
AMP SYDNEY, AUSTRALIA

ASIA/PACIFIC EXCELLENCE AWARDS: IMAGING, MERIT

EXECUTIVE SUMMARY:

One of Australia's oldest and most respected financial institutions, AMP is Australia's leading provider of retirement savings products and services to the corporate and industry superannuation market, with more than 2.5 million fund members and SAUD8, 560 million in assets under management by the end of 1996.

Despite its market leadership, AMP is facing a rapidly changing business environment that could well challenge the its position as market leader.

Legislative changes, increased competition within the financial sector, the changing needs of customers, rapidly evolving technology and the globalization of the finance market are driving the demand for improved customer service through more efficient processing procedures, easier access to information, and education and decision support on choices for customers.

AMP has responded to this demand by embarking on a comprehensive business solution program involving business process re-engineering and the design and implementation of enabling information technology supporting the new process architecture and new work organization.

The strategic plan behind this solution identified several strategic themes the business should adopt. These themes are:

- maintain market leadership in core markets
- expand into new market opportunities
- provide value added products and services to customers
- create a retirement savings product design center of excellence
- create a 'Transaction and Service Management Center of Excellence'.

Named the Plan Administration Strategy, the business solution program involves approximately 80 people, including AMP staff, Andersen Consulting staff through the AMPlus initiative, and a number of contractors, it represents an investment of more than SAUD18 million over two years.

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The Plan Administration Strategy has the following objectives:

- to deliver the technology and business processes to significantly improve the administration of defined benefit, hybrid and complex accumulation retirement savings plans,
- to establish new roles focusing on customer service delivery and specialist administration and support,
- to deliver a solution that will enable AMP to operate with a significantly lower cost base while delivering superior levels of service to employers, trustees and members,
- to position AMP to attract desirable new business domestically, with the capability to 'drive' into Asia through a packaged 'Administration and Member Services' offering,
- to allow AMP to realize, through redesign and automation of core administration processes, a service excellence culture,
- To use advanced information and communication technologies to significantly reduce manual effort and elapsed time for day-to-day processing.

To meet these objectives, changes in the areas of technology, business processes, human resources and general organization are required.

The information technology platform (Technical Architecture Project) designed to support the 'new work organization' consists of three tier architecture integrating a number of technology types. The most pervasive and critical to the delivery of the business strategy is workflow for which Eastman Software's OPEN/workflow was selected. Eastman Software's OPEN/image was also selected to address the imaging needs of the solution.

The rollout of the information technology platform will occur according to a four-release strategy, of which Release 1 was completed on time and on budget on 31 May 1997.

This release involved the implementation of new business processes using workflow and imaging (originally installed late January 1997), reporting and record keeping technology to deliver the basic business processes of the Plan Administration Strategy. The impact of Release 1 on productivity and service levels benefits was outstanding, realizing a total annual saving of \$AUD4.9 million equating to a 42 per cent productivity improvement.

Releases 2 and 3 will see the enhancement of the Release 1 technology and process architecture through the introduction of web based technology. The front end to workflow and imaging will use web technology. Web technology will also be used for electronic commerce and to deliver multiple access channels to external audiences and improve the flow and access of information for administrators and account managers.

At the completion of the Plan Administration Strategy, the technology infrastructure will have surpassed the current service needs of AMP 's corporate superannuation clients, moving the organization to the enviable position of not only meeting, but also shaping the

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future of the Australian retirement savings marketplace.

AMPlus is a joint initiative between Andersen Consulting and the AMP Group. An AMP business unit, AMPlus supports current applications throughout the group and supplies skills, resources and architecture to business solution programs. Business solution programs are large, strategic, IT-enabled change programs, which have a strong influence on the strategic development of AMP.

THE SYSTEM APPLICATION.

The Plan Administration Strategy Technical Architecture Project combines a broad number of technologies to deliver a seamless interface for improved client service to both internal (administrators and client service officers) and external (trustees, employers and superannuation fund members) users.

According to AMP this platform will enable the organization's drive to strengthen its core administration capabilities and build support for enhanced services. This will be achieved through the delivery of the process architecture resulting from the business process re-engineering project undertaken by AMP .

The business processes supported by the information technology system are:

- new entrant processing
- contribution processing
- balance inquiries/quotes
- benefit payments processing
- funds review processing
- modification of member details
- fund level processing
- fund changes
- planning and management
- trustee/employer processing
- Audit.

More specifically, however, the information technology platform will deliver the following features and benefits:

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TABLE 1: Technical Architecture Project—Features & Deliverables

FEATURES	DELIVERABLES
More efficient core administration processing	<ul style="list-style-type: none"> • full automation of core processes • direct capturing of data from payroll where possible • development of submission tools for smaller employers • workflow and imaging for controlled flow of work
Better service for employers and trustees	<ul style="list-style-type: none"> • separation of employer/trustee service from core administration • processing to give better focus • online information for employer/trustee services staff to minimize handoffs
easy access to information for employers and trustees	<ul style="list-style-type: none"> • online access to member details and fund information through a workbench • online reporting of compliance with service standards using workflow • online performance support for employers • online access to individual member workflow cases
more responsive service members	<ul style="list-style-type: none"> • separation of member services from core for administration processing • online information for member services staff to minimize handoffs
easy direct access for employers, trustees and members to information	<ul style="list-style-type: none"> • call center • voice response • workplace kiosks • in the future, Internet

To be delivered over two years in a four-release strategy, Release 1 delivered core components of Plan Administration Strategy. This included the Eastman software OPEN/workflow and OPEN/image workflow and imaging component, the custom built reporting function and the tailored Superb 2000 record-keeping platform. IBM MQ Series messaging system is used as the interfacing technology between these applications.

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Specifically, Release 1, and namely the workflow component has been used by AMP to facilitate the role of administrators and account managers to deliver the following features and benefits:

TABLE 2: Release 1 Workflow Components—Features & Deliverables

Features	Deliverables
integration of core record keeping system	<ul style="list-style-type: none"> • improved tracking of work • faster completion of tasks • more accurate statistics on work processed and service standards
automated routing of all documents	<ul style="list-style-type: none"> • more efficient processing • reduction in lost documentation • simultaneous viewing by multiple users
processes defined by coding rules	<ul style="list-style-type: none"> • consistency and compliance with defined processes
online access to historical records	<ul style="list-style-type: none"> • fast retrieval of past records including all correspondence

Imaging and workflow technology will also assist AMP to transcend geographical boundaries through workload balancing. From Release 2, work will be transferred between Melbourne and Sydney for processing, smoothing out workload peaks and troughs. Through the implementation of web technology, the system will operate like an extra net, enabling staff and clients to enter the system via a browser, from any location.

Release 1 also involved the installation of workbenches at two client sites—Honeywell and John Fairfax. The workbenches have enabled these clients to deposit information directly onto the workflow queue for automatic processing. The workbenches allow employers and trustees to interface directly with AMP electronically, cutting down on administration entailed in paper forms, EDI or in disk format. During later releases, the workbench will deliver online access to performance reports, member records and images for trustees.

Release 2 will deliver employer and trustee extra net access to:

- scanned images
- printed reports
- payroll submissions
- electronic forms for member updates, benefit payments, contributions and new members
- member record details

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- their own work queue for error corrections
- workflow case details for individual members
- online performance support
- Online modeling of retirement savings benefits.

In addition later releases will deliver significant service benefits to members through multiple access channels such as workplace kiosks for balance information and ‘what if’ modeling, a call center for member inquiries, voice response for balance inquiries and Internet access for members.

THE KEY MOTIVATIONS BEHIND THE SYSTEM

AMP is facing a rapidly changing financial service marketplace, where customers are demanding improved levels of customer service from finance organizations.

As part of its strategic business review, AMP identified the need for the superannuation business to adopt a number of strategic themes. These themes are:

- Maintain market leadership in core markets
- Expand into new market opportunities
- Provide value-added products and services to customers
- Create a product design center of excellence
- Create a ‘Transaction and Service Management Center of Excellence’.

The technology Technical Architecture Project was developed to deliver the process architecture defined by the business process re-engineering strategy adopted to address these themes. Specifically, the information technology platform will deliver the features and deliverables as noted in TABLE 1: Technical Architecture Project—Features & Deliverables.

Various components of the information technology platform were selected due to their ability to deliver the TABLE 1 capabilities and integrate with the other technologies being implemented.

Workflow formed the basis of the information handling capabilities of the core administration processing system and middle tiers of the Plan Administration Strategy. Eastman Software’s OPEN/workflow was selected as the workflow application of choice given its proven track record on large corporate retirement savings sites such as Telstra Super and AMP’s familiarity with the products (two other Eastman Software sites exist within the AMP Group).

The inherent features of the software, however, were the main drivers behind its selection. Eastman Software workflow and imaging products offered scalability and performance through

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their open architecture, flexible client options, support for industry standard databases, integration with popular network operating systems and transport protocols and use of standard DDE and OLE interfaces for application integration.

THE CURRENT SYSTEM CONFIGURATION.

Sites	Release 1 1 Administration Processing Center (Sydney) consisting of 4 administrators and 2 account managers 2 external workbench client sites (Honeywell and John Fairfax)	
	Releases 2, 3 & 4 2 Administration Processing Centers (Sydney and Melbourne) consisting of 130 administrators and 29 account managers, 5 internal user locations (Sydney, Melbourne, Adelaide, Perth, and Brisbane) >500 external workbench client sites	
Image Systems:	Eastern OPEN/image v.3.05 and Eastern Software	OPEN/workflow v.3.05 running on Windows NT
Volumes:	The following volumes are handled on an annual basis:	
	New entrants	47,800
	Member detail modification	25,100
	Regular contributors	350
	Irregular contributions	25,800
	Queries	3,600
	Benefit payments	35,300
	Fund reviews	229
	Fund level processing	279
	Fund changes	1,268
	TOTAL ANNUAL VOLUME	136,756
Operations:	Release 1 7:30am - 5:00pm Monday to Saturday - administrators 7:00am - 5:00pm Monday to Friday - clients Release 2 Web technology enabling 24 hour, 7 day week access to information for trustees, employers and members	
Scanners*	Release 1 One Fujitsu scanner	
Workstations*	Release 1 5 x HP Vectra Pentium 331 32Mb RAM	
Monitors**	Release 1 5 x dual HP monitors	

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Fax Gateways:	To be implemented Release 1
Image Server:	HP LH 256 Mb RAM, 16Gb RAID 5, running Windows NT
Printers*:	Release 1 3 x HP 55L
LAN:	Windows NT
Communications:	16Mb token ring client/server
Record keeping:	Release 1 Support 2000/open v.2.1.2 on UNIX
	Release 2 Chassis II running on AS 400
Accounting:	JD Edwards v 7.1 running on AS 400
Reporting:	Custom built in Visual Basic 5 running on Windows NT
Electronic customer service:	Custom built Visual Basic 5 and fully integrated with record keeping and workflow running on Windows NT
Messaging:	IBM MQ Series running on Windows NT and UNIX
Performance Support:	Custom built using PowerHelp
Tools platforms:	The solution integrates Windows NT, Unix and AS 400 technology platforms.

* These numbers will increase after Release 2.

IMPACT TO THE COMPANY

Cost savings

Since the installation and completion of the Release 1, significant cost savings and increased revenues have been realized across a number of process groups. AMP attributed these savings and increased revenues to process compliance enabled by workflow across almost all process groups. The impact of release1 on productivity and service levels benefits was outstanding, realizing an expected total annual savings of SAUD4.9 million equating 42 percent productivity improvement, as detailed in the chart below.

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TABLE 3: Productivity and Return on Investment Data

Program/Driver	Type	GIC		MIP			Savings (\$'000)	Total % Savings
		Volume	Investment (\$'000)	Type	Volume	Investment (\$'000)		
New Loans	25 items	47,890	910	2.5 years	47,890	70	642	82%
Ready Member Dishes	22 items	20,100	67	1 year	20,100	51	467	82%
Regular Contributions	2114	298	35	40 years	320	36	38	63%
Regular Contributions	20 items	20,900	715	25 years	20,900	205	357	46%
Contributions	18 items	8,400	27	1 year	8,400	17	80	87%
Special Payments	40 items	50,300	1,708	1.5-30 years	28,000	285	692	70%
Special Renewal	164 items	270	2,810	25-30 years	270	1,495	636	78%
Emergency 30%	-	-	1,000	-	-	642	224	64%
Special 30% (Mortgage)	30 items	270	310	21 years	270	182	194	51%
Special 30% (Savings)	200 items	270	7,260	17 years	270	1,838	152	84%
Special 30% (Savings)	-	-	250	-	-	382	167	70%
Special 30% (Savings)	-	-	200	-	-	274	48	15%
Special 30% (Savings)	-	-	2,046	-	-	1,517	1,120	42%
			13,475			8,571	4,504	42%

TABLE 4: Major drivers for savings—Features & Deliverables:

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PRODUCTIVITY IMPROVEMENTS

Since the installation and completion of Release 1, significant productivity improvements have been realized across a number of process groups. Reference TABLE 3: Productivity and Return on Investment Data, which details the productivity and ROI made possible by the following major drivers for productivity improvements in the system design.

TABLE 5: Major drivers for productivity improvements

Features	Deliverables
accurate and up-to-date member accounts achieved	<ul style="list-style-type: none"> • accurate benefit specifications • real time fund level processing • real time contribution processing • data filtering • controlled application of global changes (e.g. legislative changes)
automated transmission and application of majority of high volume transactions	
reengineered processes	<ul style="list-style-type: none"> • minimized hand-offs and checking • reengineered initiation of work • reengineered distribution of customer correspondence • reengineered correction of errors with clients • new procedures e.g. global changes and quality audit

COMPETITIVE ADVANTAGE.

Despite its position as the retirement savings market leader, AMP was limited by its existing systems. These systems were predominantly paper-based, manual systems which delayed the processing of administrative tasks.

These systems also limited the flexibility of the system and were only able to address fundamental customer service requirements.

The comprehensive business process reengineering activity undertaken by AMP has resulted in the re-development of the division's business. Enabled by a range of technologies to be implemented over a four-release period, AMP is already delivering substantially improved customer service.

Through the implementation of the workflow capability in Release 1, considerable customer service improvements have already been delivered. The development of the workflow process to meet the technology criteria of each release of the Plan Administration Strategy sets a precedent in both workflow and technology terms for the retirement savings industry.

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The ability to deliver the following services to trustees, employers and members with minimal client investment sets AMP ahead of the marketplace. AMP has dedicated a total investment of SAUD18 million over 2 years that will set a new standard on customer service with the Australian retirement savings market place. Reference TABLE 1: Technical Architecture Project—Features & Deliverables—for additional details.

Given the savings and productivity improvements already delivered through Release 1 of the Plan Administration Strategy, AMP is predicting the significant growth in new clients and members.

In addition to the ability to meet current needs of customers, the Plan Administration Strategy has also taken into account the future needs of clients. The messaging system interfacing between the technologies used for the Plan Administration Strategy allows replacement of components with minimal impact on the rest of the system. This will allow AMP to react quickly to changes in technology or business requirements.

THE IMPLEMENTATION PROCESS AND METHODOLOGY

The Plan Administration Strategy is essentially a business process re-engineering and change management project designed to develop the business processes and enabling technology infrastructure (Technical Architecture Project) to meet the current and future needs of clients.

Over the life of the two year business solution program, the Plan Administration Strategy will involve a project team of approximately 80 people, including AMP staff, Andersen Consulting staff through the AMPlus initiative, and a number of specialist contractors. These contractors will work with the permanent team to deliver expertise for the key technologies employed during the project. Eastman Software, for example, have contracted a workflow and imaging specialist to the team to assist with the development of the workflow and imaging components of each release of the technology platform.

The business process reengineering phase was split into two stages: the high level conceptual design and detailed process design, to create the guiding principles to ensure the consistency and thoroughness for all reengineered processes.

The high level design created a conceptual model of the 'to-be' process. Baseline data was gathered to ensure that essential rules and policies were carried forward into the new processes.

The detailed process design filled out the high level conceptual design into a completed model of new business processes.

The analysis of AMP identified a small number of high-level process groups and a large number of individual processes. For manageability the business process re-engineering effort was broken down into business process reengineering units of work.

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What ensued was a complex and rigorous business process reengineering exercise where all the business processes of AMP were analyzed and reengineered to align these activities to deliver the strategic business themes of:

- Maintaining market leadership in core markets
- Expanding into new market opportunities
- Providing value added products and services to customers
- Create a product design center of excellence
- Create a 'Transaction and Service Management Center of Excellence'.

The technology platform developed to enable the implementation of the new business processes involved a four-release plan, each with defined deliverables.

Release 1: Installed in January 1997 was completed on time and on budget 31 May 1997 delivering \$AUD4.9 million in savings and 42 percent gains in productivity reference TABLE 3: Productivity and Return on Investment. Release 1 delivered the core components of the Plan Administration Strategy that delivered immediate customer service and productivity benefits. The information technology released at this stage included the Eastman Software Workflow for NT Server and Eastman Software Image for NT Server components, the custom built reporting function and the tailored Superb 2000 record-keeping platform. Interfacing with all of this technology is the IBM MQ messaging system.

Interactive customer access was established with the launch of workbenches at the Honeywell and John Fairfax customer sites. These workbenches enabled customers to upload payroll data to the system where it is automatically validated and processed to Superb 2000 if there are no errors. Validation issues automatically generated workflow items for AMP staff.

The workflow component is integrated with Superb 2000 via one-directional communication where information about finished work tasks and updates on the queue status occur via workflow.

Release 2: was scheduled for completion in December 1997. The emphasis of this release will be on developing an Extranet-based architecture to deliver a browser front end for both internal and external users. This will use an extensive range of Microsoft's recently released Internet products including Internet Information Server, Active/X components, FrontPage and Interdev as development and authoring tools and Active Server Pages as the mechanism for building dynamic web pages. Visual C++ and Visual Basic Version 5 are the development languages.

The workflow application will be modified to provide additional metrics-based performance reports and direct interaction with the record keeping function (Superb 2000). The Workflow Administration client will be modified to provide HTML based functionality

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and a more consistent, intuitive interface for enhanced usability for internal and external users. Electronic Commerce Data Entry Form client application will be enhanced to provide additional functionality based on browser based applications.

At this stage the additional access channels, including work place kiosks and call centers, will be completed and available for employers, trustees and members.

Release 3, to be delivered by 30 June 1998, will see the introduction of further enhancements to the core processing engine (consisting of product processing/record keeping and operations processing) for the introduction of a second record-keeping platform (Ultimaas II) for master trusts and similar products. This will support complex accumulation of retirement savings plans and complex member investment choice.

Workflow will be fully incorporated with core record keeping and the application interaction to Galaxy (AMP's record keeping system) will be enhanced to allow the conversion team to transfer member information to their conversion application suite. At this stage further access channels such as interactive voice response and Internet access will be implemented.

Release 4, to be delivered 31 October 1998, is aimed at finally replacing the Galaxy corporate linking functions and maximizing the efficiency and productivity of the people and processes as experience deepens. The resulting system should have no dependence, on AMP's Galaxy General Ledger system and little or no connection to the IBM 3090 mainframe.

OVERALL TECHNOLOGICAL INNOVATION.

The overall technology innovation of AMP involves the development of an administration platform that redefines service delivery in the Australian retirement savings market.

The Plan Administration Strategy is innovative in its use of technology bringing together a number of different types of technology to form a cohesive solution that interfaces seamlessly delivering a wide range of functionality to different groups of users. With Release 1 already in place, future releases of the technology will further enhance AMP's service capabilities and ensure its position at the leading edge of service delivery.

A key objective for the Technical Architecture Project within the Plan Administration Strategy is to deliver the technology platform as a solid enabler to deliver the final Technical Architecture Project business solution. The following objectives were identified as the guiding principles for the architectural work within the program:

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TABLE 6: Guiding Principles for the Architectural Work

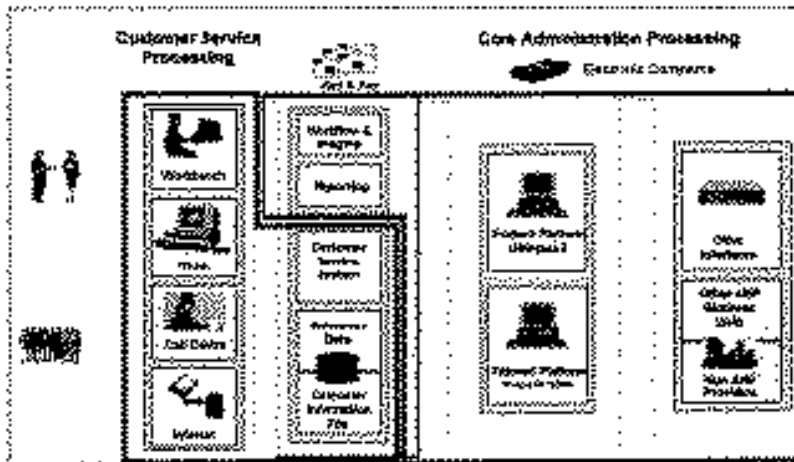
Features	Deliverables
task adequacy	The technical architecture has to support AMP's business direction and should therefore be in accordance with existing business directions
isolation	The architectural components will be structured in a way that any application or hardware component can be exchanged or replaced with minimal impact on other applications or hardware components.
flexibility	The architecture needs to assure that the final solution will be flexible and scalable to allow for future business growth. Additional components—like new delivery channels or other outcomes of the Release 5 planning initiatives—need to be able to be integrated without major effort or disruption to the running business
maintainability	A solid architectural framework based on proven methodologies must demonstrate that the various components of the final distributed solution will be delivered according to specifications, documented appropriately and implemented in a way which is easy to maintain for the future
robustness	It has to be assured that the final architecture will be robust enough to deliver the business case results without major implementation problems for initial conversions of plans and without major architecture based downtimes and business disruptions
reusability	Application components, methodologies and standards created, as part of the technical architecture effort should be designed for reusability across multiple systems. The Plan Administration Strategy will retain and leverage existing investment, where appropriate, and on the other side deliver reusable components for AMP, which potentially will be taken up by the AMPplus initiative

The resulting technology platform is divided into three tiers: customer services, core administration processing and middle tier. This architecture design delivers improved system performance.

Individual components 'talk' to each other using messaging software, standardizing the interface between components enabling AMP to add or replace obsolete components easily.

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Plan Administration Strategy technology platform



Customer service tier

The customer service tier comprises multiple access channels for employers, trustees and members linked to an intelligent customer service system.

The access channels include:

- Workbenches to provide online access to performance reports, member records and image for employers and trustees,
- Workplace kiosks to provide access to benefit quotations, education and decision support for members,
- A call center to provide access to benefit quotations, decision support and general help to members,
- Interactive voice response system to provide access to benefit quotations for members,
- The Internet to provide accesses to education and decision support. When security issues are resolved, provision of transactions such as benefit quotations and fund switches for members from home.

These channels are linked to an intelligent customer service system which stores a complete history of member contacts including telephone conversations, images of letters, review advises, checks and forms. An intuitive interface provides fast and easy access to this historical information.

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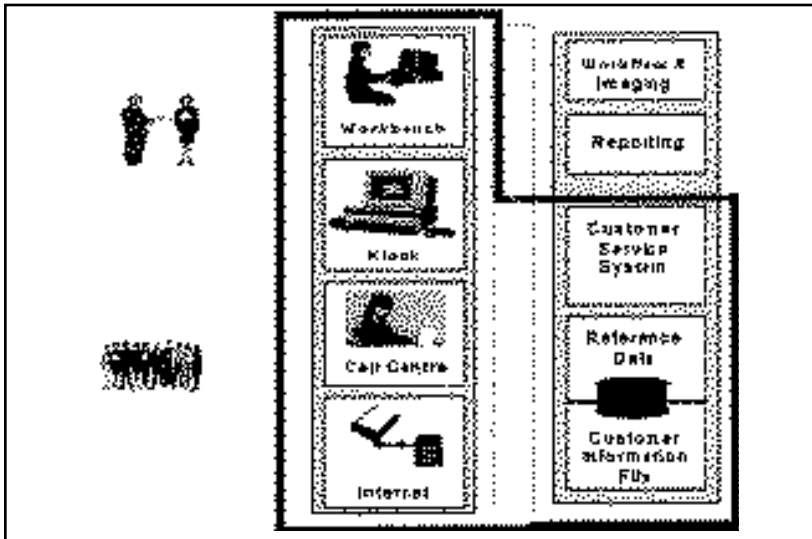
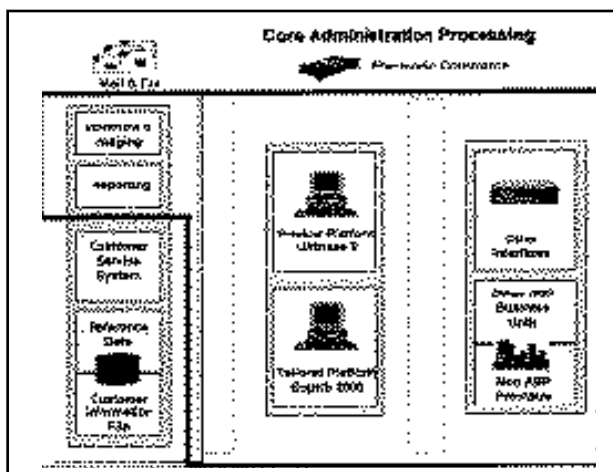


TABLE 6: Customer Service Access Channels & Technology

Workbench	Custom built in Visual Basic 5 using web technology
Workplace kiosk	Custom built in Visual Basic 5 using web technology
Call center	NBL NEX / 436 PABX with NBL UNIX-based ACD software
IYR	IBM Direct Talk
Internet	Microsoft Internet Information Server family of products

Core administration tier

The core administration tier comprises record keeping, accounting, reporting and electronic commerce systems linked to workflow and imaging.



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Record keeping

There are two record keeping systems:

- A tailored system for complex defined benefit and accumulation plans
- A 'product' system for simple master trusts and other similar accumulation products.

These systems provide a scalable solution enabling AMPCASS (AMP 's employee benefits consultant) to administer small corporate plans through to large corporate, public sector and master trusts plans on a single integrated platform.

Electronic commerce

The integrated approach to electronic commerce accommodates clients with multiple payroll systems and combination of data entry.

Key Electronic Commerce features are:

- Centralized validation against record keeping system with customized responses
- Web browser based workbench
- Full integration with administration processes
- Variable levels of authorization and validation

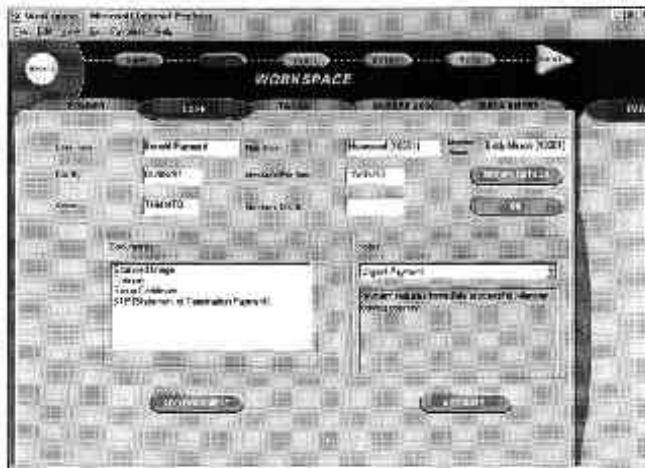
Workflow and imaging

Workflow and imaging allow AMP to create a paperless office environment in which cases can be traced and performance against service standards monitored automatically. Completed cases are archived together with images of any incoming and outgoing mail, advice notices and checks. This information is available online and can be accessed using customer service components.

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TABLE 8: Workflow System Key Features and Deliverables:

Features	Deliverables
integration of core record keeping system	<ul style="list-style-type: none"> • improved tracking of work • faster completion of tasks • more accurate statistics on work processed and service standards
automated routing of all documents	<ul style="list-style-type: none"> • more efficient processing • reduction in the lost documentation • simultaneous viewing by multiple users
processes defined by routing rules	<ul style="list-style-type: none"> • consistency and compliance with defined processes
employer access to workflow systems on-site	<ul style="list-style-type: none"> • the ability to see full case details online • online access service standard statistics
online access to historical records	<ul style="list-style-type: none"> • fast retrieval of past records including all correspondence



SCREEN 1: Screen grab from workbench workflow front-end to be introduced at Release 2.

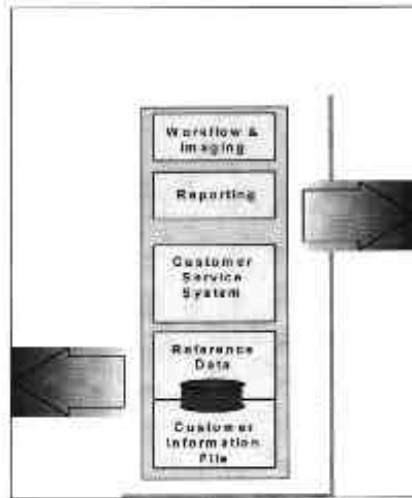
TABLE 9: Technology components

Record keeping	Superb 2000 (tailored system) v.2.4.2 Ultrasas II ('product' system custom built in Lotus)
Accounting	JED Edwards v. 7.73
Reporting	Custom built Visual Basic 5
Electronic Commerce	Custom built in Visual Basic 5 and fully integrated with record keeping and workflow
Workflow and imaging	Eastman Software OPEN/workflow v.3.05 Eastman Software OPEN/image v.3.05

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Middle tier

The customer service systems and core administration processing 'talk' to each other through middle tier using messaging software. Basic member data and account balances are regularly uploaded to a customer information file, which also holds the member contact history.



The advantages of this Mid-tier approach are:

- Real time customer service processing is isolated from batch core administration processing for improved system performance
- Customer service systems can access record keeping in real time if required to resolve a detailed inquiry
- New or obsolete components of the system can be easily replaced
- It provides a standard method for interfacing with other AMP business units (such as AMP Investments) and external providers.

Process support

The middle tier also includes process support components such as performance support for clients, administrators and other staff. Metrics-based performance support is available online and contains details of process flows, benefit designs for all funds as well as more general information on retirement savings.

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TABLE 10: Middle Tier Technology components

The solution integrates Windows NT, UNIX and AS 400 and the IBM MQ Series technology platforms	
Messaging	IBM MQ Series
Performance Support	Custom built using Robo Help
Windows NT	Customer service components, messaging, performance support, reporting and workflow and imaging
Unix	Superb 2000
AS 400	ED Edwards, Ultraacs II

This structure allows basic member data and account balance to be regularly uploaded to customer information files which hold contact history. The new administration system will also allow 'plug and play' replacement of record keeping and other core processing systems and a single mechanism for talking to other AMP business units and non-AMP providers.

The overall business innovation

To address the changing financial services marketplace and the needs of its customers, AMP conducted a comprehensive business solution program involving business process re-engineering and the design and implementation of enabling information technology supporting the new process architecture.

The strategic plan behind this solution identified several strategic themes the business should adopt. These themes are:

- maintain market leadership in core markets
- expand into new market opportunities
- provide value added products and services to customers
- create a product design center of excellence
- Create a 'Transaction and Service Management Center of Excellence'.

The Plan Administration Strategy has defined the Target Administration Model to provide the vision of the future-operating model for the AMP business. It focuses on marketing more extensive use of automation in administration processing and on developing and delivering the required capabilities to effectively service members, employers and trustees.

- The Plan Administration Strategy program has the following business objectives:

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- to deliver the technology and business processes to significantly improve the
- administration of defined benefit, hybrid and complex accumulation plans,
- to establish new roles focusing on customer service delivery and specialist
- administration and support,
- to deliver a solution that will enable AMP to operate with a significantly lower
- cost base while delivering superior levels of service to employers, trustees and
- members,
- to position AMP to attract desirable new business domestically, with the capability
- to 'drive' into Asia through a packaged 'Administration and Member Services'
- offering,
- to allow AMP to realize, through re-design and automation of core administration
- processes, the establishment of a service excellence culture,
- to use advanced information and communication technologies to significantly
- Reduce manual effort and elapsed time for day-to-day processing.

To meet these objectives, changes in the areas of technology, business processes as well as human resources and general organization are required. The initial implementation of Releases 1-4 focuses on policy and administration business.

The technology infrastructure currently under development supports this business objective. Already, through the introduction of Release 1 technology, namely workflow technology, significant business benefits have already been realized, such as cost savings of 42 percent equating to \$AUD4.9 million annually. Innovations and business benefits derived through Release 1 are: (Reference TABLE 5: Major drivers for productivity improvements)

Future technology releases will deliver the following business benefits:

- multiple access channels such as workbenches for on-line access to information and reports, workplace kiosks for balance information and 'what if' modeling, a call center for member inquiries, voice response for balance inquiries and Internet access for members.
- intelligent customer service that 'knows the customer' by bringing together complete contact history, life event recognition and reference data
- defined benefit and accumulation capability
- scalable solution with capacity to handle small corporate customers through to large industry funds
- workflow and imaging to create a 'paperless office'

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- high quality reporting capability
- customer services and core administration processing 'talk' to each other through a middle tier.

At the completion of the Plan Administration Strategy, the technology infrastructure will have surpassed the current service needs of AMP 's clients, moving the organization to the enviable position of not only meeting, but also shaping the future of the Australian retirement savings marketplace.

INNOVATION

Innovative use of technology to further strategic objectives.

- Degree of complexity in the underlying business process and IT architecture

The Plan Administration Strategy is essentially a business process reengineering and change management project designed to develop the business processes and enabling technology infrastructure to meet the current and future needs of AMP 's clients.

The business process reengineering phase was split into two stages: the high level conceptual design and detailed process design, to create the guiding principles to ensure the consistency and thoroughness for all reengineered processes.

The high level design created a conceptual model of the 'to-be' process. Baseline data were gathered to ensure that essential rules and policies were carried forward into the new processes. The detailed process design filled out the high level conceptual design into a completed model of new business processes.

The analysis of AMP identified a small number of high-level process groups and a large number of individual processes. For manageability the business process reengineering effort was broken down into business process reengineering units of work.

When considering the implementation of the information technology platform (Technical Architecture Project) designed to support the 'new work organization' based on the process architecture derived from the business process reengineering phase; AMP assembled all of the processes within the scope of the release.

Liaison between all of the business units and software vendors occurred to identify the process groups or processes not identified. The related processes were then broken into 'Units of Work' and these were then divided into 'Process Groups' The process groups redesigned and addressed through the implementation of enabling technology in Release 1 include:

- New entrant processing
- Contribution processing

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- Balance inquiries/quotes
- Benefit payments processing
- Funds review processing
- Modification of member details
- Fund level processing
- Fund changes
- Planning and management
- Trustee/employer processing
- Audit.

The level of complexity achieved during the business process reengineering project was quite considerable with process catalogues developed for each of the process groups and units of work within these process groups.

The key objective for the Technical Architecture Project within the Plan Administration Strategy is to deliver the technology platform as the enabler for the final Technical Architecture Project business solution. The following objectives were identified as the guiding principles for the architectural work within the program:

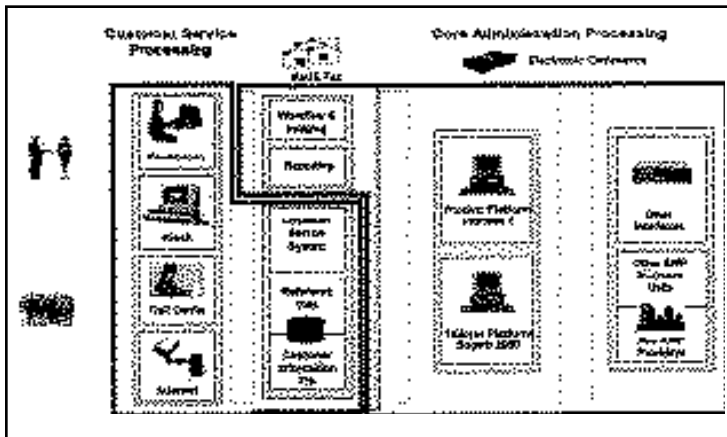
- Task adequacy—the technical architecture has to support AMP 's business direction and should therefore be in accordance with existing business directions.
- Insulation—the architectural components will be structured in a way that any application or hardware component can be exchanged or replaced with minimal impact on other applications or hardware components.
- Flexibility—the architecture needs to assure that the final solution will be flexible and scalable to allow for future business growth. Additional components—like new delivery channels or other outcomes of the Release 5 planning initiatives—need to be able to be integrated without major effort or disruption to the running business.
- Maintainability—a solid architectural framework based on proven methodologies must demonstrate that the various components of the final distributed solution will be delivered according to specifications, documented appropriately and implemented in a way which is easy to maintain for the future.
- Robustness—it has to be assured that the final architecture will be robust enough to deliver the business case results without major implementation problems for initial conversions of plans and without major architecture based downtimes and business disruptions.
- Reusability—application components, methodologies and standards created as part of the technical architecture effort should be designed for reusability across multiple

EXCELLENCE IN PRACTICE

systems. The Plan Administration Strategy will retain and leverage existing investment, where appropriate, and on the other side deliver reusable components for AMP, which potentially will be taken up by the AMPlus initiative.

The resulting technology platform is divided into three tiers: customer services, core administration processing and middle tier. This architecture design delivers improved system performance.

Individual components 'talk' to each other using messaging software, standardizing the interface between components enabling AMP to add or replace obsolete components easily.



This structure allows basic member data and account balances regularly uploaded to customer information files, which holds contact history. The new administration system will also allow 'plug and play' replacement of record keeping and other core processing systems and a single mechanism for talking to other AMP business units and non-AMP providers.

Customer service tier

The customer service tier comprises multiple access channels for employers, trustees and members linked to an intelligent customer service system.

The access channels include:

- Workbenches to provide online access to performance reports, member records and image for employers and trustees,
- Workplace kiosks to provide access to benefit quotations, education and decision support for members,
- A call center to provide access to benefit quotations, decision support and general help to members,

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- Interactive voice response system to provide access to benefit quotations for members,
- The Internet to provide accesses to education and decision support. When security issues are resolved, provision of transactions such as benefit quotations and fund switches for members from home.

These channels are linked to an intelligent customer service system which stores a complete history of member contacts including telephone conversations, images of letters, review advises, checks and forms. An intuitive interface provides fast and easy access to this historical information.

Core administration tier

The core administration tier comprises record keeping, accounting, reporting and electronic commerce systems linked to workflow and imaging.

Record keeping

There are two record keeping systems:

- A tailored system for complex defined benefit and accumulation plans
- A 'product' system for simple master trust and other similar accumulation products.

These systems provide a scalable solution enabling AMPCASS (AMP's employee benefits consultancy) to administer small corporate plans through to large corporate, public sector and master trust plans on a single integrated platform.

Electronic commerce

The integrated approach to electronic commerce accommodates clients with multiple payroll systems and combination of data entry.

Key features are:

- Centralized validation against record keeping system with customized responses
- Web browser based workbench
- Full integration with administration processes
- Variable levels of authorization and validation

EXCELLENCE IN PRACTICE

Workflow and imaging

Workflow and imaging allow AMP to create a paperless office environment in which cases can be traced and performance against service standards monitored automatically. Completed cases are archived together with images of any incoming and outgoing mail, advice notices and checks. This information is available online and can be accessed using customer service components.

Key features and benefits of these features include:

Features	Deliverables
integration of core record keeping systems	<ul style="list-style-type: none"> • improved tracking of work • faster completion of tasks • more accurate statistics on work processed and service standards
automated routing of all documents	<ul style="list-style-type: none"> • more efficient processing • reduction in the lost documentation • simultaneous viewing by multiple users
processes defined by routing rules	<ul style="list-style-type: none"> • consistency and compliance with defined processes
employer access to workflow system on-site	<ul style="list-style-type: none"> • the ability to see full case details online • online access service standard statistics
online access to historical records	<ul style="list-style-type: none"> • fast retrieval of past records including all correspondence

Middle tier

The customer service systems and core administration processing 'talk' to each other through middle tier using messaging software. Basic member data and account balances are regularly uploaded to a customer information file, which also holds the member contact history.

The advantages of this approach are:

- Real time customer service processing is isolated from batch core administration processing for improved system performance
- Customer service systems can access record keeping in real time if required to resolve a detailed inquiry
- New or obsolete components of the system can be easily replaced
- It provides a standard method for interfacing with other AMP business units (such as AMP Investments) and external providers.

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Process support

The middle tier also includes process support components such as performance support for clients, administrators and other staff. Performance support is available online and contains details of process flows, benefit designs for all funds as well as more general information on retirement savings.

- Creative and successful deployment of advanced workflow and imaging concepts

The information technology platform (Technical Architecture Project) designed to support the Plan Administration Strategy brings together a number of different types of technology to form a cohesive solution that interfaces seamlessly delivering a wide range of functionality to different groups of users.

The technology type most pervasive and critical to the delivery of the business strategy is workflow for which Eastman Software's OPEN/workflow was selected. Eastman Software OPEN/image was also selected to address the imaging needs of the solution.

Following is an outline of the creative use and deployment of workflow and imaging during the Plan Administration Strategy.

Release 1 was completed on 31 May 1997 and delivered core components of Plan Administration Strategy including Eastman Software's OPEN/workflow and OPEN/image.

A component of the core administration processing and middle system architecture tiers, the workflow and imaging combined with the records, reports and reporting function and messaging technology provided the general architecture to deliver the basic business processes.

The workflow component is integrated with Superb 2000 via one-directional communication where information about finished work tasks and updates on the queue status occur via workflow.

Workflow and imaging at Release 1 will also communicate with the electronic commerce application. Information supplied by the electronic commerce applications invoke processes within the core record keeping and workflow which then initiate the reporting application and core record keeping interface modules.

The MQ series-messaging layer provides the necessary communication platform required to initiate message transfer between workflow and imaging, record keeping and reporting applications.

Already, through the introduction of Release 1 technology, namely workflow technology, significant business benefits have already been realized, such as cost savings of 42 percent equating to \$AUD4.9 million annually.

EXCELLENCE IN PRACTICE

The features and benefits delivered by the implementation of workflow and imaging during Release 1 include:

Features	Deliverables
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Release 2 was scheduled to be completed on 12 December 1997. The emphasis of this release will be on developing an Extranet-based architecture to deliver a browser front end for both internal and external users.

The workflow application will be modified to provide additional performance reports and direct interaction with the record keeping function (Superb 2000). The Workflow Administration client will be modified to provide HTML based functionality and a more consistent, intuitive interface for enhanced usability for internal and external users.

Release 2 will deliver employer and trustee Extranet access to the following via workflow:

- Scanned images
- Printed reports
- Payroll submissions
- Electronic forms for member updates, benefit payments, contributions and new members
- Member record details
- Their own work queue for error corrections
- Workflow case details for individual members
- Online performance support

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- Online modeling of retirement savings benefits.

Release 3, to be delivered by 30 June 1998, will see the introduction of further enhancements to the core-processing engine for the introduction of Ultimaas II.

Workflow will be fully incorporated with core record keeping and the application interaction to Galaxy will be enhanced to allow the conversion team to transfer (AMP's existing record-keeping scheme) member information to their conversion application suite.

- Achievement of business process reengineering and/or continuous improvements

The AMP business solution plan—Plan Administration Strategy is driven by the reengineering of the core business processes and the implementation of process architecture and enabling technology.

The results of the re-engineering through the implementation of Release 1 technology and process architecture has already yielded substantial business benefits and dramatic savings and productivity improvements.

These features and benefits have already translated into significant business benefits such as cost savings of 42 percent equating to SAUD4.9 million annually.

Subsequent releases of the Plan Administration Strategy to be conducted over the next two years will incorporate new process architecture and the technology platform development under the Technical Architecture Project. During this period the technology and processes will be enhanced continuously.

In addition to the ability to meet current needs of customers, the Plan Administration Strategy has also taken into account the future needs of clients. The messaging system interfacing between the various technologies employed allows replacement of components with minimal impact on the rest of the system. This will allowing AMP to react quickly to changes in technology or business requirements.

Degree of complexity in the underlying business process and IT architecture. Objectives.

- Complexity in the underlying business process involved:

The Plan Administration Strategy is essentially a business process reengineering and change management project designed to develop the business processes and enabling technology infrastructure to meet the current and future needs of clients.

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EXCELLENCE IN PRACTICE

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