

# The Process of Automating Employee Benefit Plans

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The need to offer benefit programs tailored to individual needs, increasing need for useful and strategic benefit information and the changing nature of employee benefits have put increased pressure on employers to automate employee benefit plans. The objective of automation is to reduce cost, improve quality and eliminate redundant paperwork.

## Overview

Pressure to automate employee benefit plans will come from 3 sources: 1) The need to offer benefit programs which can be tailored to individual needs (i.e., flexible benefit plans, 401k plans, etc.) while managing these complex alternatives with less manpower, 2) Satisfying the increasing need for useful and strategic benefits information<sup>1</sup> and 3) The changing nature of employee benefits which requires constant adjustment in response to legislative changes (such as providing multiple investment options as required under 404c of ERISA<sup>2</sup>). Automation can help benefit professionals do more, with less, while improving quality.

Exactly what do we mean by automation of employee benefit plans? It is a seamless electronic flow of information transmitted between various computer systems or programs that can be exported to vendors (trading partners). The electronic transfer of information between dissimilar computerized business management systems which eliminates redundant clerical effort (interpreting, reading, rekeying, filing, etc.) and time delays due to processing errors resulting from the transfer of information<sup>3</sup>.

This description is very broad. It includes automating the exchange of information between internal computer systems of the business organization (integration) and / or the exchange of

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information between different organizations Electronic Data Interchange (EDI) standards (see box titled "About EDI ASC .X12 Standards"). While the use of EDI standards simplifies the exchange of information between independent organizations (for example, health care where it is a major component of health care reform<sup>4</sup>) it represents only a small portion of all automation.

The objective of automation is to reduce cost, improve quality and eliminate paper. Parallels exist between automation and the continuous quality improvement process. Both have the potential of generating their own inertia as paradigms change and a new way to conduct business is discovered and developed. Also, each requires employee flexibility as jobs shift from being custodians of information to managers of the process that generates the information.

### **Criteria for Automation**

A good candidate for automation will satisfy the following criteria: 1) Provide a payback that meets or exceeds the organization's return on investment goals, 2) Involve committed trading partners and 3) Fit the organizational business plan. Let's look at each in more detail.

Automation involves cost. The greater the cost, the more likely that the capital budgeting process will be involved requiring return on investment objectives be met. To successfully obtain funding it will be necessary to demonstrate savings and quantify the net present value. Use of the present value of future savings is one way to illustrate this concept<sup>5</sup> ("Step 4: "Calculating net present value", provides additional information on this process.)

Having trading partners (both internally and externally) committed to the process is also a key to success. Partners not committed to support the changes that result from automation will become obstacles to it.

Finally, the proposal must fit the broad business plan for the organization. Benefits are an expensive and an integral part of a business. Automation of benefit plans must fit with senior management's strategic vision for the organization and contribute to the success of implementing that vision.

### **Range of Solutions**

A wide range of solutions are available to automate benefit plans. These range from purchasing off the shelf software that runs on a single piece of

equipment to the purchase of mainframe hardware and software. In addition, outsourcing arrangements are available where organizations rent solutions which are designed, implemented and maintained by independent third parties.

Small companies with payroll and benefit information on the same computer system can purchase off the shelf software that combines these functions or allows them to interact with each other.

Larger organizations may utilize a client server environment by establishing a LAN (Local Area Network) or a WAN (Wide Area Network). Both of these link PC's so they can share common information. In the event that data cannot be shared, a bridging program that combines the data can be utilized to consolidate the information into a single file, accessible by any machine on the network.

The largest organizations may need to consolidate systems that are totally disparate and possibly operating on different hardware platforms (AS400 to RS6000 or PC to Mainframe). Two options are available; the traditional approach or the use of new technological advancements.

The traditional solution is to replace existing hardware with a new computer system that satisfies the needs of both users. Once a decision is reached regarding size and system requirements, a conversion from the old system to the new is required. Information is mapped from the old system to the new. A data dictionary is typically developed which defines elements in terms of the original source of the data traced back to the original system. The scope of this undertaking is quite significant and it has the potential to disrupt operations both during and after conversion.

The alternative is to purchase leading edge software that allows disparate computer systems to operate as a single unit. This approach is often referred to as extending the life of "legacy systems" since they are not replaced. Instead, the old application is surrounded with new software technology, leaving the core portion of both systems intact<sup>6</sup> (similar to creating an envelope around the existing systems). Object oriented programming methodology and other programming advances have enhanced these approaches with their ability to handle user interface applications<sup>7</sup>. These solutions provide a lower cost alternative and do not require a computer conversion. In addition, old screens used for retrieving and viewing data continue to be used, maintaining productivity.

Once the data is consolidated internally, the process of identifying organizations who are interested in becoming an EDI trading partner can begin. Potential trading partners include any organization that requires a list of data or information from your organization. Examples include, TPAs, insurance companies, taxing authorities, and 401k administrators.

## **The 9 Steps to Automation**

### **1. Tie to Business Plan**

Automation of employee benefit plans must be tied to the future goals and objectives of the organization. There needs to be a relationship between where senior management expects the organization to go and where an automation proposal will take the benefits function. An area of support can often be found in the treasury function if your proposal includes substituting direct wire transfers for checks (such as payments made for flexible spending accounts under your flexible benefit plan).

### **2. Document the Manual Process**

“Garbage in - Garbage out” is true of automation. Documenting the manual process before automation can provide significant dividends. Automation is the key to eliminating paper but not necessarily improving the process. By interviewing the employees who do the work, you have the opportunity to improve the process. During this evaluation you can streamline the manual process and eliminate repetitive or unnecessary steps. The goal is to automate a logical, well thought out streamlined process that will maximize the benefit of automation.

### **3. Cost / Savings Analysis**

This step first identifies the annual cost to manually process the data. Then calculate the cost of processing after automation. The difference between the two represents savings (assuming it is less costly after automation) that are a result of automation. These savings become the underlying calculation to determine the net present value to the business (Step 4).

When determining the manual cost to process the information, include all costs, such as labor, benefits and the expense incurred by other departments from processing and correcting errors.

(In employee benefits, this cost can be significant when payment of non-eligible claims resulting from incorrect eligibility information are considered).

Next, calculate processing costs after automation. These costs assume an error free environment and will be predicated on anticipated productivity gains.

### **4) Calculating Net Present Value**

Savings generated under step 3 provide a stream of savings similar to an annuity. (An annuity is defined as a series of payments of an equal or constant amount... for a specified number of periods<sup>8</sup>). Therefore, to calculate the rate of return from automation, we can use annuity tables that determine the present value of future dollars (savings). The formula to accomplish this is:

$$\text{Present Value} = \text{Future Value} \times \text{Discount Factor}^9$$

Where present value, equals the value today of future savings discounted at the appropriate interest rate. Future value, represents the sum of the savings that accrue over the economic useful life of the software / hardware investment. The discount factor is found by utilizing an annuity discount table or a financial calculator and is predicated on an assumed future interest rate.

By subtracting the investment cost from the present value of future net cash flows (discounted at an appropriate interest rate), we calculate the current value of the investment. This approach is called net present value (NPV)<sup>10</sup> and is one of several used in financial planning.

Finally, it is important to give recognition to soft dollar savings that will accrue to the organization even though they may not be quantifiable. Included in this category will be such things as improvement of quality for other departments, ability to provide more timely information to trading partners and increased future flexibility.

### **5. Consider Error Possibilities**

What can go wrong? By identifying possible errors that can occur you can construct checks and balances as an early warning system. These will alert you if a segment of the data is not processed or the results that are generated are inconsistent with expectations.

## 6. Senior Management Proposal

At this point you put it all together for senior management. Your proposal begins with tying the recommendations to the organization's business plan (step 1). It should include quantifying the return on investment that accrues to the organization (step 4). If you have done your homework, your presentation will be powerful and linked to organizational goals and objectives.

## 7. Implementation

You are now ready to move forward to an automated environment. Initially, pilot the automation in an environment where the data is verifiable for accuracy. If the process involves a very critical aspect of the operation, you may want to run parallel systems (manual and automated simultaneously) and compare both of the results.

## 8. Post Implementation Evaluation

Did automation occur as you anticipated? Did it generate expected results? If not, why not? Now is the time to rethink the steps and take note of what worked and what did not. Automation will be

repeated many times in our careers and well worth the effort of perfecting.

## 9. Re-evaluate based on New Paradigms

With automation, the way information is processed and exchanged has changed. Therefore, our paradigms must change to reflect new possibilities. Reports that previously would have taken weeks to prepare can now be made available on demand. The most critical component of this step is giving recognition to the fact there is a new range of possibilities.

## Is It Worth It?

Organizations who have proceeded with implementation of automating their employee benefit plans through the ability of exporting data on an EDI basis, report spectacular results. At the 1994 ISCEBS Symposium, it was reported that AT & T calculated their savings to be 1% of their total healthcare costs or \$15,000,000<sup>11</sup>, much of it accruing from improved accuracy in reporting eligibility information. Bergen Brunswick Corporation, a pharmaceutical company was able to reduce their human resource staffing from 21 to 17 as a result of implementing automation and EDI<sup>12</sup>.

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<sup>1</sup> Miram Basch Scott, February, 1995 "Focus on Benefits Technology", Employee Benefit Plan Review, pg. 20. A 1994 survey of Fortune 1000 executives reported that 67% of the respondents indicated an increasing need for more useful strategic benefits information

<sup>2</sup> ERISA 404C requires that for a plan sponsor to avoid responsibility for investment decisions made by plan participants with respect to their own accounts, a participant must have access to a broad range of investment alternatives. ERISA regulation 2550.404c-1 was published in the Federal register on October 13, 1992.

<sup>3</sup> Electronic Data Interchange (EDI) Business System Planner, EDI Support Services, 3rd edition, June 1994, pg. 10.

<sup>4</sup> Joseph Bigley, March, 1995, "EDI: A Vital Link in National health Reform" EDI World, pg. 29.

<sup>5</sup> CEBS Course VI text "Introduction to Financial Management" by Dickerson, Campsey and Brigham provides an excellent discussion of the time value of money in Chapter 13. The discussion starting on page 485, "Present Value of an Annuity" is especially appropriate for purposes of calculating the present value of future savings which can be generated from automation.

<sup>6</sup> Sidney Diamond, March / April 1995, "The Wild West of Corporate Computing", A Financial Executive, pg. 46.

<sup>7</sup> Decline & Fall of the American Programmer, Edward Yourdon, Yourdon Press Computing Series, 1992, pg. 111.

<sup>8</sup> Dickerson, Camosey & Brigham, Introduction to Financial Management, The Dryden press, 4th edition, 1995, pg. 482.

<sup>9</sup> The formula to calculate the present value of future revenues is  $PV = Fv_n (1 \div [1 + k]^n)$  where PV= the present value, n = number of periods and k = interest rate.

<sup>10</sup> Dickerson, Campsey & Brigham, Introduction to Financial Management, The Dryden press, 4th Edition, 1995, Pg. 531. For example, if a project has a \$100,000 investment cost and will return \$50,000 per year in savings for 6 years, our NPV is \$105,700 using a 12% future interest rate. \$50,000 times 4.114 ( factor found from annuity table where 12% & 6 years intersect) minus \$100,000.

<sup>11</sup> James J. Moynihan, " Electronic Data Interchange (EDI): What Can It Do For You", presented results at 1994 ISCEBS Symposium held in Denver Colorado October 2-5, 1994.

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