



**PAVING THE WAY TO PRODUCT  
LIFECYCLE MANAGEMENT IN THE  
COMMUNICATIONS INDUSTRY.**

**CRITICAL SUCCESS FACTORS IN REALIZING THE  
ENTERPRISE PRODUCT CATALOG VISION.**

AMDOCS > CUSTOMER EXPERIENCE SYSTEMS INNOVATION

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## EXECUTIVE SUMMARY

### The Urgency of Centralized Product Management

In all honesty, the product data situation at most service providers is a mess, and getting worse. Multiple databases strewn around the company wreak havoc with the goal of efficient product lifecycle management (PLM). The lack of consistent, integrated data slows down product development, increases operating expenses and multiplies mistakes every step of the way.

With the fast emerging environment of Telco 2.0, service providers desperately need to clean up PLM. Telco 2.0 puts a premium on faster, more innovative, and more collaborative product development and management while creating more complex business models and operations. Absent a serious effort to standardize, integrate and simplify product data across the organization, service providers will have great difficulty creating the kind of PLM systems and processes they need to succeed.

### Vision and Benefits

The enterprise product catalog (EPC) vision is clear and compelling: a single, central repository of all commercial product information to support all channels to market and all internal users across the enterprise.

The goal is to address the specific needs of multiple stakeholders with a single system to define, price, bundle, market, sell, maintain and retire product and service offerings while taking advantage of all the benefits of a single common data model.

From a business perspective, such a tool can help substantially in the effort to streamline product lifecycle management with positive effects on every aspect of bringing a product idea from inception to design, launching new products, and supporting and managing the existing portfolio.

The benefits with EPC come in all three of the major areas of business focus for service providers:

- > Reducing Costs: Running leaner and more efficiently to reduce data management costs, streamline product development, and streamline customer service
- > Driving the Customer Experience: Simplifying the product portfolio, improving service fulfillment and minimizing errors in sales and service
- > Generating New Revenue: Better protecting existing revenue, speeding time to market with new products and improving product innovation and targeting

### Critical Success Factors

Bringing the vision to fruition, however, is no simple task. Actually carrying out the centralized catalog vision is a substantial, multi-year initiative with implications across the company. Doing it right requires careful planning, a balanced strategy highlighting both short- and longer-term priorities, and constant attention to process improvement and change management.

Lessons learned from companies moving to an enterprise product catalog suggest six critical success factors:

- > Secure ongoing executive sponsorship
- > Keep business value at center stage
- > Push for the best technology
- > Identify and optimize core business processes
- > Don't skimp on training or change management
- > Stay focused on the big picture

**INTRODUCTION**

It has never been easy for service providers to manage a constantly changing portfolio of thousands or even hundreds of thousands of distinct product and service offerings. Figuring out the right new offers, getting them to market quickly, tracking sales and usage, and deciding which offers to retire and when has challenged even the most efficient service provider.

Now, with the onset of Telco 2.0 and a substantially more complex and faster moving ecosystem, the challenge is that much greater.

The specific issues for product lifecycle management (PLM) remain the same:

- > Speeding time to market with new products and services
- > Fostering an environment for greater product and service innovation
- > Improving the customer experience for product consideration and fulfillment
- > Increasing the hit rate with new offers
- > Controlling costs throughout the process

What’s different is the level of competition, the pace of market change and the degree of complexity across every aspect of the process. Business and product managers today have little margin for error with PLM. Delays in new offers, slip-ups in promotions or pricing and wasteful work streams inside the organization mean direct hits to the top and bottom line with little forgiveness from the market.

Perhaps most important, the coming era of Telco 2.0 promises a radical change in the way service providers produce, market and

sell their offerings. The traditional PLM processes that sit mostly or entirely inside the company will give way to a much more collaborative model with large networks of partners working together for product development, launch, management and evaluation. Needless to say, the pressures on PLM will escalate dramatically.

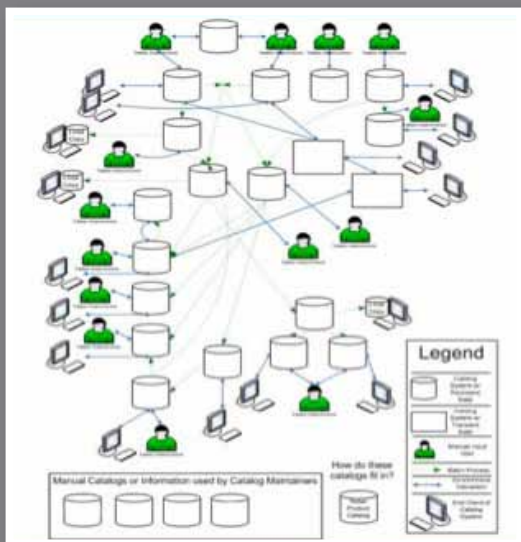
The growing importance of efficient and effective PLM, in turn, puts a tremendous premium on product data management. Absent clear, confident and convenient views into a single source of data truth, PLM bogs down in the muck of inconsistent data, duplicative development and cross-organizational debate.

Service provider executives understand the challenge, but the reality is that the product data situation has worsened in recent years.

As providers have accelerated product introductions, expanded into new regions, and acquired new partners and subsidiaries, they have added yet more databases with different information structures, different terminology, different rules and different degrees of information quality. As the Director of IT Architecture, Strategy and Planning at one large Asian service provider notes, “Any tier 1, tier 2 or even tier 3 carrier today has multiple product catalogs for different reasons, including online shopping, the CRM system, service delivery platforms, provisioning systems, billing, and more.”

The result is that product managers, contact center agents, and everyone else who relies on product information, struggle to understand what’s going on across the company and spend a great deal of extra time either finding out or “re-creating the wheel.” Typically, this leads to inefficient processes, increased costs and more customer errors. It often contributes to missed revenue opportunities, as well, along with greater difficulty in evaluating the business performance of different products and fine-tuning the entire PLM process.

**FIGURE 1: TYPICAL PRODUCT CATALOG ENVIRONMENT**



**THE MOVE TO ENTERPRISE PRODUCT CATALOG:  
WHY NOW?**

Product data integration and consolidation has long been a “nice to have” for service providers. CIOs and CMOs have often wished it were so, but the initiative rarely made it onto the investment priority list.

In the last several years, however, a number of service providers have tested the water with projects to create a centralized enterprise product catalog (EPC). National and global service providers in wireline, wireless, Internet, cable and satellite operations, including Elisa Corporation in Finland, Mobiltel in Bulgaria and T-Mobile companies in the UK, Germany and the Czech Republic, have all invested in new systems to rationalize and integrate essential product data.

A 2008 Yankee Group study highlighted six important reasons that service providers were looking toward integrated product catalogs (Figure 2).

The recent downturn put a damper on new investments across the industry, but now, as service providers begin to look past the downturn, product data consolidation is gaining even more attention as a potentially critical investment for both growth and cost control. In fact, more than half of the participants on a

recent TM Forum webinar stated that their organizations would be upgrading or replacing their product catalog system within the next year or two.

The service providers’ push for product data consolidation is based on a growing recognition that they can no longer afford to manage product catalogs in a fragmented, inconsistent and overly time-consuming manner. Simply put, the downturn has put every cost category under a microscope while growing competition accentuates the gap between winners and losers in new product management. “We absolutely have to get better at targeting our marketing and creating more tailored offers for specific customer segments,” according to the Director of Business Intelligence at a large North American service provider. “We need to be better and faster at meeting the needs of different age groups, different ethnic groups, providing this type of phone for this group, this plan for people who make lots of overseas calls, and so on.”

**FIGURE 2: TOP SIX FACTORS CATALYZING CARRIERS’ ADOPTION OF AN ENTERPRISE PRODUCT CATALOG**



Source: Yankee Group, **It’s Time for Carriers to Adopt Centralized Dynamic Catalog Strategy**, 2008

**THE ENTERPRISE PRODUCT CATALOG VISION**

The vision of an enterprise product catalog is simple: A single, central repository of all commercial product information to support all channels to market and all internal users across the enterprise (Figure 3).

The goal is to address the specific needs of multiple stakeholders with a single system to define, price, bundle, market, sell, maintain and retire product and service offerings while taking advantage of all the benefits of a single common data model. In short, the EPC vision is about product data standardization, integration and simplification.

What this means in practice is the creation of a new master database that serves as the single point of truth and the single point of entry for all product and service information.

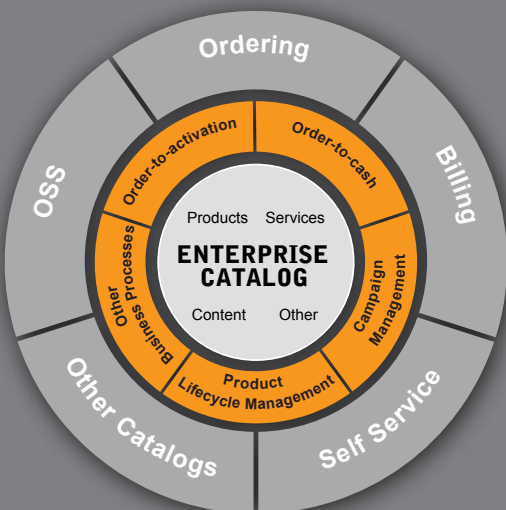
Functionally speaking, an enterprise product catalog can provide a set of capabilities that can generate enormous benefit throughout the whole of product lifecycle management, including:

- > Support for a product meta-model with definitions of common, enterprise-wide product attributes used by all business and technical units, such as marketing, sales, IT, network operations, logistics and customer care.

- > A master repository for all product and service information that provides a single point of view across the business for:
  - > Product pricing
  - > Product documentation
  - > Service and technical definitions
  - > Business rules, such as eligibility and compatibility
- > Controls over product versions and release schedules
- > Integration and interface with other management systems, including automatic distribution of data in multiple formats
- > Distribution of data via different services directly to consumers
- > Management of product launch and retirement
- > Sales configuration
- > Access from multiple sales channels
- > Support for product data analysis

From a business perspective, such a tool can help substantially in the effort to streamline product lifecycle management with positive effects on every aspect of bringing a product idea from inception to design, launching new products, and supporting and managing the existing portfolio.

**FIGURE 3: THE ENTERPRISE PRODUCT CATALOG VISION**



## THE BENEFITS OF THE ENTERPRISE PRODUCT CATALOG: BUILDING THE BUSINESS CASE

The issue of business value is obviously front and center in any discussion of investing in an enterprise product catalog. Moving to an enterprise product catalog approach is not a small initiative, so executives need to know that the payback is there and in relatively short order.

The benefits with EPC actually come in all three of the major areas of business focus for service providers: reducing costs, driving the customer experience and generating new revenue (Figure 4).

### Reducing Costs

Managing multiple product databases is costly in several ways, including:

- > Duplication of effort by product managers and others in designing and configuring the same or similar new products for separate catalogs
- > Additional time (and thus cost) for product managers and others working across multiple systems to analyze the portfolio and manage the changes consistently
- > Additional time (and thus cost) derived from the maintenance of multiple systems, and the reconciliation (technical and manual) of fragmented data.

In a typical service provider environment, as Yankee Group has noted:

Product managers face the uphill task of obtaining visibility of commercial products that are available to them. Because of the lack of a single source of truth, they end up creating

duplicate products. It causes operational complexity and hinders information exchange across the organization—all of which results in an opex increase for service providers. (Source: Yankee Group, *It's Time for Carriers to Adopt Centralized Dynamic Catalog Strategy*, 2008)

In the end, the additional errors that are inevitable in this scenario will generate substantial rework after product launch: rework of failed orders by customer care and the network operations center as well as charging and rating corrections.

With an enterprise product catalog, service providers run leaner, increase efficiencies and realize cost savings from several specific areas, including:

- > An easy to configure and easy to use central catalog, reducing the need for data entry and maintenance across the enterprise
- > Support for broader IT system consolidation and overall IT cost savings
- > Reduced errors, lessening the demand on costly internal and customer service support
- > Simpler use and reuse of product data and processes to support more efficient product development and launch
- > More cost effective operationalization of new services using pre-configured standard product components
- > Simpler product data analytics, leading to faster decisions about product retirement and lessening support expenditures

FIGURE 4: BUILDING THE BUSINESS CASE FOR THE ENTERPRISE PRODUCT CATALOG



### Driving the Customer Experience

Product data confusion inside the organization damages the customer experience in three specific areas:

- > Frustration with an overly complex product portfolio
- > Lack of access to new or even existing products due to ineffective marketing, sales and product development
- > Poor ordering experience based on inconsistent or incorrect data
- > Difficulty using new products due to poor quality service fulfillment (e.g., the wrong product is activated because product definitions are not aligned across service databases)
- > Anger and frustration with customer service (including self-service) based on too-slow or incorrect account information or unexpected charges on the bill

With an enterprise product catalog, service providers can improve the customer experience in each of these areas:

- > Simplifying the available product portfolio
- > Accelerating the opportunity to purchase new products
- > Ensuring the timeliness and accuracy of service fulfillment
- > Ensuring product information consistency across sales and service channels
- > Personalizing the offers

### Protecting Revenue and Generating New Revenue

Finally, an enterprise product catalog can contribute substantially to the revenue side as well. By creating internal order from product data chaos, the EPC supports the revenue side in three essential ways:

- > Revenue Protection: Minimizing both undercharging due to errors and goodwill adjustments from incorrect overcharges and fulfillment mistakes
- > Revenue Acceleration: Speeding time to market with new offers, including better and faster re-use of existing offers in new bundles
- > Revenue Growth: Facilitating internal and partner collaboration to support greater innovation in product development and launch, as well as more effective new offers for specific customer segments, channels and opportunities

With all this, service providers are better able to target their marketing and sales efforts, leading to higher subscriber acquisition, more effectively personalized offers, accelerated revenue, higher close rates, and, ultimately, greater average revenue per user (ARPU).

From an organizational perspective, it's also important to note that the move to EPC provides different benefits for different groups:

- > For enterprise architecture, EPC is a vital step towards streamlining the architecture for a more agile and qualitative support of business requirements
- > For operational IT, it helps with system rationalization and cost
- > For product management, it provides better visibility into the existing product assets and support for a more agile product strategy
- > For marketing, it eases the way to more targeted and sophisticated offers and campaigns
- > For customer care, it reduces complaints and supports faster resolution
- > For network operations, it increases the accuracy and reliability of service fulfillment execution, decreases the amount of order rework and, through automation, reduces the cost of both new service introduction and service fulfillment

Finally, the nature of a typical EPC initiative allows service providers to begin capturing benefits quickly, even before a full implementation is complete. For example, one of the early steps in an implementation is rationalizing the product portfolio to prepare for a consolidated data set. Going through this exercise often leads to a substantial simplification of the product set, resulting in greater management efficiencies. Similarly, creating a standard model for product configuration, another early step in the implementation process, helps greatly in speeding time to market and minimizing inconsistencies and mistakes in documentation.

### SIX KEYS TO SUCCESS

Service providers that have moved down the enterprise product catalog path point to six critical elements of success:

- > Secure ongoing executive sponsorship
- > Keep business value at center stage
- > Push for the best technology
- > Identify and optimize core business processes
- > Don't skimp on training or change management
- > Stay focused on the big picture

### Secure Ongoing Executive Sponsorship

Product data touches literally all aspects of the service provider operations and organization. Implementing a centralized catalog will therefore affect a broad range of critical business processes.

These processes link the catalog with critical support systems on both the BSS side (ordering, billing, CRM, self service) and the OSS side (service provisioning and fulfillment).

The users of these systems are widely spread across the organization, and typically have different priorities, perspectives and measures of success. Absent strong executive sponsorship to champion the vision and steer the project, the normal pressures of departmental priorities will likely undermine the collaborative energy required to keep such a large initiative on track.

### Keep Business Value at Center Stage

Notwithstanding the technical complexity of product lifecycle management for service providers, EPC projects are first and foremost about business change. The IT folks will likely drive the project, but those that succeed are clear that the business priorities of product lifecycle management should guide the way:

- > How can we speed time to market?
- > What type of product innovation is required to generate new sources of revenue?
- > Which customer care concerns are most urgent and most amenable to improvement with EPC?
- > How can we better support the need for increased ARPU and sustained subscriber acquisition?
- > What type and degree of cost savings are possible?
- > How we can contribute to reduced churn?

Keeping business value at center stage throughout the project requires involving business leaders not simply to approve the budget but also to help understand the business requirements, guide the project development, determine the essential measures for success, and identify and achieve quick business wins.

“It’s not possible to do this with just a technical approach,” explains the Vice President of Product and Offer Management of a large European service provider. “You need multiple business streams to look at all the related business processes.”

Phasing your project to deliver tangible, visible business value first will ultimately help the credibility and standing of the project and will transform the business stakeholders into champions of the centralized catalog strategy.

### Push for the Best Technology

While the business issues come first, the technology side of EPC is extremely demanding.

Technically speaking, the EPC needs to connect to many other enterprise technology systems, including ordering, billing, fulfillment, supply chain and CRM—while providing direct support to product development, marketing, sales and customer care.

Given the uneven and often fragmented reality of the systems spread across most service provider organizations, the technical and integration requirements with an EPC solution are extremely high.

Specifically, the EPC solution should:

- > Support enterprise wide operations
- > Support the modeling of information for all enterprise applications (CRM, Billing, Ordering, Fulfillment, Assurance, etc.)
- > Enable single point-of-view and single point-of-entry for product data, supporting all data types (business and technical definitions, documentation, pricing, business rules, etc.)
- > Comply to TMF/SID principles
- > Support multi-user environments
- > Provide role-based authorization, workflow, and data access control
- > Include versioning and rollback capabilities
- > Enable easy integration with external systems
- > Leverage service-oriented architecture (SOA) principles
- > Provide validation to ensure data quality and consistency

In this context, it’s difficult to overstate the need for extensive due diligence with any potential EPC system to ensure it can provide the full range of necessary functionality.

### Identify and Optimize Core Business Processes

The centralized enterprise catalog sits at the heart of critical business processes, such as order-to-activation, order-to-cash and, substantially, product lifecycle management. Replacing several catalogs with a single one helps streamline those processes, allowing for the identification of obsolete steps, rework or “dead time” in the process. It’s essential to identify these changes early in order to provide input into the change management plan and train the stakeholders in the new and better ways of operating the business.

### Don’t Skimp on Training or Change Management

The range of change that comes with EPC requires constant support. This is not necessarily different from other large-scale technology-based initiatives, but it is something that service providers ignore at their peril.

Inevitably, an EPC implementation will bring a host of internal process changes cutting across multiple departments, so training and change management are essential contributors to success. In most cases, this will require substantial training for the direct users of the catalog (e.g., product developers, business analysts and product managers). The indirect users of the catalog in areas such as CRM, ordering, network operations, billing and self-service may also need training and should not be overlooked. As with most major change initiatives, some departments will accept the new ways more easily than others, so a generic “one and done” approach to training is far from adequate. Customized training and change management programs for marketing, sales, IT, customer care, product management, network operations, finance and others are generally best.

Finally, as the European Vice President of Product and Offer Management notes, “If the project includes introducing a new philosophy to the business, such as a more marketing-oriented philosophy or a more flexible approach to product development, you’ll need to think about continuous coaching even beyond the training. You’ll need special people for this, too.”

**Stay Focused on the Big Picture**

A full-fledged, wisely planned EPC implementation may take several years, which, in today’s environment, is difficult to plan. Many service providers have trouble these days focusing on anything more than one year out. Given the benefits of EPC, however, as well as the risks and costs of the status quo, a multi-year time horizon is no excuse to avoid beginning.

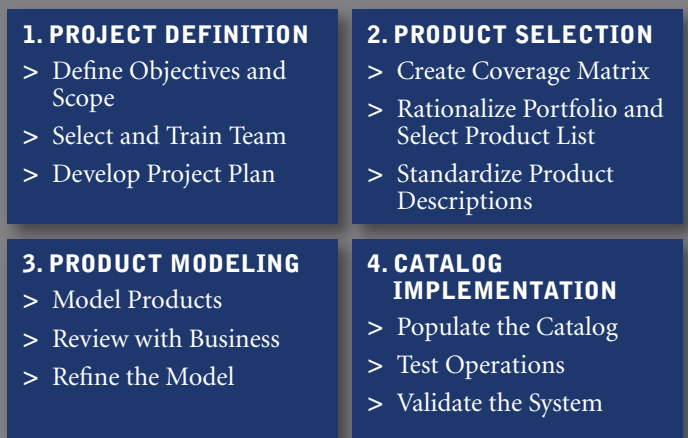
The best approach, according to EPC veterans, is to develop a clear and comprehensive roadmap and then move ahead in defined increments with near-term deliverables and benefits while maintaining focus on longer-term requirements.

While putting most energy on near-term needs, however, it’s critical to remember that the broader transformation coming with Telco 2.0 will greatly increase the complexity of product lifecycle management. Most important, the multi-sided business models of Telco 2.0 will multiply the number of offers, stakeholders and channels to market. Technology and business change at an unprecedented rate and service providers need to consider any future conceivable scenario in their EPC initiatives. Ignoring these longer-term needs prevents making full use of the EPC advantage while risking a distortion of near-term priorities, and, ultimately, diminishing the value of the project.

**A ROADMAP FOR ENTERPRISE PRODUCT CATALOG DEVELOPMENT**

The core issue for service providers embarking on an Enterprise Product Catalog initiative is determining which data from which catalogs from which lines of business and applications should be included. The specific roadmap will of course differ for each service provider, but each plan will include four main steps: Project Definition, Product Selection, Product Modeling and Catalog Implementation. Figure 5 illustrates the primary tasks in each phase.

**FIGURE 5: ENTERPRISE PRODUCT CATALOG ROADMAP**



## CONCLUSION

The economic downturn and the rise of Telco 2.0 have put the longstanding challenge of product lifecycle management at center stage for service providers anxious to run leaner and more efficiently, generate new sources of revenue and drive the customer experience. PLM has never been easy, given the scale of the typical product and service portfolio, but current and emerging economic pressures, as well as the emerging world of more than a trillion connected devices, suggest that service providers now need to dramatically improve their ability to figure out the right offers, get them to market quickly, track sales and usage, and decide which offers to retire and when.

In this context, service providers should move aggressively toward the implementation of an enterprise product catalog, a single, central repository of all commercial and technical product information to support all channels to market and all

internal users across the enterprise. Absent such an integrated system, service providers will find it difficult to create the more streamlined, effective, and innovative approach to product lifecycle management that is fast becoming a core foundation for business success.

The implementation challenge is certainly large. For those companies that can meet the challenge, however, the benefits are substantial:

- > **Reducing Costs:** Reducing data management costs, streamlining product development, and streamlining customer service
- > **Driving the Customer Experience:** Simplifying the product portfolio, improving service fulfillment and minimizing errors in sales and service
- > **Generating New Revenue:** Better protecting existing revenue, speeding time to market with new products and improving product innovation and targeting

## AMDOCS ENTERPRISE PRODUCT CATALOG: DO MORE IN A CONNECTED WORLD

The harsh economic conditions facing most service providers give them little room for error in choosing partners to help them survive and thrive. Add to that the inevitable march to a connected world where more than a trillion devices will soon be connected to the network, driven by the demand for ubiquitous connectivity, information anytime and anywhere, and smarter, more innovative connected devices. With high stakes and limited resources, providers need to know that any investments they make will pay off in cost control, improved customer experience or new revenue – and ideally in all three.

Amdocs is uniquely qualified to partner with service providers in their efforts to improve product lifecycle management and implement an enterprise product catalog.

Unlike most large solution providers addressing product lifecycle management, Amdocs is singularly focused on helping service providers succeed. The company launched in 1982 to provide software for directory information services, and today is the leader in customer experience systems innovation, serving 90 percent of Fortune's Global 500 service providers with an integrated suite of products and services for the communication, media and entertainment industry.

Amdocs is also unique in offering service providers a comprehensive suite of products, services and solutions under one roof. Unlike other software or services firms that compete in the service provider marketplace, only Amdocs has the ability to do the strategic analysis, make the proper recommendations, and then design and deliver fully integrated solutions based on its own industry-leading products.

More specifically, Amdocs has a well-developed set of offerings that respond directly to the need for centralized product management, including the Enterprise Product Catalog, the Product Lifecycle Management solution, industry best-practice business processes and unbeatable delivery capability.

The Amdocs enterprise product catalog offerings are designed to help service providers thrive in the connected world and realize all three primary business objectives for successful product lifecycle management:

- > **Expand quicker** to realize connected world opportunities with customers by supporting more complex product and service bundling with a more flexible and adaptable data model
- > **Drive a unique, real-time customer experience** by accelerating time to market, removing barriers to product innovation, and streamlining BSS/OSS integration
- > **Run a leaner and more agile operation** by replacing all catalogs with a single one, supporting future reuse and re-composition of existing products, and creating a more business-friendly user interface for the PLM process

Amdocs has deep understanding and experience helping service providers with both the business and IT issues surrounding product management and product data management, and has already helped 15 service providers worldwide move toward the EPC vision.

Finally, a closed-loop business model enables Amdocs to accept total accountability for results. Having a single partner with comprehensive capabilities for the work makes it easier for service providers to demand results, and being fully accountable for those results helps focus Amdocs executives on delivering the promised benefits.

# ABOUT AMDOCS

Amdocs is the market leader in customer experience systems innovation. The company combines business and operational support systems, service delivery platforms, proven services, and deep industry expertise to enable service providers and their customers to do more in the connected world. Amdocs' offerings help service providers explore new business models, differentiate through personalized customer experiences, and streamline operations. A global company with revenue of \$2.86 billion in fiscal 2009, Amdocs has approximately 18,000 employees and serves customers in more than 60 countries worldwide. For more information, visit Amdocs at [www.amdocs.com](http://www.amdocs.com).

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