Market Analysis Program (MAP)

# Industry Sector/ Cross-Industry Markets 1988-1993

## Appendix C: Forecast Reconciliation

INPUT®

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DECEMBER 1988

# INDUSTRY SECTOR/CROSS-INDUSTRY MARKETS 1988-1993

# APPENDIX C: FORECAST RECONCILIATION

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**Market Analysis Program**
**(MAP)**

***Industry Sector/Cross-Industry Markets, 1988-1993***
***Appendix C: Forecast Reconciliation***



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# Exhibits

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# Exhibits (Continued)

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# Appendix: Forecast Data Base Reconciliation

EXHIBIT C-1

## PROCESSING/NETWORK SERVICES DATA BASE RECONCILIATION OF MARKET FORECAST BY INDUSTRY SECTOR

**($ Millions)**

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Information Services Industry | 30,305 | 34,110 | -11 | 55,313 | 67,195 | -18 | 13 | 15 |
| Discrete Manufacturing | 785 | 1,015 | -23 | 1,390 | 1,830 | -24 | 12 | 13 |
| Process Manufacturing | 930 | 1,140 | -18 | 1,730 | 2,475 | -30 | 13 | 17 |
| Transportation | 260 | 1,470 | -82 | 540 | 3,015 | -82 | 16 | 15 |
| Utilities | 150 | 125 | 20 | 255 | 260 | -2 | 11 | 16 |
| Telecommunications | 510 | 520 | -2 | 1,150 | 1,120 | 3 | 18 | 17 |
| Distribution. | 425 | 605 | -30 | 749 | 1,530 | -51 | 12 | 20 |
| Banking & Finance | 4,390 | 3,630 | 21 | 8,865 | 7,730 | 15 | 15 | 16 |
| Insurance | 790 | 860 | -8 | 1,350 | 1,700 | -21 | 11 | 15 |
| Medical. | 1,290 | 1,215 | 6 | 2,620 | 2,690 | -3 | 15 | 17 |
| Education | 150 | 330 | -55 | 230 | 470 | -51 | 9 | 7 |
| Services | 1,140 | 905 | 26 | 2,060 | 1,710 | 20 | 13 | 14 |
| Federal Government | 570 | 1,300 | -56 | 745 | 2,090 | -64 | 6 | 10 |
| State & Local Government | 570 | 690 | -17 | 1,150 | 1,450 | -21 | 15 | 16 |
| Other Industry Sector | 650 | 590 | 10 | 1,050 | 1,100 | -5 | 10 | 13 |
| Total Industry Sectors | 12,610 | 14,395 | -12 | 23,884 | 29,170 | -18 | 14 | 15 |
| Cross-Industry Sector | | | | | | | | |
| Accounting | 1,020 | 950 | 7 | 1,140 | 1,120 | 2 | 2 | 3 |
| Education & Training | 90 | 90 | 0 | 130 | 110 | 18 | 8 | 4 |
| Engineering & Scientific | 260 | 110 | 136 | 340 | 140 | 143 | 6 | 5 |
| Human Resources | 1,060 | 990 | 7 | 1,930 | 1,900 | 2 | 13 | 14 |
| Planning & Analysis | 235 | 220 | 7 | 230 | 185 | 24 | -0. | -3 |
| Other Cross-Industry Sector | 630 | 380 | 66 | 830 | 760 | 9 | 6 | 15 |
| Total Cross-Industry Sectors | 17,695 | 19,715 | -10 | 31,429 | 38,025 | -17 | 12 | 14 |

EXHIBIT C-2

## APPLICATION SOFTWARE
## DATA BASE RECONCILIATION OF
## MARKET FORECAST BY INDUSTRY SECTOR
### ($ Millions)

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Application Software Industry | 15,696 | 15,900 | -1 | 34,908 | 38,030 | -8 | 17 | 19 |
| Discrete Manufacturing | 1,180 | 1,130 | 4 | 2,550 | 2,710 | -6 | 17 | 19 |
| Process Manufacturing | 150 | 145 | 3 | 230 | 360 | -36 | 9 | 20 |
| Transportation | 230 | 215 | 7 | 590 | 590 | 0 | 21 | 22 |
| Utilities | 150 | 145 | 3 | 380 | 340 | 12 | 20 | 19 |
| Telecommunications | 110 | 110 | 0 | 410 | 455 | -10 | 3 | 33 |
| Distribution | 373 | 470 | -21 | 834 | 1,590 | -48 | 17 | 28 |
| Banking & Finance | 1,380 | 1,490 | -7 | 3,035 | 3,300 | -8 | 17 | 17 |
| Insurance | 480 | 455 | 5 | 1,120 | 1,330 | -16 | 18 | 24 |
| Medical | 590 | 570 | 4 | 1,420 | 1,280 | 11 | 19 | 18 |
| Education | 105 | 450 | -77 | 210 | 830 | -75 | 15 | 13 |
| Services | 180 | 270 | -33 | 500 | 710 | -30 | 23 | 21 |
| Federal Government | 90 | 180 | -50 | 220 | 390 | -44 | 20 | 17 |
| State & Local Government | 70 | 65 | 8 | 170 | 210 | -19 | 19 | 26 |
| Other Industry Sector | 130 | 130 | 0 | 390 | 310 | 26 | 25 | 19 |
| Total Industry Sectors | 5,218 | 5,825 | -10 | 12,059 | 14,405 | -16 | 18 | 20 |
| Cross-Industry Sector | | | | | | | | |
| Accounting | 1,330 | 1,270 | 5 | 2,260 | 2,690 | -16 | 11 | 16 |
| Education & Training | 110 | 110 | 0 | 290 | 350 | -17 | 21 | 26 |
| Engineering & Scientific | 290 | 310 | -6 | 910 | 970 | -6 | 26 | 26 |
| Human Resources | 630 | 690 | -9 | 900 | 1,000 | -10 | 7 | 8 |
| Planning & Analysis | 1,630 | 1,210 | 35 | 2,820 | 2,670 | 6 | 12 | 17 |
| Other Cross-Industry Sector | 980 | 285 | 244 | 2,830 | 630 | 349 | 24 | 17 |
| Total Cross-Industry Sectors | 10,478 | 10,075 | 4 | 22,849 | 23,625 | -3 | 17 | 19 |

EXHIBIT C-3

## SYSTEMS SOFTWARE
## DATA BASE RECONCILIATION OF
## MARKET FORECAST BY SOFTWARE TYPE
### ($ Millions)

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Systems Software Industry | 9,560 | 9,880 | -3 | 29,645 | 25,880 | 15 | 25 | 21 |
| Application Development Tools | 3,440 | 3,760 | -9 | 9,340 | 10,480 | -11 | 22 | 23 |
| Mainframe and Minicomputer | 2,660 | 3,050 | -13 | 6,560 | 6,810 | -4 | 20 | 17 |
| Workstation/PC | 780 | 710 | 10 | 2,780 | 3,670 | -24 | 29 | 39 |
| Systems Control | 3,930 | 4,150 | -5 | 14,220 | 10,260 | 39 | 29 | 20 |
| Mainframe and Minicomputer | 3,370 | 3,560 | -5 | 11,750 | 7,150 | 64 | 28 | 15 |
| Workstation/PC | 560 | 590 | -5 | 2,470 | 3,110 | -21 | 35 | 39 |
| Data Center Management | 2,190 | 1,970 | 11 | 6,085 | 5,140 | 18 | 23 | 21 |
| Mainframe and Minicomputer | 2,150 | 1,900 | 13 | 5,820 | 4,520 | 29 | 22 | 19 |
| Workstation/PC | 40 | 70 | -43 | 265 | 620 | -57 | 46 | 55 |
| Mainframe and Minicomputer | 8,180 | 8,510 | -4 | 24,130 | 18,480 | 31 | 24 | 17 |
| Application Development Tools | 2,660 | 3,050 | -13 | 6,560 | 6,810 | -4 | 20 | 17 |
| Systems Control | 3,370 | 3,560 | -5 | 11,750 | 7,150 | 64 | 28 | 15 |
| Data Center Management | 2,150 | 1,900 | 13 | 5,820 | 4,520 | 29 | 22 | 19 |
| Workstation/PC | 1,380 | 1,370 | 0 | 5,515 | 7,400 | -25 | 32 | 40 |
| Application Development Tools | 780 | 710 | 10 | 2,780 | 3,670 | -24 | 29 | 39 |
| Systems Control | 560 | 590 | -5 | 2,470 | 3,110 | -21 | 35 | 39 |
| Data Center Management | 40 | 70 | -43 | 265 | 620 | -57 | 46 | 55 |

EXHIBIT C-4

# TURNKEY SYSTEMS
# DATA BASE RECONCILIATION OF
# MARKET FORECAST BY INDUSTRY SECTOR
## ($ Millions)

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Turnkey Systems Industry | 14,667 | 14,820 | -1 | 23,028 | 24,020 | -4 | 9 | 10 |
| Discrete Manufacturing | 1,860 | 1,660 | 12 | 3,000 | 2,790 | 8 | 10 | 11 |
| Process Manufacturing | 370 | 370 | 0 | 590 | 580 | 2 | 10 | 9 |
| Transportation | 150 | 140 | 7 | 260 | 235 | 11 | 12 | 11 |
| Utilities | 30 | 30 | 0 | 60 | 50 | 20 | 15 | 11 |
| Telecommunications | 250 | 240 | 4 | 480 | 470 | 2 | 14 | 14 |
| Distribution | 306 | 895 | -66 | 429 | 1,485 | -71 | 7 | 11 |
| Banking & Finance | 740 | 710 | 4 | 1,250 | 1,170 | 7 | 11 | 11 |
| Insurance | 200 | 200 | 0 | 360 | 320 | 12 | 12 | 10 |
| Medical | 630 | 610 | 3 | 1,020 | 1,040 | -2 | 10 | 11 |
| Education | 110 | 170 | -35 | 140 | 270 | -48 | 5 | 10 |
| Services | 410 | 410 | 0 | 640 | 700 | -9 | 9 | 11 |
| Federal Government | 390 | 370 | 5 | 590 | 520 | 13 | 9 | 7 |
| State & Local Government | 120 | 110 | 9 | 240 | 200 | 20 | 15 | 13 |
| Other Industry Sector | 130 | 320 | -59 | 220 | 500 | -56 | 11 | 9 |
| Total Industry Sectors | 5,696 | 6,235 | -9 | 9,279 | 10,330 | -10 | 10 | 11 |
| Cross-Industry Sector | | | | | | | | |
| Accounting | 410 | 390 | 5 | 510 | 460 | 11 | 4 | 3 |
| Education & Training. | 150 | 140 | 7 | 190 | 180 | 6 | 5 | 5 |
| Engineering & Scientific | 350 | 310 | 13 | 510 | 490 | 4 | 8 | 10 |
| Human Resources | 235 | 100 | 135 | 300 | 130 | 131 | 5 | 5 |
| Planning & Analysis | 280 | 270 | 4 | 370 | 330 | 12 | 6 | 4 |
| Other Cross-Industry Sector | 1,210 | 340 | 256 | 1,540 | 550 | 180 | 5 | 10 |
| Total Cross-Industry Sectors | 8,971 | 8,585 | 4 | 13,749 | 13,690 | 0 | 9 | 10 |

EXHIBIT C-5

## PROFESSIONAL SERVICES
## DATA BASE RECONCILIATION OF
## MARKET FORECAST BY INDUSTRY SECTOR
### ($ Millions)

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Professional Services Industry | 14,335 | 12,715 | 13 | 33,237 | 27,705 | 20 | 18 | 17 |
| Discrete Manufacturing | 2,590 | 2,460 | 5 | 6,590 | 6,270 | 5 | 21 | 21 |
| Process Manufacturing | 1,230 | 1,220 | 0 | 3,715 | 3,320 | 12 | 25 | 22 |
| Transportation | 180 | 150 | 20 | 530 | 310 | 71 | 24 | 16 |
| Utilities | 360 | 370 | -3 | 720 | 620 | 16 | 15 | 11 |
| Telecommunications | 590 | 610 | -3 | 1,360 | 1,255 | 8 | 18 | 16 |
| Distribution | 450 | 380 | 18 | 937 | 895 | 5 | 16 | 19 |
| Banking & Finance | 1,720 | 1,600 | 8 | 3,870 | 3,820 | 1 | 18 | 19 |
| Insurance. | 1,050 | 1,050 | 0 | 2,240 | 2,260 | -0 | 16 | 17 |
| Medical | 310 | 260 | 19 | 850 | 580 | 47 | 22 | 17 |
| Education | 75 | 50 | 50 | 120 | 105 | 14 | 10 | 16 |
| Services | 180 | 100 | 80 | 505 | 220 | 130 | 23 | 17 |
| Federal Government | 3,510 | 2,550 | 38 | 6,250 | 4,530 | 38 | 12 | 12 |
| State & Local Government | 1,770 | 1,655 | 7 | 4,780 | 2,990 | 60 | 22 | 13 |
| Other Industry Sector | 320 | 260 | 23 | 770 | 530 | 45 | 19 | 15 |
| Professional Services | | | | | | | | |
| Consulting | 2,460 | 2,520 | -2 | 6,360 | 6,520 | -2 | 21 | 21 |
| Education and Training | 1,610 | 1,635 | -2 | 4,180 | 3,820 | 9 | 21 | 18 |
| Software Development | 7,555 | 7,540 | 0 | 14,470 | 15,655 | -8 | 14 | 16 |
| Systems Operations | 990 | 1,020 | -3 | 1,570 | 1,710 | -8 | 10 | 11 |

Note: INPUT's 1987 Professional Services forecast includes Systems Integration software revenues.

EXHIBIT C-6

## DISCRETE MANUFACTURING SECTOR
## DATA BASE RECONCILIATION OF
## MARKET FORECAST BY DELIVERY MODE
### ($ Millions)

| Industry Sector | 1987 Market 1987 Forecast | 1988 Forecast | Variance (%) | 1992 Market 1987 Forecast | 1988 Forecast | Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Discrete Manufacturing Sector | 6,415 | 6,265 | 2 | 13,530 | 13,600 | 0 | 16 | 17 |
| Processing/Network Services | 785 | 1,015 | -23 | 1,390 | 1,830 | -24 | 12 | 13 |
| Application Software Products | 1,180 | 1,130 | 4 | 2,550 | 2,710 | -6 | 17 | 19 |
| Turnkey Systems | 1,860 | 1,660 | 12 | 3,000 | 2,790 | 8 | 10 | 11 |
| Professional Services | 2,590 | 2,460 | 5 | 6,590 | 6,270 | 5 | 21 | 21 |

Note: INPUT's 1987 Professional Services forecast includes Systems Integration software revenues.

EXHIBIT C-7

## PROCESS MANUFACTURING SECTOR DATA BASE RECONCILIATION OF MARKET FORECAST BY DELIVERY MODE

**($ Millions)**

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Process Manufacturing Sector | 2,680 | 2,875 | -7 | 6,265 | 6,735 | -7 | 19 | 19 |
| Processing/Network Services | 930 | 1,140 | -18 | 1,730 | 2,475 | -30 | 13 | 17 |
| Application Software Products | 150 | 145 | 3 | 230 | 360 | -36 | 9 | 20 |
| Turnkey Systems | 370 | 370 | 0 | 590 | 580 | 2 | 10 | 9 |
| Professional Services | 1,230 | 1,220 | 0 | 3,715 | 3,320 | 12 | 25 | 22 |

Note: INPUT's 1987 Professional Services forecast includes Systems Integration software revenues.

EXHIBIT C-8

## TRANSPORTATION SECTOR
## DATA BASE RECONCILIATION OF
## MARKET FORECAST BY DELIVERY MODE
### ($ Millions)

| Industry Sector | 1987 Market 1987 Forecast | 1988 Forecast | Variance (%) | 1992 Market 1987 Forecast | 1988 Forecast | Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Transportation Sector | 820 | 1,975 | -58 | 1,920 | 4,150 | -54 | 19 | 16 |
| Processing/Network Services | 260 | 1,470 | -82 | 540 | 3,015 | -82 | 16 | 15 |
| Application Software Products | 230 | 215 | 7 | 590 | 590 | 0 | 21 | 22 |
| Turnkey Systems | 150 | 140 | 7 | 260 | 235 | 11 | 12 | 11 |
| Professional Services | 180 | 150 | 20 | 530 | 310 | 71 | 24 | 16 |

Note: INPUT's 1987 Professional Services forecast includes Systems Integration software revenues.

EXHIBIT C-9

## UTILITIES SECTOR
## DATA BASE RECONCILIATION OF
## MARKET FORECAST BY DELIVERY MODE
### ($ Millions)

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Utilities Sector | 690 | 670 | 3 | 1,415 | 1,270 | 11 | 15 | 14 |
| Processing/Network Services | 150 | 125 | 20 | 255 | 260 | -2 | 11 | 16 |
| Application Software Products | 150 | 145 | 3 | 380 | 340 | 12 | 20 | 19 |
| Turnkey Systems | 30 | 30 | 0 | 60 | 50 | 20 | 15 | 11 |
| Professional Services | 360 | 370 | -3 | 720 | 620 | 16 | 15 | 11 |

Note: INPUT's 1987 Professional Services forecast includes Systems Integration software revenues.

EXHIBIT C-10

## TELECOMMUNCIATIONS SECTOR DATA BASE RECONCILIATION OF MARKET FORECAST BY DELIVERY MODE

**($ Millions)**

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Telecommunications Sector | 1,460 | 1,480 | -1 | 3,400 | 3,300 | 3 | 18 | 17 |
| Processing/Network Services | 510 | 520 | -2 | 1,150 | 1,120 | 3 | 18 | 17 |
| Application Software Products | 110 | 110 | 0 | 410 | 455 | -10 | 30 | 33 |
| Turnkey Systems | 250 | 240 | 4 | 480 | 470 | 2 | 14 | 14 |
| Professional Services | 590 | 610 | -3 | 1,360 | 1,255 | 8 | 18 | 16 |

Note: INPUT's 1987 Professional Services forecast includes Systems Integration software revenues.

EXHIBIT C-11

## WHOLESALE DISTRIBUTION SECTOR DATA BASE RECONCILIATION OF MARKET FORECAST BY DELIVERY MODE

**($ Millions)**

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Wholesale Distribution Sector | 1,554 | 1,265 | 23 | 2,949 | 2,975 | -1 | 14 | 19 |
| Processing/Network Services | 425 | 415 | 2 | 749 | 1,000 | -25 | 12 | 19 |
| Application Software Products | 373 | 290 | 29 | 834 | 875 | -5 | 17 | 25 |
| Turnkey Systems | 306 | 320 | -4 | 429 | 570 | -25 | 7 | 12 |
| Professional Services | 450 | 240 | 88 | 937 | 530 | 77 | 16 | 17 |

Note: INPUT's 1987 Professional Services forecast includes Systems Integration software revenues.

EXHIBIT C-12

## RETAIL DISTRIBUTION SECTOR
## DATA BASE RECONCILIATION OF
## MARKET FORECAST BY DELIVERY MODE
### ($ Millions)

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Retail Distribution Sector | 1,378 | 1,085 | 27 | 3,142 | 2,525 | 24 | 18 | 18 |
| Processing/Network Services | 677 | 190 | 256 | 1,360 | 530 | 157 | 15 | 23 |
| Application Software Products | 142 | 180 | -21 | 501 | 715 | -30 | 29 | 32 |
| Turnkey Systems | 295 | 575 | -49 | 630 | 915 | -31 | 16 | 10 |
| Professional Services | 264 | 140 | 89 | 651 | 365 | 78 | 20 | 21 |

Note: INPUT's 1987 Professional Services forecast includes Systems Integration software revenues.

EXHIBIT C-13

## BANKING AND FINANCE SECTOR DATA BASE RECONCILIATION OF MARKET FORECAST BY DELIVERY MODE

**($ Millions)**

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Banking and Finance Sector | 8,230 | 7,430 | 11 | 17,020 | 16,020 | 6 | 16 | 17 |
| Processing/Network Services | 4,390 | 3,630 | 21 | 8,865 | 7,730 | 15 | 15 | 16 |
| Application Software Products | 1,380 | 1,490 | -7 | 3,035 | 3,300 | -8 | 17 | 17 |
| Turnkey Systems | 740 | 710 | 4 | 1,250 | 1,170 | 7 | 11 | 11 |
| Professional Services | 1,720 | 1,600 | 8 | 3,870 | 3,820 | 1 | 18 | 19 |

Note: INPUT's 1987 Professional Services forecast includes Systems Integration software revenues.

EXHIBIT C-14

## INSURANCE SECTOR
## DATA BASE RECONCILIATION OF
## MARKET FORECAST BY DELIVERY MODE
### ($ Millions)

| Industry Sector | 1987 Market 1987 Forecast | 1988 Forecast | Variance (%) | 1992 Market 1987 Forecast | 1988 Forecast | Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Insurance Sector | 2,520 | 2,565 | -2 | 5,070 | 5,610 | -10 | 15 | 17 |
| Processing/Network Services | 790 | 860 | -8 | 1,350 | 1,700 | -21 | 11 | 15 |
| Application Software Products | 480 | 455 | 5 | 1,120 | 1,330 | -16 | 18 | 24 |
| Turnkey Systems | 200 | 200 | 0 | 360 | 320 | 12 | 12 | 10 |
| Professional Services | 1,050 | 1,050 | 0 | 2,240 | 2,260 | -1 | 16 | 17 |

Note: INPUT's 1987 Professional Services forecast includes Systems Integration software revenues.

EXHIBIT C-15

## MEDICAL SECTOR
## DATA BASE RECONCILIATION OF
## MARKET FORECAST BY DELIVERY MODE
### ($ Millions)

| Industry Sector | 1987 Market 1987 Forecast | 1988 Forecast | Variance (%) | 1992 Market 1987 Forecast | 1988 Forecast | Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Medical Sector | 2,820 | 2,655 | 6 | 5,910 | 5,590 | 6 | 16 | 16 |
| Processing/Network Services | 1,290 | 1,215 | 6 | 2,620 | 2,690 | -3 | 15 | 17 |
| Application Software Products | 590 | 570 | 4 | 1,420 | 1,280 | 11 | 19 | 18 |
| Turnkey Systems | 630 | 610 | 3 | 1,020 | 1,040 | -2 | 10 | 11 |
| Professional Services | 310 | 260 | 19 | 850 | 580 | 47 | 22 | 17 |

Note: INPUT's 1987 Professional Services forecast includes Systems Integration software revenues.

EXHIBIT C-16

## EDUCATION SECTOR
## DATA BASE RECONCILIATION OF
## MARKET FORECAST BY DELIVERY MODE
### ($ Millions)

| Industry Sector | 1987 Market 1987 Forecast | 1988 Forecast | Variance (%) | 1992 Market 1987 Forecast | 1988 Forecast | Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Education Sector | 440 | 1,000 | -56 | 700 | 1,675 | -58 | 10 | 11 |
| Processing/Network Services | 150 | 330 | -55 | 230 | 470 | -51 | 9 | 7 |
| Application Software Products | 105 | 450 | -77 | 210 | 830 | -75 | 15 | 13 |
| Turnkey Systems | 110 | 170 | -35 | 140 | 270 | -48 | 5 | 10 |
| Professional Services | 75 | 50 | 50 | 120 | 105 | 14 | 10 | 16 |

Note: INPUT's 1987 Professional Services forecast includes Systems Integration software revenues.

EXHIBIT C-17

## SERVICES SECTOR
## DATA BASE RECONCILIATION OF
## MARKET FORECAST BY DELIVERY MODE
### ($ Millions)

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Services Sector | 1,910 | 1,685 | 13 | 3,705 | 3,340 | 11 | 14 | 15 |
| Processing/Network Services | 1,140 | 905 | 26 | 2,060 | 1,710 | 20 | 13 | 14 |
| Application Software Products | 180 | 270 | -33 | 500 | 710 | -30 | 23 | 21 |
| Turnkey Systems | 410 | 410 | 0 | 640 | 700 | -9 | 9 | 11 |
| Professional Services | 180 | 100 | 80 | 505 | 220 | 130 | 23 | 17 |

Note: INPUT's 1987 Professional Services forecast includes Systems Integration software revenues.

EXHIBIT C-18

## FEDERAL GOVERNMENT SECTOR DATA BASE RECONCILIATION OF MARKET FORECAST BY DELIVERY MODE

**($ Millions)**

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Federal Government Sector | 4,560 | 4,400 | 4 | 7,805 | 7,530 | 4 | 11 | 11 |
| Processing/Network Services | 570 | 1,300 | -56 | 745 | 2,090 | -64 | 6 | 10 |
| Application Software Products | 90 | 180 | -50 | 220 | 390 | -44 | 20 | 17 |
| Turnkey Systems | 390 | 370 | 5 | 590 | 520 | 13 | 9 | 7 |
| Professional Services | 3,510 | 2,550 | 38 | 6,250 | 4,530 | 38 | 12 | 12 |

Note: INPUT's 1987 Professional Services forecast includes Systems Integration software revenues.

EXHIBIT C-19

## STATE AND LOCAL GOVERNMENT SECTOR DATA BASE RECONCILIATION OF MARKET FORECAST BY DELIVERY MODE

**($ Millions)**

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total State and Local Government Sector | 2,530 | 2,520 | 0 | 6,340 | 4,850 | 31 | 20 | 14 |
| Processing/Network Services | 570 | 690 | -17 | 1,150 | 1,450 | -21 | 15 | 16 |
| Application Software Products | 70 | 65 | 8 | 170 | 210 | -19 | 19 | 26 |
| Turnkey Systems | 120 | 110 | 9 | 240 | 200 | 20 | 15 | 13 |
| Professional Services | 1,770 | 1,655 | 7 | 4,780 | 2,990 | 60 | 22 | 13 |

Note: INPUT's 1987 Professional Services forecast includes Systems Integration software revenues.

EXHIBIT C-20

## OTHER INDUSTRY-SPECIFIC SECTOR DATA BASE RECONCILIATION OF MARKET FORECAST BY DELIVERY MODE

**($ Millions)**

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Other Industry-Specific Sector | 1,230 | 1,300 | -5 | 2,430 | 2,440 | 0 | 15 | 13 |
| Processing/Network Services | 650 | 590 | 10 | 1,050 | 1,100 | -5 | 10 | 13 |
| Application Software Products | 130 | 130 | 0 | 390 | 310 | 26 | 25 | 19 |
| Turnkey Systems | 130 | 320 | -59 | 220 | 500 | -56 | 11 | 9 |
| Professional Services | 320 | 260 | 23 | 770 | 530 | 45 | 19 | 15 |

Note: INPUT's 1987 Professional Services forecast includes Systems Integration software revenues.

EXHIBIT C-21

## ACCOUNTING CROSS-INDUSTRY SECTOR DATA BASE RECONCILIATION OF MARKET FORECAST BY DELIVERY MODE
### ($ Millions)

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Accounting Sector | 2,760 | 2,610 | 6 | 3,910 | 4,270 | -8 | 7 | 10 |
| Processing/Network Services | 1,020 | 950 | 7 | 1,140 | 1,120 | 2 | 2 | 3 |
| Application Software Products | 1,330 | 1,270 | 5 | 2,260 | 2,690 | -16 | 11 | 16 |
| Turnkey Systems | 410 | 390 | 5 | 510 | 460 | 11 | 4 | 3 |

EXHIBIT C-22

## EDUCATION AND TRAINING CROSS-INDUSTRY SECTOR DATA BASE RECONCILIATION OF MARKET FORECAST BY DELIVERY MODE

**($ Millions)**

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Education and Training Sector | 350 | 340 | 3 | 610 | 640 | -5 | 12 | 13 |
| Processing/Network Services | 90 | 90 | 0 | 130 | 110 | 18 | 8 | 4 |
| Application Software Products | 110 | 110 | 0 | 290 | 350 | -17 | 21 | 26 |
| Turnkey Systems | 150 | 140 | 7 | 190 | 180 | 6 | 5 | 5 |

EXHIBIT C-23

## ENGINEERING AND SCIENTIFIC CROSS-INDUSTRY SECTOR DATA BASE RECONCILIATION OF MARKET FORECAST BY DELIVERY MODE

**($ Millions)**

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Engineering and Scientific Sector | 900 | 730 | 23 | 1,760 | 1,600 | 10 | 14 | 17 |
| Processing/Network Services | 260 | 110 | 136 | 340 | 140 | 143 | 6 | 5 |
| Application Software Products | 290 | 310 | -6 | 910 | 970 | -6 | 26 | 26 |
| Turnkey Systems | 350 | 310 | 13 | 510 | 490 | 4 | 8 | 10 |

EXHIBIT C-24

## HUMAN RESOURCES CROSS-INDUSTRY SECTOR DATA BASE RECONCILIATION OF MARKET FORECAST BY DELIVERY MODE

**($ Millions)**

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Human Resources Sector | 1,925 | 1,780 | 8 | 3,130 | 3,030 | 3 | 10 | 11 |
| Processing/Network Services | 1,060 | 990 | 7 | 1,930 | 1,900 | 2 | 13 | 14 |
| Application Software Products | 630 | 690 | -9 | 900 | 1,000 | -10 | 7 | 8 |
| Turnkey Systems | 235 | 100 | 135 | 300 | 130 | 131 | 5 | 5 |

EXHIBIT C-25

## PLANNING AND ANALYSIS CROSS-INDUSTRY SECTOR DATA BASE RECONCILIATION OF MARKET FORECAST BY DELIVERY MODE

**($ Millions)**

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Planning and Analysis Sector | 2,145 | 1,700 | 26 | 3,420 | 3,185 | 7 | 10 | 13 |
| Processing/Network Services | 235 | 220 | 7 | 230 | 185 | 24 | 0 | -3 |
| Application Software Products | 1,630 | 1,210 | 35 | 2,820 | 2,670 | 6 | 12 | 17 |
| Turnkey Systems | 280 | 270 | 4 | 370 | 330 | 12 | 6 | 4 |

EXHIBIT C-26

## OTHER CROSS-INDUSTRY SECTOR DATA BASE RECONCILIATION OF MARKET FORECAST BY DELIVERY MODE

**($ Millions)**

| Industry Sector | 1987 Market 1987 Forecast | 1987 Market 1988 Forecast | 1987 Market Variance (%) | 1992 Market 1987 Forecast | 1992 Market 1988 Forecast | 1992 Market Variance (%) | CAGR 87-92 1987 Forecast (%) | CAGR 87-92 1988 Forecast (%) |
|---|---|---|---|---|---|---|---|---|
| Total Other Cross-Industry Sector | 2,820 | 1,005 | 181 | 5,200 | 1,940 | 168 | 13 | 14 |
| Processing/Network Services | 630 | 380 | 66 | 830 | 760 | 9 | 6 | 15 |
| Application Software Products | 980 | 285 | 244 | 2,830 | 630 | 349 | 24 | 17 |
| Turnkey Systems | 1,210 | 340 | 256 | 1,540 | 550 | 180 | 5 | 10 |

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