

PROFESSIONAL SERVICES
INDUSTRY
INPUT

— INPUT —



AGENDA

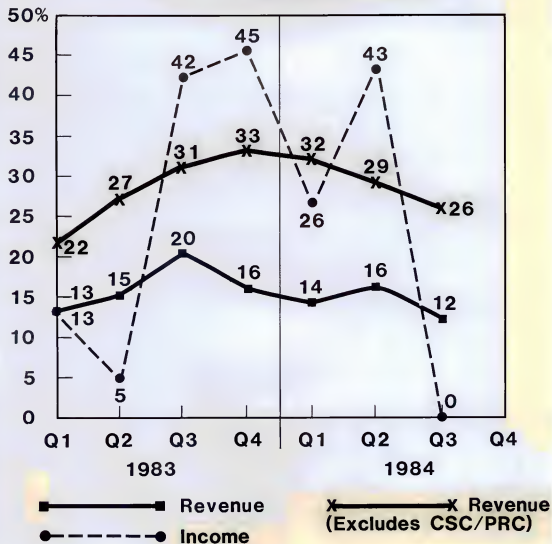
- 1. Introduction**
- 2. Environment**
- 3. Professional Services**
 - Forecasts and Trends**
- 4. Conclusion**

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Year
on Year
Quarterly
Growth

25 PUBLIC PROFESSIONAL SERVICES COMPANIES



INPUT

Figure 1. Map of the study area.



PROFESSIONAL SERVICES SALES POINTS

- **Top Management**
- **Operating Management**
- **End User Systems**
- **IS Management**
- **Technical Specialities**

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CONCLUSION

- **Phenomenal Opportunity**
- **Small Capital Investment**
- **Large People Investment**
- **Great Returns**

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ARTHUR ANDERSEN

- **“Management Information Consulting”**
- **“Plans, Designs, Installs”**
- **Methodology Driven**
- **Product/Industry Marketing Orientation**
- **Strong Education/Training Orientation**

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ARTHUR ANDERSEN

- **\$400 Million - MIC 1984**
- **\$320 Million - U.S.**
- **70% Design and Implementation**

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**FACILITIES MANAGEMENT
- EMPHASIS SHIFT**

Hardware Management



**Software
Communications**

Management

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MANAGEMENT STRATEGIES

- **Pursue Strategic Partnering**
 - **Includes Selectivity, Market Focus, Management Attention**
 - **Leverages Critical Capabilities of both Parties**
- **Specialize**

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MANAGEMENT STRATEGIES

- **Unbundle Professional Services**
- **Adopt New Roles**
 - **System Integrator**
 - **Information Center Services Provider**
 - **Expert Systems Facilitator**

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AUXCO

- **Processing Services**
 - **Cellular Processing**
- **Software Products**
- **Communications Industry**

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AUXCO

- **Professional Services**
 - **Consulting**
 - **Systems Development**
 - **Education**
 - **Support**

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COMPUTER HORIZONS

- Communications

- Banks

- Brokerage

} 85% of Revenues

Insurance Utilities

Manufacturing

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COMPUTER HORIZONS

Management Consulting



Custom Software



Support (Education and Training)

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SCT

- **Facilities Management**
 - Professional Services
- **Software Products**
 - Baseline

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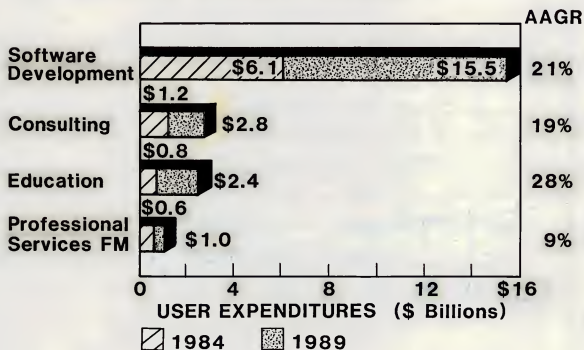
SCT

- **Education Market**
 - **Universities**
 - **School Districts**
- **Local Governments**

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STRENGTH IN PROFESSIONAL SERVICES



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MARKET IMPACTS

- **Establishing New Relationships**
 - **Professional Services Vendors**
 - **Software Product Vendors**
 - **Computer/Communication Vendors**

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MARKET IMPACTS

- **Software Technology**
 - **Program Development Systems (PDS)**
 - **Authoring Systems**
 - **Expert Systems**

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HOW TO INCREASE PROFIT MARGINS

Method	Vendor Response
Leverage Skills across Services	21%
Become More Cost Conscious	43%
Slowly Raise Rates	29%
Increase Training Services	36%

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HOW TO INCREASE PROFIT MARGINS

Method	Vendor Response
Offer Higher Skill Levels	57%
Specialization	36%
Unbundling	29%

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**PERSONNEL SKILLS
FOR PROFESSIONAL SERVICES**

Personnel Skills	Vendors Needing Skill
Computer-Based Instruction	24%
DBMS	53%
Knowledge-Based Systems	18%
Business Applications	76%

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**PERSONNEL SKILLS
FOR PROFESSIONAL SERVICES**

Personnel Skills	Vendors Needing Skill
Communications	71%
Program Development Systems	36%
Other	24%

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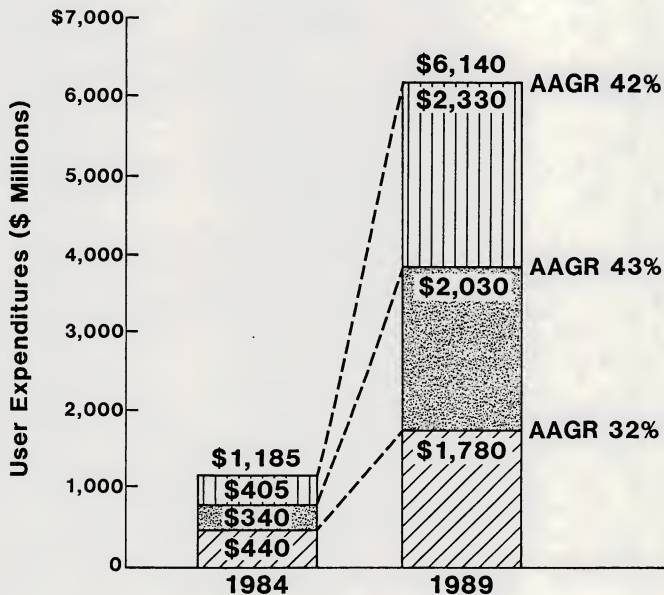





U.S. CUSTOMER SERVICES SECTOR REVENUE FORECAST

SERVICE SECTORS	TOTAL SERVICE REVENUE (\$ Billions)		AAGR (Percent)
	1984	1989	
Hardware Maintenance	\$9.84	\$20.02	15%
Software Maintenance and Support	0.77	3.47	35
Professional Services	0.32	1.36	34
Educational Services	0.26	1.17	36
Totals	\$11.20B	\$26.00B	18%

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MARKET PROJECTIONS: SOFTWARE-RELATED PROFESSIONAL SERVICES



-  Implementation Services
-  Education and Training Services
-  Other Services

1984	Total \$1,185
1989	Total \$6,140
	AAGR 39%

SYSTEMS INTEGRATION

- **Custom Projects**

- **Software**

- **Hardware**

- **Education and Training**

- **Networks**

- **Support**

- **Management**

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SOFTWARE-RELATED PROFESSIONAL SERVICES CHARACTERISTICS

- **Implementation Services**
 - **Software Products**
 - **Support Users**

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SOFTWARE-RELATED PROFESSIONAL SERVICES CHARACTERISTICS

- **Education and Training Services**
 - **Corporate Executives**
 - **End Users**
 - **Middle Management**
 - **Microcomputers and Software**

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SOFTWARE-RELATED PROFESSIONAL SERVICES CHARACTERISTICS

- **Expert Systems Services**
 - **Bridging the Gap between AI
Products and End Users**

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SOFTWARE-RELATED PROFESSIONAL SERVICES CHARACTERISTICS

- **Information Center Services**
 - **Corporate Information Centers**
 - **Business Information Centers**
 - **Shared-Tenant Information Centers**

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SOFTWARE SUPPORT TRENDS

- **Integration of Systems Design, Software Maintenance, and Consulting into Customer Support**
- **Increased Remote Software Support**
- **Development Software Data Bases for Remote Access by Users**

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SOFTWARE SUPPORT TRENDS

- **Greater Focus on Identification of Key Customer Size Contracts for Software Maintenance/Support**
- **Increasing Support for Applications Software**
- **Consolidation of Software Support into National Service Centers**

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the 1990s, the number of people in the UK who are employed in the public sector has increased by 1.5 million, from 2.5 million in 1980 to 4 million in 1995. The public sector has become a major employer in the UK, and its growth has been a major factor in the overall growth of the economy.

The public sector has also become a major employer of women. In 1980, women made up 40% of the public sector workforce, and by 1995, this figure had risen to 50%. This increase in the number of women in the public sector has been a major factor in the overall increase in the number of women in the workforce.

The public sector has also become a major employer of people with disabilities. In 1980, people with disabilities made up 1% of the public sector workforce, and by 1995, this figure had risen to 3%. This increase in the number of people with disabilities in the public sector has been a major factor in the overall increase in the number of people with disabilities in the workforce.

The public sector has also become a major employer of people from ethnic minorities. In 1980, people from ethnic minorities made up 1% of the public sector workforce, and by 1995, this figure had risen to 3%. This increase in the number of people from ethnic minorities in the public sector has been a major factor in the overall increase in the number of people from ethnic minorities in the workforce.

The public sector has also become a major employer of people who are over 50 years old. In 1980, people over 50 years old made up 1% of the public sector workforce, and by 1995, this figure had risen to 3%. This increase in the number of people over 50 years old in the public sector has been a major factor in the overall increase in the number of people over 50 years old in the workforce.

The public sector has also become a major employer of people who are under 25 years old. In 1980, people under 25 years old made up 1% of the public sector workforce, and by 1995, this figure had risen to 3%. This increase in the number of people under 25 years old in the public sector has been a major factor in the overall increase in the number of people under 25 years old in the workforce.

The public sector has also become a major employer of people who are over 65 years old. In 1980, people over 65 years old made up 1% of the public sector workforce, and by 1995, this figure had risen to 3%. This increase in the number of people over 65 years old in the public sector has been a major factor in the overall increase in the number of people over 65 years old in the workforce.

The public sector has also become a major employer of people who are under 16 years old. In 1980, people under 16 years old made up 1% of the public sector workforce, and by 1995, this figure had risen to 3%. This increase in the number of people under 16 years old in the public sector has been a major factor in the overall increase in the number of people under 16 years old in the workforce.

PROFESSIONAL SERVICES DRIVERS

- **Importance of IS**
 - **Competitive Weapon**
 - **Top Management View**
- **Scarcity of Skilled People**
- **Reduced Internal Capacity**
 - **Freeze Impact**
 - **Lack of Training**

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ADVANTAGES OF NATIONAL FIRM

- **Customer Base Leverage**
- **Multi-Size Project Implementation**

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PROFESSIONAL SERVICES

- **Software Conversion**
- **Software Maintenance**
- **IV and V (Independent Validation and Verification)**
- **Education and Training**
- **Implementation Services**
- **Support Services**

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PROFESSIONAL SERVICES

- **Consulting**
- **Facilities Management (Client Owned)**
- **Systems Analysis and Design**
- **Systems Engineering and Integration**
- **Software Development**

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TECHNICAL STRATEGIES

- **Leverage Professional Services Resources through Program Development Systems**
- **Leverage Educational and Training Services through Authoring and Video Disk Systems**

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TECHNICAL STRATEGIES

- **Leverage High-Level Skills to Increase Revenues and Profit Margins**
- **Partner and Cross-Train to Acquire AI Skills to Build Expert Systems**

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CHANGING MARKET STRUCTURE

- **Solutions Orientation**
- **Buy versus Build Software**
- **Hardware versus Software in System Cost Equation**
- **Spectacular Growth in Number of Hands-On Users**

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CHANGING MARKET STRUCTURE

- **Shift from Hardware Power and Product Functionality to Vertical Markets Expertise and Distribution**
- **Hardware Vendors Going Outside for Market Resources**

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FAST GROWING PUBLIC COMPANIES

	Growth Rate*	Size (\$ Millions)
AGS Computers	63%	\$220
Analysts Intl.	44	35
AUXTON Comp.	28	24
CGA Comp.	40	58

***9 Months 1984 versus 1983**

INPUT



FAST GROWING PUBLIC COMPANIES

	Growth Rate	Size (\$ Million)
Computer Horizons	45%	\$42
CTG	53	80
Keane	67	34
SCT	32	62

9 Months 1984 versus 1983

INPUT

