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# Product Development Efficiency

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*How good is your company's product development process? Could it be more efficient? A survey of the product development processes of U.S. life insurers reveals a variety of answers.*



Most life insurance executives acknowledge that high-performance product development is critical to success in the marketplace. Yet many insurers find it difficult to assess the performance of their product development processes because they cannot easily compare themselves to other companies.

Performance has two aspects: effectiveness and efficiency. Product development *effectiveness* reflects the degree to which products address customer and agent needs while creating value for the manufacturer. Product development *efficiency* is the degree to which the time and resources required to launch a product are minimized. A good deal has been written on how to enhance product development effectiveness. More attention needs to be paid to product development efficiency.

A recent survey of the product development processes of U.S. life insurers found a wide range of efficiency among companies. The survey included a self-evaluation of various product development functions and a quantitative evaluation of comparative efficiency.

## The Process

Most companies use a product development process (see Figure 1) with four stages:

- Project nomination
- Actuarial and economic analysis
- Project management
- Analysis of results.

Project nomination includes idea generation and screening. A company's definition of "product" should reflect its strategic intent and business focus, and the perspectives and requirements of all its important customers (that is, agents and policyholders). A clear definition of a company's targeted role (for example, product manufacturer or career agency distributor) and the requisite organizational capabilities will create the framework for the product. Although project nomination is an important part of product development, most survey respondents admitted that their companies have no formal idea generation and screening procedures.

Actuarial and economic analysis includes several phases that are key to successful product development. In the preliminary design phase, product structure is developed, and initial market and economic feasibility are evaluated. Later, in the detailed design phase, a company refines product structure and economic assumptions. Iterative pricing continues until the right mix of design, competitiveness and profitability is found. Survey respondents gave themselves their highest scores in judging how well they perform these tasks. Nevertheless, most acknowledged difficulties in estimating sales potential, initial market, and economic feasibility.

Project management overlaps the actuarial and economic analysis. It begins with project planning as part of the actuarial and economic analysis and

continues with detailed systems development for new business administration and illustration system specifications. The go-to-market phase includes development of promotional and training materials as well as agent and operations training. Many respondents indicated that they cannot accurately evaluate time and resource requirements at project inception. When asked to list important changes needed to improve the product development process, nearly 80% named project management issues.

Analysis of results entails evaluating performance against objectives and assumptions. Performance tracking is critical to identifying product design and marketing/administrative support strengths and weakness, as well as successful sales practices. This phase received the lowest rating in the self-performance evaluations. The weaknesses specified included a lack of anticipated success measures or standards and nonexistent or incomplete post-launch reporting. These weaknesses make it difficult for companies to improve their product development processes based on their own experiences.

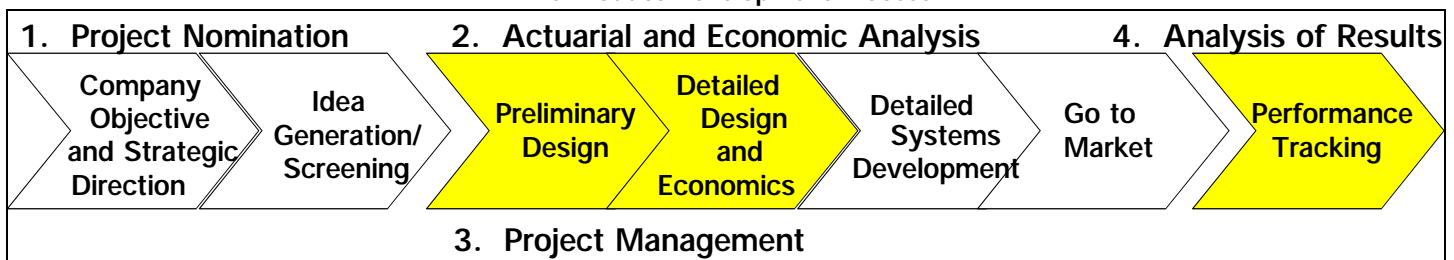
## Measuring Product Development Efficiency

The survey focused on the actuarial and economic analysis function. The objective was to devise standard measures of product development efficiency. Three questions were considered in defining efficiency:

- How much activity was undertaken?
- How fast was it undertaken?
- What resources were consumed?

*continued on page 8, column 1*

FIGURE 1  
The Product Development Process



## Product Development Efficiency

continued from page 7

### How Much Activity?

The survey took into account both the number of product development initiatives in 1996 and the mix of initiative types. Participants were asked to classify product development efforts as follows:

- **Small Changes.** Modifications to existing lines (for example, repricing to accommodate new experience assumptions)
- **Line Extensions.** New versions of existing products, having a similar function (for example, introducing another universal life product)
- **New to the Company.** A product type that the company had not offered before (for example, the company's first variable life product)
- **New to the World.** Market innovations that provide benefits not previously offered by any company.

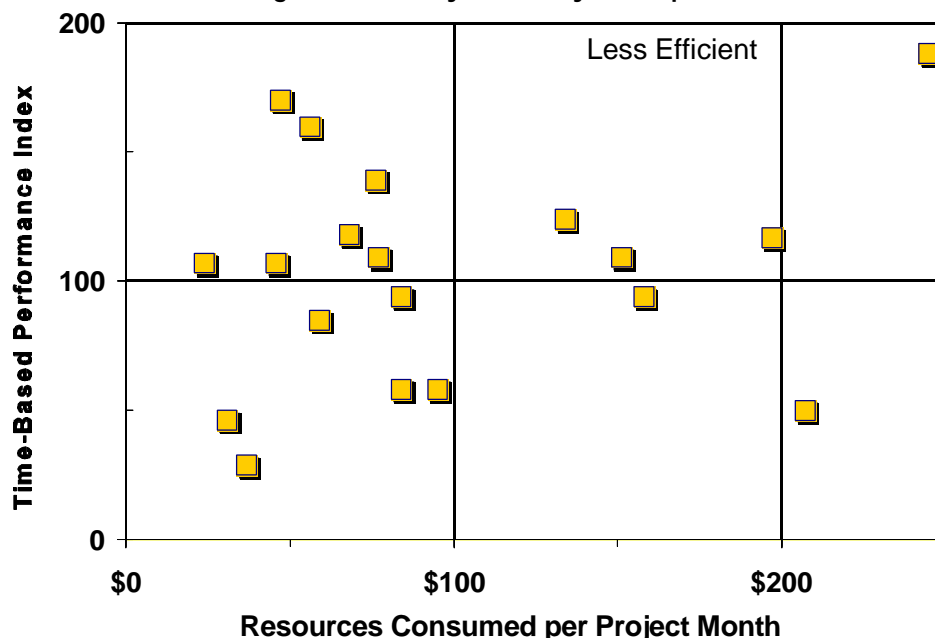
Almost half (47%) of all 1996 initiatives fell into the category of small changes, and the overwhelming majority (85%) consisted of either small changes or line extensions. Only 14% of product development initiatives were new to the company, and less than 1% were new to the world. The number and mix of initiatives varied widely across companies. Although the average number of projects per company was approximately 11, companies conducted as many as 30 projects and as few as two.

### How Fast?

The survey assessed the actuarial and economic analysis time requirements for each type of project. The average time for completion ranged from 2.6 months for small-change projects to 4.9 months for new-to-the-company projects. (The average time to launch a product was approximately two to three months longer than the time to complete the analysis.)

A time-based performance index was calculated for each company by dividing the actual number of months needed to complete all projects by the expected number of project months. The lower the resulting index, or percentage, the faster the company completed its pricing and design work and, therefore, the better the performance.

FIGURE 2  
Rating the Efficiency of Survey Participants



According to the calculations, time-based performance varied widely, from less than 50% of expected to more than 150% of expected. Not surprisingly, insurers that undertook more product development activity generally did it faster.

### What Resources Were Consumed?

Resource consumption included both staff costs and outside spending. Respondents provided data on full-time equivalent staffing (actuarial and non-actuarial) by level and on outside spending for the actuarial and economic analysis function. Salary and benefit cost estimates (based on an approximation of industry norms) were applied to each position to estimate annual resource consumption in dollars.

Figure 2 rates the performance of survey participants. A single efficiency rating was produced by computing actual-to-expected costs for each company and combining this cost figure with the data on "How fast?" The horizontal axis represents resource efficiency in terms of dollar value of resources consumed per "expected project month"—the standard unit of product development activity. The vertical axis indicates how fast companies completed preliminary and detailed design and pricing activity, measured by the time-based performance index, which

portrays actual versus expected time frames.

What differentiates insurers with efficient product development processes from other survey participants? Efficient companies use less experienced actuaries for small-change projects and more senior actuaries for line extension projects. To complete projects, the efficient companies are also more willing to sacrifice profit targets than competitive positions or commission levels. Differences between the efficient companies and the others in complexity of pricing measures and quality of documentation are less significant.

### Managing Individual Projects

Profiling an efficient company's project management process may provide the keys to product development success. In an efficient company, project management usually has senior management commitment, a senior-level product development committee to prioritize strategic direction and individual projects, and subcommittees to monitor progress. The efficient company gives product development implementation high prominence, with full-time project implementation directors. Senior management has a formal role in project management, project approval,

continued on page 9, column 1

**Product Development Efficiency**

*continued from page 8*

resource commitment, and product launches. The company creates project plans and implementation standards based on internal experience and best practices derived from other companies.

Communication is vitally important. Participants communicate internally with regular reports on project progress. They have a good understanding of pricing assumptions and profit targets, and documentation is performed and easily retrievable. (Only one respondent, however, had actuarial/pricing and system documentation centrally retrievable.)

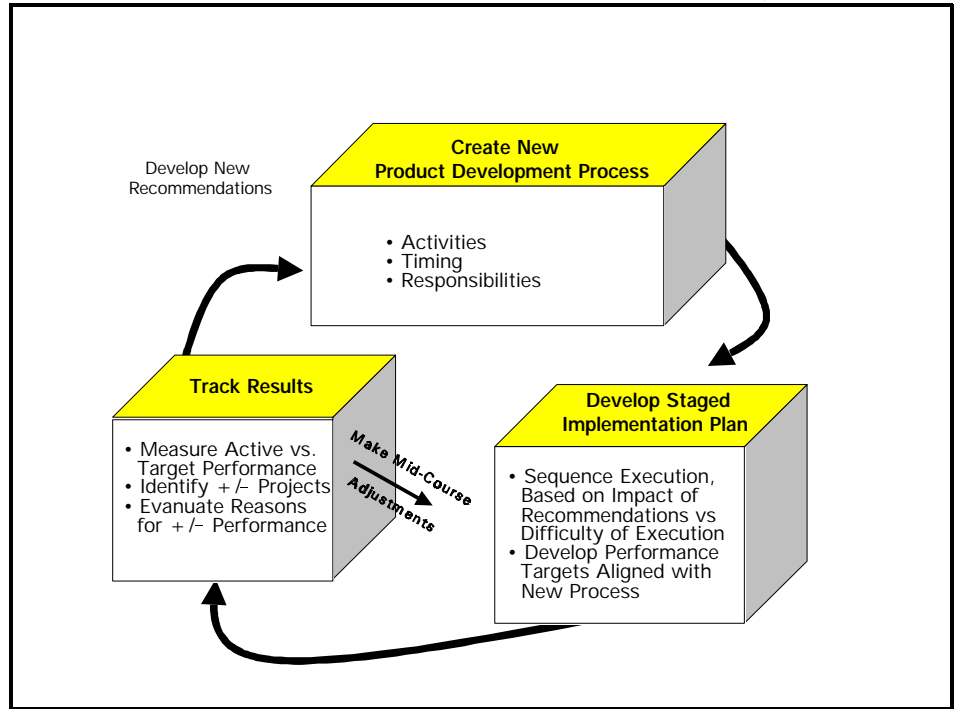
The project manager's role is also formalized, with responsibility for establishing the budget, tracking progress and meeting delivery dates within time and budget limitations. The manager must also have authority over functional area resources, including input into resource performance evaluations. This is a full-time assignment, requiring prior project management experience.

In addition to the project manager, the efficient company employs a cross-functional implementation team, whose members are accountable for meeting delivery dates assigned to their functional areas. These individuals must have sufficient experience and knowledge to prevent stoppages in the process. Furthermore, the functional area managers must allocate resources, giving priority to the product development process.

Systems and operations coordination is a key element that is frequently underemphasized. Early participation is critical to develop system specifications, identify systems constraints, and develop illustration software capabilities. This coordination works best when a system representative "champions" product development goals through the systems and operations functional areas.

Good execution of the process provides a company with a competitive advantage. Execution is enhanced when a complete and consistent product development process is always followed. A project manager's leadership group should establish implementation standards using best practices. Benchmark baseline plans and time lines for various categories of projects can be set up, with key resources identified within functional areas. Resource weaknesses should be identified and remedied. The leadership group should also implement training in project planning and management and in coordi-

**FIGURE 3**  
How to Improve Product Development Efficiency



nating project management staff support.

**Striving for Improvement**

Assume that a company has the right foundation for efficient product development (that is, management commitment, a structured process, adequate systems and high-priority allocations). What separates the most successful companies from their competitors? The successful companies continually strive for improvement in such areas as faster resolution of conflicts, higher quality of market research (especially in new potential markets), and systems infrastructure (to increase speed of administrative systems implementation).

The product development process can be improved by following a four-step process:

- Determine the existing structure's capability to meet the company's product development challenges and identify areas for improvement.
- Develop an understanding of select peer company product development practices to benchmark against an evaluation of their efficiency/

effectiveness. This should result in a description of practices that can be used to improve the company's product development process.

- Document the new product development process with well-defined performance measures and targets.
- Implement changes and track results. Expectations for changes should be clear and measurable. Performance evaluations will provide lessons for further improvement and leads for new ideas.

**On the Leading Edge**

Customers are more demanding, and their needs are changing. As a result, product strategies are evolving in an effort to improve both persistency and profitability. Strategies are becoming less distribution-system-oriented and sales-focused and more customer-relationship-oriented and capital-focused. Because consumers buy only what they value, their needs will drive marketing and product strategies.

As insurers strive to carve out niches and respond to current economic

*continued on page 10, column 1*

## Product Development Efficiency

*continued from page 9*

conditions, product development activity will increase. Companies must be responsive to the market. They can improve their product development efficiency by devising benchmark performance measures and identifying best-practice product development and project

management techniques (see Figure 3.) How efficiently they perform will determine whether they find themselves on the leading edge or desperately trying to catch up.

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## Pricing

*continued from page 2*

levelized-commission program, the sensitivity of profits to changes in persistency is reduced. However, there still is some sensitivity to changes in persistency because of the acquisition costs related to policy issue and underwriting.

**Interest Rate.** Because commissions are paid over a longer time, the sensitivity of profits to changes in the level of interest rates increases under a levelized-commission program. Under some levelized-commission contracts, the present value of future level commissions is guaranteed to be paid upon retirement. The payout should be designed so that it does not create a risk to the company from changes in interest rate environment.

**Premium Patterns.** Under a levelized-commission program, it is anticipated that agents will have more contact with their existing customer base. For flexible-premium products, this should result in increases in premium persistency and also in increases in the level of premiums paid (as compared to planned). Upon the implementation of a levelized-commission program, one company reported an increase of 20% of planned premium—from 70% to 90%—on its flexible-premium products.

**Expenses.** The implementation of a levelized-commission program will result in a change to the level and pattern of distribution-related expenses. In their expense allocation formula, many companies will allocate a percentage of expenses to either first-year commissions and/or renewal commissions. Any expense allocation formula should be reviewed when implementing a levelized commission program to determine if any modifications are necessary. Another perceived benefit of a levelized commission program is that improved policy persistency will result in

an increased block of business, if sales levels are maintained. This in turn may result in decreased unit-related expenses. Although reductions in unit-related expenses would not be recommended for base profit-test assumptions, it may be appropriate to reflect reduced unit-related expenses as a sensitivity test.

## Product Design Features

A levelized-commission structure, in combination with the subsequent changes to expected profit-test assumptions, changes the economics of product profitability. The changes to the economics of product profitability may lead to changes in design features commonly found in life insurance products sold today. The following examines some common product features and possible modifications to them under a levelized-commission environment.

**Surrender Charges.** A proportion of the surrender charge is set in order to recover unamortized first-year commissions that are forfeited upon the early surrender of a policy. In a levelized-commission product, the amount of unamortized first-year commission is less than under a heaped-commission policy. In order to make early policy-year values more attractive to consumers, companies may choose to reduce surrender charges or shorten the surrender charge period.

**Policy Loads.** Companies may also choose to revisit the policy load structure existing in their contracts. Under a levelized-commission contract, there is the opportunity to match commission expenses directly with per premium loads. However, this may not be well received by the field force.

**Persistency Bonus.** Under levelized-commission policies, it is anticipated that

better persistency and higher levels of target premiums will be paid. This could increase the cost of persistency bonuses and other like features that are contingent upon the insured maintaining the policy in force for a predetermined number of years. Companies may want to revisit the cost effectiveness of these product features and the marketing appeal gained through them.

**Policy Values.** Changes to policy features and profit-test assumptions may provide companies with an opportunity to improve projected long-term policy values. As with any significant change to product economics, companies must decide whether to pass on gains anticipated from a levelized-commission program to policyholders through higher policy values, to pass them on to their representatives through higher commissions, or to retain them through higher profits. If gains are passed on to policyholders through higher policy values, the policyholder, the representatives, and the company may all win. Policyholders will have a better product, representatives will be able to sell more because the product is more competitive, and increased sales will improve the overall profits of the company. Companies should carefully examine this profit/competitiveness/compensation equation.

## Profit Measures and Profit Targets

A natural starting point in the development of a levelized commission scale is one that is actuarially equivalent to the heaped scale, incorporating the effect of

*continued on page 11, column 1*