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MANAGEMENT BRIEF

VALUE PROPOSITION FOR IBM SOFTWARE ACCELERATED VALUE PROGRAM

Quantifying the Cost/Benefit Case

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Abbreviations used in this report

AVL	Accelerated Value Leader	FTE	Full Time Equivalent
AVP	Accelerated Value Program	IM	Information Management
AVS	Accelerated Value Specialist	IWCS	IBM Workplace for Customer Support
BA	Business Analytics	LUW	Linux, Unix & Windows
DBA	Database administrator	PMR	Problem Management Report
ECM	Enterprise Content Management	RFE	Request for Enhancement
EMEA	Europe, Middle East & Africa	SME	Subject Matter Expert
EOS	Emergency On-site	SWG	IBM Software Group

EXECUTIVE SUMMARY

Quantifying Value

What is the value of an IBM Software Accelerated Value Program (AVP) contract?

The answer depends in large part on another question: *What is the value of IBM software products to organizations that employ them?*

Companies and public sector agencies that contributed to this report had often invested hundreds of millions of dollars in IBM middleware. Hundreds of applications were supported by these products, and hundreds – in some cases, thousands – of IT staff developed for, administered and maintained infrastructures built around them.

The effectiveness with which they are used has far-reaching impact. The speed and quality of solution delivery; efficiency and cost-effectiveness of IT organizations; as well as the stability, reliability and security of solutions depend, in no small measure, on middleware infrastructures. There are few business activities that are not affected by the applications these infrastructures support.

Even relatively small improvements in overall effectiveness may thus provide major business benefits. With IBM Software AVP coverage, improvements may be substantial.

The Accelerated Value Program provides a level of IBM middleware support that is significantly greater than standard Technical Support arrangements. Staff is dedicated to the customer, proactive as well as reactive services are provided, and AVP teams coordinate availability of all IBM resources.

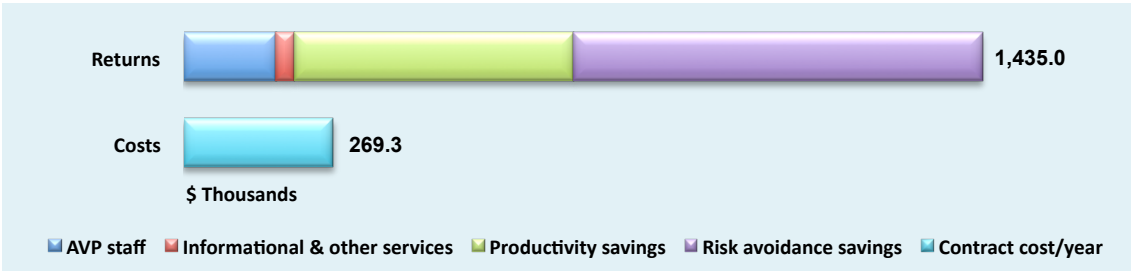
The value of AVP coverage is clearly understood by existing customers. Others, however, often find it difficult to quantify its value. This report is designed to assist them.

The report is based on interviews with customer IT and AVP personnel as well as on detailed documentation of AVP activities, analyses of problem reporting records, and other input from 56 large organizations participating in the program. AVP contracts covered IBM Business Analytics (BA), Enterprise Content Management (ECM), Information Management (IM), Lotus, Rational, Tivoli and/or WebSphere products.

Four sets of benefits were quantified. Annual returns – meaning total quantified benefits for a single year relative to AVP contract costs for the same year – averaged between 2.7 and 7.6 times, depending on brands. The average for all brands was, as figure 1 shows, 5.3 times annual contract costs.

Figure 1

Accelerated Value Program Costs and Benefits: Averages for All Brands



Benefits were calculated as follows:

1. ***AVP staff*** benefits costs are for IBM Accelerated Value Leaders (AVLs) and Accelerated Value Specialists (AVSs) handling support-related tasks that customers would otherwise have had to deal with directly.

2. ***Informational and other services*** benefits are costs for educational, consulting and related services provided by other IBM personnel under AVP arrangements, for which customers would otherwise have been obliged to contract and pay for separately.

3. ***Productivity savings*** are for time saved by customer developers, administrators and other specialists dealing with IBM products.

   Savings are realized through: (1) proactive AVP activities that avoid or mitigate problems, accelerate new deployment and migration projects, and enable more effective planning and scheduling of activities involving IBM products; and (2) reactive AVP activities that enable faster resolution of issues documented in Problem Management Reports (PMRs).

4. ***Risk avoidance savings*** are for reduced frequency and severity, and faster resolution of incidents resulting in quantifiable business and/or IT costs. Savings are due to AVP proactive and reactive activities, and are calculated on an application-by-application basis for each installation using financial and lost end-user productivity values.

   Incidents, which vary by brand, variously involve outages, performance bottlenecks, loss or corruption of data, delays in delivering results of calculations or completing projects, operational inefficiencies, security violations and others.

The basis of these calculations, along with details of methodology, descriptions of installations, and breakdowns of costs and benefits by brand and installation may be found in the Detailed Data section of this report.

Program Coverage

The Accelerated Value Program represents a higher level of coverage than standard IBM Technical Support provided under Passport Advantage agreements. It involves dedicated procedures, technical resources and personnel.

There are two main components to the program:

1. ***Problem Management***. Customers that experience problems with IBM software normally document these in PMRs and initiate contact with the IBM Technical Support organization to deal with them.

   Under the Accelerated Value Program, separate, dedicated teams of AVLs and AVSs monitor PMR activity for individual customers. They assume responsibility for resolution of these, and may initiate contacts with Technical Support, escalate problems to IBM Software Group (SWG) development units and work with IBM specialists and in-house IT staff until a satisfactory conclusion is reached.

   AVP customers typically experienced significant improvements in most or all PMR metrics under the program. Some organizations reported increases in PMR numbers, severity and time to resolution if major projects were initiated – although when this occurred, the role of AVP teams tended to become more significant and more beneficial.

There was general agreement among organizations that contributed to this report that problems documented in PMRs affected IT staff productivity. Individual PMR incidents often disrupted the activities of administrators, developers and/or other specialists.

There were also broader "cascading" effects. Disruptions might affect other activities within IT organizations, affecting dozens or even hundreds of individuals.

There was a further implication. Problems might cause outages or lead to other negative effects. Where this occurred, not only would IT staff productivity loss be magnified, but also end users and business operations might be impacted. Damage could be substantial.

Cascading effects might again occur. In large, complex installations with high levels of integration, effects of errors may spread rapidly to other software components. Large segments of IT infrastructures may be affected.

Any significant improvement in PMR metrics thus yielded material benefits. If the amount of time spent by IT staff dealing with problems was reduced, greater effort could be channeled into activities that contributed more substantially to functional improvement and IT effectiveness. "Costs of downtime" and other bottom-line effects would also be mitigated.

2. ***Proactive support***. The second major source of AVP value involves what may be described as "proactive" activities. These vary between customers, and are agreed on a case-by-case basis. Activities are documented in an annual delivery plan, updated on a quarterly basis.

   Objectives commonly include assisting in strategy development and planning; facilitating deployment of IBM products in a rapid and trouble-free manner; ensuring optimum performance and quality of service (including such variables as availability, security and recoverability); and helping to improve the efficiency and productivity of IT organizations.

   Where proactive activities are emphasized, the focus tends to move from problem resolution to problem avoidance through improved planning; advising management on selection and deployment of IBM solutions, and on broader IT issues; educating IT staff in use of technologies, tools and practices which reduce risks of problems and increase IT effectiveness; and other initiatives described in the About AVP section of this report.

   According to organizations that contributed to this report, proactive support provides particular value in that AVP staff are familiar with customer IT environments, staff and plans. Close monitoring and analysis of PMR records contributes to this knowledge base.

   Equally, AVP teams have close links to SWG executive decision-makers, product managers and planners and developers. These may be brought into accounts to deal with specific technical issues, provide briefings and custom education and advise management on IBM plans.

The extent to which AVP teams focused on reactive or proactive issues varied widely. For individual customers, the range was from "70 percent proactive, 30 percent reactive" to "80 percent reactive, 20 percent proactive." Variations reflected customer preferences.

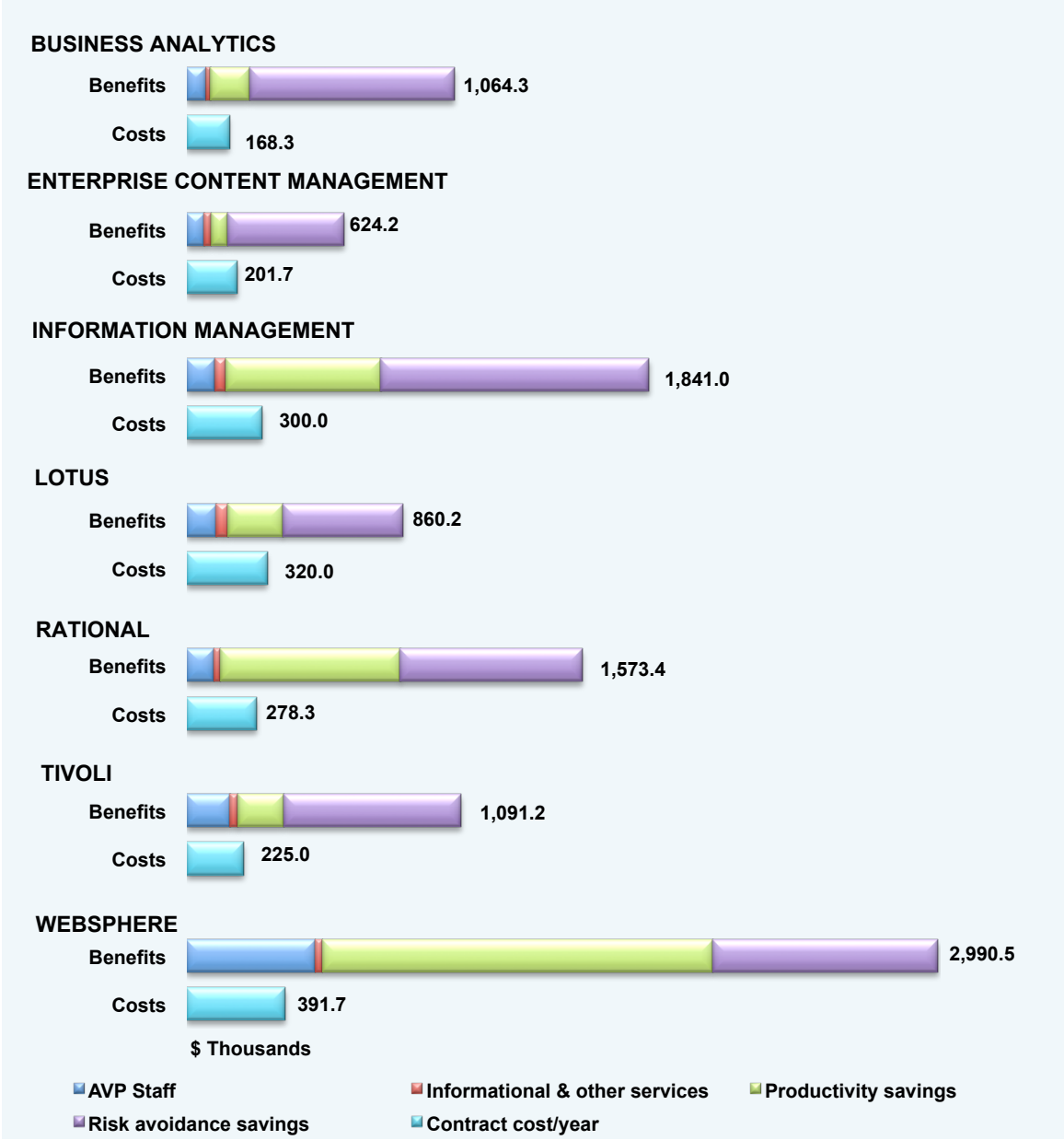
The mix of reactive and proactive activities often changed over time. In many cases, program activities were initially reactive – this was particularly the case where the frequency and severity of PMR incidents was exceptionally high – but later became more oriented toward proactive goals.

Cost and Benefit Patterns

Although the general picture was consistent, there were a number of variations in costs and benefits between brands, which are summarized in figure 2, and individual installations, which are documented in the Detailed Data section of this report.

Figure 2

Accelerated Value Program Costs and Benefits: Averages by Brand



Variations reflected a number of factors. For example, benefits tended to be higher than the norm in large, complex installations with multiple IBM products and hundreds, thousands or (in several cases) tens of thousands of instances of these. At the other end of the spectrum, AVP coverage was also valued by some smaller organizations with comparatively few IT staff and limited skill bases.

In installations of all types and sizes, benefits were also typically higher when organizations were engaged in major new application deployments, migrations (including upgrades to new IBM product versions and releases) and other major IT changes. Examples of these included consolidation and shared services initiatives, and restructuring of IT infrastructures following mergers or acquisitions.

While these initiatives were under way, the role of AVP teams could be critical in preventing and resolving problems. Program activities were typically aligned with customer plans and schedules, and AVP teams often played a valuable role in ensuring that appropriate IBM resources were available at the right time to assist in planning, implementation, testing and quality assurance.

There was also general agreement that critical situations were dealt with more effectively under AVP than under Technical Support arrangements. AVP contracts often included a given number of Emergency Onsite (EOS) days, for which IBM makes best efforts to put a suitably skilled team on customer premises within 24 hours. Problems could also be rapidly escalated to SWG specialist units.

Conclusions

In its initial form, the Accelerated Value Program (originally known as Premium Support) focused primarily on improving the quality of reactive support provided to IBM middleware users. Problem management is still an important component of coverage. The program's evolution to include proactive activities, however, reflects changing demands.

The trend is industry-wide. Organizations that have invested heavily in a vendor's products have increasingly sought relationships that extend beyond traditional forms of support. While concerned to retain their independence, they have recognized that delivery of value may be materially enhanced if vendor resources are more effectively engaged, and aligned more closely with those of in-house IT staff.

Like other vendors, IBM has always maintained "special relationships" with their most important customers. The Accelerated Value Program, however, provides a degree of structure and operational focus to such relationships that has often been lacking in the past.

In contrast to Technical Support, which is ad hoc and reactive in nature, and professional services engagements, which are typically project-focused and of limited duration, AVP relationships offer greater continuity in staff, procedures and customer knowledge. This continuity was repeatedly cited as a key advantage of participating in the program.

Finally, the Accelerated Value Program reflects another broad industry trend. At a time of economic pressures and budgetary constraints, a growing number of organizations are demanding that the benefits of support should be quantifiable.

As the calculations presented in this report indicate, this is clearly the case for the Accelerated Value Program. Returns of 2.7 to 7.6 times within a year are among the highest that can be obtained by any form of IT investment.

ABOUT AVP

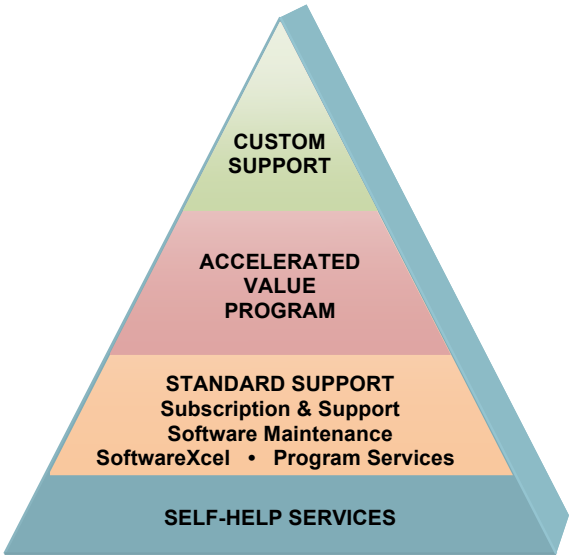
Program Overview

The Accelerated Value Program is designed for users of major IBM Software Group products who require a higher level of assistance than is available from the company's Technical Support organization.

Technical Support is provided under Subscription and Support arrangements, and under specialized IBM System z (SoftwareXcel, Program Services) and Power Systems (Software Maintenance) arrangements. This description applies to the U.S. Support structures and may vary in other countries.

The role of AVP coverage relative to other IBM support offerings is depicted by the company as shown in figure 3. This Custom Support involves specialized arrangements that typically focus on highly business-critical environments.

Figure 3
Accelerated Value Program Relative to Other IBM Support Offerings



The Accelerated Value Program is operated by SWG, which is responsible for the major IBM middleware brands and for other IBM software solutions. SWG operates more than 70 software development laboratories worldwide, and employs more than 23,000 developers. The program is closely aligned with SWG development, product management and planning groups.

AVP services are provided through separate contracts. In most cases, these are renewed annually and cost between $50,000 and $1,000,000. Some customers, however, have opted for discounted multi-year contracts, and this approach has become increasingly common.

Contracts may cover the products of one or more SWG brands, and may be national, regional – e.g., covering IBM North America, Europe, Middle East and Africa (EMEA), Asia/Pacific or Latin America geographies, or combinations of these – or global in nature.

AVP Staff

AVLs and AVSs

Most AVP activities are conducted by AVLs and AVSs. These may be assigned on a full-time basis, or may divide their time between multiple accounts (typically two to five), depending on customer requirements and on how much customers are prepared to pay.

Customers may thus be assigned, for example, a 0.5 full time equivalent (FTE) AVL and a 0.33 FTE AVS. The highest levels of coverage involve full-time on-site staff.

The roles of AVLs and AVSs are typically as follows:

- ***AVLs*** act as the primary customer interface to IBM on support-related issues. They also coordinate contacts with the IBM Technical Support and SWG organizations, and with IBM developers and other subject matter experts (SMEs) who may be brought in to assist customers.

  (In IBM nomenclature, an SME is a technical specialist, such as a developer or consultant, who has extensive experience with a specific product or products. SME are required to undergo specialized training and to pass certification examinations.)

  Additional AVL responsibilities include providing customer briefings on IBM software directions, organizing events to meet informational requirements, and reporting on the status of PMRs and AVP activities.

- ***AVSs*** have a more technical focus. They have primary responsibility for problem management (including dealing with PMRs, collection and analysis of diagnostic information, providing fixes and workarounds and related tasks), as well as product configuration and deployment, and other tactically oriented tasks.

  AVSs deal with a set of named callers within customer IT organizations. There are typically 5 to 50 named callers, although larger organizations with AVP contracts covering multiple brands may have significantly more. Named callers may channel requests and queries from larger populations of IT professionals.

In principle, AVLs deal with management and emphasize proactive activities, while AVSs deal with technical specialists and handle more reactive tasks. In practice, however, AVL and AVS tasks often overlap, and are shared. In smaller AVP accounts, single individuals may act as both. In this, as in other areas, arrangements tend to be flexible.

AVP contracts typically specify that AVLs and/or AVSs will spend a given number of days (On-site Days) per year at customer premises. Numbers are agreed on a case-by-case basis, and may involve AVP-related reporting, technical briefings, custom education or consulting, and/or other activities.

Among organizations that contributed to this report, some smaller installations reported that no On-site Days were specified in contracts, and the remainder reported between 2 and 100. Numbers varied widely between brands and individual customers.

The term Field Support Services (FSS) Days is employed by the Lotus brand for comparable activities.

In most cases, AVLs and AVSs specialize in particular brands or products within brands. In large organizations, AVP teams may include dozens of individuals. Figure 4 shows an example.

Under global contracts, a lead AVL may be assigned to coordinate AVP activities on a worldwide basis. For example, one Lotus global customer was served by a 0.5 FTE AVL who acted as global lead and managed AVP activities for North America.

Figure 4
Large AVP Team: Example

Brand	Product	AVL	AVS
Business Analytics	Cognos 8, TM1, Series 7	0.12	0.1
Enterprise Content Management	Content Manager FileNet	1.0 1.0	– –
Information Management	Balanced Warehouse DB2 LUW & tools InfoSphere Informix	0.1 0.33 – 0.33	– 0.5 0.33 0.33
Lotus	Notes/Domino, Connections, iNotes, Quickr, Sametime	0.33	–
Rational	ClearCase, ClearQuest, Rational Application Developer, Software Architect	–	1.0
Tivoli	Monitoring, Service Provider & Automation Maximo	1.0 1.0	0.53 1.0
WebSphere	Application Server Application Server for z/OS Business Integration DataPower MQ Transformation Extender	0.5 – 0.5 – 0.5 –	0.5 1.0 1.0 0.33 1.0 0.33
Totals		4.71	7.95

Other AVP personnel assigned to the account included a 0.5 FTE AVL for the IBM EMEA geography, a 0.33 FTE AVL for the Asia/Pacific region, two 0.1 AVLs supporting the company's operations in Latin America, and a 0.5 FTE AVS supporting multiple geographies.

Among some larger customers, AVLs and AVSs participated in cross-brand initiatives. One organization, for example, had three initiatives under way in which AVP personnel representing IM and WebSphere brands were cooperating. In a second IBM, IM, Tivoli and WebSphere specialists were participating in a major deployment project. Others reported similar experiences.

AVP customers at the highest level are also assigned the services of an SWG Executive Sponsor.

Relationships

The closeness of relationships with AVP personnel was cited as a major source of value. AVLs, AVSs or both were typically in contact with customers at least once a week, spent a great deal of time on-site, and interfaced with IT staff through a variety of events and activities. In some cases, AVP staff was on-site on a full-time basis.

One result was that AVLs and AVSs became highly familiar with customer environments and IT organizations, and with the challenges faced by the latter. Relationships were reinforced by the fact that personnel had often been working with the same customers for multi-year periods, and had often demonstrated a willingness to (to quote one respondent) "go the extra mile."

Anecdotes about AVP staff undertaking activities not called for by contracts, and being available outside normal business hours and during weekends were common. For example, one AVP team had "worked overtime" to help prepare management for a critical internal meeting. Another made itself available on a 24x7 basis during the critical phases of a migration project. Others reported similar experiences.

Problem Management

A large part of AVP activity typically involves reactive support, primarily in response to PMRs opened by customers experiencing a software problem.

AVP customers enjoy priority handling for calls to the IBM Technical Support organization. In addition, PMRs are monitored by AVP teams, and named callers may involve them in problem diagnosis and resolution. AVP teams may accelerate IBM Technical Support response, escalate problem resolution to SWG development, and if necessary engage other IBM groups.

AVP teams then track the status of IBM response, and may intervene if delays or complications occur. Teams also commonly coordinate IBM and customer teams working to resolve problems.

Overall numbers of PMRs vary. Among the organizations that contributed to this report, numbers of PMRs per year ranged from 18 to more than 1,000. Numbers tended to increase when organizations were engaged in major deployments and migrations.

Overall numbers are not, however, necessarily indicative of the difficulties caused by problems documented in PMRs. Severity 1 PMRs, for example, are comparatively rare, but typically involve outages affecting critical systems. Severity 2 incidents, which involve serious impairment of application functionality, might also result in significant business disruption.

IBM severity ratings are summarized in figure 5.

Figure 5
PMR Severity Ratings

LEVEL	DESCRIPTION
1. Critical business impact	Unable to use program, resulting in a critical impact on operations.
2. Significant business impact	Program is usable, but is severely limited.
3. Some business impact	Program is usable, but less significant features (not critical to operations) are unavailable.
4. Minimal business impact	Problem causes little impact on operations, or a reasonable circumvention has been implemented.

Once customer noted that, while the ability of AVP teams to reduce time to resolution was useful for most types of PMR, it was particularly valuable for Severity 1 and 2 incidents. The “80:20” rule was said to apply: “20 percent of the PMRs cause 80 percent of the damage.” There was general agreement that AVP coverage restricted the effects of such incidents.

AVP teams were also reported to have realized broader improvements in PMR metrics. Several customers reported that numbers and average severity of PMRs had declined steadily over multi-year periods. In another case, a company that had signed up for AVP coverage reported that its backlog of unresolved problems decreased by 58 percent in one year.

AVP teams also collect and analyze extensive statistics on the nature, frequency, severity and status of PMRs (e.g., whether they have been mitigated or resolved, or when this is expected to occur). Details are communicated to customers through a number of vehicles, which may include weekly, bi-weekly or monthly teleconferences, e-mail alerts and/or on-site meetings. PMR activity and status are also summarized in quarterly and annual reports, and presentations by AVP staff.

Proactive Support

Proactive support covers a broad spectrum of activities that are not tied to resolution of specific problems documented in PMRs. These included recommending actions to accelerate deployment, assisting with migrations, providing technical guidance on critical projects, and advising on best practices to ensure optimal performance and quality of service for customer software infrastructures.

Actions commonly included arranging briefings by IBM SMEs on tools, technologies and practices that should be applied, educating IT staff and providing appropriate (in some cases, customized) documentation on these. AVP and other IBM specialists also assisted in implementation.

AVP customers also benefited from earlier and more comprehensive notifications about potential problems than Technical Support customers. Critical Situation Flash Alerts, access to draft Technotes and actions by AVP teams ensured that customers were informed in "real time" about potential difficulties. Organizations were also alerted to problems that have been encountered by other AVP customers.

At the high end of the spectrum, AVP teams often participated in customer planning, governance and in project management structures. In one organization, for example:

> *The AVP team (was) heavily involved in multiple war rooms to resolve outstanding problems and prevent future ones. (The team) provided onsite support, coordination across all IBM resources, and analysis and resolution of problems, along with recommendations on efficiency and productivity improvement, risk avoidance and other subjects. (The team) also participated in major project kickoff meetings, providing guidance on system designs, technical questions and deployment best practices.*

AVP teams also assisted planning by arranging for briefings on IBM product directions, supplying advance information on forthcoming products and versions, and providing other SWG input.

AVP teams commonly work to align customer initiatives with IBM product cycles, ensuring that allowance is made for timing of version upgrades and enhancements. Teams also tracked and alerted customers about upcoming end of service dates, and assisted in developing plans to deal with these. In some cases, they were able to obtain extensions of IBM support.

The significance of end of service dates was noted by several customers. Users often employed multiple versions of multiple products – one organization, for example, employed more than 40 different Tivoli and WebSphere products and versions. Keeping track of and preparing for end of service deadlines were often onerous tasks. AVP teams could provide highly useful assistance in this area.

A variety of other proactive activities were reported. Figure 6 shows examples from multiple AVP WebSphere customers. The picture was similar for other brands.

In some cases, AVP teams assisted in preparing Requests for Enhancement (RFEs) and in presenting these to SWG development organizations. RFEs are requests that IBM incorporate specific new functionality in future software releases.

Figure 6

Proactive Activities by AVP Teams: Examples

New Application Deployment

(AVP team) organized IBM task force, including lab scripting expert, product architects/developers, WebSphere SWAT team & multiple IBM support teams. Engaged with client on-site for review of current segmentation & infrastructure; analysis of deployment processes; assessment of rollout plan & schedule.

Recommended actions to accelerate deployment; best practices on core groups, bridging, ODR rules & traffic routing; provided fixes to address potential failover issues; assisted in automation & scripting; tested configurations & resolved performance bottlenecks. Made recommendations on overall WebSphere Extended Deployment (XD) architecture for improving stability.

Provided technical guidance & advice for critical system project built on WebSphere Message Broker (WMB) & XD infrastructure. Addressed problem management, troubleshooting & development & test issues.

Coordinated & led on-site participation by IBM WebSphere Application Server (WAS), WebSphere Transformation Extender (WTX) & other WebSphere development teams during major application deployment. Identified & resolved issues potentially affecting stability, performance & availability. No post-production issues were experienced.

Migration Projects

Assisted customer in developing a comprehensive migration plan, including documenting which environments required migration, & which products would need upgrading; assisted in developing key migration strategies.

Provided best practices & 24x7 problem resolution during migration from WAS v5 to v6.1. Coordinated IBM teams supporting migration.

Coordinated IBM development & operational teams to assist planning, implementation & testing for WAS v5.1 to WAS v6.1 migration. All applications were successfully migrated according to scheduled. No post-production issues were experienced.

Facilitated WAS 7.0 & WebSphere MQ (WMQ) 7.0 migration – researched features of WAS V7 relevant to customer requirements; created custom presentations; provided education to multiple development & operations teams. Also researched specific aspects of WMQ that could result in migration problems; worked with customer to develop migration proof of concept.

Coordinated multiple teams from IBM development, L2 & L3 support & other groups to prepare for & support migration from WebSphere Message Broker (WMB) 6.0 to 6.1.

Performance Optimization

Identified limitation in core groups that could prevent WAS application scaling to handle large user population. Engaged IBM architects to understand client environment & provide configuration recommendations.

Researched known WMB issues that might affect performance. Introduced IBM performance management specialists; recommended practices to improve & maintain performance.

Engaged IBM SMEs to review customer implementation of WebSphere Transformation Extender (WTX) & respond to performance shortfalls. Recommended areas of improvement that significantly improved system performance. Also eliminated crashes affecting WMB & WTX applications.

Worked with customer teams to develop best practices for WAS & MQ pre-production performance tuning & stress testing, avoiding potential production outages for new application deployments.

Mentored customer staff on use of XML feature pack with WAS v7 to increase XML performance.

Provided best practices for WAS configuration to connect with WMQ. Improved application performance for high-volume workloads.

Worked with customer to develop model to analyze code & tune performance for new applications. (Also advised) on use of code analysis tool to identify & correct potential performance bottlenecks.

Figure 6 (continued)

Proactive Activities by AVP Teams: Examples

Availability Optimization

Led effort to resolve issue that disrupted critical system production. Performed extensive system analysis, & coordinated testing by customer & IBM staff. Recommended & assisted in implementation of solution.

Provided extensive guidance & expertise allowing immediate resolution of a critical system outage disrupting operations. Engaged WMQ SME to organize planning to prevent future outages.

Led effort to resolve problem causing application instability & hangs. Conducted research on potential causes, analyzed performance data & settings, involved IBM SMEs, & coordinated testing by customer & IBM teams.

Resolved problem causing outage without initiating a PMR. Reduced application downtime by several days.

Involved IBM Lab team to work with customer to resolve errors disabling a key WMB application. Reduced time to resolution, minimizing business impact.

Responded to WAS server hang. Analysis indicated resource contention on physical server. Resolved issue & provided a best practice to prevent recurrence

Corrected MQ object process damaged during operating system upgrade. Also helped provide customized recovery documentation in case of recurrence.

Provided instructions to prevent configuration errors causing outages to strategic MQ-based operational system. Prevented further outages.

Analyzed downtime & concluded that problems could be resolved by upgrading to a different version of MQ containing critical fixes. Assisted in upgrade.

Performed in-depth research on a bug affecting a key payments application. Provided information on the symptoms & verification of the bug, & its subsequent resolution.

Prevented MQ outages by providing information regarding a critical WMQ security flash related to an overflow on unsecured WMQ client connections.

Security Exposures

Reviewed all WAS, XD, Portal & MQ security advisories on an ongoing basis, & alerted customer to potential security vulnerabilities. In one case, customer was prompted to request an ifix to address possible exposure.

Informed customer when a known security risk for WAS & MQ was detected. Provided immediate assistance to apply a fix, & escalated to IBM security team to deal with unexpected difficulties when these emerged. Ensured fix download availability for all deployed production versions.

Responded immediately to customer MQ team concerns about security exposures via third-party network interface. Identified potential exposures, & provided custom documentation on security configuration to prevent future problems.

Researched WMQ 6.0.2.3 & RHEL 5.3 & concluded that these versions are unsupported which could have created a possible security exposure. Alerted customer accordingly.

Developed xml firewall examples for use in future application development scenarios. WMQ security flash related to an overflow on unsecured WMQ client connections.

Figure 6 (continued)
Proactive Activities by AVP Teams: Examples

Skills & Practices Development

Advised customer on performance tuning for automatic business processes in WebSphere Process Server (WPS) v6.1 with DB2 as supporting database. Shared relevant documentation & introduced IBM SMEs. Briefed customer team on common performance bottlenecks for long running processes & recommended use of a procedure critical for WPS connections to DB2.

Advised customer on strategic approaches to interface WPS & WebSphere Enterprise Service Bus (WESB) to Tuxedo, facilitating migration from Tuxedo v8 to v9. Provided in-depth review of available connectivity options.

Introduced IBM SMEs to provide requested education on WebSphere SAP Adapter & DataPower use cases & system architecture/environment. Topics included automated backups of configuration data, security assessment questions, application of fixes & others.

Other Activities

Submitted 5+ specific requests to IBM labs for changes/fixes that would provide value to customer.

Educated customer on current IBM investment; assisted in developing plans to improve AVP support within under current contract; researched options for access by foreign employees to priority call handling; extended access to priority call handling by employees outside the US.

Researched optimum combination of WebSphere Virtual Enterprise & IBM Tivoli Composite Application Manager (ITCAM). Teamed with IBM lab advocate to schedule meetings across multiple IBM development teams. Arranged for IBM development to test configurations.

Worked closely with customer development team & created proof of concept for usage of HTTP Bindings showing how to configure adapter settings and code applications for major deployment. Provided ongoing assistance & support during deployment.

Engaged with customer on issues surrounding WebSphere Time Manager that had brought a deployment project to a standstill. Determined that the technology adopted does not support Time Manager & recommended alternative solution. Created custom documentation for this solution.

Provided customer with advance information on planned new version of WebSphere Portal.

Researched installation & configuration of WAS with Chinese language support. Introduced IBM SME & arranged direct discussion with developers.

Created 15+ customized documentation articles providing guidance on risk avoidance, system usage, skill requirements & project options. Documents enable customer IT teams to triage, troubleshoot & mitigate problems before they arise.

Provided customized reference documents dealing with WMB accounting & statistics, application code re-use, disaster recovery failover, dynamic WTX assignment, problem reporting & other topics.

Delivered sample scripts defining automated backup & restore processes for WMB environment.

Other Services

Other AVP services include the following:

- ***Emergency Onsite (EOS) days*** involve commitments by IBM to "dispatch within 24 hours to (a customer's site) a suitably skilled team to perform to perform diagnostic work on a critical Severity 1 incident."

Most AVP agreements allow for one to four EOS per year, although contracts with some larger AVP customers involve more. Global AVP contracts with two organizations that contributed to this report allowed for unlimited EOS days.

- ***Special events*** include IBM AVP Summits, which are organized by individual brands for AVP customers only. Participants typically include SWG executives, senior development specialists and other IBM professionals. Roadshows may also be provided.

  Customer-specific briefings may also be organized at AVP Summits, national brand conferences (e.g., IBM Cognos Forum, Information on Demand, Lotusphere, Rational Software Conference, Tivoli PULSE and multiple WebSphere conferences) and other venues.

- ***Educational services*** include briefings, teleconferences, Webcasts, training classes and other events whose content is customized or developed uniquely to reflect the interests of AVP customers. These may be provided by AVP staff, IBM SMEs and/or other IBM specialists.

  Educational events may be arranged in response to customer requests, or may be scheduled by AVP teams; e.g., to brief staff on new product capabilities, or to prevent recurrence of problems documented in PMRs.

  Named callers identified in AVP contracts also receive one voucher for IBM Professional Certification Program courses for each contract year.

- ***Online services*** include IBM Workplace for Customer Support (IWCS), an SWG portal available only to AVP customers. This provides unique content on software problems and fixes, as well as advanced search and analysis capabilities enabling in-house IT staff as well as AVP teams to review the customer's PMR records in detail. IWCS will be replaced with IBM Support Portal in 2010.

  Customers may also participate in and interact with peers and IBM personnel through AVP discussion groups.

This list should not be regarded as exhaustive. A key characteristic of AVP coverage is that activities are structured in a flexible manner in response to varying customer requirements.

DETAILED DATA

Basis of Calculations

Profile Installations

The costs and returns presented in this report are for 18 profile installations – three for each SWG brand – of large financial services, government, insurance, manufacturing, retail and IT services organizations.

Profile installations were constructed using data on contract coverage, deliverables and costs; FTE numbers and activities of AVP teams and other IBM personnel introduced into customer accounts under AVP arrangements; applications, middleware stacks and FTE staffing; PMR demographics; and other variables for 56 AVP customers employing the products of one or more SWG brands.

A composite approach was employed; e.g., data from two large manufacturing companies with generally similar business profiles, IT environments and AVP contracts, employing the same set of IBM software products, was combined to create a single company profile. This approach was adopted because of limitations in data available for individual customers, and for reasons of confidentiality.

Costs are based on reported AVP annual contract values, while benefits were calculated as follows.

AVP Staff

Calculations were based on numbers of FTE AVP personnel (e.g., 0.66 FTE AVL, 1.0 FTE AVS), using representative annual average salaries. Salaries were increased by 48.3 percent to allow for benefits and other personnel costs. Salary and benefits assumptions were developed independently of IBM.

Informational and Other Services

Benefits were calculated based on reported AVP activities undertaken for customers. Calculations include EOS days, as well as educational and consulting activities provided by IBM personnel other than AVLs and AVSs, which customers would otherwise have been obliged to contract and pay for separately.

In the case of EOS days, costs were calculated for used days only; e.g., if a customer had contracted for five EOS days but used only two of these during the contract period, calculations were based on two days of services.

Costs of educational activities were calculated based on applicable IBM rates for custom education, Allowance was also made, on the same basis, for events such as AVP Summits and Roadshows provided at no extra charge. Consulting costs were based on IBM hourly professional services rates. Appropriate volume discounts were applied to both.

Productivity Savings

Benefits were calculated for all profile installations based on three sets of values:

1. Numbers of FTE customer IT staff (including developers, administrators, and other types of specialist as appropriate) engaged in developing for and/or supporting BA, ECM, IM, Lotus, Rational, Tivoli or WebSphere software covered by AVP contracts.
2. Numbers of FTE customer IT staff freed up for other work by improvements in PMR resolution time and proactive actions resulting from AVP activities.

FTE numbers were determined by International Technology Group (ITG) analysis of overall customer IT staffing for IBM software products covered by AVP contracts, and of AVP records for the companies upon which profile installations were based.

3. FTE staff savings were calculated using the job categories and baseline average annual salaries shown in figure 7.

Figure 7
Job Categories and Baseline Salary Assumptions for Customer IT Staff

BRAND	JOB CATEGORY	SALARY
Business Analytics	Developer	$85,841
Enterprise Content Management	Developer Administrator	$87,672 $79,014
Information Management	Mainframe DB2 DBA DB2 Linux, Unix & Windows (LUW) DBA DB2 application developer	$96,325 $92,886 $89,983
Lotus	Developer Administrator	$84,138 $75,960
Rational	Project leader Senior developer Developer	$125,945 $109,291 $95,754
Tivoli	Security specialist System management specialist	$98,798 $92,012
WebSphere	WebSphere high-level developer WebSphere Portal developer WebSphere developer WebSphere administrator	$102,376 $98,698 $89,745 $85,868

Baseline annual salaries were calculated based on averages for job categories reported by salary specialists, job posting Web sites and other sources.

Salaries adjusted to reflect prevailing industry-specific levels (e.g., salaries for customer IT staff in financial services companies were increased by 7.8 percent). Salaries were again increased by 48.3 percent to allow for benefits and other personnel cost items.

Productivity savings were then calculated as follows:

Number of FTE customer IT staff freed up for other work x annual average compensation including salaries, benefits and other items.

Risk Avoidance Savings

Risk avoidance calculations were conducted using three primary methodologies, which varied by brand as shown in figure 8.

Figure 8
Risk Avoidance Calculation Methodologies by Brand

METHODOLOGY	BA	ECM	IM	Lotus	Rational	Tivoli	WebSphere
Costs of downtime (end user productivity loss)	X	X	X	X	–	X	X
Costs of downtime (business calculation)	–	X	X	–	–	X	X
Project impairment (developer productivity loss)	–	–	–	–	X	–	–

Costs of downtime were calculated based on estimates of reduced downtime under AVP arrangements for problems caused by outages (typically corresponding to the IBM PMR classification of Severity 1) and, in some cases, by severe impairment of application functionality (typically corresponding to Severity 2).

Examples of such estimates are that time to resolution for a specific problem would have been six hours if IBM Technical Support only was employed, and two hours if AVP procedures were activated (i.e., downtime was reduced by four hours); and that time to resolution for a different problem would have been 12 and 5 days respectively (i.e., downtime was reduced by 168 hours – the application in question operated on a 24x7 basis).

Estimates were based on analysis of PMR records over a 12-month period for organizations that contributed to this report and on customer input, industry experiences and values developed by the authors of this report.

Two types of costs of downtime calculation were developed:

1. ***End-user productivity loss***. Numbers of hours of downtime were multiplied by numbers of end users affected, and by an application-specific value (typically 0.05 to 0.3) for reduced end-user productivity while the application was unavailable or severely impaired. Allowance was also made for the percent of users who would normally be active during this period.

   The resulting value for total hours or days of lost end user productivity was then multiplied by average end-user cost per hour based on average compensation (salary, bonus, benefits and other items as appropriate) divided by numbers of hours worked per year.

   Average compensation was calculated based on industry data for occupational categories (e.g., managers, executives, professionals, front-line employees, administrative employees, customer service personnel) and industries (e.g., financial services, manufacturing, government).

   An example of a lost end-user productivity calculation – in this case for an outage affecting a Lotus Domino e-mail server – was as follows:

   > *Six hours reduced downtime/impairment x 500 users (the average number of users per server in this installation) x 0.75 active x 0.3 reduced productivity for x $53.17 average compensation per hour = $35,890.*

2. ***Business calculation***. Numbers of hours of downtime were multiplied by application-specific business values for specific applications.

   For example, for a retail Web site supported by DB2, calculations were based on average numbers of visitors per hour, and average sales per visit. Using industry values, allowance was made for lost sales that could be expected if visitors were unable to obtain information, place orders or perform other tasks online; e.g., three percent of frustrated visitors would decide not to purchase or purchase from another supplier.

   In a number of installations, IM, Tivoli and/or WebSphere applications supported supply chain, logistics and distribution operations. In these cases, hours of downtime were multiplied by organization-specific values for average cost of supply chain disruption per hour. Industry and ITG-developed metrics were employed to calculate these values.

   Comparable organization-specific calculations were conducted for business intelligence, case management, customer service, directory, financial, funds transfer, human resources, infrastructure, marketing and sales, policy management, procurement, research, security, transaction processing and other applications.

A different methodology was employed to quantify Rational risk avoidance savings. As AVP contracts cover Rational tools rather than applications developed with them, costs of downtime approaches were inappropriate. Calculations were instead based on ***developer productivity loss***.

For each Rational installation profile, estimates were made of the amount of time lost by development teams due to delays caused by problems documented in PMRs if (1) IBM Technical Support and (2) AVP support were employed. Estimates were based on analysis of detailed PMR records, customer experiences, and industry and ITG-developed application development productivity norms.

Allowance was also made for the effects of proactive actions undertaken by AVP teams.

An example of this methodology is that a Rational development project was delayed by 60 person-days or 20 person-days if IBM standard support and AVP support respectively were employed. The lost developer productivity calculation was as follows:

> *60 - 20 = 40 person days x cost per person day (based on annual salary plus benefits and other personnel costs divided by 200 working days per year)*

Calculations were for teams composed of project leaders, senior developers and developers. Average annual salaries for these are shown in figure 7. Salaries were adjusted using the same industry values as for productivity savings, and were again increased by 48.3 percent to allow for benefits and other personnel cost items.

Data Tables

Profile installations, including contract costs, are summarized in figure 9. Benefits are summarized in figure 10.

Figure 9
Profile Installations: Summary

BUSINESS ANALYTICS			
INDUSTRY	**Financial Services**	**IT Services**	**Pharmaceuticals**
Organization	Diversified retail bank $100+ billion sales $1,000+ billion assets 5,000+ branches 200,000+ employees	Diversified IT systems & services company $20+ billion sales $200+ locations 100,000+ employees	Pharmaceuticals manufacturer $10+ billion sales 10+ manufacturing sites 20,000+ employees
Products covered	Cognos 8, TM1, Series 7	Cognos 8, TM1, Series 7	Cognos 8, TM1, Series 7
AVP FTEs	0.5 AVL, 0.3 AVS	0.5 AVL	0.2 AVL
Named callers	30	10	20
Contracted days	2 AVL onsite days	2 AVL onsite days	2 AVL onsite days
Contract cost/year	$225,000	$150,000	$130,000

Figure 9 (continued)

Profile Installations: Summary

ENTERPRISE CONTENT MANAGEMENT			
INDUSTRY	**Insurance**	**Financial Services**	**Distribution**
Organization	Diversified life insurer $25+ billion sales $500 billion assets 30,000+ employees 5,000+ agents	Diversified banking & financial services company $5 billion sales $100 billion assets 15,000 employees	Automotive distribution & services company $10 billion sales 10+ manufacturing sites 5,000 employees
Products covered	Content Manager, CommonStore for Lotus Domino, InfoSphere eDiscovery Manager	FileNet P8 Application Engine, Business Process Framework, Business Process Manager, Process Analyzer, Process Engine, Process Simulator	FileNet P8 Business Process Framework, Content Manager, Business Process Manager, Content Manager, eForms, Process Analyzer
AVP FTEs	1.0 AVL/AVS	0.15 AVL, 0.2 AVS	0.25 AVL/AVS
Named callers	12	5	5
Contracted days	2 AVL/AVS onsite days	5 AVL onsite days	2 AVL onsite days
Contract cost/year	$400,000	$125,000	$80,000

INFORMATION MANAGEMENT			
INDUSTRY	**Financial Services**	**Retail**	**Insurance**
Organization	Diversified retail bank $100+ billion sales $1,000+ billion assets 5,000+ branches 200,000+ employees	Specialty retailer $45+ billion sales 2,000+ stores 50+ distribution centers 200,000+ employees	Life insurance, annuities & other financial services $20+ billion sales $200+ billion assets 20,000+ employees
Products covered	DB2 for z/OS, DB2 for LUW, BCU, InfoSphere	DB2 for LUW, InfoSphere	DB2 for z/OS, DB2 for LUW
AVP FTEs	0.45 AVL, 0.85 AVS	0.2 AVL, 0.33 AVS	0.6 AVL/AVS
Named callers	30	20	15
Contracted days	18 AVL/AVS on-site days 9 EOS days	10 AVL/AVS on-site days 1 EOS day	8 AVL/AVS onsite days 2 EOS days
Contract cost/year	$500,000	$225,000	$175,000

LOTUS			
INDUSTRY	**Financial Services**	**Insurance**	**Manufacturing**
Organization	Diversified retail bank $70+ billion sales $1,000+ billion assets 5,000+ branches 200,000+ employees	Diversified property & casualty insurer $20+ billion sales $100+ billion assets 30,000+ employees	Industrial manufacturer $25+ billion sales 20 manufacturing, distribution & service centers 10,000+ employees
Products covered	Notes/Domino, Connections, iNotes, Quickr, Sametime,	Notes/Domino, Connections, Quickr, Sametime	Notes/Domino, iNotes, Quickr, Sametime
Number of users	200,000+	50,000+	10,000+
AVP FTEs	1.3 AVL	0.5 AVL	0.33 AVL
Named callers	70	15	5
Contracted days	100 AVL/AVS on-site days Unlimited EOS days	25 AVL/AVS on-site days EOS days as needed	12 AVL onsite days 1 EOS day
Contract cost/year	$600,000	$235,000	$125,000

Figure 9 (continued)

Profile Installations: Summary

RATIONAL			
INDUSTRY	**Financial Services**	**Manufacturing**	**Manufacturing**
Organization	Diversified retail bank $100+ billion sales $1,000+ billion assets 5,000+ branches 200,000+ employees	Communications & network equipment manufacturer $20+ billion sales 20+ manufacturing sites 50,000+ employees	Health care products manufacturer $10+ billion sales 15+ manufacturing sites 30,000+ employees
Products covered	ClearCase, ClearQuest, Rational Application Developer, Rational Software Architect	ClearCase, ClearQuest, DOORS, Rational Application Developer, Rational Software Architect	ClearCase, ClearQuest, DOORS
Number of users	300+	155	60
AVP FTEs	1.0 AVL, 0.33 AVS	0.5 AVS	0.33 AVS
Named callers	10	10	5
Contracted days	10 AVL/AVS on-site days	6 AVL/AVS on-site days 1 EOS day	4 AVL/AVS on-site days 1 EOS day
Contract cost/year	$500,000	$200,000	$135,000
TIVOLI			
INDUSTRY	**Financial Services**	**Government**	**Insurance**
Organization	Diversified retail bank $100+ billion sales $1,000+ billion assets 5,000+ branches 200,000+ employees	State government shared IT services organization supporting 80+ agencies & departments, & 100,000+ employees	Diversified property & casualty insurer $20+ billion sales $100+ billion assets 30,000+ employees
Products covered	Business Systems Manager, Application Dependency Discovery Manager, Composite Application Manager, Configuration Manager, Enterprise Console, License Compliance Manager, Maximo, Monitoring, Omegamon XE, Provisioning Manager, System Automation, Workload Scheduler	Application Dependency Discovery Manager, Business Systems Manager, Composite Application Manager, Configuration Manager, Enterprise Console, Monitoring, Monitoring for Databases, Netcool, NetView, Omegamon XE, Remote Control	Access Manager, Directory Server, Identity Manager, Identity & Access Assurance
AVP FTEs	1.25 AVL, 1.2 AVS	0.33 AVL, 0.25 AVS	0.33 AVL, 0.2 AVS
Named callers	15	5	5
Contracted days	5 AVL/AVS on-site days 1 EOS day	15 AVL/AVS on-site days 1 EOS day	5 AVL/AVS on-site days 2 EOS days
Contract cost/year	$300,000	$200,000	$175,000

Figure 9 (continued)
Profile Installations: Summary

WEBSPHERE			
INDUSTRY	**Financial Services**	**Retail**	**Insurance**
Organization	Diversified retail bank $100+ billion sales $1,000+ billion assets 5,000+ branches 200,000+ employees	General merchandise retailer $50+ billion sales 2,000+ stores 70+ distribution centers 250,000+ employees	Diversified property & casualty insurer $20+ billion sales $100+ billion assets 30,000+ employees
Products covered	Application Server, Business Integration, Customer Center, DataPower, Enterprise Service Bus, Message Broker, MQ, Process Server	Application Server, Business Integration, Extended Deployment, Message Broker, MQ, Portal Server	Application Server, Business Integration, MQ, Process Server
AVP FTEs	1.5 AVL, 4.75 AVS	1.5 AVL, 1.5 AVS	1.5 AVL/AVS
Named callers	120	35	25
Contracted days	22 AVL/AVS on-site days 5 EOS days (0 used)	15 AVL/AVS on-site days 4 EOS days (0 used)	12 AVL/AVS on-site days 2 EOS days (0 used)
Contract cost/year	$650,000	$325,000	$200,000

Figure 10

Profile Installations: Returns

BUSINESS ANALYTICS			
INDUSTRY	**Financial Services**	**IT Services**	**Pharmaceuticals**
AVP staff	124,089	77,858	31,143
Informational & other services	22,043	16,793	14,543
Productivity savings	264,446	93,660	112,284
Risk avoidance savings	1,483,908	644,546	307,571
TOTAL ($)	**1,894,486**	**832,857**	**465,541**

ENTERPRISE CONTENT MANAGEMENT			
INDUSTRY	**Insurance**	**Financial Services**	**Distribution**
AVP staff	129,911	46,344	35,221
Informational & other services	49,080	20,588	19,399
Productivity savings	138,531	36,764	15,795
Risk avoidance savings	820,350	317,310	243,247
TOTAL ($)	**1,137,872**	**421,006**	**313,662**

INFORMATION MANAGEMENT			
INDUSTRY	**Financial Services**	**Retail**	**Insurance**
AVP staff	177,515	75,707	84,531
Informational & other services	66,225	35,925	25,425
Productivity savings	1,291,076	334,296	227,586
Risk avoidance savings	2,224,872	504,723	475,001
TOTAL ($)	**3,759,688**	**950,651**	**812,543**

LOTUS			
INDUSTRY	**Financial Services**	**Insurance**	**Manufacturing**
AVP staff	227,641	85,273	46,492
Informational & other services	76,193	33,293	31,493
Productivity savings	549,481	77,036	22,014
Risk avoidance savings	1,230,345	169,625	31,644
TOTAL ($)	**2,083,660**	**365,227**	**131,643**

RATIONAL			
INDUSTRY	**Financial Services**	**Manufacturing**	**Manufacturing**
AVP staff	217,037	63,028	41,598
Informational & other services	32,993	27,293	23,543
Productivity savings	1,357,258	603,480	190,121
Risk avoidance savings	1,361,409	357,956	444,450
TOTAL ($)	**2,968,697**	**1,051,757**	**699,712**

TIVOLI			
INDUSTRY	**Financial Services**	**Government**	**Insurance**
AVP staff	364,447	82,900	71,703
Informational & other services	38,543	34,043	25,343
Productivity savings	328,762	134,528	82,224
Risk avoidance savings	1,203,826	750,111	157,032
TOTAL ($)	**1,935,578**	**1,001,582**	**336,302**

WEBSPHERE			
INDUSTRY	**Financial Services**	**Retail**	**Insurance**
AVP staff	876,824	444,900	211,328
Informational & other services	36,743	23,243	32,993
Productivity savings	3,135,974	1,122,162	404,201
Risk avoidance savings	986,929	1,210,786	485,299
TOTAL ($)	**5,036,470**	**2,801,091**	**1,133,821**

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