

APPS RUN THE WORLD

Manufacturing

Vertical Applications Market Report 2009-2014,
Profiles Of Top 10 Vendors

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Table of Contents

Summary.....	5
Top Line and Bottom Line.....	5
Market Overview.....	6
Implications Of The Great Recession of 2008-2009.....	7
Customers.....	8
Top 10 Apps Vendors In Vertical.....	9
Vendors To Watch.....	9
Outlook.....	9
SCORES Box Illustration.....	10

Profiles of Top 10 Apps Vendors.....	11
SAP.....	12
Oracle.....	17
Infor.....	22
Dassault.....	27
Siemens PLM.....	32
PTC	27
Microsoft.....	42
TOTVS.....	47
QAD.....	52
Consona	57

Summary

This applications market sizing report examines the 2009 performance of the top 10 applications vendors in the manufacturing vertical, which includes automotive, discrete and process manufacturing.

The automotive manufacturing sector has rebounded from the recession with OEMs boosting capacity and sprucing up their lineup to develop new alternative-energy vehicles. Similarly high-tech manufacturing companies and process manufacturers have also ramped up their production to accommodate increased customer demand. Such investment plans have sharpened their focus on overhauling their IT infrastructure as well as applications strategies in order to gain better visibility into their operations, while bolstering their support capabilities to improve customer relationship and retention.

In addition, applications vendors have made emerging markets their top priority, taking advantage of the massive amounts of infrastructure investment in countries such as Brazil, Russia, India and China, all of which are bulking up their manufacturing sectors to meet growing demand both at home and abroad.

Top line and Bottom line

On the top line, the manufacturing vertical is gearing up for significant expansion after a severe downturn that rendered a large number of factories idling or permanently closed. In recent weeks, purchasing managers in the manufacturing sector have reported increased manufacturing output in Europe and the United States.

Manufacturing activities will accelerate in 2011. Cash hoard among some of the biggest high-tech manufacturers have reached a staggering level with Apple's topping \$70 billion and Cisco's nearing \$40 billion projected for 2011. Companies in the industrials segment have seen their cash on hand rising steadily to exceed \$160 billion as of the third quarter of 2010, more than twice of they held three years ago, according to Standard & Poors Capital IQ.

What that means is that these companies and their large contingent of partners and suppliers will have to deploy their cash somewhere in order to maintain their competitive edge. For example, Apple's biggest supplier Honhai Precision Industry Co. has announced large-scale expansion plans in China. In other cases, they will turn to mergers and acquisitions, all of which will have serious ramifications on their capital spending plans as well as their overall IT strategies.

Applications vendors are making a big push into the manufacturing sector by positioning their Product Lifecycle Management software as the key enabler for creating next-generation high-tech electronics or electrical vehicles.

With the manufacturing sector closely tracking economic activity, the bottom line remains that the ongoing recovery could be the real test of whether different segments of the industry from industrial machinery and components to electronics and from automotive to plastic makers will rebound at the same rate, or for that matter any specific segment over the other will be able to regain more than enough ground lost during the recession.

That matters to plenty of vendors that have established sizable presence in certain manufacturing segments. While vendors such as Oracle have been traditionally strong in segments like high-tech manufacturing, others such as Infor have done well among mid-sized process manufacturers.

The first half of 2011 could be the harbinger of things to come for any application vendor to ascertain the pace of the recovery in the manufacturing vertical and whether any segment offers greater return than others. When that

happens, the long-term outlook of the manufacturing vertical will depend on vendors' ability to capitalize on such lucrative opportunities and replicate the results in adjacent segments in order to dominate the entire vertical.

Market overview

The market for applications in the manufacturing boils down to three major areas:

1. Operations for routine running of a manufacturing organization that requires constant tuning of its manufacturing execution system, enterprise resource planning system for financial, procurement and human capital management, as well as a whole host of front-office applications for order management and back-office systems for logistics, inventory management, production planning and supply chain management functions.
2. Customer information management that offers complete visibility into all aspects of customer interaction as well as a full range of sales, marketing, customer service and partner relationship management functions. With the advent of the Internet, multi-channel selling has become critical for any manufacturer that needs to connect with customers in whatever communication mode they prefer.
3. Specialized applications that handle specific functions such as engineering simulation and computer assisted manufacturing and design in 2D, 3D and increasingly high-definition 3D format.

While 2009 was still a period of retrenchment for manufacturers needing to reduce costs, much of the applications spending was done to ensure that there would be no disruption in business processes or normal workflow. The maintenance mode kept the growth of a large swath of applications vendors in check.

With new development sharply curtailed in the manufacturing sector, PLM apps vendors such as Dassault, PTC and Siemens PLM experienced contraction in their license sales in 2009. The following year was another story. For much of 2010 all three major PLM apps vendors rebounded nicely, suggesting that their manufacturing customers have ratcheted up their development plans in hopes of gaining an upper hand during the upturn.

Meanwhile Microsoft has been investing heavily in the manufacturing vertical through new products that enable subsidiaries of manufacturers to better connect with their headquarters. The two-tier ERP approach has particular appeal among manufacturers that have gone through successive acquisitions in order to stave off the effects of the recession, while shoring up their presence in emerging countries. In some cases, much of the IT spending of these manufacturing companies in 2009 revolved around consolidating operations with the help of the two-tier ERP strategy after making such acquisitions.

Then there was the growing importance of the emerging markets. In Latin America, Middle East and Asia Pacific, manufacturing companies were keenly aware of the looming IT challenges that could put their young and perhaps fragile infrastructure at risk because of years of underinvestment. Applications vendors seized that opportunity and expanded rapidly in countries such as China, India and others. SAP, for example, has reaped considerable benefits after investing in local partners such as Neusoft in China. In fact, SAP has solidified its presence as the leading ERP vendor for major manufacturing organizations in China, much to the credit of its ties with IBM Global Services, which in turn works closely with another fast-growing ERP implementer Camelot Information System in China.

Oracle, on the other hand, has continued to expand its reach into the Middle East market, especially among a new class of budding conglomerates in the region. Recently it signed a \$10 million-plus deal with Nuqul Group, a diversified manufacturing company with 5,500 employees that plans to standardize on a number of Oracle applications including E-Business Suite, Demantra, Siebel and Hyperion at its facilities in Jordan, Saudi Arabia, United Arab Emirates, Algeria and Morocco. That followed Oracle's similar successes in places such as Dubai where it has already won a loyal following across process and discrete industries among other verticals.

In summary, it's fair to suggest that manufacturing companies in developed countries from the United States to Germany have begun switching from the maintenance mode that was prevalent during the recession to an investment mindset when it comes to their applications strategies. On the other hand, manufacturers in emerging countries that have already been making selective IT investment over the past two years are accelerating their plans in order to keep up with their growth due to sunnier economic conditions and thusly not being seen as complacent or worse reversing their course of expansion through innovation.

Implications of the Great Recession of 2008-2009

While the worst is behind them, manufacturing organizations have been picking up the pieces that left many in tatters because of their deliberate attempts to fight recession with drastic cost-cutting measures from plant closings to multiple rounds of layoffs.

The much touted alliance between General Motors and Toyota to build light trucks and subcompact models in the highly automated plant in Fremont CA, is a case in point. First opened in 1984, the plant was known as New United Motor Manufacturing Inc. or NUMMI, and it built an average of 6,000 vehicles a week. NUMMI was considered a shining example of Japanese-infused production quality meeting Western metrics-based just-in-time inventory and volume production. Similar to corporate restructuring moves at different levels of the manufacturing vertical due to the recession, the March 2010 closing of the plant meant that the remaining 4,700 employees of the NUMMI plant had to be let go.

However the end of a chapter for the American automotive industry was bittersweet. In at least one part of the shuttered NUMMI plant, Tesla, which is on the vanguard of high-quality electric cars, has started building a new generation of vehicles since October 2010.

The rebirth of the last remaining California auto assembly plant, albeit on a smaller scale, underscores the dynamics of the American manufacturing industry striving for any chance of a turnaround provided the timing and the product can meet customer demand.

Similarly the robust manufacturing sector in Germany, which thrives on highly specialized tools and equipment as well as high-margin services, demonstrates that the path from oblivion to born-again relevance stems from the ability of manufacturing organizations to innovate and excel through consistent process improvement in order to attain the quality needed to survive and thrive in a market niche that ensures its success.

The role of IT has never been stronger behind such reinvention of the manufacturing sector. For one, Tesla has been running SAP applications since 2007.

Customers

Another reinvention of the manufacturing vertical lies in companies that have been involved in a series of mergers and acquisitions, which often result in a burgeoning number of applications and perhaps a chaotic IT environment.

Some manufacturers have even made a name of rationalizing the heterogeneous IT landscape.

For example, Cummins, the \$11-billion supplier to the automotive vertical, amassed hundreds of applications across its enterprise as a result of a series of acquisitions over the past decade. At one point Cummins had a software arm responsible for the rationalization and management function. The division Cummins Infotech merged with KPIT Infosystems to form KPIT Cummins in 2002. Cummins currently holds a 14.7% stake in KPIT Cummins, which continues to serve the applications integration needs of its former parent.

As the economy improves, many manufacturing organizations are likely to turn to mergers and acquisitions to fuel their growth, which in turn will bring with them third party systems that either have to be decommissioned or integrated into the corporate standard.

Hence musical chairs are expected to be the recurring theme in the manufacturing vertical as one vendor's expansion invariably comes at the expense of its competitors.

In November 2010 Siemens PLM dropped a bombshell on the automotive vertical by announcing the winning of Daimler AG as its latest CAD customer right under the nose of its archrival Dassault, which has been the CAD provider for the giant German car maker for years.

It wasn't the first time in 2010 that Siemens PLM was able to pull a rabbit out of its hat, stunning everyone in the close-knit world of selling highly specialized applications to just a handful of global automotive OEMs that in turn wield considerable influence over the IT decisions of their army of tier-1 and tier-2 suppliers.

In July Siemens PLM announced that Chrysler - after using its TeamCenter solution for product data management - has decided to add Siemens NX for design automation as well. Chrysler was also a Dassault CATIA user when it was part of Daimler and remained so even after it was sold to Cerberus, a US private equity firm, in 2007

Such moves underscore the fact that there could be more volatility in the manufacturing vertical as customers need to accelerate their product development cycle or do a better job integrating disparate systems into a manageable environment.

In many respects, last year's cost cutting measures have been replaced by front-loading applications investment as manufacturers aim to reinvent their industry once again through product innovation by putting the right technology in place.

Top 10 Applications Vendors In Vertical

The following table lists the 2009 shares of the top 10 applications vendors in the manufacturing vertical and their 2008 to 2009 applications revenues(license, maintenance and subscription) from the vertical.

Vendor	2009 Share(%)	2009 Applications Revenues From Manufacturing(\$M)	2008 Applications Revenues From Manufacturing (\$M)
SAP	14.7%	1662	1930
Oracle	12.2%	1375	1292
Infor	8.0%	898	949
Dassault	7.4%	834	876
Siemens	4.2%	474	558
PTC	4.0%	455	525
Microsoft	1.6%	175	170
TOTVS	1.1%	122	107
QAD	0.9%	100	130
Consona	0.8%	95	90
Subtotal	54.9%	6190	6627
Other	45.1%	5092	5271
Total	100.0%	11282	11898

Vendors To Watch

One of the major developments could come from the recent appointment of Charles Philips as the new Infor CEO. Philips, the former co-president of Oracle who took credit for some of its acquisitions, could use the same template at Infor pushing the ERP vendor into new verticals or subverticals within the manufacturing vertical where Infor has already built a sizable installed base.

The rise of China as a global economy could catapult its ERP vendors such as Kingdee and UFIDA to extend their manufacturing expertise into other regions, especially countries within Asia where Chinese companies like Huawei and Lenovo have already become a household name.

In the midmarket manufacturing space, QAD and Syspro will be the vendors to watch as they have been extending their expertise in different segments of the vertical to drum up new business in Asia Pacific for the former and Cloud-based solutions for the latter.

Outlook

On the upside, the manufacturing vertical is bracing for an upturn that could not come any sooner. The latest figures are indicating a sustainable recovery. The US Commerce Department, for example, reported orders for manufactured goods in November 2010 rose 0.7% to \$423.8 billion from the prior month, suggesting growing momentum in the manufacturing vertical.

General Motors, on the heels of a successful IPO that raised \$20 billion, reported its sales rising 7.9% in December 2010, ending the year where auto sales in the United States were up for the first time since the Great Recession of 2008-2009.

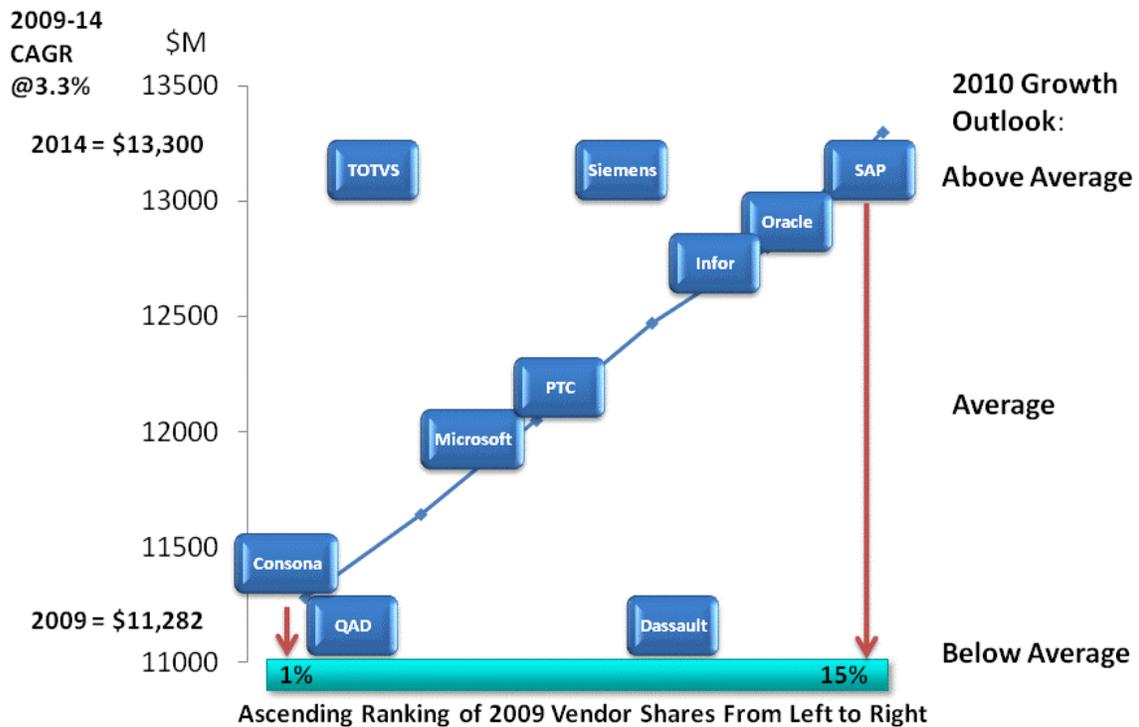
What that means is that after years of lackluster growth, applications vendors could see a windfall as manufacturing companies start investing again in order to stay competitive and perhaps become more profitable through process improvement.

On the downside, similar to the economy at large, the manufacturing vertical is likely to hit bumps along the way, perhaps taking considerable time and effort to reach where it stood in the pre-recession days. That could leave some applications vendors empty-handed when it's time to recoup their sizable losses.

SCORES Box Illustration

The following graphic shows the 2009 shares of the top 10 applications vendors in manufacturing vertical with SAP claiming the top spot at 15%, followed by Oracle, Infor, Dassault, Siemens PLM and others. Based on our SCORES methodology, SAP, Siemens PLM and TOTVS are rated above average for their growth potential in 2010. The market is expected to achieve a 3.3% compound annual growth rate rising from \$11.2 billion in 2009 to \$13.3 billion by 2014.

2009 Shares of Top 10 Apps Vendors in Manufacturing Vertical, 2010 Growth Outlook, Forecast Through 2014



Profiles of Top 10 Applications Vendors In Vertical

- SAP
- Oracle
- Infor
- Dassault
- Siemens
- PTC
- Microsoft
- TOTVS
- QAD
- Consona

SAP

Walldorf, Germany

www.sap.com

Overview:

SAP offers one of the most complete solutions for manufacturers, having secured more than 15,000 customers in different segments of the vertical. Typical customers include companies involved in automotive, industrial, machinery and components, high-tech manufacturing, as well as a whole host of discrete and process manufacturing organizations.

Applications Revenues In Manufacturing:

	2008	2009
\$(M)	1930	1662

2009 Applications Revenues In Manufacturing By Region:

Region	2009(\$M)	% of total
Americas	581.7	35%
EMEA	831	50%
Asia Pacific	249.3	15%

2009 Applications Revenues In Manufacturing By Company Size:

Size	2009(\$M)	% of total
XL(5K ees and above)	831	50%
Large(1K-5K ees)	498.6	30%
SMB(1K ees and below)	332.4	20%

2009 Applications Revenues In Manufacturing By Revenue Type:

Type	2009(\$M)	% of total
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License	581.7	35%
Maintenance	1080.3	65%
Subscription	0	0%

2009 SCORES Box:

Evaluation	Criteria	Results
Strengths	Key differentiators, domain expertise, product portfolio, solution scope	Above average
Customers	Customer wins across regions and customer segments, momentum among new and existing customers	Average
Opportunities	Market opportunities at the vertical and subvertical levels	Average
Risks	Ability to handle internal and external risks and challenges	Average
Ecosystem	Network effects of VARs, resellers, SIs and ISV partners, health of ecosystem	Below average
Shares	Market shares, company sales, size, overall market presence	Above average
Total	With a 15% share in the Manufacturing vertical, SAP's ability to maintain and win share in the market segment in 2010	Above average

Full overview:

After decades of selling into automotive and discrete manufacturing segments, SAP has gained critical insights on well-established business practices as well as the latest innovation on manufacturing processes and system requirements.

With its extensive experience in selling enterprise resource and planning(ERP) systems to some of the world's largest automakers such as Daimler AG and manufacturers like Siemens, SAP has leveraged its track record to new heights by adding complementary products and partnerships.

Much of its success can be attributed to its back office applications for manufacturers, connecting their sales and distribution systems to shop floor control units as well as financial accounting function for centralized book keeping.

SAP has also capitalized on the rise of customer information management and line of business analytics with robust applications that help manufacturers identify customer preferences and strengthen decision-support capabilities.

More recently SAP has been expanding into new markets from on-demand delivery of its applications to a range of governance, risk and compliance products that are increasingly critical to the day-to-day workflow for manufacturers to meet environmental and sustainability requirements.

Key Applications For Manufacturing Vertical:

SAP ERP 6.0, SAP Business Suite including SAP SCM, SAP HCM, SAP CRM, SAP BusinessObjects Analytics

SCORES Analysis

Strengths

SAP has been on the forefront of the manufacturing business process innovation by developing and enhancing applications that meet the needs of customers from different segments of the vertical.

Hightech and industrial, machinery and components(IMC) are among the major manufacturing sector for SAP. For years, SAP has been building a comprehensive solution map to help manufacturers such as those in semiconductor, electronic equipment and consumer technology products address critical issues like compressed product lifecycle and go-to-market strategies with tailored-made functionality from innovation management to service parts planning.

For IMC customers, SAP has developed specific solutions for handling end to end functions such as inventory control, new product development and introduction, after sales and service, demand and supply planning, operational procurement, and channel management.

With continuous innovation, SAP has broadened those solutions to target different sizes of manufacturers. The SAP All-in-One applications and SAP Business One have been instrumental in helping small and mid-sized manufacturers meet their back-to-front office system requirements with a standardized template that can be easily implemented in a fixed-fee and fixed-scope manner. In fact, thousands of these manufacturers have adopted these products, representing the majority of its installed base in the vertical.

The other major pillar comes from multinational manufacturers that demand scalable systems for increased visibility into their global operations.

SAP is enabling that by extending its core systems to facilitate seamless collaboration with suppliers on digital product creation, along with persistent connection into third party manufacturing execution systems such as Citect, Performix and Werum as well as SAP's own MESes.

The next phase of development is based on network coordination for easy exchanges of traceability information and digital manufacturing for guided processes designed for rapid reconciliation between engineering and manufacturing bill of materials. Other enhancements include better benchmarking and performance management tools for plant to enterprise visibility as well as improved local execution in areas such as work-in-progress tracking and enhanced Kanban planning.

All these suggest that SAP is investing heavily to ensure its continued successes in the manufacturing vertical by leveraging its sizable installed base as well as a growing army of partners to scale out a solution set that could serve as the underpinning of the factory of the future.

Customers

With more than 15,000 customers using its applications, SAP has established a sizable presence across different segments of the manufacturing vertical. For example, SAP has secured more than 2,000 customers in the industrial,

machinery and components segment. And the recent acquisition of Sybase - on top of its earlier purchase of BusinessObjects - has netted the vendor tens of thousands of additional customers.

Its recent reference wins included BendPak, Furniture Brands International, Hilti AG, Hunter Manufacturing Co., Invensys, Lincoln Electric, MSC Industrial Direct Co., SeverStal, Yaskawa, and Yves Rocher.

Opportunities

Through product extensions and acquisitions, SAP is adding significant value to an already extensive product and service portfolio for manufacturing organizations.

On the high-end, SAP is expected to realize its vision for digital manufacturing with new enhancements in such areas as better process and resource planning, as well as work instruction authoring. Tight integration between SAP Business Suite and its middleware products from SAP NetWeaver composition and Service Oriented Architecture will allow for unified process and workflow modeling, thus enabling manufacturers to strengthen their data integration and performance management capabilities.

Additional support for mobile devices will help manufacturing customers distribute critical data to a wider audience on a real time basis, while extensions of lean manufacturing concepts will entail significant improvement to inter-company supply chain processes.

For small and midsized manufacturers, SAP is positioning its latest on-demand software Business ByDesign as a simple to use and fully integrated solution for manufacturers that are increasingly drawn to Web-based solutions because of their flexibility and ready accessibility.

For example, BendPak, a manufacturer of automotive service equipment and a new Business ByDesign customer, has been able to leverage the on-demand functionality to its advantage because of its limited IT resources. The Web-based interface also supports third-party solutions for additional features such as shipping and logistics.

Another major opportunity lies in its recent acquisition of TechniData AG, which develops product safety and environmental, health and safety (EHS) solutions, allowing SAP to further its momentum in such areas as governance, risk and compliance and sustainability.

Risks

The drop in sales to the vertical in 2009 suggested that SAP was adversely impacted by the cutbacks of its manufacturing customers due to the recession. Though recent SAP's financial results indicated the vendor has turned the corner, a sustainable recovery among its manufacturing customers could take considerable time and effort.

Its on-demand push also raises the specter that the vendor needs to interface with a new set of ISV partners and perhaps hosting providers that will test the open integration capabilities of its Web-based platform.

Another challenge is that SAP needs to shore up its best practices when carrying out such on-demand implementations, an exercise that has taken the vendor longer to bear fruit than that of its on-premise applications, which will continue to play a bigger role in the ongoing business process optimization of its manufacturing customers.

As a result, SAP will have to demonstrate its commitment to supporting open integration as much as tight collaboration with new and existing partners in order to extend its leadership position on all fronts.

Ecosystem

SAP has been relying heavily on a long list of systems integrators to help it penetrate the manufacturing vertical. The partners include Accenture, IBM, Logica, Neoris, Seal, TCS, and Trebing Himstedt. For the midmarket it has gained traction in the manufacturing vertical with All-in-One partners such as itelligence, which sells into manufacturers including Armacell GmbH, Cintas Corp., COMET Group and David Brown Gear Systems Ltd.

Shares

With a 15% share in the manufacturing vertical, SAP's ability to gain share is above average because of its incremental revenues from recent acquisitions from Sybase to TechniData .

On the upside, the recent rebound of its financial results suggested that SAP's recovery may be sweeping enough to generate substantial increases in license revenues as well as additional recurring revenue streams in 2011.

On the downside, SAP's on-demand push as well as its recent acquisition of Sybase will usher in a host of challenges such as its commitment to ecosystem building and full support for multiple databases and third-party manufacturing execution systems.

Oracle

Redwood Shores, CA

www.oracle.com

Overview:

With a full suite of ERP and supply chain management applications, Oracle is well positioned to bolster its presence in the manufacturing vertical. Typical customers include high-tech manufacturing companies as well as small and midsized manufacturers that are increasingly drawn to Oracle's extensive product portfolio and global support capabilities.

Applications Revenues In Manufacturing:

	2008	2009
\$(M)	1292	1375

2009 Applications Revenues In Manufacturing By Region:

Region	2009(\$M)	% of total
Americas	660	48%
EMEA	495	36%
Asia Pacific	220	16%

2009 Applications Revenues In Manufacturing By Company Size:

Size	2009(\$M)	% of total
XL(5K ees and above)	701.2	51%
Large(1K-5K ees)	440	32%
SMB(1K ees and below)	233.7	17%

2009 Applications Revenues In Manufacturing By Revenue Type:

Type	2009(\$M)	% of total
License	567.8	41%
Maintenance	807.1	59%
Subscription	0	0%

2009 SCORES Box:

Evaluation	Criteria	Results
Strengths	Key differentiators, domain expertise, product portfolio, solution scope	Above average
Customers	Customer wins across regions and customer segments, momentum among new and existing customers	Average
Opportunities	Market opportunities at the vertical and subvertical levels	Above average
Risks	Ability to handle internal and external risks and challenges	Average
Ecosystem	Network effects of VARs, resellers, SIs and ISV partners, health of ecosystem	Average
Shares	Market shares, company sales, size, overall market presence	Average
Total	With a 12.2% share in the Manufacturing vertical, Oracle's ability to maintain and win share in the market segment in 2010	Average

Full overview:

After years of developing and acquiring applications designed to automate different business processes of manufacturing companies, Oracle has built a formidable presence in the vertical through continuous product enhancements and channel alliances.

In addition to selling core applications for manufacturers to run their back-end financial accounting and customer-facing systems, Oracle has expanded its offerings to further differentiate itself with capabilities such as supplier capacity simulation and attribute-based planning through internal development and partner collaboration.

Additionally Oracle is ramping up its push into high-tech companies where it has already become fairly entrenched because of long-standing ties with contract manufacturers and semiconductor makers in Silicon Valley and elsewhere.

Beyond high-tech and industrial manufacturing, Oracle is aiming to establish a much bigger foothold among pharmaceutical and process manufacturing companies with the pending acquisition of Phase Forward and other planned enhancements in supply chain management.

The result is expected to be a bigger wallet share among manufacturing customers that are increasingly turning to Oracle for a large selection of applications to replace their home grown or third-party systems. Oshkosh Truck, for example, was able to replace more than 34 legacy systems with Oracle applications and a handful of best-of-breed solutions to run their entire truck-making operations worldwide.

Key Applications For Manufacturing Vertical:

Oracle E-Business Suite, Oracle JD Edwards Enterprise One, Oracle JD Edwards World, Oracle Siebel CRM, Oracle Supply Chain Management, Oracle Process Manufacturing, Oracle Value Chain Planning 12.1, Demantra 7.3, Oracle Agile PLM, Oracle Agile EDM, Oracle Transportation Management

SCORES Analysis

Strengths

Over the past year, Oracle has been investing heavily to bulk up its supply chain management offerings for a variety of manufacturing organizations by focusing on five areas: value chain planning, transportation management, product lifecycle management, enterprise visualization, and manufacturing and asset lifecycle.

Within the past year, Oracle has introduced at least 14 new products packed with more than 500 new features and 15 new integrations that connect its SCM applications to back-end operations, engineering and/or customer-facing solutions.

The latest releases include Value Chain Planning 12.1.3 with Demand Signal Repository 2.0 for sensing and alerting market demand, Oracle Manufacturing Operations Center for sustainability sensor data management, AutoVue 20.1.0 with Hotspots for 2D CAD for electronics and high-tech manufacturers.

Value Chain Planning 12.1.3 also incorporates Rapid Planning enhancements for demand pull-in processing and routing and supplier capacity simulation as well as services parts planning for equitable allocation, integration with

Oracle Contracts and Field Replaceable Bill of Materials.

Customers

Oracle has more than 6,000 manufacturing customers using its ERP, SCM, PLM and CRM applications, among others.

Recent wins included Aditya Birla Minacs Worldwide Ltd., AP Industrial Infrastructure Corporation Ltd., Bajaj Electricals Ltd., Best Solar Co. Ltd., Cabot Microelectronics, Charter Steel, Chartered Semiconductor Mfg Ltd., Ciena Corp., Cummins, Dhanalakshmi Srinivasa Sugars Private Ltd., Diodes, Dunham-Bush Holdings Bhd, Emerson, Greif, Hitachi, Huawei, Husky Injection Molding, Hyflux Ltd., Hyundai, Iljin Diamond, Impco Technologies, Ingersoll Rand Security Technologies, International Industries Ltd., JA Solar, Jaffer Brothers Pty Ltd., JDSU, KAFUS, L&T Komatsu Ltd., Leggett & Platt, LG Display, Libbey Glass Inc., Lutron Electronics, MiaSole, NetApp, NextWindow, OK Systems, Orbotech, Rheem Manufacturing, Rosemount Inc., Shimano, Star Trac, TIPCO, Vedanta Aluminum Ltd., Yantai Baogang Steel Pipe Co Ltd., and Zodiac Pools.

In addition, Oracle has brought its tech industry leadership position to bear by establishing the High Tech Industry Strategy Council, which fosters product development collaboration and strategy discussion between Oracle and its members through bi-annual meetings.

Formed in 2006, the council has attracted a selective group of executives from companies such as Acer, Brocade, Cisco, Dell, EMC, Foxconn, Huawei, Inventec, Itron, LG, Motorola, Qualcomm, Sanmina-SCI, Sony, Toshiba and Xilinx. One of the priorities is for Oracle to work with members of the High Tech Industry Council to iron out specifications for attribute-base planning, which will be incorporated into a new product for 2011 release.

Opportunities

Oracle is not sitting still when it comes to leveraging the economy of scale of its vast resources to sustain development efforts for the manufacturing vertical.

Upcoming releases will include Agile Customer Needs Management v. 1 with systems engineering enhancement and integration to Customer Relationship Management for idea capture to improve product development collaboration across the enterprise.

Value Chain Planning 12.x will include cost modeling and scenarios modeling for Sales and Operations Planning, as well as embedded promotion planning for Siebel Consumer Goods applications. New SCM releases will also deliver such enhancements as eKanBan and Oracle Process Manufacturing for Contract Manufacturing.

That will be followed by the general availability of Oracle Fusion Supply Chain Management due out in 2011. The product, coupling with other Fusion applications built on a common code base, will include fully integrated capabilities for product master data management, global order promising, distributed order orchestration, inventory management and cost management.

All of these will position Fusion SCM as a viable alternative to many existing products from Oracle and its competitors that do not run on a single data model thus requiring some kind of integration.

Because Oracle Fusion SCM is already tightly connected to existing Oracle applications through Web services to easily automate tasks and configure business processes from order capture to EDI translation, it facilitates common management across multiple systems for handling everything from order fulfillment to field service requests on the backend.

Risks

For a number of years Oracle had services industries in mind when developing Fusion Applications without paying close attention to addressing specific supply chain and business process requirements of manufacturing customers. As the products are slated to become generally available in 2011, they are likely to have limited impact on the vertical.

The decision could open up opportunities for competitors to drive a wedge between Fusion Applications and the existing products such as Oracle E-Business Suite, JDEdwards Enterprise One or even edge applications like Demantra for demand planning. Even though Oracle has made it clear that it would continue its development with these Applications Unlimited products, its future development is clearly headed in the direction of Fusion Applications.

For manufacturing customers that are planning to regain their competitive edge through IT innovation on the heels of the recession, their choice is either third party solutions or to migrate to the latest versions of the Applications

Unlimited products, which may not fully address their end to end requirements because of their different origins. Also they may not serve as the perfect substitute for their existing systems, especially those that incorporate customized components.

The upshot is that Oracle is doing everything possible to ensure any product within its portfolio will be supported, easily integrated among each other and even extended indefinitely. However manufacturing customers are faced with a gaping hole that may not be filled for quite some time after one of the biggest product launches of Oracle's history, turning their task at hand into an interim solution at best.

Ecosystem

Oracle is leveraging its partner ecosystem to go after the high tech manufacturing vertical with good results. For instance, its alliance with Infosys has yielded a large number of high-tech makers including Alcatel, Cisco and Huawei as joint customers.

Over the past three years, Oracle and Infosys have co-developed products for the high-tech industry delivering solutions for revenue management, ship and debit, and supply chain management for real-time distribution of semiconductor products that carry short lifecycle.

In addition, Infosys has committed to investing nearly \$100 million in 2010 to jointly develop and market with Oracle products such as Rapid Planning designed solely for the high-tech manufacturing segment.

Similarly, Oracle has been working with Wipro to build an end-to-end warranty management solution that leverages Oracle Siebel for effective campaign management and marketing of high-margin warranty and parts replacement services that manufacturers are gravitating toward. The joint solution will also leverage different Oracle applications for claims processing, performance management, and reporting.

Shares

With a 12.2% share in the Manufacturing vertical, Oracle's ability to gain share is average as it embarks on a number of new releases as well as the transition to the new Fusion application platform in 2011.

On the upside, Oracle's ecosystem has become stronger than ever because of increased investments by the vendor and its partners to become more entrenched in the manufacturing vertical as new solutions are being introduced.

On the downside, as Oracle accelerates the migration of its existing customers to the latest releases of E-Business Suite, Siebel and JD Edwards, adoptions of new modules will be gradual as much of the upgrade will not yield additional license revenues until the latter part of 2011.

Infor

Alpharetta, GA

www.infor.com

Overview:

Infor has become one of the largest applications vendors in the manufacturing vertical following a series of acquisitions that resulted in more than 15,000 customers and a healthy flow of recurring revenue stream. Typical customers include automotive, discrete and process manufacturing companies.

Applications Revenues In Manufacturing:

	2008	2009
\$(M)	949	898

2009 Applications Revenues In Manufacturing By Region:

Region	2009(\$M)	% of total
Americas	422	47%
EMEA	386.1	43%
Asia Pacific	89.8	10%

2009 Applications Revenues In Manufacturing By Company Size:

Size	2009(\$M)	% of total
XL(5K ees and above)	170.6	19%
Large(1K-5K ees)	475.9	53%
SMB(1K ees and below)	251.4	28%

2009 Applications Revenues In Manufacturing By Revenue Type:

Type	2009(\$M)	% of total
License	233.4	26%
Maintenance	664.5	74%

Subscription	0	0%
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2009 SCORES Box:

Evaluation	Criteria	Results
Strengths	Key differentiators, domain expertise, product portfolio, solution scope	Average
Customers	Customer wins across regions and customer segments, momentum among new and existing customers	Average
Opportunities	Market opportunities at the vertical and subvertical levels	Average
Risks	Ability to handle internal and external risks and challenges	Average
Ecosystem	Network effects of VARs, resellers, SIs and ISV partners, health of ecosystem	Average
Shares	Market shares, company sales, size, overall market presence	Above average
Total	With a 8% share in the Manufacturing vertical, Infor's ability to maintain and win share in the market segment in 2010	Average

Full overview:

Infor has assembled a comprehensive portfolio of financial management, supply chain planning and execution as well as domain-specific applications for the manufacturing vertical, catapulting the vendor to the front of the pack in a market that has helped define its history and perhaps its future as well.

Since 2004 Infor has been embarking on an acquisition rampage that culminated in an impressive list of manufacturing customers that have come to rely on the vendor and its full assortment of mission-critical applications to run their global operations.

Despite the lingering effects of the recession that prevented many of its manufacturing customers from spending freely on new IT projects, Infor has continued to expand through strategic partnerships and a recent management overhaul that could presage further acquisitions in 2011.

In 2010 Infor strengthened its relationship with Microsoft to incorporate the latter's Azure platform as the underpinning of its cloud computing strategy. Infor has also developed new products leveraging a host of Microsoft technologies such as Silverlight and Microsoft Dynamics CRM.

More recently Infor appointed Charles Philips as its new CEO in a move that could set the stage for rapid expansion given the track record of the former Oracle co-president who was largely responsible for carrying out an elaborate vertical-industry strategy through relentless acquisitions at Oracle.

Key Applications For Manufacturing Vertical:

Infor ERP LX, Infor ERP LN, Infor Enterprise Asset Management, Infor Supply Chain Management

SCORES Analysis

Strengths

As one of its primary markets, discrete manufacturing has sometimes taken an outsized influence over Infor's direction because of its illustrious history of selling into automotive, high-tech electronics and industrial equipment and machinery companies through a litany of acquired products.

Despite its accelerated push into services verticals like government and hospitality, Infor has never wavered in its commitment to the discrete manufacturing industry. For example, it recently introduced Infor AutoConnect, a new flexible and scalable demand management offering designed to help suppliers better compete by giving them ready access to multiple electronic data interchanges (EDI) through a single solution.

Infor also beefed up its supply chain management applications by releasing Infor SCM Demand Planning 6.4, which is designed to optimize visibility into customer demand, allowing for more accurate inventory forecasting.

The enhancements helped reinforce Infor's position as a leading vendor for an array of industry-specific applications ranging from lean manufacturing to supply chain optimization and from green efficiency to enterprise asset management.

Another major attribute of Infor's strategy in discrete manufacturing lies in its extensible applications that provide customers with strategic insights on high-margin business opportunities. The value chain equation becomes more pronounced than ever with Infor coupling inventory management and after market service capabilities for automotive suppliers, high-tech OEMs and industrial machinery providers. The seamless integration allows for effective handling of issues like scenario planning, field service and depot repair, and engineering change management, while boosting the bottom line and customer satisfaction of different classes of manufacturing organizations.

Customers

Infor has more than 15,000 customers in discrete manufacturing, including 3,400 in high tech and electronics, 4,500 in industrial machinery, 5,000 in automotive.

Its manufacturing reference wins in 2009 included Beverage Plastics Ltd., Leach International, Neonlite Electronic & Lighting (HK) Ltd., Planet Filters, Rieter Automotive, and Tyco Valves.

More recent wins included American Paper & Twine, C/G Electrodes, Guascor Fotón, Novum, and Quality Bicycle Products.

Opportunities

In addition to leverage its domain expertise and global support capabilities to go after net new manufacturing customers, Infor has made a concerted effort to reengage with users that have gone off their maintenance plans while continuing to run earlier releases of its software.

Under the Reconnect System i Program, Infor is aiming to reestablish ties with its BPCS/LX, System21/Aurora, or XA customers who are not currently on maintenance by offering them a migration tool called Infor Development Framework, which helps modernize and extend the System i applications.

Some customers have already seen the benefits of adopting the latest release with the help of these migration tools. For example, Novum, which manufactures refrigeration equipment in Ireland, recently upgraded its legacy System21 version 3 to Infor ERP System21 to take advantage of the Services Oriented Architecture capabilities for reduced cost of ownership and improved business processes.

Such upgrades are also crucial for the long-term success of Infor and its partners like IBM. With a large number of Infor customers running on older versions of IBM hardware, the stake is high for both vendors to ensure stable migration in order to preempt any move on the part of its customers to have their systems decommissioned in the event of IT strategy shifts.

Risks

With the naming of a new CEO, Infor is preparing to make a series of major announcements in January 2011 that could breathe new life into its product and vertical strategies. The moves follow a series of changes to its executive ranks in R&D and product management as well as the recent restructuring of its discrete manufacturing division.

Infor is seeking to strike the right balance between achieving growth through acquisitions and product extensions and streamlining its platform development efforts through partnerships with the likes of Microsoft.

What remains missing is a distinct positioning of its manufacturing offerings, something that has blurred over time because of the lingering effects of the recession, which has eroded its base of manufacturing customers.

The unfurling of its upcoming product direction, coupled with the new management, is expected to help clarify that. The next turn of events could become the watershed moment for Infor, which has met with both hits and misses over the years when it comes to executing its product strategies.

Ecosystem

Infor primarily sells direct to its discrete manufacturing customers, but it also relies on reseller channel to help address the needs of those in EMEA and Asia Pacific. Currently it has 1,400 partners representing 25% of its license revenues.

Since the overhauling of its reseller channel program in December 2008, Infor has signed 25 partners including many that focus on selling its ERP and EAM applications to discrete manufacturing vertical.

In 2010 Infor also acquired Qurius' ERP LN operations. Qurius is an Infor implementation partner that caters to manufacturing customers in Italy, Germany and Spain.

In 2011 Infor plans to invest heavily in its channel by boosting market development funds as well as support capabilities from certifying product training to the unveiling of the Infor Partner Network in order to help drive specialization and collaboration among its resellers. In return for their increased commitment, Infor is expected to elevate some resellers to a higher status under a stratified program that aims to improve channel quality.

Shares

With a 8% share in the Manufacturing vertical, Infor's ability to gain share is average because of a healthy flow of recurring revenues primarily in the form of maintenance fees from customers that have been running these systems for years.

On the upside, Infor is planning to take the offensive now that its management changes and restructuring moves have given way to the formulation and execution of its new product strategy, which is expected to generate additional sales from new and existing customers.

On the downside, the issue is whether Infor is capable of restoring growth in the discrete manufacturing vertical after years of mixing and matching products with mixed results. While it still has time to recover lost ground, Infor needs to step up delivering more easy-to-implement and on-demand solutions to meet the changing needs of its global manufacturing customers.

Dassault Systemes

Vélizy-Villacoublay, France

www.3ds.com

Overview:

Dassault Systemes has become one of the major applications vendors for discrete manufacturing and automotive vertical, riding on the strengths of its expanded offerings in product life management after acquiring the IBM PLM division. Typical customers include automotive OEMs as well as their suppliers, along with a long list of companies in industrial equipment and heavy manufacturing.

Applications Revenues In Manufacturing:

	2008	2009
\$(M)	876	834

2009 Applications Revenues In Manufacturing By Region:

Region	2009(\$M)	% of total
Americas	250.2	30%
EMEA	542.1	65%
Asia Pacific	41.7	5%

2009 Applications Revenues In Manufacturing By Company Size:

Size	2009(\$M)	% of total
XL(5K ees and above)	391.9	47%
Large(1K-5K ees)	275.2	33%
SMB(1K ees and below)	166.8	20%

2009 Applications Revenues In Manufacturing By Revenue Type:

Type	2009(\$M)	% of total
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License	241.8	29%
Maintenance	592.1	71%
Subscription	0	0%

2009 SCORES Box:

Evaluation	Criteria	Results
Strengths	Key differentiators, domain expertise, product portfolio, solution scope	Average
Customers	Customer wins across regions and customer segments, momentum among new and existing customers	Above average
Opportunities	Market opportunities at the vertical and subvertical levels	Average
Risks	Ability to handle internal and external risks and challenges	Below average
Ecosystem	Network effects of VARs, resellers, SIs and ISV partners, health of ecosystem	Average
Shares	Market shares, company sales, size, overall market presence	Average
Total	With a 7.4% share in the Manufacturing vertical, Dassault's ability to maintain and win share in the market segment in 2010	Below average

Full overview:

For more than a decade, Dassault has become synonymous with data management in the manufacturing vertical, especially when it comes to extending the latest technologies for digital product design.

In the automotive world, that sets Dassault apart from its competitors because of its sophisticated shape modeling capabilities in products such as CATIA, which has been standardized by a long list of automotive OEMs.

With more than a million users – including many in automotive - running its computer aided design and PLM applications around the world, Dassault has leveraged its extensive product portfolio to facilitate the migration of 2D to 3D visual element among artists, designers, engineers or anyone involved in creating new products. Dassault users have reported reduced manufacturing costs, faster time to bring their products to market, while delivering enhanced customer experience.

At the same time Dassault has upped the ante by releasing new enhancements and broadening its channel. The biggest move was the 2009 acquisition of the IBM PLM sales and client support operations, which solidified Dassault's dominance in many of the markets it serves.

Key Applications For Manufacturing Vertical:

3DVIA, CATIA, DELMIA, ENOVIA V6, SIMULIA, SolidWorks

SCORES Analysis

Strengths

Dassault has dominated some of the verticals including automotive because of its advanced product features and tightly integrated design and collaboration environment for optimized performance and scalability for a global audience.

While the superior features of CATIA for shape modeling have won Dassault a huge following in the automotive industry, the vendor has continued to enhance complementary offerings such as its latest PLM offerings for real-time collaboration by leveraging intuitive and rapid deployment of Web services.

The new offerings include Inceptra PowerUP for easy discovery of product lifecycle processes, as well as new releases of ENOVIA for global collaboration lifecycle management. For example, ENOVIA V6R2011x delivers 3D, collaboration and content-based services for lifelike experience for Dassault's targeted verticals.

The key to Dassault's success in design automation for verticals such as automotive is the delivery of an integrated 3D environment that enables all stakeholders to collaborate even though some may not be running the system that generated the data.

One of the latest strategies is billed Collaborative Multi-Discipline Engineering (CMDE), which enables manufacturers to implement multi-discipline collaboration and lean product development processes. CMDE, which delivers functionality from multiple Dassault brands, is capable of handling large, complex assemblies, all running on a single PLM platform. Not only does the approach facilitate reduced cost of ownership, it allows engineers and designers to collaborate in real time on a large scale to stem product defects and streamline the entire product development process.

Customers

With more than 2,000 customers in the manufacturing and automotive vertical, Dassault has done well selling into some of the largest manufacturing organizations in the world.

In 2009, Dassault's reference customers included Beneteau, BMW, Bobst, Chrysler, Claas, Daimler AG, Ford Motor Co., General Motors, Goodyear, Honda, Honeywell, Hyundai Kia Motor Corp., Kobelco, Metso, MeyerWerft, Michelin, Mitsubishi Motors, Nissan, Porsche, PSA Peugeot Citroen, Renault, Tata Motors, Toyota Motor, Volkswagen, and Volvo.

Recent reference wins included Scania, a bus and truck manufacturer that has integrated production design, product development, processes and manufacturing using Dassault Systèmes PLM applications including CATIA and ENOVIA for everything from design evaluation and virtual manufacturing to marketing material.

Opportunities

With the completion of the purchase of the IBM PLM sales and client support operations, Dassault is adding hundreds of Big Blue specialists as employees responsible for helping the vendor make further inroads into major accounts.

Additionally the Collaborative Multi-Discipline Engineering (CMDE) initiative is expected to facilitate more cross-selling and upselling into current customers by getting new and existing users familiarized with the breadth of its product portfolio that Dassault is delivering with the help of PLM 2.0 Web services.

Risks

One of the biggest challenges facing Dassault is the fallout from the recent decision of Daimler AG to halt its Dassault CATIA 5.0 upgrade to the latest version v. 6.

In November 2010 Daimler AG decided to switch to Dassault competitor Siemens PLM for its NX design applications, which will be integrated into Daimler's homegrown PDM system called Smaragd named after an emerald lizard.

Dassault products have been a constant presence at Daimler and its past and current subsidiaries. At one point it accounted for as much as 5% of its total revenues with thousands of licensed seats of CATIA. In the automotive vertical, Daimler, when combined with Chrysler, was among one of the top five customers of Dassault over the past 10 years.

In fact, Dassault was so confident about its relationship with Daimler, suggesting that the giant German auto maker, which has already been running CATIA 5.0 since 2005, would upgrade to CATIA 6.0 along with its Powertrain development partners including Toyota and Tesla when announcing the win at Tesla, the electric car startup, during a conference call a few weeks earlier. Daimler has also been using DELMIA, ENOVIA, SIMULIA, and 3DVIA from Dassault.

Daimler was not the only one switching its allegiance. Chrysler, the former subsidiary of Daimler, already made the move switching from CATIA to NX in July 2010 after using the former product for years.

While Dassault may be able to retain some business with Daimler, it is clear that the rift between the vendor and one of its biggest customers has reached a point of no return.

A bigger question is whether Dassault can contain the damage by persuading other major OEMs including BMW, Ford and Toyota to proceed with their plans to upgrade to CATIA 6.0.

Ecosystem

Dassault primarily sells direct and it also works with a large number of channel partners. For example, Solidworks alone has a VAR network of 498 resellers as well as 800 solution partners.

Recently it has expanded its channel by adding DASBAT, an Abu Dhabi-based company, to become its VAR in the Middle East.

Shares

With a 7.4% share in the manufacturing vertical, Dassault's ability to gain share is below average because of the fallout from major customer defections.

On the upside, Dassault has created an extensive product portfolio for different segments of the design-centric manufacturing vertical and the customer move toward real-time collaboration making use of its PLM 2.0 applications should bear fruit.

On the downside, the high-profile defections of Chrysler and Daimler will impair near-term sales momentum of Dassault, making it an uphill battle for the vendor to maintain its dominance in the automotive industry for years to come.

Siemens PLM

Plano, TX

www.plm.automation.siemens.com

Overview:

As part of Siemens Industry Automation division, the Siemens PLM Software has established an extensive portfolio of integrated offerings for companies to manage their product design and development processes as well as other manufacturing-specific requirements. Typical customers range from major automotive OEMs, their suppliers and a smattering of discrete manufacturing organizations.

Applications Revenues In Manufacturing:

	2008	2009
\$(M)	558	474

2009 Applications Revenues In Manufacturing By Region:

Region	2009(\$M)	% of total
Americas	189.6	40%
EMEA	189.6	40%
Asia Pacific	94.8	20%

2009 Applications Revenues In Manufacturing By Company Size:

Size	2009(\$M)	% of total
XL(5K ees and above)	237	50%
Large(1K-5K ees)	165.9	35%
SMB(1K ees and below)	71.1	15%

2009 Applications Revenues In Manufacturing By Revenue Type:

Type	2009(\$M)	% of total
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License	142.2	30%
Maintenance	331.8	70%
Subscription	0	0%

2009 SCORES Box:

Evaluation	Criteria	Results
Strengths	Key differentiators, domain expertise, product portfolio, solution scope	Above average
Customers	Customer wins across regions and customer segments, momentum among new and existing customers	Average
Opportunities	Market opportunities at the vertical and subvertical levels	Above average
Risks	Ability to handle internal and external risks and challenges	Average
Ecosystem	Network effects of VARs, resellers, SIs and ISV partners, health of ecosystem	Average
Shares	Market shares, company sales, size, overall market presence	Average
Total	With a 4.2% share in the Manufacturing vertical, Siemens' ability to maintain and win share in the market segment in 2010	Above average

Full overview:

Following its purchase of UGS in 2007, Siemens has continued to expand the lineup of its product lifecycle management and engineering applications by boosting global coverage as well as industry-specific functionality.

For example, Siemens PLM recently introduced Version 5.3 of Teamcenter Express software with key usability and desktop integration enhancements that improve collaboration and productivity in manufacturing organizations.

Expanded capabilities include improved support for Microsoft Office 2010 and Adobe Acrobat as well as features like Structure Manager module that enables more comprehensive and efficient management of product structures including the ability to selectively apply and reject recommended changes to a bill of materials.

Siemens PLM has also been trumpeting its visual analytics capabilities to deliver what it calls HD-PLM technology framework, allowing key stakeholders to make better decisions by collaborating with one another when everyone is

presented with visually rich data and information. For example, HD3D, a part of its NX 7.0 releases, is a visually-rich environment for working with virtually any type of PLM data.

A number of recent wins by Siemens PLM in the automotive industry are expected to boost its license and maintenance revenues, escalating its fight with its arch-rival Dassault for PLM market dominance.

Key Applications For Manufacturing Vertical:

Technomatix for manufacturing operations planning, process management; NX for product design and management; Teamcenter for product portfolio management and product configuration management, supply chain collaboration and sourcing

SCORES Analysis

Strengths

The purchase of UGS, which earlier acquired vendors such as D-Cubed for embedded CAD, Technomatix for manufacturing process management, and sd&m AG for part reuse management, combined Siemens' industrial automation expertise with an array of PLM applications for team collaboration and product information management. Siemens also brought its implementation capabilities to the mix since it had been an integrator on the UGS product line.

The synergy has become more apparent as Siemens extends the PLM applications to its turnkey manufacturing execution systems allowing customers to realize greater benefit in plant design, operations and maintenance.

Customers

With more than 10,000 customers in the vertical, Siemens PLM has established a formidable presence in different automotive and discrete manufacturing segments including heavy equipment, high tech electronics, industrial machinery and ship building.

Its customer references include Eisenbeiss GmbH, Fooke GmbH, José Ma Mendiola, S.A., Red Bull Racing, Toshiba Corporation Komukai Operations, Verhoeven Oss BV Engineering Works, and Zollner Elektronik AG.

Recent wins included Changsha Zoomlion Heavy Industry Science & Technology Development Co., Jinan Second Machine Tool Group Co. Ltd., and Joe Gibbs Racing.

Opportunities

In rapid-fire succession Siemens PLM scored major wins in the automotive industry signing Chrysler and Daimler AG, both of which will be using its NX design applications as their standard for worldwide vehicle development.

The deals are expected to add tens of millions of dollars in license and maintenance revenues for Siemens PLM over the next few years, not to mention the added benefits of positioning the wins as Trojan horses to replace legacy design systems being used by partners, suppliers and affiliates of Chrysler and Daimler ranging from Fiat to Toyota.

In July 2010 Siemens PLM announced that Chrysler will start using NX along with its TeamCenter applications, which have been used by the OEM since 2008. NX will replace CATIA from Siemens PLM archrival Dassault.

Four months later, Siemens PLM announced that starting 2012 Daimler AG will start using NX – again replacing Dassault CATIA - as the standard design platform at more than 20 development centers and their suppliers. Daimler

also uses Teamcenter as its product data management backbone. As a result, Daimler will establish digital collaboration from initial concept design, through simulation during design, down to proof of concept of design solutions, all running on Siemens PLM applications.

The deals are significant because many current Dassault users running CATIA 5.0 will take the cues from Daimler AG and Chrysler, potentially scrapping their plans to move to CATIA 6.0 especially for those that already have partnerships with the two OEMs. For instance, Toyota, a CATIA 5.0 customer, has been a partner of Daimler on powertrain development.

While the repercussions of the recent wins will be felt over the next year or two, Siemens PLM is expected to milk the glory to its fullest extent by gaining both mind share and market share in the automotive industry.

Risks

Managing customer expectations will be a challenge for Siemens PLM to effectively capitalize on its recent wins in the automotive vertical.

On one hand, Siemens PLM will be able to use the planned implementations, which will consume all the parties involved the next 12 to 36 months, as the template to demonstrate the scalability and performance of its design applications as well as the integration into its Teamcenter product data management solution for real-time collaboration.

On the other hand, it is critical for Siemens PLM to quickly develop best practices from the standpoints of change management, performance optimization and hassle-free integration. For one thing some users at Daimler, Chrysler and their suppliers are likely to be running Dassault CATIA for an extended period of time and their expected move to Siemens PLM NX will be fraught with difficulties when it comes to seamless integration and reusing 2D and 3D data that reside in other legacy systems.

Then there is the growing desire among cost-conscious manufacturers of converting their users to a Web-based or Cloud Computing environment for tighter collaboration beyond the four walls of the enterprise. That is something that Siemens PLM needs to come up with a ready answer, perhaps with the help of its strategy partners such as Microsoft whose Cloud Computing strategy is still evolving at best.

Ecosystem

Siemens PLM relies on its direct sales force as well as dozens of channel partners around the world. Recently it added Phoenix PLM, EnDuraSim and ADA CADPartners as new reseller service partners in Australia. CADEM Technology Center Pte has also been named distributor of its NX Software in Singapore.

In addition Siemens PLM has expanded its relationship with MDTVISION, the PLM consulting arm of IBM in France, which will offer greater Siemens PLM applications and IBM products.

Shares

With a 4.2% share in the manufacturing vertical, Siemens PLM's ability to gain share is above average because of the incremental revenues from high-profile customer wins in automotive OEMs.

On the upside, the recent wins at Daimler AG and Chrysler will drastically increase its license and maintenance revenues, potentially adding tens of millions of dollars over the next few years. That doesn't take into account of the halo effects such contracts will entail as these two OEMs start asking their suppliers to follow suit.

On the downside, the short-term successes of Siemens PLM will cast a long shadow over its ability to deliver especially when ramping up global implementation teams in order to meet the high expectations of its automotive OEM customers and their supplier partners.

PTC

Needham, MA

www.ptc.com

Overview:

Founded in 1985 as a computer aided design applications vendor, PTC has evolved to become a major applications provider to the manufacturing vertical through product enhancements, acquisitions and ecosystem alliances. Typical customers include a diverse base of industrial manufacturing and high-tech electronics companies as well as major automotive OEMs and their suppliers.

Applications Revenues In Manufacturing:

	2008	2009
\$(M)	525	455

2009 Applications Revenues In Manufacturing By Region:

Region	2009(\$M)	% of total
Americas	154.7	34%
EMEA	191.1	42%
Asia Pacific	109.2	24%

2009 Applications Revenues In Manufacturing By Company Size:

Size	2009(\$M)	% of total
XL(5K ees and above)	318.5	70%
Large(1K-5K ees)	91	20%
SMB(1K ees and below)	45.5	10%

2009 Applications Revenues In Manufacturing By Revenue Type:

Type	2009(\$M)	% of total
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License	182	40%
Maintenance	273	60%
Subscription	0	0%

2009 SCORES Box:

Evaluation	Criteria	Results
Strengths	Key differentiators, domain expertise, product portfolio, solution scope	Average
Customers	Customer wins across regions and customer segments, momentum among new and existing customers	Average
Opportunities	Market opportunities at the vertical and subvertical levels	Average
Risks	Ability to handle internal and external risks and challenges	Average
Ecosystem	Network effects of VARs, resellers, SIs and ISV partners, health of ecosystem	Above average
Shares	Market shares, company sales, size, overall market presence	Average
Total	With a 4% share in the Manufacturing vertical, PTC's ability to maintain and win share in the market segment in 2010	Average

Full overview:

After building a major presence in the computer aided design applications market, PTC has stepped up its effort by boosting its innovation quotient, while laying the groundwork for an extensive list of open and interoperable products designed to ease migration burden for its existing customers as well as those needing to replace their legacy systems for greater productivity gains.

In October 2010 PTC announced a line of new design applications under a brand name Creo with a stated mission of delivering products that are easy to use, adhere to open standards as well as flexible enough for users to manipulate regardless of the type of CAD data they have been accessing or creating from any mode.

As PTC takes on new market opportunities with continuous innovation including the common Creo platform, the vendor is positioning itself as the standard bearer when it comes to interoperability in design and product lifecycle management because of its large installed base of users have been using its applications in almost every facet of new product creation and development.

Over the years PTC has made a number of significant acquisitions to boost its presence in the manufacturing vertical.

Along with other acquisitions like OHIO Design Automation for EDA visualization, Arbortext for enterprise publishing, CoCreate for product lifecycle management, Itedo for technical illustration, and Mathsoft for engineering calculation and design, PTC has firmly established itself in the design and PLM applications market for more than 50,000 customers including some of the biggest manufacturing companies in the world.

Key Applications For Manufacturing Vertical:

PTC FlexPLM; PTC Windchill; InSight Creo Elements/Pro, formerly Pro/ENGINEER; Creo Elements/Direct, formerly CoCreate; Creo Elements/View, formerly ProductView

SCORES Analysis

Strengths

With manufacturing accounting for more than half of its revenues, PTC has achieved the critical mass that capitalizes on the globalization efforts of some of its biggest manufacturing companies.

The diversity of its installed base is also a big plus, given that any part of its manufacturing customers may still be going strong even when other segments are stalling.

As a result, PTC has established a fairly balanced revenue mix. Among its direct customers, large accounts that spend more than \$1 million in a given quarter represent a little more than one-third of its revenues (about 36% in its latest fiscal), while another one-third comes from small and midsized customers. The final one-third comes from its channel sell through.

PTC has also benefited from its alliance with Microsoft to offer seamless integration between its Windchill applications and popular tools like the Microsoft SharePoint. Recently it introduced Windchill Web Parts for SharePoint 2010, which provides a single, consolidated view of product information by enabling SharePoint users to easily view, search, and edit Windchill data together with content from ERP, finance and other enterprise applications.

Then there are hundreds of resellers that enable PTC to expand different market segments especially among small and midsized customers. Its channel now represents close to 30% of its revenues. Despite a drop of indirect sales in 2009 because of the recession, PTC is expected to rely more heavily on its resellers to capture new opportunities in emerging markets.

Customers

With more than 30,000 customers in the vertical, PTC has been successful selling into manufacturers of automotive components and parts, high-tech electronics, racing cars, as well as a host of heavy equipment from elevators to industrial machinery.

Its recent wins included Aluminum Corporation of China Limited, American Wave Machines Inc., Buehler Motor GmbH, Club Car, Continental, Cummins Inc., Dallara Automobile, DestinyParts, Epson, Fujigiken Inc., GIGABYTE Corporation, Greaves Cotton Limited, Ingersoll Rand, Komatsu America, Larsen & Toubro, NCR, Nokia, Okuma America Corporation, Otis Elevator Company, Penske Racing and Penske Technology Group, Ricardo, Richard Childress Racing, Schindler Group, Vaillant Group, Volvo Group, and XL Video.

Opportunities

Following its acquisitions of Synapsis Technology and Planet Metrics, Inc., PTC has begun to roll out its sustainability strategy. One of the newest products is InSight Product Analytics, which is designed to help manufacturers analyze carbon and other environmental issues during product development and manufacturing. The product from Planet Metrics will help manufacturers and retailers to model, analyze and optimize carbon emissions and energy use throughout the entire value chain, from concept to end-of-life.

Risks

While its enterprise PLM business has rebounded nicely over the past year, its desktop sales of design applications including Pro/ENGINEER have finally shown revived momentum in the latter part of the year.

However its maintenance business on the desktop side has been languishing because of the lingering effects of the recession. While the number of Pro/ENGINEER seats under maintenance has risen slightly in its latest fiscal year, recurring revenues have dropped suggesting sluggish renewal rates among existing customers of other desktop products.

One reason has to do with the reluctance of some of its manufacturing customers to loosen their purse-strings whether it has to do with opening new hires or filling vacant positions, both of which could put a damper on PTC's upgrade activities, or maintenance renewal rates for that matter.

Hence the key to PTC's future may lie in convincing users running legacy CAD systems in 2D to consider Creo a viable option for them to migrate to and stay that way because of its promised benefits of open interoperability with any system that they have been accessing but no longer holds long-term value.

Ecosystem

PTC's direct sales force accounts for 72% of its revenues, while its network of 420 resellers focusing on small and midsized customers – primarily in manufacturing – contribute the rest.

In addition to its direct sales force, PTC maintains an extensive network of resellers around the world, including system integrators and major reseller partners in fast-growing regions.

For example, it signed an enterprise alliance agreement with NEC, which will resell PTC PLM solutions to Japanese owned companies worldwide. It also signed a deal with Atos Origin, a large systems integrator.

Other new partners include TriStar, EAC, NxRev, 3HTI and BRT Solutions in North America for its CoCreate applications. Its new CoCreate resellers in Europe include Econocap OY, IPM Solutions, Ltd., S&T Unitis Hungary Ltd., and SCIROTEC GmbH. And in Southeast Asia, it added RevTech as a reseller for CoCreate.

Shares

With a 4% share in the manufacturing vertical, PTC's ability to gain share is average as it begins to recover from the 2009 slump due to the recession.

On the upside, the Creo initiative will help boost its renewal rates and drive maintenance revenues, perhaps capturing incremental business from customers that would have never considered PTC before without the interoperability benefits of using Creo along with data from their legacy systems.

On the downside, the absence of PTC's design strategy for penetrating major automotive OEMs, their suppliers and partners may put the vendor at a disadvantage in advance of accelerated upgrade activities among engineers to build a new generation of vehicles using alternative energy.

Microsoft

Redmond, WA

www.microsoft.com

Overview:

Extending the synergistic benefits of its Windows platform and a full array of enterprise applications, Microsoft has reinvented the way manufacturing companies automate their business processes along with their propensity to partner and collaborate with affiliated entities. Typical customers include industrial manufacturing organizations as well as divisions and subsidiaries of large companies that consider Microsoft an increasingly attractive choice as a major provider of 2-tier ERP systems.

Applications Revenues In Manufacturing:

	2008	2009
\$(M)	170	175

2009 Applications Revenues In Manufacturing By Region:

Region	2009(\$M)	% of total
Americas	70	40%
EMEA	87.5	50%
Asia Pacific	17.5	10%

2009 Applications Revenues In Manufacturing By Company Size:

Size	2009(\$M)	% of total
XL(5K ees and above)	0	0
Large(1K-5K ees)	105	60%
SMB(1K ees and below)	70	40%

2009 Applications Revenues In Manufacturing By Revenue Type:

Type	2009(\$M)	% of total
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License	78.7	45%
Maintenance	96.2	55%
Subscription	0	0%

2009 SCORES Box:

Evaluation	Criteria	Results
Strengths	Key differentiators, domain expertise, product portfolio, solution scope	Average
Customers	Customer wins across regions and customer segments, momentum among new and existing customers	Average
Opportunities	Market opportunities at the vertical and subvertical levels	Average
Risks	Ability to handle internal and external risks and challenges	Average
Ecosystem	Network effects of VARs, resellers, SIs and ISV partners, health of ecosystem	Above average
Shares	Market shares, company sales, size, overall market presence	Average
Total	With a 2% share in the Manufacturing vertical, Microsoft's ability to maintain and win share in the market segment in 2010	Average

Full overview:

As a leading technology provider for the manufacturing vertical, Microsoft has the added benefit of leveraging an army of resellers and ISV partners to help extend its reach into different market segments.

One key area of focus has been divisions and subsidiaries of manufacturing companies that find themselves operating without the support of their headquarters after a series of mergers and acquisitions as well as cuts to their IT budgets.

The result has been the move toward a two-tier ERP system that Microsoft is seizing as a golden opportunity to extend its flexible and scalable system capable of addressing the back-office and customer-facing functions of these semi-autonomous subsidiaries, many of which have to work beyond the IT infrastructure set by their headquarters because of their independent status.

Recently Microsoft announced the general availability of the Microsoft Dynamics ERP two-tier connector that accelerates deployments between Microsoft Dynamics AX across subsidiaries, divisions or branch entities, and the SAP Business Suite applications being used at the corporate headquarters.

The Microsoft Dynamics ERP two-tier connector will enable common business process integration scenarios for headquarters and subsidiary locations, including such requirements as financial consolidation, intercompany supply-chain integration, and plant automation.

Key Applications For Manufacturing Vertical: Microsoft Dynamics AX, Microsoft Dynamics NAV, Microsoft Dynamics GP, Microsoft Dynamics CRM

SCORES Analysis

Strengths

Microsoft has been banking on its resellers and ISV partners that allow the vendor to boost its presence in the manufacturing vertical through best-practice implementations and domain-specific add-ons.

For example, one of its partners HSO has been extending the Microsoft Dynamics AX functionality with a complete set of add-ons including Sales, Costing, Projects, Purchasing, Equipment, Trade, Warehouse Management, Accounting, Production, Service and Maintenance that render the use of legacy systems in a manufacturing organization obsolete.

Because of its global support capabilities, Microsoft has continued to help its partners cast a wider net with localization and continuous technology innovation in such areas as Cloud Computing. For example, Infor, one of the largest ERP vendors in the manufacturing vertical, has embraced Microsoft Azure as its cloud platform, while leveraging a litany of Microsoft technologies to help defray its research and development costs instead of building every localized version or extension on its own.

For partners building solutions on Microsoft Dynamics NAV, the company introduced new development features for Microsoft Dynamics NAV 2009 R2 with previous updates that will be made available in December 2010. These new features provide significant productivity improvements, giving partners the tools they need to develop, set up, configure and customize vertical solutions for customers.

Customers

With more than 25,000 customers in the vertical, Microsoft has secured a strong presence among small and mid-sized manufacturing organizations that standardize on its back-office, customer-facing and infrastructure products to run a gamut of their corporate, supply chain and CRM functions from financial management to unified communications.

Its recent reference wins included Bowles Fluidics Corp., Lattice Semiconductor Corp., Polaris Industries, Roland DGA Corp, S&V Industries., and Volcano Corp.

Opportunities

Microsoft has made tremendous progress in its race to become a force to be reckoned with by addressing sustainability and environment concerns among its manufacturing customers.

Microsoft announced that its Environmental Sustainability Dashboard for Microsoft Dynamics AX has been certified by Global Reporting Initiative (GRI), verifying that the reporting of GRI content within the dashboard is

compliant with the GRI standards. This recognition makes the Dashboard one of only four software applications and the only midmarket ERP solution with the GRI certification in the software applications category to date.

At the marketing level, Microsoft has worked closely with its partners such as Prodware and Radiant Technologies to shore up their sustainability practice, helping them expand into such areas as analytics for energy and transportation management, and green tech.

Risks

For the past year, Microsoft has been seeking to enhance the quality of its reseller channel. By doing so, Microsoft has served as the rainmaker behind the marriage of some of its biggest resellers. The continuous consolidation of the Microsoft Dynamics channel is not without its challenges.

For example, Fullscope, one of the biggest Microsoft Dynamics resellers in the manufacturing vertical, was acquired by Edgewater Technology in January 2010. Shortly after the acquisition, Fullscope employee embezzlement charges were filed causing Edgewater to incur losses of up to \$361,000.

Radiant Technologies, for its own part, acquired Clifton Gunderson's Microsoft Dynamics NAV practice in February 2010, broadly expanding Radiant's footprint around the world.

More recently SBS Group, a major Microsoft Dynamics reseller, acquired Omnios, a Microsoft reseller based in Chicago, following the launch of SBS Partner Network, which is designed to harness the joint sales, marketing and service activities of participating resellers doing business across 11 offices in the United States.

These cases underscore the fact that the faces of the Microsoft Dynamics reseller community are changing and it remains to be seen whether a consolidated channel is going to translate into a sustainable competitive advantage for Microsoft and its partners in a synchronized fashion that ultimately benefit the end customers.

Ecosystem

Microsoft primarily sells its Dynamics ERP and CRM applications through its channel and it has made it clear that its future will rest on the financial strengths of its resellers.

As a result, the invisible hand of the Microsoft has become more pronounced than ever with the vendor investing in its channel to ensure its long-term success. In some cases, these partners have reported receiving direct subsidies from Microsoft to the tunes of up to \$1 million per quarter to help them fund their R&D efforts using Microsoft Dynamics platform and other technologies from the vendor.

In addition to familiar names such as Aldata, Edgewater, GFI Informatiques, and Radiant, Microsoft has also expanded globally by partnering with CodeBakers Oy in Finland for CRM solutions based on Microsoft Dynamics, Dundas Data Visualization in Canada for Windows-based dashboards, Insera in Sweden for decision support. All of them have been leveraging different Microsoft technologies to help them expand in the manufacturing vertical.

Shares

With a 2% share in the manufacturing vertical, Microsoft's ability to gain share is average because much of its success will depend on the full-scale recovery of its channel.

On the upside, a host of new products and enhancements – coupled with the increasing popularity of business applications from Microsoft Dynamics CRM to Office 2010 – will create a halo effect that provides the impetus for near-term cross-sell and upsell opportunities for its resellers.

On the downside, Microsoft's strategy of harnessing the collective strengths of its channel could come at a steep price when quality and loyalty are far from certain because many of its resellers also work with competing vendors. Edgewater, for example, is also a partner of SAP and Oracle.

TOTVS

Sao Paulo, Brazil

www.totvs.com

Overview:

After its acquisition of Datasul, TOTVS has continued to expand with an eye toward becoming the largest ERP applications vendor in Latin America with the help of an extensive product portfolio and highly effective channel program. Typical customers include small and mid-sized manufacturing companies that have turned to TOTVS for a host of electronic bookkeeping and process automation applications to help them meet new government compliance requirements, while boosting their overall efficiency.

Applications Revenues In Manufacturing:

	2008	2009
\$(M)	107	122

2009 Applications Revenues In Manufacturing By Region:

Region	2009(\$M)	% of total
Americas	118.3	97%
EMEA	3.6	3%
Asia Pacific	0	0%

2009 Applications Revenues In Manufacturing By Company Size:

Size	2009(\$M)	% of total
XL(5K ees and above)	12.2	10%
Large(1K-5K ees)	30.5	25%
SMB(1K ees and below)	79.3	65%

2009 Applications Revenues In Manufacturing By Revenue Type:

Type	2009(\$M)	% of total
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License	40.2	33%
Maintenance	81.7	67%
Subscription	0	0%

2009 SCORES Box:

Evaluation	Criteria	Results
Strengths	Key differentiators, domain expertise, product portfolio, solution scope	Average
Customers	Customer wins across regions and customer segments, momentum among new and existing customers	Average
Opportunities	Market opportunities at the vertical and subvertical levels	Above average
Risks	Ability to handle internal and external risks and challenges	Average
Ecosystem	Network effects of VARs, resellers, SIs and ISV partners, health of ecosystem	Above average
Shares	Market shares, company sales, size, overall market presence	Average
Total	With a 1.1% share in the Manufacturing vertical, TOTVS' ability to maintain and win share in the market segment in 2010	Above average

Full overview:

TOTVS has been riding high along with the rest of its home country Brazil because of rising commodity prices and the cascading effects of the Latin American business forces that are transforming the region from a sleeping giant to a formidable trade bloc.

Among thousands of software companies in Brazil, TOTVS has been playing the role of a successful consolidator responsible for series of acquisitions that have redrawn the map of the local applications market

Following its purchases of BCS, Datasul, Dynamo Relevant, Logocenter, Midbyte and RM Sistemas since 2005, TOTVS has accumulated more than 25,000 customers, including many in the manufacturing vertical in Brazil and elsewhere. The installed base has continued to grow with TOTVS revamping its distribution channel.

In 2009 it intensified its move to strengthen its channel by acquiring partners that used to be selling applications such as RM and Datasul, while divesting those that no longer fit into its campaign of maximizing the brand equity of TOTVS under a single banner. The moves are laying the groundwork for TOTVS to deliver a converged product line to a national and regional installed base with a fully integrated sales and support network.

Over the past two years, TOTVS has consolidated its sales operations consisting of more than 160 channel partners and franchisees into a unified TOTVS-branded network of about 100 outlets.

Key Applications For Manufacturing Vertical:

TOTVS Manufacturing, TOTVS ERP, TOTVS Asset Maintenance, TOTVS Advanced Planning and Scheduling

SCORES Analysis

Strengths

The heart of TOTVS' strategy remains its focus on the small and mid-sized market, which provides the engine for sustainable growth for the Brazilian economy. Because of its dominance in the local market, TOTVS has enjoyed increased momentum among SMBs looking for long-term technology providers that can meet their overall IT requirements from hardware configuration to hosting support.

TOTVS is replicating its success from the Brazilian SMB market to areas such as Argentina and Mexico, positioning the vendor as the regional software powerhouse where customers prefer indigenous heroes that are considered more agile and responsive to the needs of local customers than others that need to answer to central authorities in faraway places.

TOTVS traced its success in the Brazilian market to the franchise system that it set up in 1989 when it rolled out a scalable model similar to that of a fast-food restaurant chain, allowing for rapid delivery of products and services with full attention being paid to consistent implementation methodologies and centralized customer management.

Over the past year, TOTVS has been building out the model by acquiring some of these franchisees and affiliates in order to exert control over its branding and selling into larger organizations that are demanding a more cohesive support infrastructure on a national scale.

Customers

TOTVS has more than 3,500 customers in the manufacturing vertical including 1,400 involved in production of capital goods, 1,100 in extractive and process manufacturing, and 1,000 manufacturers of metal and plastic products.

Reference wins include Aliança Metalúrgica S.A, GA., Mabel, Marcegaglia do Brasil, MA Italy, GRAVIA, and Plastiglas de México S.A. de C.

TOTVS has also done well selling into divisions of large companies such as Vale, the world's biggest producer of iron ore, as well as multinationals such as Volkswagen do Brasil Ltda. that have been making significant inroads into the Latin American market.

With increased collaboration among its direct sales force, a network of 60 distribution franchisees and 40 complementary channel partners, TOTVS has yielded more than 800 net new customers including many in manufacturing in a given quarter, a 60% increase from what it was capable of doing just a few years back.

Opportunities

With Brazil becoming one of the world's biggest producers of food and agricultural goods, TOTVS stands a good chance of selling into a surging number of agribusiness, which is being supported by an army of manufacturing partners delivering specialized equipment for research and development and production.

In addition to its stronghold in Brazil, TOTVS is expanding into Argentina, Mexico and elsewhere. Already TOTVS has established a subsidiary in Portugal and a growing list of customers in African countries like Angola, in addition to significant presence in different parts of Latin America, which now boasts a base of 400 customers and 10 distribution partners outside Brazil.

Then there is the untapped opportunity of selling into some of the conglomerates in Latin America that have a vested interest in supporting indigenous IT providers such as TOTVS to help diversify the local economy in anticipation of a number of high-profile international events such as the World Cup and the Olympics that will be held in Brazil in 2014 and 2016 respectively. Recently TOTVS has been able to post double-digit revenue gains every quarter multiplying the number of licensed seats to hundreds of users at large corporations across the region.

Risks

The fragmented nature of the Latin American applications market is both a driver and inhibitor of growth for TOTVS. While its first-mover advantage has helped TOTVS gain considerable traction in raising capital and public awareness, it has become a visible target for both competitors at home and from abroad.

Despite its recent successes in selling into countries outside of Brazil, TOTVS is heavily dependent on the local economy, whose fortune is closely linked to volatile commodity prices. It remains unclear how receptive it is for TOTVS in countries like Chile where local heroes like Xnear has won a loyal following. Even in Brazil, there is no shortage of competition among smaller vendors like Plusoft that has enjoyed growing momentum in the local CRM applications market.

Its restructuring of its distribution channel underscores there is still a lot work to do before it can stitch together a quality network of sales and field representatives with rigorous go-to-market, delivery and support standards.

Ecosystem

Since 2009, TOTVS has begun to improve its distribution channel by acquiring Bonagura group, FDES, M2I, SRC, TOOLS Arquitetura Financeira Negócios S.A., YMF Arquitetura Financeira Negócios S.A., and TOTVS NE.

Currently TOTVS has six branches and 52 franchisees in Brazil, supplemented by 40 channel partners. For the rest of Latin America, TOTVS has 13 distribution partners. It has a branch and a franchisee in Portugal and one franchisee in Angola.

Shares

With a 1.1% share in the Manufacturing vertical, TOTVS' ability to gain share is above average because of the prospects of robust economic growth in Brazil and Latin America.

On the upside, TOTVS' dominance in the Brazilian SMB market will usher in sustainable license, maintenance revenue growth, in addition to growing penetration of some of the largest corporations in Latin America.

On the downside, TOTVS' product strategy is a work in progress, despite its recent attempts of rallying behind a common brand. It remains to be seen whether TOTVS has the wherewithal of capitalizing on its R&D capabilities

that meet the future needs of local manufacturers as they become more global, while differentiating itself from other competitors because of the breadth of its distribution program at the grass-roots level.

QAD

Santa Barbara, CA

www.qad.com

Overview:

After building a strong presence in automotive and high-tech electronics, QAD has continued to expand globally by following its customers to emerging markets where a proliferation of joint ventures is reshaping the world of manufacturing. Typical customers include suppliers to automotive OEMs, industrial manufacturers as well as a long list of companies in the discrete manufacturing space.

Applications Revenues In Manufacturing:

	2008	2009
\$(M)	130	100

2009 Applications Revenues In Manufacturing By Region:

Region	2009(\$M)	% of total
Americas	53	53%
EMEA	31	31%
Asia Pacific	16	16%

2009 Applications Revenues In Manufacturing By Company Size:

Size	2009(\$M)	% of total
XL(5K ees and above)	30	30%
Large(1K-5K ees)	50	50%
SMB(1K ees and below)	20	20%

2009 Applications Revenues In Manufacturing By Revenue Type:

Type	2009(\$M)	% of total
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License	30	30%
Maintenance	70	70%
Subscription	0	0%

2009 SCORES Box:

Evaluation	Criteria	Results
Strengths	Key differentiators, domain expertise, product portfolio, solution scope	Average
Customers	Customer wins across regions and customer segments, momentum among new and existing customers	Average
Opportunities	Market opportunities at the vertical and subvertical levels	Average
Risks	Ability to handle internal and external risks and challenges	Below average
Ecosystem	Network effects of VARs, resellers, SIs and ISV partners, health of ecosystem	Average
Shares	Market shares, company sales, size, overall market presence	Below average
Total	With a 1% share in the Manufacturing vertical, QAD's ability to maintain and win share in the market segment in 2010	Below average

Full overview:

QAD has been revamping its operations in order to keep up with the changing demands of its customers as the world of manufacturing is being turned upside down because of globalization and the lingering effects of the recession.

For many years QAD was considered the dependable source of ERP applications for a large base of manufacturing customers that standardized on its reliable and scalable software to automate an array of tasks from supply chain management to production scheduler.

As these companies turned to international partners either to outsource their production or drive incremental growth, QAD took notice by picking up complementary products to help facilitate the globalization moves of its customers.

In 2008 it acquired FullTilt for its product information management applications, while signing up an OEM deal with PTC to resell its product lifecycle management applications for different segments of the manufacturing vertical.

Additionally it spruced up its offerings designed for single-site and multinational organizations, supporting such requirements as shared services, cross-border trade, multi-site manufacturing and multi-entity accounting.

Like most applications vendors in the manufacturing vertical, the downturn undermined QAD's momentum as many of its customers slashed their IT budgets resulting in sharp drops in the vendor's license sales over the past two years.

QAD is pinning its hopes on revival of manufacturing activities in developed countries, which still account for the bulk of its sales, while building a stronger presence in fast-growing manufacturing hubs like China. At the same time QAD is helping its customers ease the burden of operating legacy systems through gradual migration to on-demand delivery of software and support on a global level.

Key Applications For Manufacturing Vertical:

QAD Enterprise Applications, QAD Manufacturing Solutions, QAD Lean Manufacturing, QAD Just In Time Sequencing, QAD ProPlus

SCORES Analysis

Strengths

By working closely with customers at more than 6,000 sites around the world, QAD has established stellar reputation by selling tailored solutions for manufacturers that need to constantly update their systems in order to meet rigorous requirements in lean manufacturing, quality management, and just-in-time production.

In the automotive market, QAD has been on the vanguard of steering and adhering to such industry guidelines as Materials Management Operations Guideline/Logistics Evaluation (MMOG/LE) established by trade groups Automotive Industry Action Group (AIAG) in North America and Odette International Limited in Europe. As a result, QAD has been instrumental in helping tier-2 and tier-3 suppliers improve their bottom line through automation and process improvement by meeting these compliance requirements and incorporating supply chain best practices.

Although the recession has been devastating to many in the automotive industry, it has not disrupted QAD's product strategy. Its latest QAD 2010 offers enhancements in such areas as easy on-boarding for rapid on-premise or on-demand implementations, embedded business intelligence for improved decision support, powerful configuration engine for intuitive customer management, as well as industry-specific capabilities like Kanban sizing and management in lean manufacturing and materials transfer for streamlining of financial transactions associated with movement of goods around the globe or between affiliated entities.

Coupled with the domain expertise in automotive production and electronics manufacturing, QAD has been setting its sights on improving its system look and feel to replace the dated green-screen terminal display that no longer fits the needs of today's users.

For example, it has been promoting the use of a Dot Net UI among its existing customers under active maintenance that can access the new user interface at no charge. More than 500 customers have adopted the new UI, which offers such enhanced features as pivot-table like functionality, integration with Microsoft Excel, and better

compliance through the use of process maps to guide infrequent tasks and operational metrics to identify anomalies. The latest enhancement in the Dot Net UI covers planning and scheduling workbenches that allow manufacturers to deliver rich information to users and suppliers, enabling them to react to real-time events based on supply constraints, order and price changes.

Such free offers have been common occurrences at QAD, which has enjoyed 90%-plus renewal rates because of its extensive support programs to ensure customer satisfaction. Then there is the fact that the vendor is still run by its founders Pam and Karl Lopker since 1979 underscoring its resiliency, management continuity and commitment to the long-term successes of its customers.

Customers

With more than 2,500 customers in discrete manufacturing and automotive, QAD has been serving the needs of some of the largest OEMs and manufacturers around the world. Currently its software has been deployed at 6,100 sites, the majority of which are involved in the manufacturing vertical.

Its reference wins in 2009 included Ball Corp., FEI Co., GS Yuasa Corp., Halberg Emboutissage et Mécanisme, Hubbell Inc., International Paper, Invacare France Operations SAS, SADAFCO, and Tower Automotive.

Opportunities

Although manufacturing companies have been slow to adopt the on-demand delivery model because of reliability and security concerns, QAD has made universal access to its applications one of its priorities.

Since 2009 it has made steady progress migrating some of its long-standing customers to the on-demand model by simplifying the conversion process and delivering global capabilities. For example, QAD has been offering QAD Automotive On Demand to users in 27 languages and more than 90 countries.

Already 100 customers have signed on to adopt the on-demand version of QAD applications and more than 50 are expected to go live by the end of 2010. For example, International Components Corp., a global manufacturer of rechargeable power supplies and battery systems for portable applications, has recently completed a major upgrade, on time and on budget, to QAD Enterprise Applications On Demand.

Another major opportunity lies in the global manufacturing landscape where major production hubs such as China have continued to attract new investments from Western companies. Most QAD customers in China fall into the category of joint ventures that have been set up between US or European manufacturers and their Chinese counterparts, all of whom are involved in leveraging the vendor's latest applications to help them boost inventory turns through tight collaboration and real-time information exchanges.

Risks

Similar to its customers, QAD is entering some uncharted territories when it comes to selling on-demand applications to a large base of manufacturers and their partners, all of which have little tolerance for unreliable Web access to mission-critical information.

While the tradeoff may be reduced implementation and IT support costs for its customers, the journey for QAD has only yielded incremental benefits. Its on-demand applications account for less than 5% of its revenues, though the new delivery model has been providing much of its growth at a time with overall license sales showing little upward momentum.

What QAD needs is to move more swiftly to the new delivery model by adding complementary products from partners or acquisitions that position the vendor as the de-facto technology leader in helping manufacturers become more agile and efficient by leveraging the Web platform.

Another challenge facing QAD is its decision to split its platform support between Dot Net and its longstanding ties to the Progress programming language, which remains the dominant environment among its customers. It is not clear whether QAD plans to drive greater economy of scale of its development and support resources by placing all its bets on a single platform.

Ecosystem

QAD primarily sells its applications directly, but it also relies heavily on channel and systems integration partners in emerging markets as well as implementation support. Currently its indirect channel is made up of more than 60 distributors and sales agents.

The distributors specializing in the manufacturing vertical include AutoEver Systems Corp., BSB, Crescendo International SRL, Interface KAD, ISYS-ON Information Consulting Ltd., IT Consulting S.A., Minerva Ceska Republika A.S.Minerva, Orca IT, SIT Consultores, Softspeed, Strategic Information Group, Team Ltd., and Tecnoware Ltd.

Shares

With a 1% share in the Manufacturing vertical, QAD's ability to gain share is below average because of its transitioning to the on-demand delivery model, which could take years to complete.

On the upside, QAD's domain expertise in the automotive sector is a big plus and its extensive distributor network in fast-growing automotive markets such as China will result in incremental revenues in 2011, cushioning the effects of its sluggish license sales in key revenue-producing countries in the West.

On the downside, QAD's online delivery roadmap is in a work in progress, while its on-premise applications are split between its legacy Progress environment and the Dot Net platform. Without any clarity on its future product strategy, competitors could move in and seed fear, uncertainty and doubt among its legacy customers.

Consona

Indianapolis, IN

www.consona.com

Overview:

Following a series of acquisitions, Consona has achieved significant presence in different segments of the manufacturing vertical because of its ability to meet the needs of highly specialized manufacturing organizations from discrete to mixed mode manufacturers. Typical customers include manufacturers involved in injection molding, film and bag processing, furniture production and industrial machinery.

Applications Revenues In Manufacturing:

	2008	2009
\$(M)	90	95

2009 Applications Revenues In Manufacturing By Region:

Region	2009(\$M)	% of total
Americas	70.3	74%
EMEA	9.5	10%
Asia Pacific	15.2	16%

2009 Applications Revenues In Manufacturing By Company Size:

Size	2009(\$M)	% of total
XL(5K ees and above)	28.5	30%
Large(1K-5K ees)	28.5	30%
SMB(1K ees and below)	38	40%

2009 Applications Revenues In Manufacturing By Revenue Type:

Type	2009(\$M)	% of total
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License	23.7	25%
Maintenance	71.2	75%
Subscription	0	0%

2009 SCORES Box:

Evaluation	Criteria	Results
Strengths	Key differentiators, domain expertise, product portfolio, solution scope	Average
Customers	Customer wins across regions and customer segments, momentum among new and existing customers	Average
Opportunities	Market opportunities at the vertical and subvertical levels	Average
Risks	Ability to handle internal and external risks and challenges	Average
Ecosystem	Network effects of VARs, resellers, SIs and ISV partners, health of ecosystem	Below average
Shares	Market shares, company sales, size, overall market presence	Average
Total	With a 1% share in the Manufacturing vertical, Consona's ability to maintain and win share in the market segment in 2010	Average

Full overview:

Formerly known as M2M Holdings, Consona went on an acquisition spree in 2004 with multiple purchases of ERP brands including Automated Design Systems, AXIS, Cimnet, DTR Plastics, Encompix, Intuitive, Made 2 Manage, Relevant, SupportSoft and TproSoft.

The result is a portfolio of ERP applications designed for manufacturers of printed-circuit boards, metals, wire and cable, plastics products as well as for aerospace and defense and engineer to order industries. Both Intuitive and Made 2 Manage ERP lines are designed for discrete and mixed mode manufacturers.

In addition to ERP, Consona has also acquired CRM lines Knova and Onyx as well as supplier collaboration products from Supplyworks.

More recently Consona has acquired Compiere, one of the largest open-source ERP vendors that has won a large following among manufacturers because of the flexibility and accessibility of the open source community of developers, along with the cost benefits of the network effect it engenders.

Key Applications For Manufacturing Vertical:

AXIS, DTR ERP, Encompix, Intuitive ERP, Made2Manage ERP, Relevant

SCORES Analysis

Strengths

While Consona has assembled one of the biggest portfolios of manufacturing-specific applications for small and midsized companies, it has gone one step further by meeting their needs at the subvertical levels beyond what they could get from generic ERP solution providers.

AXIS, for example, offers applications designed for makers of metals, wire and cable, as well as metal service centers, while Encompix caters to complex manufacturing and close tracking of projects, costs and schedules.

Unlike other back-office vendors that have done little to address the increasingly complex customer information management needs of their manufacturing customers, Consona has already made CRM a central part of its product strategy.

The 2009 acquisition of Supportsoft strengthened Consona's capabilities to offer after-sale support, boosting its commitment to manufacturers that have large exposure to consumer goods production.

Customers

With more than 4,000 customers in the vertical, Consona specializes in different subverticals that form an extended base of suppliers and components providers to multinational manufacturers.

Its reference wins in 2009 included AT&S, D&S Wire, Founder PCB Development Ltd., Michigan Custom Machines, Ohio Tool Works Corp., Rotobrush International, Sol-Lite Manufacturing Co., Ltd., Ulbrich Stainless Steels and Metals, Inc., and Unicircuit, Inc.

Its other references included Adkev, Inc., Aluminum Line Products Co., Amphenol APC, ATI Industrial Automation, Boston Centerless, Cardinal Scale Manufacturing Co., Clarion Technologies, Dacro Industries, Salco Products, Shat-R-Shield, Warrior Manufacturing, and Wisconsin Film & Bag.

Opportunities

The acquisition of Compiere has opened up a new chapter for Consona, allowing for tighter integration between its traditional manufacturing customers and that of distribution industry from Compiere's installed base of 130 customers.

Another new opportunity lies in Consona's long-standing Dot Net development plan, which should bear fruit in 2011, enabling the vendor to have a more integrated product roadmap for ease of upgrades and unified customer support.

Risks

While Consona has been standardizing on the Dot Net platform for much of its product development over the years, the acquisition of Compiere poses new challenges because of the associated multi-tenant architecture that makes use of Google Web Toolkit for its user interface from Compiere and the increased use of the Amazon Web Services for Consona's new Cloud Computing strategy. Prior to the acquisition of Compiere, Consona started porting its CRM applications to run in the Amazon environment.

The proliferation of technology options for its users may not necessarily be a good thing, given its limited R&D resources compared with those that have already offloaded their platform development work to someone like Microsoft or IBM.

In fact the scenario of Consona offering multiple avenues for product migration could give rise to competitors seeding fear, uncertainty and doubt among its legacy customers.

Ecosystem

Consona primarily sells its applications directly. The acquisition of Compiere has resulted in the addition of scores of partners that have been working on implementing or supporting open-source ERP solutions. Among the Compiere partners are Audaxis, Fuseforward, KnowledgeBlue, and Sodexis.

Shares

With a 1% share in the manufacturing vertical, Consona's ability to gain share is average because of the incremental revenues from the acquisition of Compiere.

On the upside, the Compiere acquisition is expected to shore up Consona's presence in the open source market by becoming a credible player that has delivered proven solutions to a host of customers including some in manufacturing.

On the downside, Consona's business model remains a holding company, which at one point was called M2M Holdings, competing largely on the strengths of different products acquired through acquisitions and it is not clear how the accelerated push into open source and Cloud Computing could improve or impede the cohesion of its distinctive products and their future product roadmaps.

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