Information
Services
Program
(ISP)

Information Systems Planning Report

Insurance Sector

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INFORMATION SYSTEMS PLANNING REPORT
INSURANCE SECTOR

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INFORMATION SYSTEMS PLANNING REPORT
INSURANCE SECTOR

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INFORMATION SYSTEMS PLANNING REPORT
INSURANCE SECTOR

EXHIBITS

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I MAJOR ISSUES

A. DRIVING FORCES

- The life insurance segment of the insurance industry is enjoying significant growth. Major contributing factors include:
    - Tax legislation permitting insurance companies to include life insurance-based investment vehicles in their product line.
    - The variable annuity and universal life products that allow the client to make investment decisions. Insurance companies are using this feature to initiate the transfer of a major portion of risk into the client's hands. Business is increased and risk to insurance companies is reduced.
- This segment continues to face:
    - The shift from a product to a customer focus.
    - The requirement for competitive agent support systems for proposal preparation, administration, client information, and tracking.
- The health segment of the insurance industry continues to be pressured by employers/customers to cut costs. It also faces increasing competition from

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the health maintenance organizations (HMOs). In some cases, health insurers are implementing HMOs themselves.

- Additionally, new trends are causing significant change in the industry including:

  - Flexible benefit programs. No longer do employers buy packages and provide them for all employees. Today, more and more employers are providing a menu of benefits for their employees to choose from due to changing social and economic conditions; thus, the health industry must sell to the individual as well as the corporation. These changes are causing a substantial investment in information systems and procedures to support the entire product life cycle.

  - Medicare mandating fixed prices for outpatient care. Hospitals can no longer routinely bundle overhead into these charges. This is causing a review of processes and procedures for both hospitals and insurance companies.

  - Many health care providers are moving from an acute care orientation to a trauma, surgical, or accident center basis. The individual practice has completely given way to group and groupings of practices.

- The property/casualty segment of the insurance industry continues to experience problems due to pricing policies of the last decade, interest rate fluctuations, and large settlements awarded to claimants. This segment also faces:

  - Increased competition, including captive and self-insurers.

  - Elimination of and/or significant changes in the agent relationships.

  - Setting of liability limits.

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- Cost reduction through automation of paperwork, consolidation of backbone systems, and replacement of older technologies and fragmented systems that do not meet functional or capacity needs.

- Extreme public relations problems due to increased premiums and refusals to insure.

- Exhibit I-1 summarizes the driving forces in the insurance industry sector.

B. INFORMATION SYSTEMS ISSUES AND OBJECTIVES

- Decreased profitability is the central issue for insurance firms due to a number of factors, including:
  - High administrative costs due to paperwork and/or very old systems.
  - Large underwriting losses.
  - Severe price competition.
  - Tax reform.
  - Interest-sensitive investments and continued lower interest rates.
  - Agent demand for on-line support systems.
  - Non-profitable insurance products that were based on technology rather than an ROI analysis.

- With the changing and very complex insurance products, newer technologies, and the information systems (IS) function at the core of the daily execution of

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EXHIBIT I-1

INSURANCE DRIVING FORCES

- Productivity and Cost Reduction
- Tax Reform
- Risk, Profitability, and Business Management
- Agent Relationship
- Flexible Benefit Programs
- Government Regulation of Costs

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business, management is requiring new tools and procedures to effectively manage an accelerating rate of change and ensure that the IS dollar is allocated and used most profitably to meet the corporate objectives. To this end there is a focus on providing IS tools for:

- Product and business planning.

- Risk analysis and management.

- Minimizing the amount of administrative information stored and reducing administrative processes.

- Financial analysis.

- End-user access to client and product information.

- Single data bases (distributed eventually).

- PCs and/or other access/computational devices targetted for or in most end-users' hands.

- In the life sector, the 1986 tax reform has resulted in the investment insurance vehicle. Concurrently, the ability for a purchaser of insurance to personally direct the investment of his funds is both a draw for new business and a major profit risk reducer for the insurance companies. This has resulted in major IS support work.

- In life and health sectors, flexible benefit plans are changing the ways insurance is provided through employers. As individuals select custom benefit programs, both the sales and administrative processes must be revamped, including the related IS systems.

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EXHIBIT I-2

INSURANCE
IS ISSUES

- Productivity Non-Profitability
- Competitive Agent Support
- Financial Risk on Investments
- Market Share
- Management Effectiveness
- Administrative Paperwork Bottlenecks

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- IS staffing remains a major issue with retention of key personnel a serious concern. Several of the executives surveyed cited that candidates feel the insurance business just is not interesting to most computer professionals. Industry and technology changes cited above may reverse this trend in the next few years.

- Exhibits I-2 and I-3 summarize the key issues and objectives as identified by the respondents.

C. IMPACT OF NEW TECHNOLOGY

- Technologies that allow insurance companies to connect end-user terminals to central sites are key to current and future success. This area of computing is already fully integrated in a few very successful corporations using available technology and strict controls. All respondents agreed, however, that serious technology problems will remain, such as:

    - Lack of capability to easily integrate mixed vendors into LANs.

    - Problems of providing and controlling software release levels from the central site. Sending thousands of floppies without control of installation and use is confusing at best. Further, as larger regional centers are set up there is no satisfactory technology available to download the many megabytes of operating systems, applications, and data in a timely, controlled, and cost-effective manner.

    - Unattended operation of office or regional installations remains a user objective but not a technical reality.

- Distributed (or apparently so) data bases are not yet viable on a large operational scale. End-user data access is becoming increasingly critical for all sectors of the insurance industry.

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EXHIBIT I-3

INSURANCE IS OBJECTIVES

- **Provide Business Management of IS**
- **Develop Risk Reducing Products**
- **Expand Market and Client Base**
- **Improve Operational Efficiency and Customer Support**

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- Artificial intelligence and its applications were mentioned by all respondents. Recent developments from the artificial intelligence (AI) community are very interesting, but these solutions will not be available in the operational or tactical timeframes desired by most respondents. Applications of major interest include:
    - Risk and asset management.
    - Support for the field agent in customizing a policy to meet specific financial and subjective objectives of the client.
    - Medical review analysis as well as diagnostic services.
- A strong requirement was voiced by more than half the respondents for volume image processing of typed and, especially, handwritten documents. This remains a strategic technology but is not expected to be practically applicable in the near term.
- Reduction of paperwork remains a major issue. One medium-sized firm stated it prints two miles of paper every hour; another prints 100 pages per partner per day. This has to be brought under control from management, resource, and business perspectives.
- Information technology to assist the IS and corporate executives in business, product, asset, risk, and profit planning and management is available in bits and pieces but is still in the formative stages of development. Furthermore, due to the increased variety and complexity of financial instruments, fluctuating interest rates, and economic factors, there is an accelerating demand for sophisticated IS technology to manage portfolios and profitability.
- Exhibit I-4 summarizes the areas of new technology which are of high interest to the insurance industry.

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EXHIBIT I-4

INSURANCE
AREAS OF NEW TECHNOLOGY INTEREST

- Data Bases - Distributed and/or Relational
- Networks - Integrated Mixed Vendor
- Artifical Intelligence - Risk Analysis
- Image Processing - Machine and Handwritten
- IS Integrated Business Management Tools
- Unattended Operation

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II NEW APPLICATIONS

- Major applications development continues in agent support systems for proposal work, flexible benefit sales, client tracking, and administration.

- Procedures and systems applications are being developed to provide distribution and release level control of software that is downloaded to regional, end-user, and agent sites. Site support will include from 10 to 15,000 locations.

- Some relational and distributed data bases are in place, albeit mostly in pilot mode. Every account we talked with does not believe the management, technology, and control problems are satisfactorily solved. Continued development activity in the face of inadequate technical solutions testifies to the importance of these applications to the insurance industry.

- New systems are being developed to support new insurance products that allow the purchaser to manage his investment.

- AI programs and expert systems are in the initial stages of development for application in a number of areas including:

    - Financial investment management.

    - Premium calculations.

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  - Loss limits.

  - Medical review.

  - New product ventures and business ROI planning.

- Single premium products are being developed.

- There is continued development of new and completely reworked administration and claims systems for all segments of the industry. Old systems often cannot support capacity demands, nor do they provide the services and functions required in today's insurance world. These system replacements are unavoidable, essential to meeting the IS needs of the end users, and a current activity cited by all respondents.

- Exhibit II-1 summarizes major new applications as identified by the respondents. Exhibit II-2 summarizes sources of new application products, and Exhibit II-3 summarizes assignment of development staff.

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EXHIBIT II-1

INSURANCE NEW APPLICATIONS

- End-User Administration and Data Access
- Software Distribution and Release Control
- Risk Reducing and Business Management Tools
- Tax Reform and Customer-Managed Based Products
- Policy Administration and Claims Processing
- Distributed Data Bases with Central Control

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Exhibit II-2

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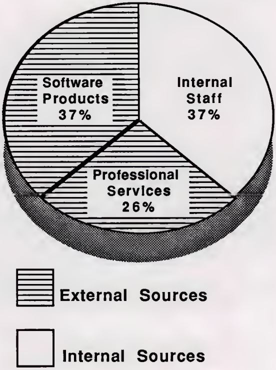
INSURANCE SOURCE OF DEVELOPMENT ALL NEW MAJOR APPLICATIONS



Cost Range: $60K - $13,000K

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EXHIBIT II-3

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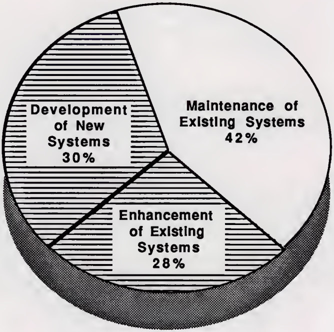
INSURANCE ASSIGNMENT OF APPLICATIONS DEVELOPMENT STAFF



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III BUDGET ANALYSIS

- The insurance sector's IS department operating budgets are not primarily dependent on revenue or profits because of the critical nature of IS to the long-term success of the company. In growing companies, new products and applications are routinely justified using business case (ROI) analysis. Stabilized and downsizing companies continue to justify budget decisions using "keeping up with technology" as the primary decision criteria.

- Insurance companies' IS budgets are growing, overall, at a faster rate than last year, with 20% in the 50-100% range due to excellent growth. Another 10% are stabilized or actively downsizing, and the rest are growing at 5-15% a year. The average is 9.6%.

- Key factors impacting the budget are:

  - Continued investment in automation of paperwork for the long-term cost savings.

  - Investment in new insurance vehicles such as the single premium whole life, variable annuities, and universal life.

  - Rework or complete redevelopment of insurance administration systems to take advantage of new IS technologies and to replace worn out systems.

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  - Business management systems both for justification and tracking.

  - Disaster planning.

- Exhibit III-1 shows the 1987 budget distribution and projects the 1988 budget growth for the industry's IS costs.

  - The largest budget growth areas include personnel, communications, and professional services reflecting the extensive applications development and support activities.

  - The smallest growth area is in overall hardware expenditures. This reflects adequate capacities and good price/performance from the primary vendors.

  - Personnel and hardware costs have stayed reasonably stable in the 32+% range and software costs have increased by more than 20%. In the personnel area, 1987 did not show a large percent increase, but hiring is ramping up, and while some companies are stabilized or downsizing, 20% expect a 1988 growth of at least 50%.

- Eighty percent of respondents indicated that their budgets would increase over 1986. Factors influencing both upward and downward trends include:

  - Increase:

    - Staffing.

    - Reworked or new administrative systems.

    - New product development.

    - Business expansion.

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EXHIBIT III-1

INSURANCE
1987 BUDGET DISTRIBUTION AND 1987/1988 CHANGES IN THE INSURANCE SECTOR

BUDGET CATEGORY	1987 PERCENT OF I.S. BUDGET	1987 - 1988 EXPECTED BUDGET GROWTH
Personnel Salaries and Fringes	34.1	15.3
Mainframe Processors	14.3	1.3
Minicomputers	1.8	12.6
Microcomputers	5.0	15.1
Mass Storage Devices	5.1	3.0
Other Hardware	5.9	.6
Total Hardware	32.1	2.0
Data Communications	14.1	10.0
Voice Communications	4.2	11.1
Total Communications	18.3	10.3
Professional Services	2.4	2.3
Outside Processing Services	1.1	5.1
External Software	5.5	10.0
Software Maintenance	1.7	7.0
Hardware Maintenance	4.8	10.0
Other	- -	9.6
Total	100%	9.6%

U-BRA-IN

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- Decrease:
  - Business downsizing.
  - Major new hardware not needed; sufficient capacity.

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About INPUT

INPUT provides planning information, analysis, and recommendations to managers and executives in the information processing industries. Through market research, technology forecasting, and competitive analysis, INPUT supports client management in making informed decisions. Continuing services are provided to users and vendors of computers, and communications and office products and services.

The company carries out continuous and in-depth research. Working closely with clients on important issues, INPUT's staff members analyze and interpret the research data, then develop recommendations and innovative ideas to meet clients' needs. Clients receive reports, presentations, access to data on which analyses are based, and continuous consulting.

Many of INPUT's professional staff members have nearly 20 years of experience in their areas of specialization. Most have held senior management positions in operations, marketing, or planning. This expertise enables INPUT to supply practical solutions to complex business problems.

Formed in 1974, INPUT has become a leading international planning services firm. Clients include over 100 of the world's largest and most technially advanced companies.

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