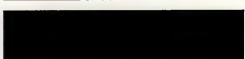
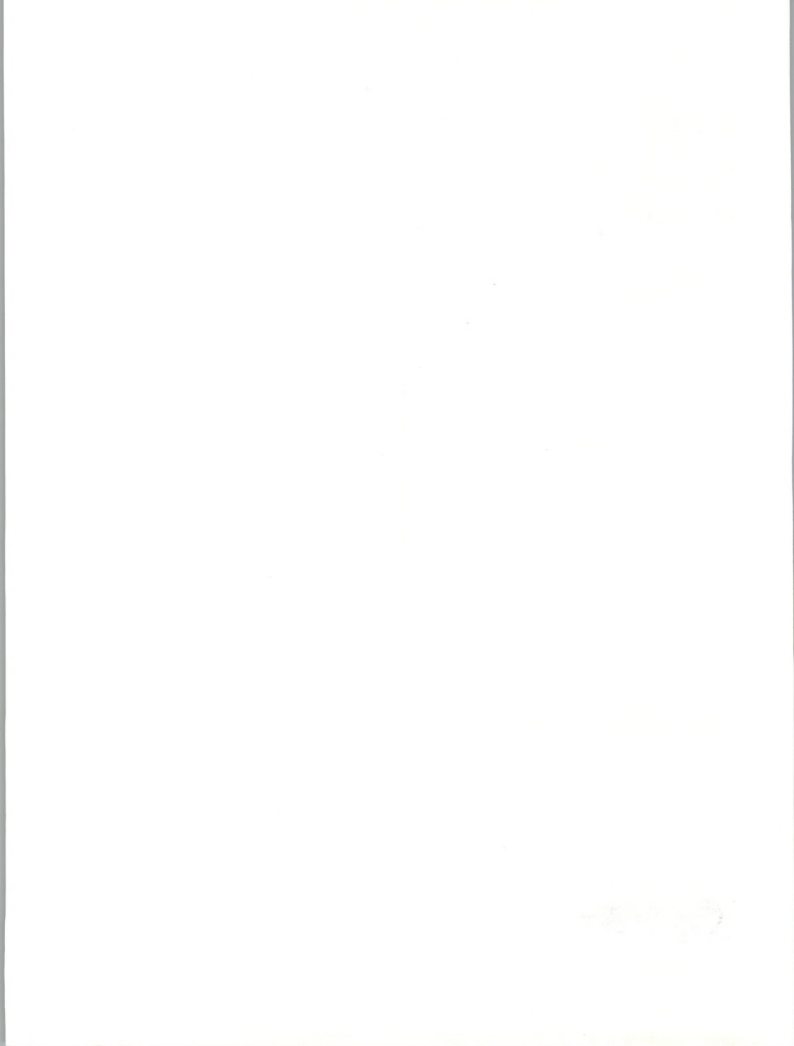


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**Information  
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Planning  
Report**

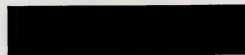


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DECEMBER 1987

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**INFORMATION SYSTEMS  
PLANNING REPORT  
UTILITIES SECTOR**

the 1990s, the number of people aged 65 and over in the United States is projected to increase from 20 million in 1990 to 35 million in 2010, and the number of people aged 75 and over is projected to increase from 10 million in 1990 to 20 million in 2010 (U.S. Census Bureau 1996).

As the number of people aged 65 and over increases, the number of people aged 75 and over is expected to increase at a faster rate. The number of people aged 75 and over is projected to increase from 10 million in 1990 to 20 million in 2010, and the number of people aged 85 and over is projected to increase from 3 million in 1990 to 7 million in 2010 (U.S. Census Bureau 1996).

As the number of people aged 75 and over increases, the number of people aged 85 and over is expected to increase at a faster rate. The number of people aged 85 and over is projected to increase from 3 million in 1990 to 7 million in 2010, and the number of people aged 95 and over is projected to increase from 1 million in 1990 to 2 million in 2010 (U.S. Census Bureau 1996).

As the number of people aged 95 and over increases, the number of people aged 100 and over is expected to increase at a faster rate. The number of people aged 100 and over is projected to increase from 1 million in 1990 to 2 million in 2010, and the number of people aged 105 and over is projected to increase from 0.5 million in 1990 to 1 million in 2010 (U.S. Census Bureau 1996).

As the number of people aged 105 and over increases, the number of people aged 110 and over is expected to increase at a faster rate. The number of people aged 110 and over is projected to increase from 0.5 million in 1990 to 1 million in 2010, and the number of people aged 115 and over is projected to increase from 0.2 million in 1990 to 0.5 million in 2010 (U.S. Census Bureau 1996).

As the number of people aged 115 and over increases, the number of people aged 120 and over is expected to increase at a faster rate. The number of people aged 120 and over is projected to increase from 0.2 million in 1990 to 0.5 million in 2010, and the number of people aged 125 and over is projected to increase from 0.1 million in 1990 to 0.2 million in 2010 (U.S. Census Bureau 1996).

As the number of people aged 125 and over increases, the number of people aged 130 and over is expected to increase at a faster rate. The number of people aged 130 and over is projected to increase from 0.1 million in 1990 to 0.2 million in 2010, and the number of people aged 135 and over is projected to increase from 0.05 million in 1990 to 0.1 million in 2010 (U.S. Census Bureau 1996).

As the number of people aged 135 and over increases, the number of people aged 140 and over is expected to increase at a faster rate. The number of people aged 140 and over is projected to increase from 0.05 million in 1990 to 0.1 million in 2010, and the number of people aged 145 and over is projected to increase from 0.02 million in 1990 to 0.05 million in 2010 (U.S. Census Bureau 1996).

As the number of people aged 145 and over increases, the number of people aged 150 and over is expected to increase at a faster rate. The number of people aged 150 and over is projected to increase from 0.02 million in 1990 to 0.05 million in 2010, and the number of people aged 155 and over is projected to increase from 0.01 million in 1990 to 0.02 million in 2010 (U.S. Census Bureau 1996).

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**Information Systems Program (ISP)**

**Information Systems Planning Report  
Utilities Sector**

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the 1970s, and a number of studies have shown that the rate of increase in the prevalence of these disorders has continued to rise (Gould and Greenberg 1992, Greenberg 1992, Gould et al. 1993, Lewinsohn et al. 1993, Lewinsohn and Rohlfing 1994, Lewinsohn et al. 1995, Lewinsohn and Rohlfing 1995, Lewinsohn and Rohlfing 1996, Lewinsohn et al. 1996, Lewinsohn et al. 1997, Lewinsohn et al. 1998, Lewinsohn et al. 1999, Lewinsohn et al. 2000, Lewinsohn et al. 2001, Lewinsohn et al. 2002, Lewinsohn et al. 2003, Lewinsohn et al. 2004, Lewinsohn et al. 2005, Lewinsohn et al. 2006, Lewinsohn et al. 2007, Lewinsohn et al. 2008, Lewinsohn et al. 2009, Lewinsohn et al. 2010, Lewinsohn et al. 2011, Lewinsohn et al. 2012, Lewinsohn et al. 2013, Lewinsohn et al. 2014, Lewinsohn et al. 2015, Lewinsohn et al. 2016, Lewinsohn et al. 2017, Lewinsohn et al. 2018, Lewinsohn et al. 2019, Lewinsohn et al. 2020, Lewinsohn et al. 2021, Lewinsohn et al. 2022, Lewinsohn et al. 2023, Lewinsohn et al. 2024, Lewinsohn et al. 2025).

As a result of the above-mentioned findings, it is clear that the prevalence of major depressive disorder has increased significantly over the past few decades. This increase in prevalence is likely due to a combination of factors, including changes in the environment, increased awareness of mental health issues, and changes in the way that mental health disorders are diagnosed and treated. Further research is needed to better understand the causes of this increase in prevalence and to develop more effective treatments for major depressive disorder.

In addition to the increase in prevalence, there has also been a significant increase in the burden of major depressive disorder. This is due to the fact that major depressive disorder is a leading cause of disability and is associated with significant economic costs. The burden of major depressive disorder is expected to continue to increase as the prevalence of the disorder continues to rise.

Given the significant increase in prevalence and burden of major depressive disorder, it is important to focus on developing more effective treatments for this disorder. This includes both pharmacological and psychological treatments. While there have been significant advances in the treatment of major depressive disorder, there is still a need for more effective treatments, particularly for individuals who do not respond to current treatments.

One area of research that has shown promise in the treatment of major depressive disorder is the use of novel antidepressants. These include drugs such as vortioxetine, desvenlafaxine, and esketamine. These drugs have been shown to be more effective than traditional antidepressants in the treatment of major depressive disorder. Further research is needed to better understand the mechanisms of action of these drugs and to determine their long-term safety and efficacy.

In addition to the development of novel antidepressants, there is also a need for more effective psychological treatments for major depressive disorder. This includes treatments such as cognitive behavioral therapy (CBT) and interpersonal therapy (IPT). These treatments have been shown to be effective in the treatment of major depressive disorder, but there is still a need for more effective treatments, particularly for individuals who do not respond to current treatments.



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## Major Issues



the 1990s, the UK has experienced a significant increase in the number of people who are living with a long-term health condition. This has led to a growing awareness of the need for self-management strategies to help people manage their condition and live more independently. Self-management strategies are a range of techniques that people can use to manage their condition and live more independently. These strategies can be used to manage symptoms, prevent complications, and improve overall health and well-being.

There are many different self-management strategies that people can use. Some of the most common strategies include: taking medication as prescribed, attending regular medical appointments, following a healthy diet and exercise routine, and using assistive devices. Self-management strategies can also include: learning about the condition, setting goals, and seeking support from family and friends.

Self-management strategies can be used to manage a wide range of long-term health conditions. Some of the most common conditions that can be managed with self-management strategies include: diabetes, asthma, heart disease, and arthritis. Self-management strategies can also be used to manage mental health conditions, such as depression and anxiety.

There are many benefits to using self-management strategies. Some of the most important benefits include: improved health and well-being, reduced hospital admissions, and increased independence. Self-management strategies can also help people to live more actively and enjoy their lives. By using self-management strategies, people can take control of their condition and live more independently.

There are many resources available to help people learn about and use self-management strategies. Some of the most common resources include: self-management books, websites, and support groups. Self-management courses are also available, which can provide people with the skills and knowledge they need to manage their condition effectively.

Self-management strategies are an important part of living with a long-term health condition. By using self-management strategies, people can manage their condition and live more independently. There are many resources available to help people learn about and use self-management strategies, and it is important to seek support from family and friends.

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## I

## Major Issues

## A

### Driving Forces

Merger and acquisition activities among utilities are increasing and will result in larger, but fewer, utilities, especially electric.

- Pacific Lighting Corporation (Los Angeles, CA) acquired drugstore chain Thrifty Corporation (Los Angeles, CA) in an effort to diversify its operations.
- Pacific Gas & Electric Company (San Francisco, CA) has made an offer to merge with the Sacramento (CA) Municipal Utilities District.

The cost of building new nuclear power plants continues to force budget austerity. While building nuclear power plants may be necessary to provide sufficient capacity, building costs for such plants have escalated in the last few years to where a new plant costs \$4 - \$6 billion.

State utility commissions are separating power generation from power distribution activities. Rate changes are divided into the cost of power production and the cost of power transmission.

The federal government is gradually deregulating prices for electricity and natural gas, adding pressure on utilities to learn how to effectively market its products. Further pressure comes from certain state governments, which are permitting utilities in their state to sell electricity or gas to customers in neighboring states.

Cogeneration is now a reality in the power business. Large industrial customers can purchase generators capable of providing internal capacity and excess power. The excess power must, by law, be purchased back by the local electric utility at comparatively high rates.

As a result of deregulation and cogeneration, utilities face more competition. New systems to address market-based requirements must be estab-





lished. To prosper, utilities must learn marketing. Marketing efforts will be directed mainly at the largest customers, which are necessary to retain in order to spread the fixed costs across a wider user base. Please refer to Exhibit I-1.

As part of an improved service orientation, smaller, rural utilities are continuing the conversion from batch to on-line systems. Department managers strongly influence the operations of smaller utilities. In the past, near-monopoly rural utilities spent as little as possible on technology. Now, they must invest in new systems to meet a changing economic and regulatory environment.

EXHIBIT I-1

### UTILITIES SECTOR — DRIVING FORCES

- Mergers and Acquisition Will Lead to Fewer Utilities
- Flattening Demand for Electricity
- Building of Nuclear Power Plants Forces Budget Austerity
- Separate Power Generation and Distribution Activities
- Federal Government Deregulation
- Power Cogeneration
- More Emphasis on Marketing
- Continued Conversion to On-Line by Rural Utilities

the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.1 billion to 1.5 billion (United Nations 1994). This increase is expected to be particularly large in the developing countries, where the population is expected to increase from 1.1 billion to 1.7 billion (United Nations 1994).

It is important to note that the increase in the number of children in the world is not only due to the increase in the number of children born, but also due to the increase in the number of children who survive. The number of children who survive is expected to increase from 1.1 billion to 1.5 billion (United Nations 1994). This increase is expected to be particularly large in the developing countries, where the number of children who survive is expected to increase from 1.1 billion to 1.7 billion (United Nations 1994).

The increase in the number of children in the world is also due to the increase in the number of children who are under 15 years of age. The number of children who are under 15 years of age is expected to increase from 1.1 billion to 1.5 billion (United Nations 1994). This increase is expected to be particularly large in the developing countries, where the number of children who are under 15 years of age is expected to increase from 1.1 billion to 1.7 billion (United Nations 1994).

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**B**

**Issues and Objectives** Cost containment has always been a major issue in this industry. Service requirements must be balanced against funds available for increases through rate hikes and the need to pay shareholders of investor-owned utilities a fair return on their investment.

More regulatory changes means more changes to the existing software to accommodate the wishes of state legislatures or other governmental bodies. Minor changes are not a problem; however, major regulatory changes mean major software rewrites and testing and debugging.

Interestingly, a few large utilities have installed and tested Local Area Networks (LANs). Now that users have seen what they can do, virtually every user wants to be part of the network, whether or not the network is relevant to that person's job.

Utilities are coping with the problem of how to structure the organization's data processing operation. Should it be centralized, distributed, or a "hybrid" in order to best accomplish necessary tasks? Decentralization is being discussed as a means to delay the purchase of an additional mainframe, since the existing mainframe is already burdened by the growth of applications/power needs.

Office automation, especially in IBM environments, is being implemented slowly with calendar functions and electronic mail as the primary applications.

Utilities are buying used computers to help stretch their budgets. While the purchase of used disk and tape drives is relatively commonplace, buying used CPUs is a major, but necessary, step for many utilities.

IS managers appear to have a broader organization perspective than many utility company senior managers. They want to use IS to improve customer service — through on-line inquiry, on-line posting, and relational database management system-based customer information systems, providing vital marketing information.

Senior management must begin to use information for a strategic or competitive advantage. While one electric company does not compete with another, many factors influence a developer's choice of gas or electric heat for a new shopping center or office building.

In a couple instances, IS managers wanted to use IS to foster better organizational teamwork and cooperation. The utility industry may be the last business where department managers ran the company, rather than senior management providing organizational leadership and direction.

Please refer to Exhibits I-2 and I-3 for details.

the 1990s, the number of people in the world who are under 15 years of age has increased from 1.1 billion to 1.3 billion. The number of people aged 15 years and over has increased from 3.5 billion to 4.5 billion. The total population of the world has increased from 4.6 billion to 5.8 billion.

The population of the world is expected to continue to increase. The United Nations (UN) estimates that the world population will reach 6.5 billion by the year 2000, 7.5 billion by the year 2010, and 8.5 billion by the year 2020. The UN also estimates that the world population will reach 9.5 billion by the year 2050.

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EXHIBIT I-2

**UTILITIES SECTOR – ISSUES**

- Cost Containment
- More Regulatory Changes
- Control Growth of LANs
- Centralized/Distributed/Hybrid Processing
- Office Automation
- More Used Computers

EXHIBIT I-3

**UTILITES SECTOR – OBJECTIVES**

- Use IS to Improve Customer Service
- Get Senior Management to Strategically Use Information
- Use IS to Foster Organizational Teamwork and Cooperation

the 1990s, the number of people in the UK who are aged 65 and over has increased from 10.5 million to 13.5 million, and the number of people aged 75 and over has increased from 4.5 million to 6.5 million (Office for National Statistics 2000).

There is a growing awareness of the need to address the needs of older people, and the UK Government has set out a strategy for the 21st century in the White Paper on *Ageing Better: The Challenge of the 21st Century* (Department of Health 1999). This strategy sets out a number of key objectives for the health care system, including the need to improve the quality of care for older people, to ensure that older people are able to live independently for as long as possible, and to ensure that older people are able to access the services they need.

The White Paper also sets out a number of key objectives for the health care system, including the need to improve the quality of care for older people, to ensure that older people are able to live independently for as long as possible, and to ensure that older people are able to access the services they need. The White Paper also sets out a number of key objectives for the health care system, including the need to improve the quality of care for older people, to ensure that older people are able to live independently for as long as possible, and to ensure that older people are able to access the services they need.

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## C

**Impact of Technology** Exhibit I-4 highlights four key aspects of what technology has done for end users in the utility industry.

## EXHIBIT I-4

**UTILITIES SECTOR — IMPACT OF TECHNOLOGY**

- Office Automation Helps Daily Operations
- New Technology Results in Decreasing Maintenance Costs
- Users Get More Hardware Power for the Money
- Routine Work Moves from Programmers to End Users
- IBM PS/2 will Increase User Expenditures

First, office automation helps manage the daily operations in electric, gas, and water/waste utilities. Better communications are a must for improving customer service and becoming more competitive.

Second, new hardware technology has resulted in steadily decreasing maintenance costs over the past two years. While manpower requirements to operate an IBM mainframe have not changed much, IBM decreased its direct charges for maintenance under its CSA program.

Third, for the same amount of money spent three years ago, a user now gets ten times the raw hardware power. However, increases in the number of applications supported and the increasing memory required to support each application results in a minimal overall gain. More robust software continues to help sell more hardware.

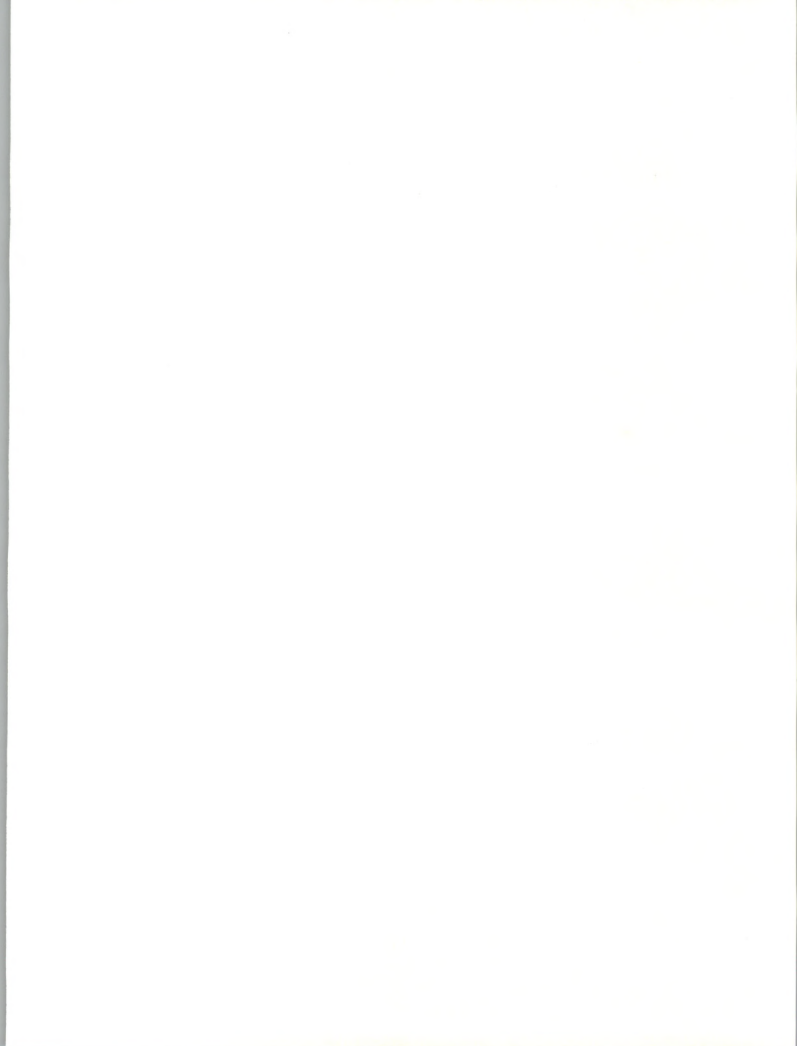
Fourth generation application development software helps move more routine work from programmers to end users, enabling programmers to catch up on the applications backlog.

Finally, IBM's new PS/2 system will have the effect of forcing end users to spend more money to adapt and integrate this new technology into existing IBM PC/XT/AT-based operations. This comes at a difficult time for utilities, when management would rather watch all IS spending.











## New Applications





**II**

## New Applications

Application development within the utilities sector continues its focus on asset management and customer-oriented systems. Exhibit II-1 highlights the specific applications to be started or continued in 1988.

EXHIBIT II-1

**UTILITIES — NEW APPLICATIONS IN 1987**

- Shareholder Systems
- Repetitive Maintenance for Nuclear Facility
- Distributed Work Information Power Plant Maintenance System
- On-line Financials (AP/AR/GL/Billing)
- Conversion from Batch to On-line Systems

Better utilization of people's time and the capital assets in place represent a major means of improving overall financial performance. The installation of customer-oriented systems may be the result of:

- A different regulatory environment.
- The financial community's perception of what makes for a "better" investor-owned utility.
- Utilities' responses to increased competition.

of the system, the user's perception of the system and the user's satisfaction with the system.

The first research question is: *How do the users perceive the system? Do they perceive the system as useful, easy to use, and enjoyable to use?*

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Shareholder systems are also being updated to foster better relations with shareholders, in the increasingly likely event of a takeover offer. Better relations should result in increased loyalty to the organization and, indirectly, to current management.

People and asset management applications include:

- Repetitive maintenance for nuclear facility.
- Distributed work information systems.
- Power plant maintenance system.

Medium-sized gas, electric, and water/waste utilities are continuing to convert financial systems from batch to on-line operations.

The utility sector has few IS needs which respondents believe are not well-served by vendors. Specifically, users want:

- More networking options available through each vendor.
- More involvement by vendors to help hold costs down.

Without prompting by INPUT interviewers, users remarked favorably about the decreasing mainframe hardware maintenance costs under IBM's new Corporate Service Amendment (CSA). However, the CSA is designed generally for large accounts which must meet such requirements as: setting up a first-line of contact for internal users (to minimize "no fault found" service calls); agreeing to a long-term contract with heavy cancellation penalties; and having staff members trained at certain IBM-determined levels of competency for the user's computer system.

However, users believe that, in general, vendors are trying to sell too much technology too fast.

According to the information depicted graphically in Exhibit II-2, the utilities sector is divided in its approach to software development.

- Larger utilities tend to develop new applications in-house while smaller organizations generally rely on third-party software vendors for new applications.
- Maintenance and enhancement of existing applications takes far greater resources than developing new applications. Larger utilities devote approximately 50% of software development staff to developing new applications. Smaller utilities devote less than 30% of their software development staff to developing new applications.

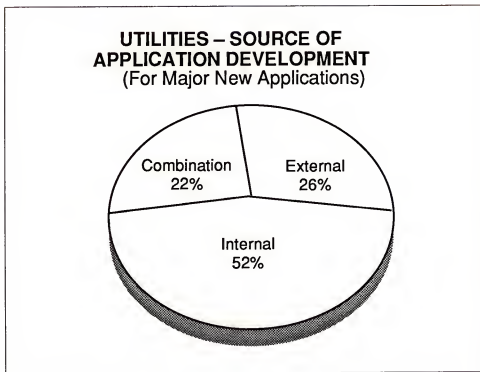








EXHIBIT II-2



One respondent expressed a caveat for third-party software vendors. Specifically, although utilities must accomplish the same basic tasks, no two utilities approach the problem in the same way. Therefore, some level of software customization is necessary to help make the sale. Customization requirements can be minimized by offering menu-driven choices within the application software package, and thereby simplifying user support requirements.

Cost Range of New Applications, whether developed in-house or purchased from a third-party:

- Mainframe Based: \$90,000 - \$2,000,000
- Minicomputer Based: \$18,500 - \$950,000
- Microcomputer Based: \$165 - \$9,300

Average Cost of Purchased Application Software:

- Mainframe Based: \$550,000
- Minicomputer Based: \$67,500
- Microcomputer Based: \$1,175





## Budget Analysis





## III

## Budget Analysis

In 1987, respondents experienced limited growth in their IS budgets, due primarily to increases in salaries and fringe benefits and the negative effects of nuclear power plant construction cost overruns.

- Overall IS spending in 1988 is projected to decrease 0.2%.
- Exhibit III-1 shows the 1987 budget distribution and projects the growth in specific budget categories in 1988.

In general, IS budgets at large utilities are growing faster than those at medium and smaller utilities. The unique staffing and equipment requirements at nuclear power plants account for the difference. If nuclear plants are deleted from the analysis, then budgets at medium and small utilities are increasing 0.7% faster than those of large, investor-owned utilities.

A comparison of data from 1985, 1986, and 1987 indicates that 1987 was an unusual year. Generally speaking, more utilities took one of the following actions than in either of the two previous years:

- Purchased new equipment.
- Leased more equipment.
- Upgraded existing equipment.
- Bought used equipment.

Nearly 60% of the respondents project that their IS budgets will decrease or remain the same in 1988 as in 1987. Please see Exhibit III-2.





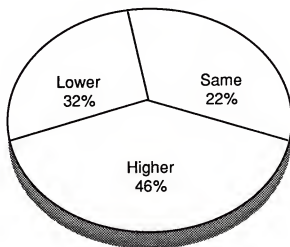
## EXHIBIT III-1

**1987 BUDGET DISTRIBUTION AND 1987-1988  
CHANGES IN THE UTILITIES SECTOR**

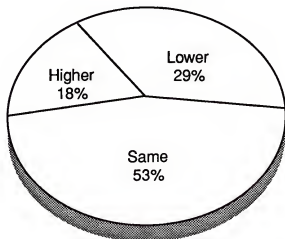
BUDGET CATEGORY	1987 I.S.BUDGET (Percent)	1987-1988 EXPECTED BUDGET GROWTH
PERSONNEL (Salaries & Fringe Benefits)	36.3	2.5
HARDWARE		
Mainframes	12.2	(9.7)
Minicomputers	6.6	(4.2)
Microcomputers	4.3	2.5
Mass Storage Devices	2.9	3.0
Other Hardware	2.2	(2.4)
<b>TOTAL HARDWARE</b>	<b>28.2</b>	<b>(2.2)</b>
Data & Voice Communicatons	4.8	4.9
External Software	6.5	8.3
Professional Services	4.5	(6.6)
Turnkey Systems	2.1	0.2
Software Maintenance	3.4	3.5
Hardware Maintenance	9.3	(11.2)
Outside Processing Services	0.1	2.3
Supplies	3.5	2.1
Travel; Subscriptions; Etc.	1.3	(6.8)
Subtotal - Maintenance, Services, & Other	35.5	(1.3)
<b>TOTAL</b>	<b>100.0</b>	<b>(0.2)</b>



EXHIBIT III-2

**UTILITIES SECTOR — MOST BUDGETS  
WILL REMAIN FLAT OR WILL  
DECREASE**

Comparison of  
1988 and 1987  
I.S. Budget

**UTILITIES SECTOR — MOST BUDGETS  
WILL REMAIN FLAT OR WILL  
DECREASE**

Comparison of  
Changes in Growth Rates of  
1987 and 1988 I.S. Budgets  
(Among Sites with Increasing Budgets)



Indirect factors contributing to decreases in the IS budget include:

- The effects of nuclear power plant construction.
- Managing reported "earnings per share."

Factors directly contributing to increases in the IS budget include:

- Personnel Expenses.
- New Application Software Development Projects.

Four factors were listed as the major contributors to decreases in the IS budget, namely:

- Declining state/local economy (resulting in a smaller customer base for services).
- Significant reductions in the purchases of software development (professional services).
- Declining hardware maintenance for IBM mainframes, resulting from adoption of IBM's Corporate Service Amendment (CSA).
- Less travel to conferences and seminars, especially from rural locations.

Headcount from 1986 to 1987 within utilities sector IS departments decreased somewhat. Larger utilities tended to add personnel, while headcount in smaller utilities decreased. These decreases can be attributed to increased efficiency resulting from automation or not replacing employees who quit or retire.

- 17% reported headcount increased.
- 56% reported headcount remained the same.
- 27% reported headcount decreased.

the 1990s, the number of people with a mental health problem has increased in the UK, and the number of people with a mental health problem who are in contact with mental health services has also increased (Mental Health Act 1983, 1990, 1994, 1997, 2003).

There is a growing awareness of the need to improve the lives of people with a mental health problem, and to reduce the stigma and discrimination that they experience. This has led to a number of initiatives, including the development of mental health services that are more user-centred and that involve people with a mental health problem in the design and delivery of services (Mental Health Act 1983, 1990, 1994, 1997, 2003).

One of the key areas of focus is the need to improve the lives of people with a mental health problem who are in contact with mental health services. This includes people who are in contact with mental health services through the criminal justice system, and people who are in contact with mental health services through the health care system.

The aim of this paper is to explore the experiences of people with a mental health problem who are in contact with mental health services through the criminal justice system, and to identify the factors that influence their experiences. The paper is based on a qualitative study of 10 people with a mental health problem who are in contact with mental health services through the criminal justice system.

The study was conducted in a prison in the north of England. The prison is a medium-sized prison, and it has a high proportion of people with a mental health problem. The study was conducted over a period of 12 months, and it involved 10 semi-structured interviews with people with a mental health problem who are in contact with mental health services through the criminal justice system.

The interviews were conducted in a private room in the prison, and they lasted between 30 and 60 minutes. The interviews were audio-taped, and they were conducted in a relaxed and informal atmosphere. The participants were given the opportunity to discuss their experiences of being in contact with mental health services through the criminal justice system, and to identify the factors that influence their experiences.

The findings of the study are presented in this paper, and they show that people with a mental health problem who are in contact with mental health services through the criminal justice system experience a range of difficulties. These difficulties include the stigma and discrimination that they experience, the lack of information and support that they receive, and the poor quality of the services that they receive.

The study also identified a number of factors that influence the experiences of people with a mental health problem who are in contact with mental health services through the criminal justice system. These factors include the individual characteristics of the person, the characteristics of the service, and the characteristics of the environment.

The findings of the study have implications for the development of mental health services that are more user-centred and that involve people with a mental health problem in the design and delivery of services. The findings also have implications for the development of policies and procedures that aim to improve the lives of people with a mental health problem who are in contact with mental health services through the criminal justice system.

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.

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