



January, 2003

Re: **Beyond Bundled 401(k) – New Technologies in Retirement Plan Services**

Integrated Benefits Administration for 401(k), Defined Benefit and Other Plans

To our readers:

McHenry helps financial services firms do more and better business. In our consulting role, McHenry's staff often finds itself addressing business issues such as technology, workflow and resource allocation. Usually our work is related to growing the top line and bottom line performance of service organizations.

When investigating institutional offerings to benefits service providers, we look at three central topics:

- **Technology** – Is it modern, efficient, effective and scalable?
- **Service Model** – Does the provider understand the needs and preferences of the platform user and their clients?
- **Business Model** – Is this a viable player with expertise to run a healthy, profitable and safe partner for our clients?

Recently, we were asked to help research solutions to a specific client's needs for an efficient and scalable recordkeeping solution. Like many 401(k) administration platforms, our clients' software was of the classic 'buy the system, run it yourself' variety. Their goal was to find a solution that would enable them to grow their business faster while adding service functionality for plan sponsors and participants.

We found an intriguing solution from an unlikely source. Milliman USA is well known for their actuarial and benefits consulting and administration services to a spectrum of business, governmental and financial organizations. We now know them to be recordkeeping system providers to institutional recordkeeping platforms. In our research, we found Milliman to be the progenitors of what may be the quietest revolution in the retirement industry.

Milliman's **Technology Resource Center (TRC)** and the ASP services it offers to other bundled service providers proved out as consistently superior in terms of technology, service and business models. We were so taken with what we found that it seemed an appropriate topic for public discussion, and this written summary is the result. We hope that you agree and look forward to your thoughts in this matter.

The cost of reproduction and distribution of this white paper have been underwritten by Milliman TRC, but the views and conclusions are our own.

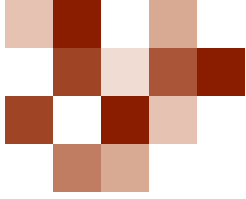
Thanks in advance for your consideration and review of our report.

Sincerely,

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McHenry Consulting Group White Paper

The Future of Retirement Plan Administration Technology: Buy, Build or Rent?

Challenges and Opportunities

Executive Summary

This paper asks: "What is the future of technology for retirement plan providers?" Almost monthly another service provider announces its departure from recordkeeping, often citing the skyrocketing cost of technology as a major factor in their decision. Still some providers are winning clients and maintaining healthy profits. How?

To answer that question, we begin by reviewing retirement plan trends around 401(k) plans and pension plans -- and how technology impacts plan sponsors, participants, and service providers.

Then we outline the future of plan administration technology: the ASP technology model. McHenry believes this model will thrive based on the ability of plan sponsors and recordkeeping providers to use one unified administration interface to share information and execute transactions at the business process level.

To move from model to practice, we present a case study of one firm's commitment to the ASP model: Milliman USA's Technology Resource Center ("Milliman" or "Milliman TRC"). This case study exemplifies the ASP model and how co-sourcing creates efficiencies for sponsors and recordkeeping providers.

Retirement Plan Trends & Technology Impact

Any discussion of retirement plan trends is framed by technology advances. Over the last ten years, frontline technologies like voice response systems, participant/sponsor websites, and trustee integration have become strategic in defining competitive advantages in RFPs, streamlining process to reduce errors and costs, and in linking sponsors more closely to providers at the systems level.

As daily valuation 401(k) plans boomed in the 90s, the technology, in most cases, provided nothing more than balance-forward systems with more frequency (i.e. daily). Industry insiders confess no one really built a true daily valuation system in the beginning because no one knew the "rules" by which to perform daily valuation. As the industry evolved rapidly, technology investments focused on addressing changes instead of reinventing the core of these old technology architectures.

Today, many of these systems are collapsing under the increased scrutiny and pressures of a down and skeptical market including:

- **Fund Access.** Most recordkeeping systems constrain fund choice amid a growing awareness that this change friction does not serve participants - and frequently harms them.
- **Fiduciary Duties.** Sponsors are demanding full disclosure of fees, pricing transparency and investment diversification for employees, forcing providers to build new tracking and reporting capabilities into their systems.
- **Expenses.** Employees may bear the costs of the typical plan, but it is up to the sponsor to control these costs - evaporating the high margins of proprietary funds and requiring bundled providers to open their systems to the complexities of new trading relationships.



- **Employee Decision Support.** With participants demonstrating little ability to shoulder the burden of retirement capital accumulation, plan sponsors face tremendous social and political pressure to equip employees with technology-based advice solutions.
- **Poor Savings Rates.** Low savings rates, poor planning in asset allocation, and cumulative impact of the down market make defined benefit plans an attractive option for those with the technology to administer them.
- **High Visibility Catastrophes.** Crashes make for political headlines and a wash of new regulations surrounding company stock purchases and sales and the reporting of those transactions.

The speed at which recordkeeping providers respond to these challenges is the determining factor for success in retirement plan recordkeeping today. Those providers with nimble and responsive technology platforms are winning large blocks of business and realizing double digit profit margins. Meanwhile, providers who are slow to incorporate change due to technology limitations are exiting the business to avoid the skyrocketing technology costs.

Build, Buy or . . . Rent: The ASP Model

If technology is the differentiator between success and failure, what model provides the most nimble and responsive technology platform? The Application Service Provider (ASP) is a new model for retirement plan administration systems offering a mission-critical architecture, decreased costs, and an adaptable development environment.

To fully appreciate the ASP model advantages, it must be compared to the "build" and "buy" approaches.

Building means being your own software company and includes the considerable expense of developing, deploying and maintaining applications. The software development cycle typically includes the following components:

- Scoping
- Discovery (including prototyping)
- Design
- Development
- Integration and Testing
- Deployment
- Maintenance

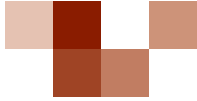
The resources, organization and infrastructure to sustain enterprise level software development are enormous. Further, once an application is deployed, all upgrades and enhancements (as dictated by the market and regulation) must be paid for by the organization. Other than specialized programming, most organizations cannot afford to build their own software.

Buying means licensing software from a commercial software provider. Buying software eliminates the direct costs of developing software in-house, and has worked famously for products like Microsoft Office. But today's recordkeeping platform is much more complicated than deploying Office. There are websites to be hosted, voice response systems to be maintained and mission critical database information to be backed up. In addition to making all of these systems available 24 x 7 x 365, recent events dictate providers now create redundant systems for disaster recovery at a cost of well over \$100,000.

Renting means subscribing to software (and infrastructure) from an Application Service Provider (ASP). An ASP is responsible for the ongoing development and operational hosting of mission critical recordkeeping applications made available to providers and their sponsors via the Internet using a web browser. Customers 'rent' applications on a subscription basis, producing an overall cash flow advantage and net lower costs for providers than building or buying. Compared to buying software, ASPs radically reduce (in some cases eliminate) a provider's infrastructure and maintenance burdens. ASPs realize their efficiencies by normalizing development tools, hardware and networks across several large clients.

The Advantages of the ASP Model

The ASP model represents a significant evolution of IT outsourcing by providing web-based software "on tap" without the high infrastructure and licensing startup costs. ASPs empower providers to focus on core competencies instead of developing technology. The benefits of this delivery model are substantial, including:



- Speed of implementation
- Lower direct and indirect costs of application development and maintenance,
- Decreased staff resources and infrastructure
- Faster and lower cost deployment of updated and new applications
- Reduced expense and risk across the application life cycle

During the Internet boom, ASPs were going to be the "new, new thing" to take the world by storm - and venture capitalists were funding all manner of ASPs. Since then a number of ASP solutions have fallen out of favor largely due to high costs and fears of financial instability. In the retirement plan industry, however, technology buyers and builders have seen their fortunes dissolve under the oppressive weight of ongoing systems development and maintenance.

Meanwhile, providers sharing costs in an ASP model have spread the development cost, eliminated overhead and realized the financial returns of a hosted solution. Specifically, the retirement plan ASP model offers many development, distribution, and financial advantages over stand-alone transactional recordkeeping systems.

Development advantages include:

- **Standardized Component Architecture.** ASPs use standardized components including Microsoft SQL or Oracle for a database engine, and middleware constructed using the common object model (COM) for business rule definition and data access processing. These standardized component architectures eliminate the complexity of translating main-frame communication into Windows.
- **Focus on Pre-Release Testing.** Generally, buyers and builders of recordkeeping technology spend much of their time "acceptance testing" new software releases before deployment on their internal live systems. ASPs, by their nature, have a much higher standard for systems, integrated, and parallel testing since their release is universal to all users everywhere.

Distribution advantages include:

- **Single Hardware Platform.** Instead of developing and testing a stand-alone application for different client/server configurations, ASPs develop web applications using generic Windows server configurations. This allows a faster and easier testing effort, fewer defects, and faster deployment.
- **Ease of Updates.** To access the latest version, all the provider or plan sponsor needs to do is open their web browser; client software downloads are eliminated. Some ASPs are using this advantage to release full software updates every 45 calendar days! Additionally, rather than dealing with supporting different product versions, the ASP upgrades all users to newest release, saving on customer support costs for older versions.
- **Distribution Ubiquity.** ASP users access the application from any system with an Internet connection and a web browser, making the anytime, anywhere work concept a reality.

Financial advantages include:

- **Software User Costs.** Stand-alone application user costs include licenses, installation, customer service/support, training, and maintenance. In the buy scenario, these costs involve massive user costs in the beginning and high costs for ongoing maintenance and upgrade releases. ASPs charge the same license fee each month, lowering the barrier to change dramatically.
- **Hardware Infrastructure Costs.** IT departments are already stretched to provide basic file server, domain and Internet connectivity. Adding the support of a mission critical record-keeping platform pushes many beyond the breaking point. All of the fault, performance, configuration and security management is offloaded to the ASP and backed up by strong service level agreements.

To determine if an ASP solution is cost-effective, an enterprise needs to estimate all of the costs associated with installing, supporting, and maintaining a stand-alone application and compare these costs to an equivalent ASP solution. More often than not, the retirement plan ASP wins.



Retirement Plan ASPs and the Future of Retirement Plan Administration Technology

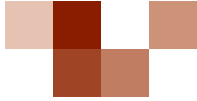
As the needs of the marketplace are met by the ASP model, it creates a future for retirement plan administration technology that:

- **For plan sponsors**, enables them to use the provider's mission-critical systems and advanced features (like XML) to easily connect human resources information systems (HRIS) to providers' systems.
- **For plan participants**, provides easy access web sites, visibility and elegant tools to encourage and manage the burden of retirement capital accumulation.
- **For mutual funds and other product providers**, offloads the expense of retirement plan administration technology to higher quality, lower cost platforms and refocus them on delivering efficient, high performing investment products.
- **For TPAs¹**, fixes their administration and recordkeeping costs while enabling them to provide excellent service and focus on high value, high touch activities that ensure customer retention.

These benefits come together to achieve the social and financial objectives of the retirement plan. Retirement plan ASPs are the foundation of this result more than any other solution.

ASPs use development, distribution and financial advantages to provide a nimble technology platform. This responsiveness is the difference between success and failure in the retirement plan recordkeeping industry today.

¹ Many TPAs simply do not have enough participants over which to spread the enormous costs involved in bringing their operations into the next generation platforms. With the ASP model, they increase their operational efficiencies by design.



ASP Case Study: Milliman USA's Technology Resource Center

If the key to success in retirement plan administration is the ASP, is there anyone providing such a solution? We believe there is.

Milliman USA began as a "builder" of recordkeeping solutions in 1994. In 1997, Milliman launched a massive effort to completely rewrite their DOS & Btrieve recordkeeping application for web technologies emphasizing scalability, adaptability and integrated multi-plan (DB, DC and non-qualified) processing.

As the considerable effort was nearing completion in late 2000, Milliman studied pricing alternatives for the ten Milliman record-keeping centers. Should the new software be sold as a site license and installed at each office? Or should each office buy per user or concurrent user licenses? What about funding ongoing development?

Milliman Chooses the ASP Model

The result of the development was the launch of the Retirement Plan Administration System (RPAS). The result of the study was the formation of the Milliman Technology Resource Center ("Milliman TRC") - an internal ASP responsible for the continuing development and operational hosting of RPAS.

The Advantages of Milliman's ASP Model

Milliman TRC was conceived and built from the ground up to leverage the ASP model's development, distribution and financial advantages.

Development Advantages. RPAS is a high-capacity, scalable, secure, and stable recordkeeping platform. While other companies (including other retirement plan ASPs) licensed their core recordkeeping system and built around it, Milliman authored the core transaction engine of RPAS as a daily valuation system.

Milliman uses best-of-breed components including Microsoft's SQL Server 2000 and industry standard Component Object Model (COM) middleware libraries. These library objects are re-used in participant/sponsor web sites, voice response and call center applications to provide unified communications "channels" and real-time updates. Administrators, plan sponsors and their participants benefit by seeing and hearing the same information at the same time.

The RPAS platform encompasses all the transaction capabilities to administer defined contribution, defined benefit and non-qualified plans - all from one unified database. Milliman has recently launched its co-sourcing product, empowering sponsors to bundle or unbundle services using the Unified Administration Interface - one web application used by Milliman administrators and plan sponsors to manage all recordkeeping activities. Further, the platform enables complete freedom of choice for funds from seven custodian/trustees including Fidelity IBG and Schwab.

Another RPAS development advantage is their adoption of XML (extensible markup language) as the standard format for communication between middleware and web applications. As XML

Cosourcing Capabilities with Unified Administration

Human Resource professionals often ask the same question when considering outsourcing retirement plan administration... "how can I maintain control of my data?"

Internal systems must synchronize payroll, benefits administration and retirement plan data held by their vendors. Participant changes on vendor websites have to be imported into internal systems.

Plan sponsors struggle with the tug of war between internal and outsourced administration. Self-administration maintains control of data but outsourcing provides expertise. It comes down to resources; "Do I have the people? Do I have the systems?"

Milliman USA has solved this dilemma through cosourcing capabilities and its Unified Administration web site. Unified Administration is one web application used by Milliman administrators and plan sponsors to perform all administrative tasks associated with a retirement plan.

Plan sponsors define the business processes to be outsourced and those they want to perform in-house using Unified Administration. Business process and participant group access is then customized using role-based user security.

Business functions like participant enrollment, payroll processing, benefits calculations and payee administration are enabled for sponsors who want the control and hidden from those desiring complete outsourcing to Milliman administration teams.

Unified Administration provides plan sponsors full access to a powerful recordkeeping platform instead of the stripped down functionality available in most plan sponsor websites.

For the first time, Unified Administration gives plan sponsors the power to choose the services they need and the level of involvement they want.



has become the standard for financial transaction communication between systems, Milliman is well-positioned to integrate with external systems and data sources in an elegant and cost-effective manner.

Distribution Advantages. The distribution advantages begin in the TRC Data Centers. Located in Milliman's Dallas Office and contracted nationwide with Sprint Esolutions, Milliman's operations team maintains the mission critical hardware for RPAS. These technology professionals implement and monitor over 450 fault, performance, configuration and security measures for RPAS performance.

Physical and network security are first rate. Milliman TRC facilities are enclosed data center environments, protecting systems and prohibiting unauthorized access. Back-up (on- and offsite) and extensive disaster recovery planning ensure near 100% uptime. Network security is just as stringent, with constant monitoring of all access points, detailed logging of transactions and real-time alarms for suspect activities. Independent security reviews are also performed annually.

Milliman upgrades RPAS functionality using an innovative 45-day release cycle. The process saves vast amounts of time and money compared to the update burden for stand-alone client/server applications with annual releases. Rather than having to support different product versions, Milliman TRC upgrades all users to a new version within the web browser and provides all release documentation and training online. This saves publication, training, customer support, and other related costs. These savings enable Milliman to focus resources on updates that drive functionality and customer satisfaction in a rapidly changing marketplace.

Financial Advantages. The Milliman TRC ASP charges recordkeeping offices monthly fees based on the number of participants and plans on RPAS. This pricing model allows Milliman recordkeepers to easily factor technology costs into their pricing models for new business. The ASP model drastically reduces technology costs for these offices by releasing them from the oftentimes hidden costs of application server upgrades, hosting websites, voice response systems and building ancillary applications to optimize processing.

As a recordkeeper, Milliman USA develops technology for competitive advantage (not to sell software), making efficient plan processing a core consideration - not an after-thought. To this end, RPAS automates over 90% of the daily processing routines, allowing Milliman client service teams to focus on billing time for client projects instead of processing transactions. Each 45 Day Release Cycle upgrades automation routines to satisfy sponsor-driven requests.

Finally, Milliman TRC also provides centralized transaction processing services ranging from plan conversion and data management to forms processing, call center and fulfillment. These process services are not available with commercial software providers.

Conclusion

Through the ASP model, Milliman USA recordkeeping offices are realizing competitive advantages in marketing and processing efficiencies in administration. Milliman TRC is a powerful example of the technology needed to meet today's challenges in retirement plan administration. Often ideas sound good, but their potential is never realized. If Milliman TRC represents where the market is going, there is much to look forward to in the future. ♦