A Cautious Approach to AI:

Custom Software for Multiemployer Benefit Funds

by | **Joey Mokos, CEBS**

Advances in artificial intelligence (AI) can make it faster and more affordable for multiemployer benefit funds to create custom administration software. The author describes potential use cases, emphasizing the importance of human oversight.

benefits
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"The AI train is leaving the station; get on board or get left behind."

Educational conference attendees across every professional discipline, including those who work in employee benefit plan administration, have heard some version of this ultimatum. Immediately following this warning, however, comes a litany of issues to watch for when implementing artificial intelligence (AI) tools: errors, hallucinations, liability for incorrect answers and the inability to audit how decisions were made. The high sense of urgency requires a thoughtful, planned approach to making sure the tools solve problems and don't create others.

It seems like an almost impossible landscape to navigate. However, it is possible to make AI tools serve human needs rather than humans forfeiting agency and serving the tools. Benefit funds need to focus on solving specific, well-defined problems and maintain human oversight, which means the user needs a clear understanding of how the tool works and an ability to audit how the work is performed. By using this approach, benefit funds can avoid the landmines of deeper AI engagement.

AI capabilities extend beyond search engines or upgraded versions of "Clippy" to draft documents. One option is to use AI to build traditional software applications at a fraction of the time and cost of conventional development, while the fund maintains full control over operations. This article explores how.

Real-World Applications

Potential use cases for AI in multiemployer benefit funds are limited only by imagination. If an administrator can define a problem and state a logical solution, software likely can be built to assist. Contemporary software can perform previously unthinkable tasks requiring analysis of large datasets or complex processes. Employee benefit fund project examples include the following.

- **Building benefits administration software:** Creating custom fund administration software that fits the fund's specific needs rather than adapting processes to off-the-shelf software.
- **Conducting large dataset research and analysis:** Automating extraction and comparison of data across multiple datasets to assist with data cleanup and analysis for improved decision making. One example is using Form 5500 datasets to identify industry trends.
- **Comparing documents in fund mergers:** Identifying differences in plan provisions across dozens of documents to help trustees and attorneys understand the implications of combining funds.
- **Creating initial drafts of restated summary plan descriptions (SPDs):** Integrating summaries of material modifications (SMMs) and checking for readability and potential contradictions to give attorneys and communications professionals a strong starting point.

In each case, human beings direct the work, validate results and confirm that the tool is doing what is expected.

The Return to Custom Software

Software across all industries has evolved. There was a time when all benefits administration software was custom designed. Then, off-the-shelf packages did portions of the work. Later, platforms were created that required customization, followed by software as

takeaways

- Multiemployer benefit funds can use artificial intelligence (AI) to build custom software tools at a fraction of traditional development time and cost while maintaining full human control over the development and operations.
- A pension fund merger project developed a document comparison tool in 47 hours using AI-assisted development—roughly 13 times faster than the estimated 625 hours conventional development would have required, saving approximately $130,000 on the project, but significantly more by improved functionality and future time savings.
- Successful AI-assisted software projects for benefit funds require three key team members: a software engineer familiar with AI tools, industry experts to validate outputs and data analysts who understand the fund's systems.
- The resulting tools should keep humans in control: AI should act only when explicitly invoked by users, all outputs should be verified by human experts and tools should operate as conventional software without autonomous decision making.
- Funds considering AI projects should start by identifying repetitive, high-stakes tasks; determining whether to build internally or hire external help; assembling the right team; and following principles that emphasize human oversight, security and maintainable solutions.

a service (SaaS). Now, benefits administration is returning to custom-built software using AI tools.

To succeed, these projects need a team, which may consist of in-house employees, outside contractors or both, to fill the following roles.

- A **software engineer** with an understanding of traditional coding and AI tools (given that AI prompts contain a logic unto themselves, equal parts art and science)
- An **industry expert** to define the problem, direct the work and validate that the software is working properly
- A **data analyst** who understands the fund's data. If the fund needs to convert from an older system, the analyst must have knowledge of the old system's data mapping.

Most benefit funds buy mass-produced software packages that can cost millions of dollars and may not fit exact needs. By using AI to build these software packages, funds may reduce coding time, which reduces software costs. In addition, changes and new customizations are under the administrator's control; cost becomes less of a factor than timing. AI coding makes it easier and faster to make changes when needed. In a sense, whenever the users come up with new ideas for processes, reporting or additional data that needs to be tracked, it is simple to update the software to meet new needs as they arise. Changes to regulations often prompt software updates—AI coding makes it easy to stay on top of timely changes while limiting costs.

The question becomes the following: "When do you want to make the change and then train users?"

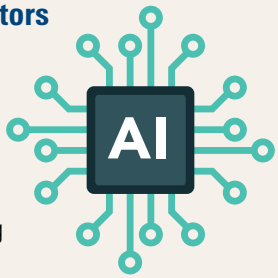
Case Study: A Plan Document Comparison Tool for a Merger

A multiemployer pension fund recently used AI to create a tool to compare and analyze plan documents, resulting in substantial savings of time and money.

The Problem

A pension fund merger required attorneys to compare many plan documents to identify differences in claims procedures, appeals processes, vesting rules and dozens of other provisions buried across hundreds of pages of legal text. This work often takes many hours, requires multiple rounds of analysis and carries the risk of human error, not to mention substantial expense.

Tips for Fund Administrators Considering AI Projects



- **Start with clean data**. Data quality determines whether an AI project will succeed. Invest in data remediation before attempting to build AI-assisted tools.
- **Think beyond current systems**. The core administration system doesn't need to be upgraded to offer modern capabilities. AI-assisted development can create new tools that work alongside existing infrastructure.
- **Demand transparency**. Whether building a tool internally or hiring externally, insist on understanding how AI reaches its conclusions. Reject black-box solutions that cannot explain their decision-making process.
- **Maintain control through design**. Design tools where AI only acts when humans explicitly request it, rather than running autonomously in the background.
- **Prioritize security and privacy**. Apply strong access controls, practice data minimization, vet vendors on their data retention policies and maintain audit trails for all AI activity. Sensitive participant data deserves the same protection it would receive in any other fund system.
- **Focus on human–AI collaboration**. The goal is not to replace human expertise but to accelerate the necessary but repetitive and time-consuming work humans do to support their research, analysis and validation of complex information.
- **Measure success by adoption and trust**. A successful tool is one that your staff uses and trusts. Start small, gather feedback and iterate based on real usage patterns.
- **Plan for the long term**. Build vendor-agnostic solutions that will continue working regardless of changes in AI technology, vendor relationships or core systems.

Rather than licensing an off-the-shelf platform or spending six months on conventional software development, the fund decided to see whether AI-assisted development could deliver a working tool.

The Team

Funds need people who can define the problem and validate results, understand the data, and translate between human

requirements and AI capabilities. Funds can use internal or external employees or both, depending on fund resources.

The project used a hybrid approach, with an external software consultant experienced in AI-assisted development working with internal and external industry experts to define the problem and validate results. This combination ensured that technical work proceeded efficiently while maintaining the fund's control over the final product.

The Process

The fund developed the software through a series of meetings to define the problem, focus on a small piece of the solution and write the code. Team members met again to validate the product. AI tools accelerated each session dramatically; in some cases, coding occurred during meetings and new software was produced in real time, even before the meeting ended.

The Result

The resulting application is a traditional web application built with HTML and JavaScript. AI is not running continuously in the background. Fund administrators have full control over when and how AI is used, and all AI-generated analysis can be verified against source documents.

The tool has the following capabilities.

- Accepts multiple SPD and SMM documents, up to 1,000 pages each
- Produces a summary of the documents, a comparison table and a detailed citation report with quoted language. For instance, the tool might identify that Plan A requires 1,000 hours per year for full vesting with no partial vesting while Plan B requires 1,200 hours for full vesting but allows partial vesting at 600 hours.
- Cites exactly where language exists in primary plan documents and makes every citation clickable so users can open the source document to the referenced language
- Allows AI queries against documents, such as, "Tell me more about the vesting differences," or, "What contradictions exist between the documents?"
- Supports collaborative notes, such as Google Docs comments
- Lets users share their analysis sessions. After a user starts a session and makes notes, they can invite other team members to review, add their own notes and collaborate without rerunning the analysis.

TABLE

Comparing AI-Assisted and Conventional Software Development Approaches

Coding Approach	Hours	Cost of Developer Time
AI-assisted (total effort)	47	$10,575
Conventional	625	$140,625
Savings		**$130,050**

Users upload documents, compare them for similarities and differences, and pose questions for analysis. The tool produces a summary, detailed comparison table and clickable citations. Attorneys then verify citations against source documents and add notes for colleagues to review. Comparing over a dozen documents spanning thousands of pages takes about 15 minutes. Because AI runs only when documents are uploaded, all AI-assisted work is intentional and under human direction. AI accelerates the initial comparison work. It identifies information and points users to the relevant passages in source documents. The tool does not make decisions about pension benefits or legal interpretations. Humans validate output and make decisions.

Comparison With Conventional Development

In this case, AI-assisted development took about 47 developer hours, roughly 13 times faster than conventional development, estimated at 625 hours (16 weeks) (Table).

Development costs for AI usage itself were negligible, only a few hundred dollars, compared with significant time savings.

A Practical Path Forward

For organizations considering how to approach AI, this project suggests a practical path described as follows.

Step 1: Identify the Problem

Look for repetitive, time-consuming tasks where errors carry significant consequences or where the size or complexity of data feels overwhelming.

Step 2: Determine Internal vs. External Development

Assess whether the fund has:

- A software engineer familiar with AI tools (or the ability to hire one)
- Clean, structured data to work with
- Subject matter experts who can validate results
- Time and resources for iterative development.

Funds that have all the above can consider internal development. Those without the necessary internal staff can look for vendors or consultants specializing in AI-assisted software development for benefit funds. They can ask potential vendors for examples of similar projects.

Step 3: Build or Hire the Right Team

Funds opting for internal development should:

- Hire or train a software engineer in AI-assisted development techniques
- Designate subject matter experts from existing staff (attorneys, benefits administrators, claims specialists)
- Assign data analysts who understand their systems.

Funds using external vendors should:

- Vet vendors for specific experience with benefit funds
- Request case studies and references from similar funds
- Verify that the vendor's approach keeps humans in control of AI outputs
- Ensure that the vendor can explain how AI reaches conclusions.

Funds choosing a hybrid approach should:

- Contract with an external vendor for technical work
- Assign internal subject matter experts to guide and validate
- Maintain internal ownership of the final product.

Step 4: Follow Key Implementation Principles

For benefit funds, these principles include the following.

- **Use AI only where it demonstrably helps**. This could mean accelerating software development and administrative processes rather than having AI make autonomous decisions about benefits or eligibility.
- **Keep humans in control for oversight, validation and decision making**. Funds should require professionals to verify every AI-generated citation before relying on it, have administrators review and approve AI-generated summaries before distribution, and maintain audit trails showing human review of all AI outputs.
- **Build tools that are understandable and can be maintained**. Funds should create solutions where they can see how they work, understand data sources and modify them as needs change. They should avoid proprietary black-box solutions where vendors cannot explain how AI reaches conclusions or where they cannot adapt tools without extensive vendor involvement.
- **Recognize that human thinking time is not waste to be eliminated**. It is the essential ingredient that makes AI useful, efficient and productive. Planning, validation and refinement work done by human experts transforms AI from a source of unreliable outputs into a powerful productivity tool.

Security and Privacy Considerations

Security and privacy deserve deliberate attention in any project involving benefit fund data. Participant and plan information—including eligibility records, claims history and plan document details—is sensitive and subject to state and federal regulations.

The approach described in this article offers a meaningful structural advantage: Funds retain clear control over when and how data is accessed and analyzed. There is no persistent AI agent "watching" fund data or making unsupervised decisions. Further, some AI engines can be set up in a self-contained environment, and users can turn off their ability to use the data for training purposes.

Key security and privacy principles to follow when implementing AI-assisted tools include the following.

- **Data minimization:** AI tools should be exposed to only the data necessary for the specific task. For example, a document comparison project would require exposing plan documents, but not participant records.

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- **Vendor due diligence:** When using third-party AI services or development partners, funds should understand their data access, retention and privacy policies and confirm that documents submitted for AI analysis are not used to train underlying models or stored beyond the session.
- **Access controls:** The same access controls that are applied to any fund administration system should be applied to AI-assisted tools. Limits should be placed on who can upload documents, run analyses and view results.
- **Audit trails:** Funds should maintain logs of when AI tools are used, who invoked the AI tools and what data was used. This supports both fiduciary accountability and the ability to identify and correct errors.
- **On-premise and private deployment options:** Funds with heightened data sensitivity, such as health funds, should consider tools that can be deployed within the fund's own infrastructure rather than relying on shared cloud environments.

Human oversight is also the first line of defense for security and privacy. When humans review and validate every AI output before acting on it, errors, anomalies and potential data issues are caught before they cause harm.

bio

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Final Words

Member self-service is the norm in banking, insurance and retail. Fund members increasingly expect the same level of access to their benefits information. AI-assisted development offers a path to deliver modern tools to meet those needs without the cost and complexity of traditional software development.

The approach described in this article helps the fund protect itself from the rollercoaster ride of an emerging market. If the AI landscape changes in the future, with vendors entering and leaving the market, the fund will still have conventional software that keeps working regardless of the changing players. The fund will not be stuck with towers of CDs when the world has moved on to streaming music.

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