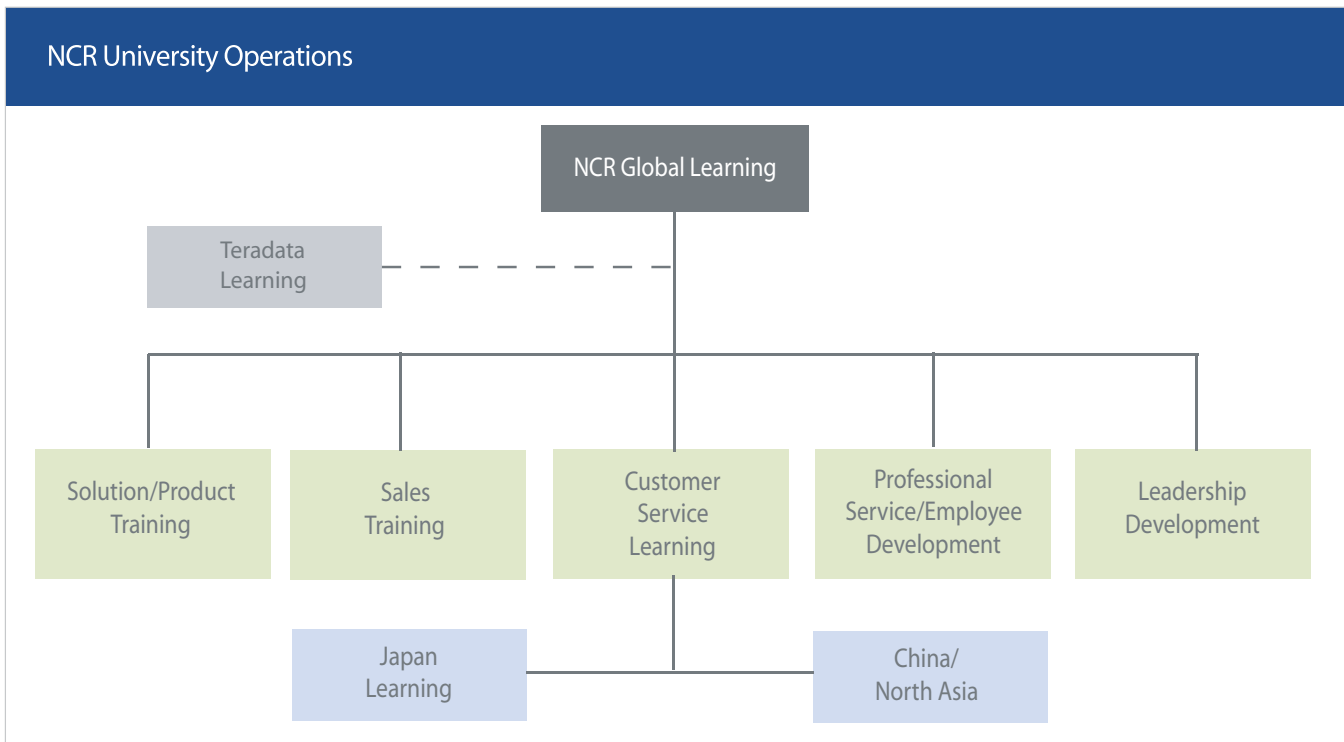
NCR University Operations

Figure 1: NCR Global Learning Organization

NCR Learning Environment

NCR has a centralized organization and technology infrastructure for extended enterprise learning. Residing within the Human Resource function, the Global Learning organization (*see Figure 1*) is tasked with developing and delivering customer and partner education for four out of the five business units at NCR.[1]

Global Learning has five learning groups (*see Figure 2*) that develop learning content for customers, customer-facing professionals, and partners at each of the four Business Units. Two other groups handle learning activities for Japan and for China/North Asia. This includes planning, needs assessment, delivery coordination, localization, logistics, and performance consulting.

NCR's **high level of success with online learning programs** has been a direct function of the **learning organization's ability to be flexible** and to **commit to acquiring the technology** infrastructure.

LEARNING GROUP	DESCRIPTION
Sales Training	• Sales excellence • Sales management • Opportunity/Account planning
Professional Services / Employee Development	• Professional services consulting skills • Project management curriculum/certification • Core employee development
Customer Services Learning	• Customer engineering training • Care centers
Solutions / Product Training	• Solutions development and delivery • Products and services management curriculum
Leadership Development	• Assessment and coaching • Management development curriculum

Figure 2: *NCR Learning Groups*

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[1] **Global Learning services the following business units: Payment Solutions, Self-Service Solutions, Store Automation, and Worldwide Customer Service. The Teradata Data Warehouse business unit maintains its own separate Teradata Education Network, a Web-enabled learning environment for customers offering self-paced, Web-based training; live virtual classes over the Internet; hosted educational chats; a reference library; and message boards.**

In 2005, 7% of the total training budget at NCR was devoted to the NCR University Operations group. Costs are allocated to the business units based on a variety of factors, including head count and expected number of course completions.

Under a central funding model, most learning content is free for employee/contractor organizations, with the exception of special business unit-sponsored content. For partners, most online content is free; classroom and physical media courses are priced by channel partner classification. Training prices for customers are set based on a customer's subscription level.

The final division of Global Learning, NCR University Operations, provides shared services to the learning groups and localization groups.[2] Led by the director of NCR University Operations, the unit manages and operates the technology infrastructure, including learning management system (LMS), course development tools, and virtual classrooms. The NCR University Operations group has 14 full-time equivalents as (*see Figure 3).*

> NCR training has **multiple pricing tiers**, which range from free online content to classroom and physical media courses, with prices based on **channel partner classification** or **customer subscription level**.

# OF STAFF	FUNCTION
4	Manage call center for users wanting information or help relating to either technology or content
2	Technical support for AICC/SCORM-based course development tools used by approximately 40 course developers spread across the five learning groups
4	Technical support for the LMS software and the servers and other hardware systems it runs on
3	Handle multimedia assignments, such as video shoots, in a fully equipped studio
1	Oversee reporting and promotion programs

Figure 3: *NCR University Operations: Staff Breakdown*   Source: *NCR, 2006*

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[2]   **For more information on learning shared services organizations and their structure please refer to the Bersin & Associates industry report** *The High-Impact Learning Organization* **at** http://www.bersin.com.

Making the Transition to Shared Technology

In 1996, NCR began making a major strategic shift to technology-based training as a supplement to instructor-led training. Today, the director of NCR University Operations estimates that 84 percent of course completions, and 52 percent of learning hours, are delivered online. Achieving this high level of success with online learning programs has been the result of organizational changes and a steady build up of the technology support infrastructure.

Like at many large organizations, NCR's early learning initiatives spawned a proliferation of management systems spread throughout the company. Most of these systems consisted of isolated databases being used to track rudimentary training metrics. The NCR University Operations group evolved out of the need for centralized technology management to enable efficient and cost-effective delivery of learning.

Centralizing the management of learning programs has had another important benefit—giving management a more transparent view of NCR's capabilities and resources. Approximately 40 percent of NCR's revenues are derived from services, while the majority of its customers are large, global organizations that require worldwide support. These clients need to understand NCR's capacity to service a particular solution in a specific geographic region. This means understanding the number and locations of the trained or certified personnel all around the world.

According to the director of NCR University Operations, NCR found it challenging to easily determine its global capacity on a highly granular level in 1996. Today that information is quickly and easily accessed using the reporting module of NCR's learning management system. See the appendix for a sample report of total completions.

ANALYSIS

Regardless of where the functional training units report, the best practice is to provide **learning support services** from a single group.

A **centralized training management system** would enable the company to better monitor the training activity of both employees and partners.

Learning Management System

NCR rolled out a large, centralized learning management system in 1998, and migrated to a SumTotal LMS in September 2003. The first LMS vendor did not keep up with developments in the commercial market, explains the director of NCR University Operations. An outmoded architecture made it difficult and costly to add functionality or make modifications.

The 2003 migration was preceded by a disciplined process designed to determine technical and business requirements. The NCR University Operations group met with each business unit and learning group to gather requirements, and also conducted focus groups with customers and partners to learn what they wanted from learning programs. NCR wanted a full-featured, turnkey LMS with built-in tools such as authoring and test creation, learning content management, competency management, physical classroom management, certification management, collaboration, and e-commerce.

After selecting the current LMS, the operations group gradually transitioned to the new system in phases. To minimize the impact of the migration on users, the group maintained its old processes to the extent possible, and then progressively modified the system with new processes.

In addition to 25,000 NCR employees, the LMS supports approximately 21,000 extended enterprise users (*see Figure 4*). Multilanguage support for Japanese and Chinese extends the LMS and some translated content to customers, partners, and distributors in Asia.

EXTENDED ENTERPRISE AUDIENCE	# OF LMS USERS
Customers	5,400
Strategic and Channel Partners	6,600
Contractors	8,500
Subsidiary Employees	1,000

Figure 4: *NCR Learning Management System – User Breakdown*   Source: *NCR, 2006*

ANALYSIS

Most major LMS providers offer **newer technology architectures** that better support system configuration and integration with other business applications. The last 2 to 3 years of product development has resulted in a new generation of systems that are far **more flexible** than those of previous technology generations.

Business Rules and Learning Plans Help Personalize Training

NCR provides the extended enterprise audience with access to a broad range of training programs, subjects, services, and tools. What each audience requires from NCR University, however, can be quite different. Sales channel partners, for example, complete more than 80 percent of their courses online and require mainly product knowledge transfer. In contrast, customers and service partners typically require more on-site classroom learning. For instance, a customer or partner engineer may need to learn how to program a specific NCR hardware device or how to install, repair, and maintain ATMs. This requires hands-on, interactive training by an instructor in a classroom.

For other learning groups—Sales, Professional Services, Solutions, and Leadership—training is also delivered through a blend of modalities, but with more of an emphasis on e-learning rather than classroom instruction. The most common online delivery format uses rapid e-learning tools[3] in the form of a self-study Microsoft PowerPoint presentation with voiceover. This is called a Seminar on Demand. Virtual classrooms are also used (*see Figure 5*).
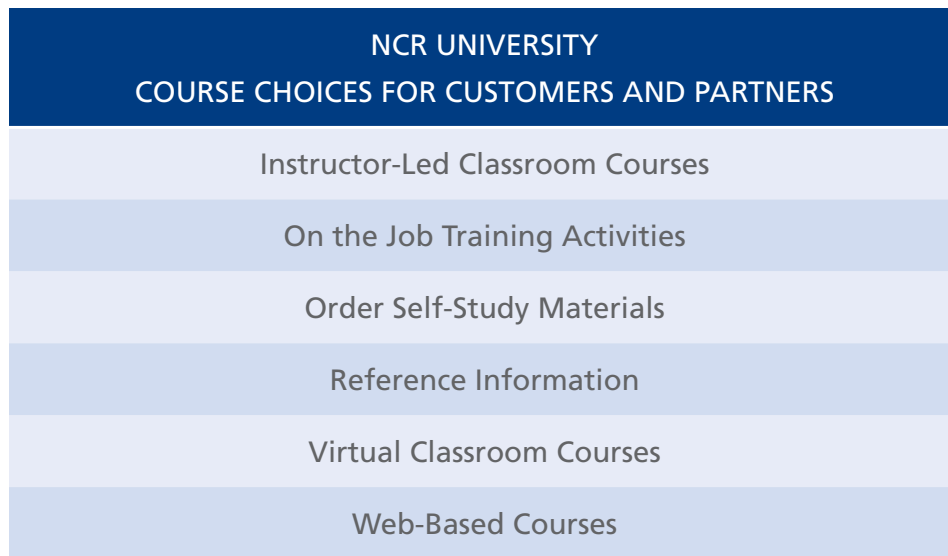
NCR UNIVERSITY
COURSE CHOICES FOR CUSTOMERS AND PARTNERS
Instructor-Led Classroom Courses
On the Job Training Activities
Order Self-Study Materials
Reference Information
Virtual Classroom Courses
Web-Based Courses

Figure 5: *NCR University Course Choices*　　　　Source: *NCR, 2006*

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[3] **For a detailed discussion of rapid e-learning tools and strategies, please consult** *The High-Impact Learning Organization* **research, available to Bersin & Associates research members or for purchase at** http://store.bersinassociates.com/rel-study-2005.html.
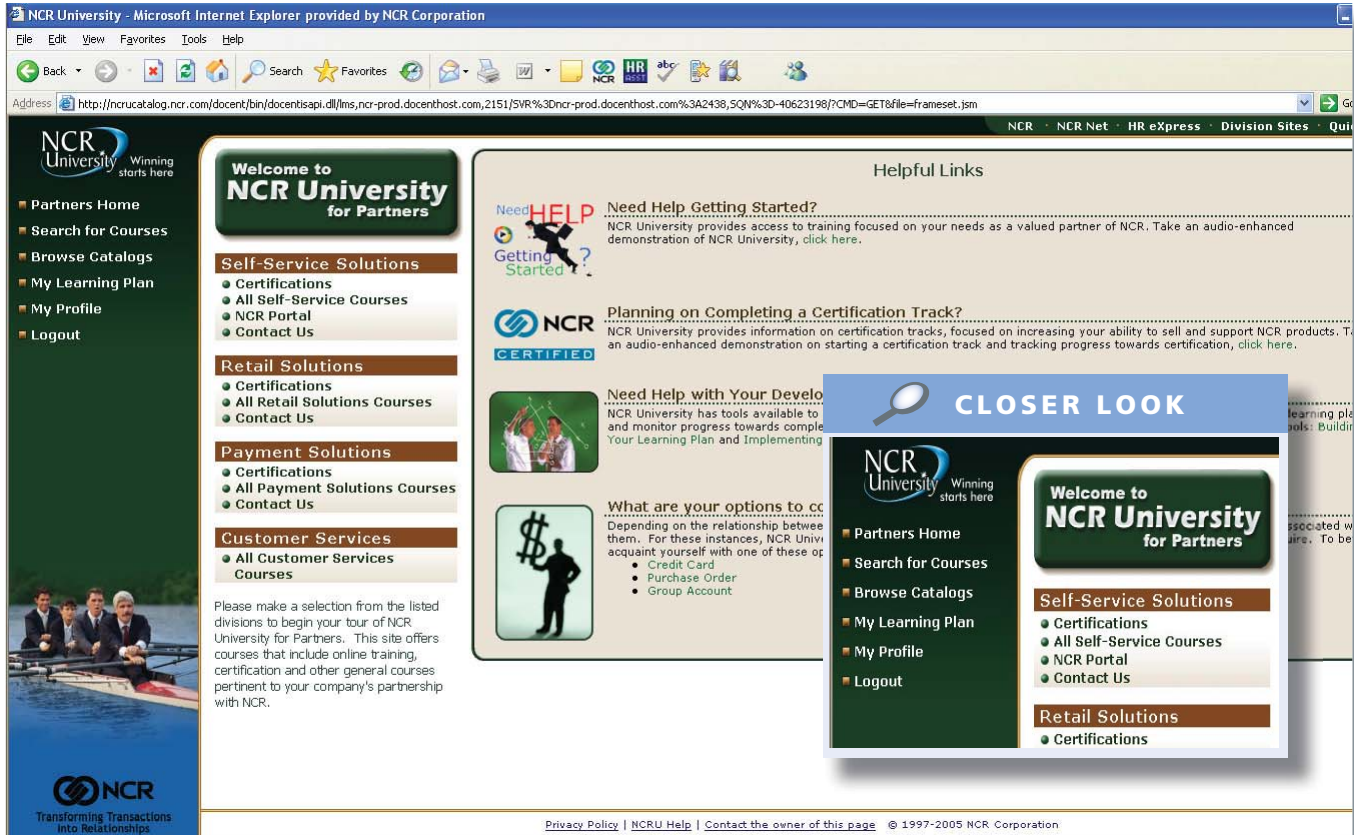
Figure 6: *Screen Shot of NCR University for Partners*

To ensure that every audience gets an appropriate view of extended enterprise education resources and content, the Technology group uses the LMS to create customized NCR University portals (*see Figure 6*) for partners and customers.

	EMPLOYEES/ CONTRACTORS	CHANNEL PARTNERS	CUSTOMERS
Site Access	Granted automatically through daily demographic feeds from other NCR systems (HRMS, Directory & Dispatching).	Granted by request of channel managers within the business units; access is through centralized portal for all external access into NCR's systems.	Granted by request of the user (validated by NCR Customer Education) or granted by request of NCR salesperson.
Content Access	Open access to the majority of the content; minor exceptions are content for managers only.	Access to specific content governed by contract with each channel partner company.	Access granted by subscription level.
Curricula Focus	Defined curricula displayed by a combination of job role, business unit, and geographic region.	Defined by business unit and certification area (e.g., sales or service).	Defined by product area or Teradata certification level.
Tuition Cost	Most content is free to the student's organization (central funding model); exceptions are "no show" penalties and special business unit-sponsored content.	Most online content is free; classroom and physical media courses are priced by channel partner type (percentage of list model).	Prices are set based on customer's subscription level.

Figure 7: *NCR University – Sample Business Rules for Each Target Audience*

Business rules control the look-and-feel of the portal as well as the content offerings (*see Figure 7*). In order to adequately support separate interfaces, business rules, and content catalogs, LMSs must contain "domain" structures that support this capability. Buyers must be specific about what capabilities they expect from each domain. In some cases, for example, a domain will support the separation of some business rules but not others (*see Figure 7*).

Supporting a **diverse array** of audiences from the same LMS requires a system that enables business rules, data access, permissions, and the user interface to be **configured** for each target user community. LMSs **vary** in the degree to which they support these **capabilities**.

Figure 8: *NCR University - My Learning Plan*

NCR University also provides tools to guide students through their training. Students can create a learning plan and monitor progress towards completing their plan. My Learning Plan allows individuals to track their personal learning activities and progress (*see Figure 8*).

In general, training curriculums are mapped to a particular job role, which NCR believes leads to increased course completions. For example, NCR started mapping SkillSoft[4] content to curricula based on job roles in March 2004. Since that time, course completions have increased dramatically, and continue to rise (*see Figure 9*).

Content Development

The majority of content delivered by NCR University relates to the transfer of knowledge about products and services. A common course, as mentioned earlier, is called a Seminar on Demand—essentially a PowerPoint presentation with voiceover. Both online and classroom content is authored by small content development teams embedded within each of the five learning groups. (The major exception is a library of desktop skills courses licensed from SkillSoft.)

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4 **SkillSoft is a provider of packed e-learning content for technical and soft-skills training.**
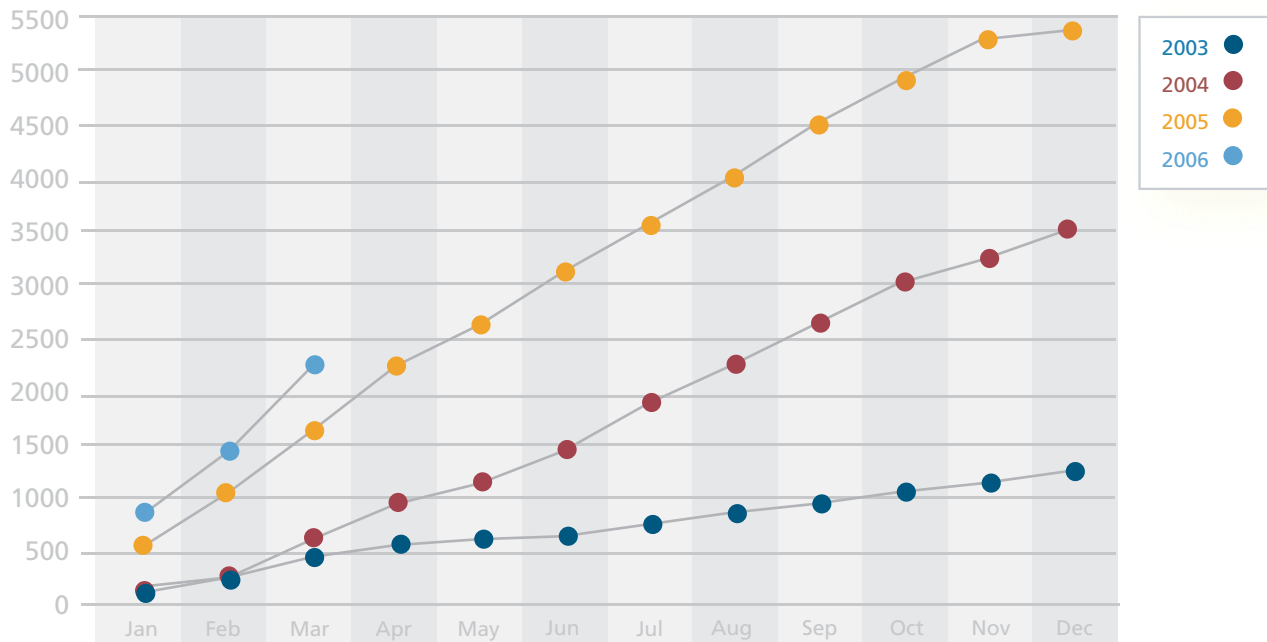
SkillSoft Course Completions

Figure 9: *SkillSoft Course Completions Rise When Tied to Role-Based Curricula in March 2004.* Source: *NCR, 2006*

Content development teams generally consist of a product manager, who serves as the subject matter expert (SME), and a learning consultant, who provides guidance to the SME to ensure that the content is instructionally sound. The consultant starts by identifying the training needs and skills gaps associated with the particular product/service. Next, the consultant works with the product manager to develop a course outline and script, as well as to provide design recommendations. The product manager reads the voiceover script and is ultimately responsible for delivering the finished course.

Product managers will frequently use the in-house studio to record video demonstrations to enrich their course materials. These videos are leveraged in sales and marketing presentations. In turn, product descriptions developed by sales and marketing groups are commonly attached to the courses as reference materials. When products are updated, new video-based training content is distributed via CD rather than online, which solves the problem of delivering video over low-speed network connections.

Most **content at NCR is generated internally by small teams** within the learning groups. **Each team consists of a product manager**, who acts as a SME and authors the content, **and a learning consultant** who guides the development.

Measuring Growth in E-Learning

The volume of hours and course completions using e-learning has exploded at NCR in recent years. In the past year alone, the NCR University Operations group tracked more than 70.5 million page views, a 42 percent increase over the previous 12-month period. In 2004, the group reported 124,000 online course completions, which jumped to 224,000 completions in 2005 (*see Figure 10 and Figure 11*).

One reason for these large increases in online usage is that NCR now requires that every employee and contractor complete a two-course curriculum on regulatory compliance and corporate strategy. Another explanation is that NCR is putting more content online for customers and partners. NCR's goal is to have 100 percent of its knowledge transfer content online and to focus all classroom learning on skills transfer.
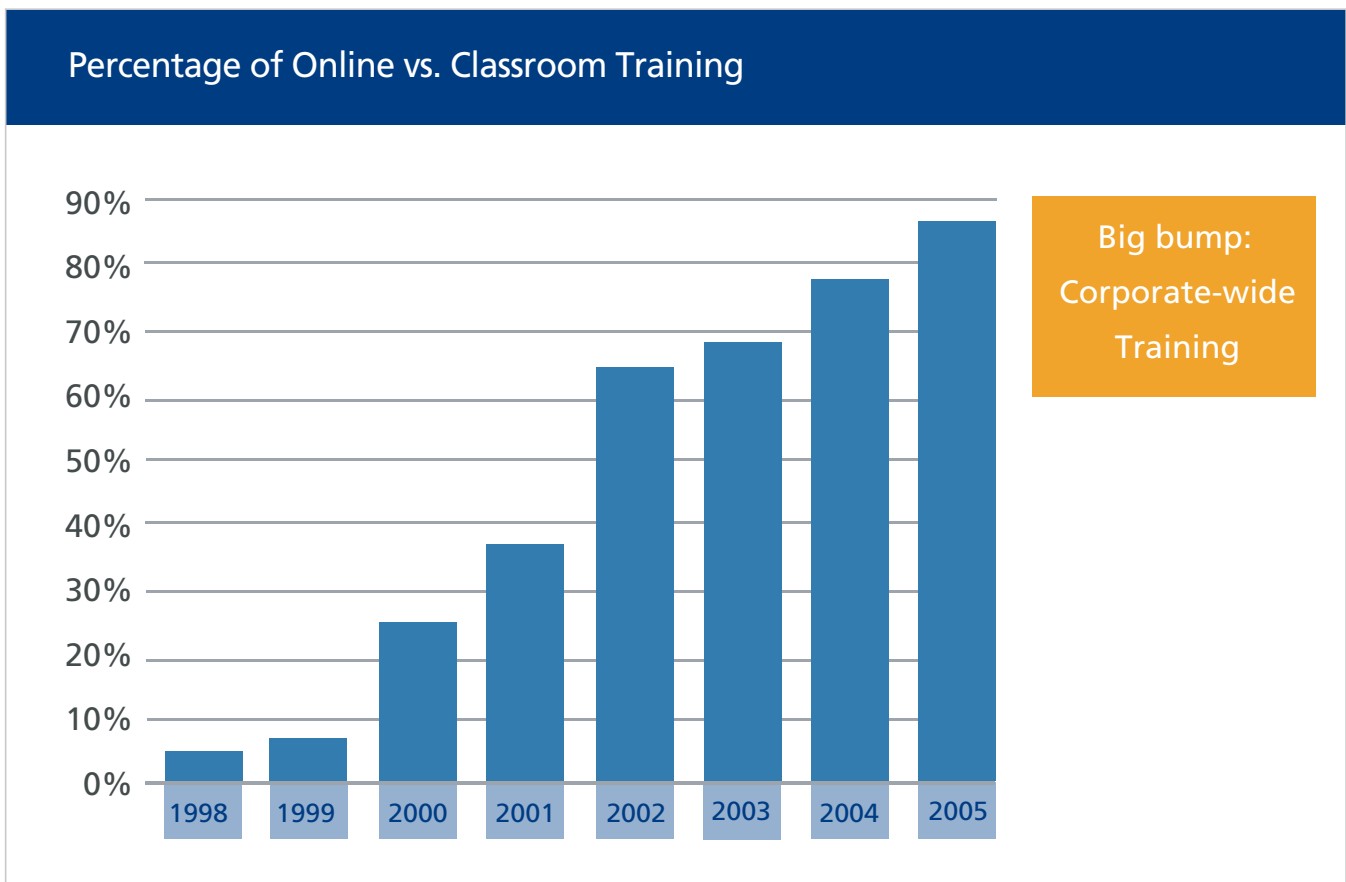
Percentage of Online vs. Classroom Training

Big bump: Corporate-wide Training

Figure 10: NCR University Pages Accessed, 1998-2005

Source: *NCR, 2006*

Users are accustomed to taking training when they are available, and they are highly inconvenienced if the NCR University system is not available immediately. As result, the NCR University Operations group is measured by its ability to deliver system availability to users. The targeted goal is 99.5 percent system uptime, which the group currently meets or exceeds.
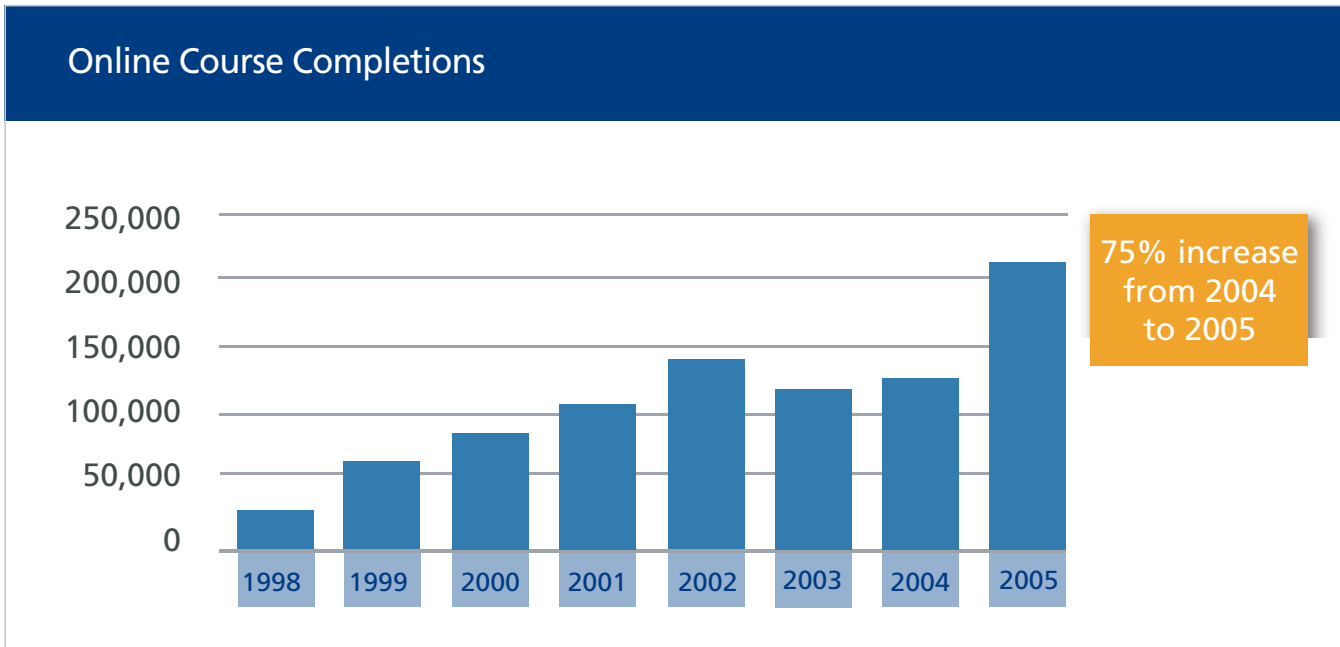

Online Course Completions

75% increase from 2004 to 2005

Figure 11: *Online Course Completions, 1998-2005*

Source: *NCR, 2006*

Partner Certification

At NCR, partner training is increasingly focused on certification tracks. The certification tracks are designed and developed by the learning consultant or product manager's content development team within a business unit.

By demonstrating that a partner understands a product, service, or implementation, the NCR certification gives a customer confidence that the partner has a high level of competency to sell and support the solution. In fact, meeting a required number of staff certifications is a pre-requisite to being authorized to sell and service NCR solutions. As a result, both total course completions and certifications have increased dramatically since 2003 (*see Figure 12*).

NCR's Services Partner Program maintains a critical distinction between the terms "authorized" and "certified." Authorized describes a company that has met NCR's strict criteria for partnering with NCR in either reselling products and services or delivering services. Certified applies to an individual that has demonstrated an acceptable level of competency in representing NCR in the sale of solutions (products and services), the customization or development of software, and the delivery of services.

Training of partners usually commences as soon as the partner signs a contract with a channel partner manager at one of the business units. The majority of partner training is provided free of charge. Depending on the relationship between NCR and its partners, however, there are a certain number of courses that have a cost associated with them.

Business units provide incentives for channel partners to complete certification tracks, including enhanced support, a logo that can be displayed on sales literature and business cards, and access to advanced sales training courses on NCR University. There are also penalties for not completing the sales certification, which include ineligibility for attending NCR-sponsored events such as sales rallies and partner conferences. Partners also cannot order certain NCR software or replacement parts unless they have completed the relevant certification.

To earn certification, partners must complete a curriculum of courses and pass tests along the way. An ATM technician, for example, must complete a mix of 10 classroom and online courses (*see Figure 13*) and successfully pass each individual Module Certification Assessment with a score of 80 percent or higher. These online tests, which NCR administers, are timed, and can be attempted up to three times before the learner is instructed to contact their NCR channel partner manager.

> NCR provides **incentives** to encourage channel partners to participate in training and to **earn certification**. These include logos, enhanced support, and access to advanced training.

YEAR	TOTAL COMPLETIONS	% INCREASE	TOTAL CERTIFICATIONS	% INCREASE
2003	794		21	
2004	2,439	207%	415	1,876%
2005	11,096	355%	1,233	197%
Grand Total	14,329		1,669	

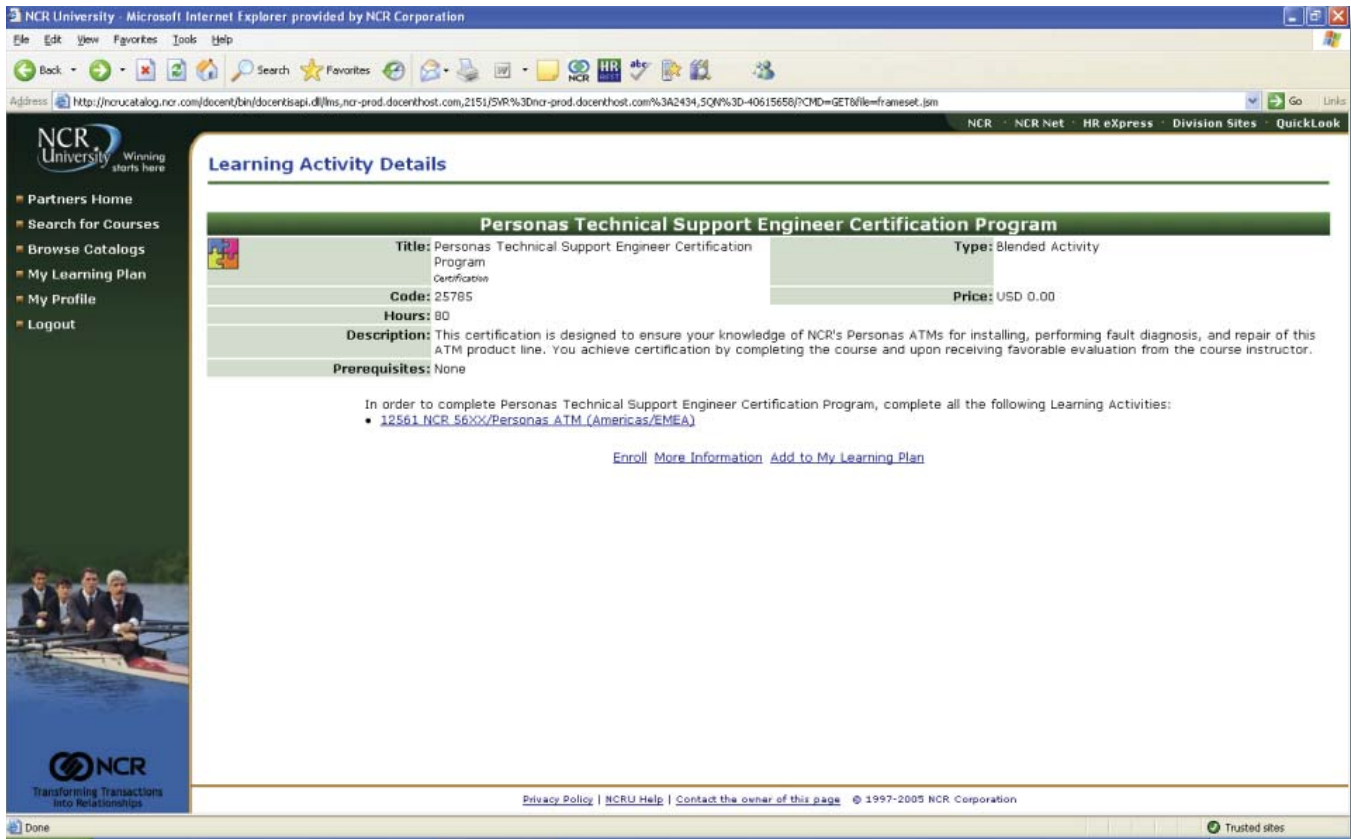*Figure 12*: *Total Partner Course Completions / Certifications, 2003-2005*

Figure 13: *Personas Technical Support Engineer Certification Program*

Channel partner managers at the business units see reports on each partner, and can track how many individuals are certified, progress towards certification, and uptake of training for particular products and services. One of the key indicators of learning success at the business unit level is the percentage of certified partner organizations. That is how the Self-Service Solutions business unit recently measured its success with a new online partner certification program. The program is designed for all partners with responsibility for product sales, service sales, software development, or service delivery. According to the director of NCR University Operations, the business unit boosted the number of certified partners to 80 percent from 20 percent in 18 months.

Looking Forward

The director of NCR University Operations has a full slate of e-learning technology initiatives planned for the next 12 to 24 months, including investments in:

- Streaming media servers to provide more in-depth, video-rich product demonstrations. NCR will place these content servers outside the corporate firewall to make them accessible to partners and customers.

- Collaboration tools, such as instant messaging and online whiteboards, to allow multiple students taking the same online course to collaborate.

- Simulation software to make training more interactive for users and reduce reliance on video for demonstrations.

- Knowledge management and performance support tools to make it easier to associate job-related reference documentation with tests and training modules.

- Data warehouse reporting to better support business units. Reports are currently generated out of a shadow LMS database using Crystal Reports. Business units have direct access to their own information through the reporting module. This year, NCR University will move to a corporate data warehouse, which will enable more cross-analysis of learning data with data from other sources, such as human resources and sales. NCR believes this will enable return-on-investment (ROI) analysis of training programs by comparing, for example, attainment of sales quota with training course completions.

Future initiatives at NCR include **streaming media servers, collaboration** tools, **simulation** software, **performance support** tools, and **data warehouse reporting.**

Lessons Learned

Since initiating an e-learning program for customers and partners in 1997, NCR has learned several important lessons. These lessons can be used by other organizations.

Dealing with Users Outside the Firewall

While NCR enjoys a highly connected, homogenous computing environment within its corporate firewall, the company finds it more challenging to support partners and customers outside the firewall. The same technology that protects computers also serves to block users with a legitimate purpose. For example, the ubiquitous pop-up blocker embedded in nearly every browser sometimes prevents users from seeing assessment scores or accessing courses. Pop-up blockers are the leading reason for calls to the help desk, according to the director of NCR University Operations.

One solution is to place servers beyond the firewall (as referenced above in "Looking Forward"), giving extended enterprise users easier access. Another solution has been to provide users with alternatives to calling the help desk. These include a special support page with a self-diagnostic troubleshooting guide that suggests quick fixes, as well as online chat support.

Tracking Extended Enterprise Users

Profiling and tracking the activity of extended enterprise users can be more difficult than managing an internal audience of employees. The problem is that NCR doesn't really know if someone has left their job at a partner company. This raises both financial and security issues. NCR pays a license fee for every LMS seat, so an inactive user costs the company money. The license can be reused once the user is deactivated. The security issue is raised when someone goes from an NCR channel partner to a competitor. Naturally, NCR does not want its learning content accessible to competitors. NCR's solution is to monitor every profiled user's last access of the system, and then automatically send an e-mail warning to any user who is inactive for more than six months. If the e-mail address is no longer valid or the user does not respond, they are removed from the system.

> Users **outside the corporate firewall** are often **prevented from enjoying the full benefits of online training** thanks to ubiquitous technology such as pop-up blockers. NCR is helping these users by **beefing up technical support** and **placing some of its media servers outside the firewall.**

> NCR **can't track the hiring and firing of employees at partner organizations**. To reduce the **cost of supporting inactive users and ensure tighter security**, NCR has created **rules that govern when a user is removed** from the learning management system **due to inactivity.**

Conclusion

From a single learning management system database, the NCR University Operations group supports five learning groups, five business units, and three major audiences—employees, customers, and partners—with very different learning needs. To service more than 46,000 users, the group has created separate portals with blended delivery of both self-paced and collaborative training, orderable materials, personal learning plans, and certification tracks.

Total Completions for P&SM Courses

Target Audience = RSD

Course Title
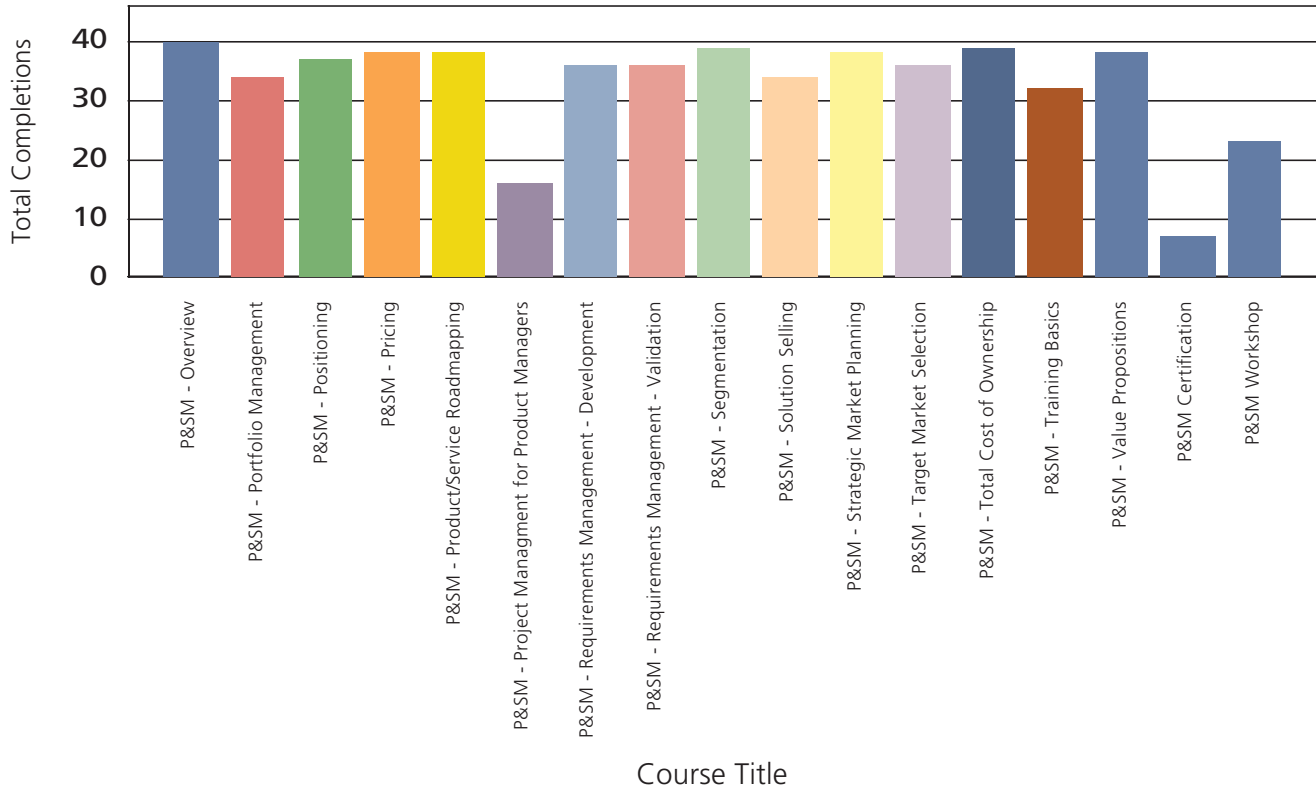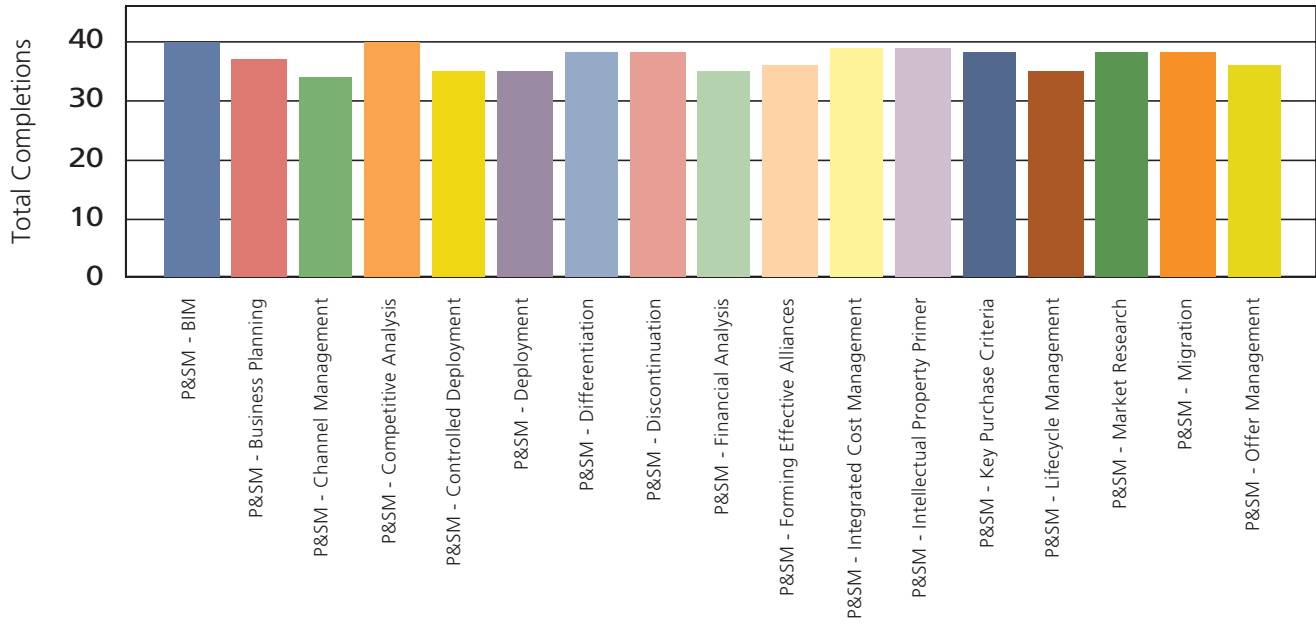
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Bersin & Associates offers the industry's first enterprise learning research subscription, *The Enterprise Learning Research Center* (**www.elearningresearch.com**), which offers up-to-date research, product selection guides, white papers, and access to other experts online. This service enables corporate training managers, vendors, and consultants to make faster, better decisions about enterprise learning strategy, programs, and technology.

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