Turnkey Systems
Forecasts, Issues, and Trends

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INPUT

Turnkey Systems/ VARs

Market Forecast & Trends

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What's in a Name?

- Turnkey Systems
- VAR

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End Product is the Same

- Equipment
  - Usually Standard from Mfg.
  - Occasional Integration of Foreign Disks, Controller, Memory, Terminals
- Standard Product Software
  - Primary Value-Added
- Customization

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End Product is the Same

- Support
  - Installation/Conversion
  - Training
  - Software/Equipment Maintenance
- Delivery by a Single Vendor Who Takes Responsibility for Results

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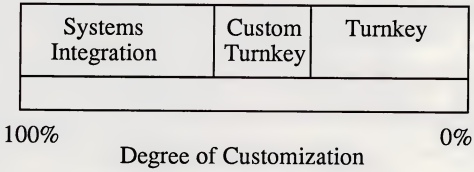
The Customization Spectrum



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Differences Between System Integrators and Turnkey System Vendors

Systems Integrators	Turnkey Systems
Strategic Design & Consulting	Tactical Consulting
Multi-Year Effort	Single Year Time Span
High Level Complexity	Modest Complexity

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Differences Between System Integrators and Turnkey System Vendors

Systems Integration	Turnkey Systems
SW Development	Software Products
High Cost	Moderate Cost
Large Project Management Skills	

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Similarities Between System Integrators and Turnkey Systems Vendors

Prime Contractors Role

Multiple Vendors Involved

Equipment Delivery

Software Customization

Installation, Training, and Support

Post-Installation Support

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Turnkey Systems Market Structure

- Turnkey Systems
  - Equipment
  - Packaged Software
  - Customized Software
  - Educ., Train., Prof., Serv.
- Industry-Specific Sectors (15)
- Cross-Industry Sectors (7)

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Market Size & Growth

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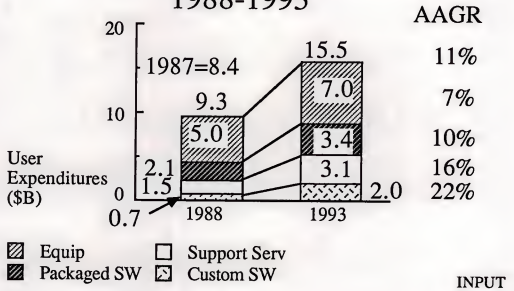
Turnkey Systems Market Forecast—1988-1993



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Platform Types: Turnkey Systems Equipment

	Total Equipment Shipped (Percent)	
	1987	1993 (Est.)
Mainframe	12	5
Minicomputer	63	35
Micro/ Workstation	25	60

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Selected Computer Systems Vendors Turnkey Products

- IBM's SolutionPacs
- IBM's AS/400 Office
- DEC's Solution Systems
- Unisys' Purchase of Convergent, a Leading VAR

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Market Directions & Trends

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Market Directions (Trends and Issues)

- Movement Away from Selling Proprietary Hardware
- Movement Toward Proprietary Software and Support Services
- Value-Added No Longer in the Hardware

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Market Directions (Trends and Issues)

- Unbundling of Hardware and Software by the VAR
- Higher Growth and Margin Potential in Customized Software
- Growing Use of VARs by Software Companies

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Market Directions
(Trends and Issues)

- Large and Small Systems Vendors Seek Out VARs as Distribution Channel
- Increasing Channel Conflict
- Rise of the Agent/Broker
- Cross-Matching for Additional Software Products

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Market Directions (Trends and Issues)

- Stress on Support Services
- VARs Acting as the MIS Manager for their End-User Customer—Including On-Site Facilities Management
- Increasing Emphasis on VAR Training

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Turnkey Systems Market—Driving Forces

- Micro-Based Solutions
- Local/Vertical Market Focus
- Customization

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Turnkey Systems Market—Driving Forces

- Support Revenue Growth
- Software Applications Required
- Account Control (at Low End of Spectrum)

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Turnkey Systems Market—Inhibiting Forces

- Shift to Software Vendor Role
- Hardware Vendors Writing Software
- Declining Hardware Margins/Prices
- Hardware Vendors Selling Direct
- Applications Are too General

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Turnkey Systems Market—Inhibiting Forces

- Prime Contractor Requirements: Cash Flow, Expenses and Resources
- Competition from Professional Services & Systems Integration Firms
- Need for a Regional/National Marketing Presence

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Leading Turnkey/VAR Companies

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Major Vendors' Shares of U.S. Turnkey Systems Market—1987(Private and Public)

Company Name	1987 Revenue ($ Millions)	Market Share (Percent)
Intergraph	628	7
Schlumberger	468	5
McDonnell Douglas	224	3

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Major Vendors' Shares of U.S. Turnkey Systems Market—1987(Private and Public)

Company Name	1987 Revenue ($ Millions)	Market Share (Percent)
Compugraphics	220	3
Auto. Data Proc.	195	2
ISC Systems Corp.	146	2

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Major Vendors' Shares of U.S. Turnkey Systems Market—1987

(Private and Public)

Company Name	1987 Revenue ($ Millions)	
Xerox Corp.	140	2
Reynolds & Reynolds Co.	138	2

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Major Vendors' Shares of U.S. Turnkey Systems Market—1987

(Private and Public)

Company Name	1987 Revenue ($ Millions)	Market Share (Percent)
Bolt, Beranek & Newman, Inc.	136	2
Convergent Sys.	130	2

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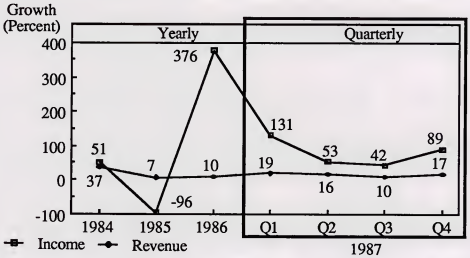
Public Turnkey Systems Vendors



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Growth Leaders: Public Turnkey Systems Companies—1987 (Calendar)

Company Name	1987 Total Revenue ($ Millions)	86-87 Revenue Growth (Percent)
Cerner	34	94
Interleaf	52	62
C3	109	49

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Growth Leaders: Public Turnkey Systems Companies—1987 (Calendar)

Company Name	1987 Total Revenue ($ Millions)	86-87 Revenue Growth (Percent)
Comptek Research	44	36
ASK Computer	116	35
Reynolds & Reynolds	572	26

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Growth Leaders: Public Turnkey Systems Companies—1987 (Calendar)

Company Name	1987 Total Revenue ($ Millions)	86-87 Revenue Growth (Percent)
HBO & Co.	175	13
Auto-Tool Tech.	76	22
Barrister Info. Sys.	38	14

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Growth Leaders: Public Turnkey Systems Companies—1987 (Calendar)

Company Name	1987 Total Revenue ($ Millions)	86-87 Revenue Growth (Percent)
Shared Medical	391	6
National Computer	209	4

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Vendor Strategies

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Expanding Services

Provide New/Additional Services

- Consulting
- Customized Programming
- Additional Training/Education
- Data-Center Management

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Vendor Strategies

Increase Typical System Size/Price

- Enhance Product Offering
- Sell Larger Systems

Expand Industry Coverage

- Related Opportunities within Current Industry
- New/Additions Industry Markets

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Vendor Strategies

System Software Developers

- VAR Internal Use
  - Development Platforms
  - New Functionality
- VAR End User Sales
  - Expanded Base
  - New Features

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Vendor Strategies

Third-Party Application
Software Developers

- Cross-Matching
  - Complements VAR Product
  - Opens New Prospects
- Cross-Industry
  - Adds Value
  - Enhances Relationship

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Successful VAR Strategies by Hardware/Software Vendors

Vendor	Product
Autodesk	PC/Workstation CAD Software
Altos	UNIX-Based Microcomputer Systems
Ultimate (Also a VAR)	PICK-OS

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Successful VAR Strategies by Hardware/Software Vendors

Vendor	Product
Apollo	Scientifc Workstations-CAE Market
Sun Microsystems	Scientific/Commercial Workstations
Compaq Computer	DOS/OS2 Desktop Computers

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Successful VAR Strategies by Hardware/Software Vendors

Vendor	Product
Seagate Tech.	Disk Drives
Informix	DBMS Software for UNIX
Timberlane Software Corp.	Application Software for Construction Industry

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NOTES:

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Successful VAR Strategies by Hardware/Software Vendors

Vendor	Product
Apple Computer	Macintosh
Oracle	Database Management Systems Software for Multi-Hardware, Operating Systems Environments

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Leading Turnkey/VAR Applications

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Most Successful Applications Areas for Turnkey/VARs

- CAD/CAM/CAE
- Automotive Dealer and Distribution Systems
- Health Care/Medical Systems
- Banking/Finance Processing Applications

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Most Successful Applications Areas for Turnkey/VARs

- Telecommunications
- Legal Applications
- MRP Systems

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Principal Turnkey Systems Industry-Specific Markets—1987

Market	Size ($M)	Projected 5-Yr AAGR (Percent)
Discrete Manufacturing	1,861	10
Banking and Finance	741	11
Medical	633	10

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Principal Turnkey Systems Industry-Specific Markets—1987

Market	Size ($M)	Projected 5-Yr AAGR (Percent)
Distribution	601	12
Services	414	9
Federal Gov.	388	9

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Principal Cross-Industry Applications Markets—1987

Market	Size ($M)	Projected 5-Yr AAGR (Percent)
Other (Word Processing, Desktop Publishing, and Graphics Applic.)	1,208	5
Accounting	414	4

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Principal Cross-Industry Applications Markets—1987

Market	Size ($M)	Projected 5-Yr AAGR (Percent)
Eng./Scientific	354	7
Planning & Analysis	284	5
Human Resources	235	5
Education & Training	149	5

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NOTES:

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Conclusions/Recommendations

- Become a Multi-Regional Turnkey Systems/VAR
- Increase Content of Industry-Specific Application Software
- Resell Proprietary Applications
- Increase Repeat Business to 50-60% Range

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NOTES:

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Conclusions/Recommendations

- Look to Installed Base as a Key Asset
- Emphasize Value-Added Services Such as Software Maintenance, Consulting, Education, and Training
- Stress Hardware and Software Add-Ons

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NOTES:

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Conclusions/Recommendations

- Increase Emphasis on Follow-On Products
- Develop Strategic Alliances
- Take Advantage of New Applications Development Tools

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Conclusions/Recommendations

- Explore UNIX-Based Hardware Platforms
- Focus on On-Going Revenue Sources
- Develop Applications Around Industry Standards
- Increase Emphasis on Network Integration

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