EXECUTIVE SUMMARY FOR SURVEY ON INFOCOMM USAGE IN BUSINESSES FOR 2002
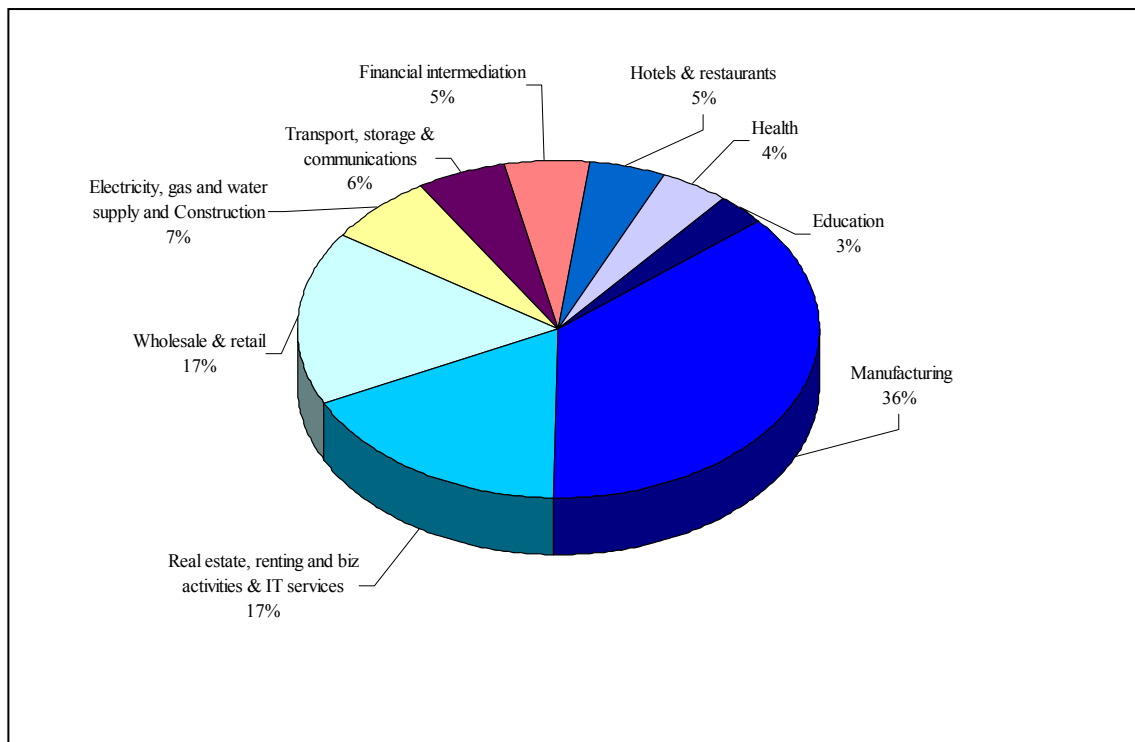
Introduction

- The Infocomm Development Authority of Singapore (IDA) conducted a survey to assess the extent of Infocomm usage among the various economic sectors in Singapore

- The survey aims to assess the level of adoption and spending patterns in Infocomm by Singapore registered companies, as well as to determine the rate of usage of seven identified technologies[1]. In addition, trends in Infocomm usage were identified, as well as barriers to and motivations for the use of Infocomm technologies.

Survey Research and Design

- A stratified sampling method was used to ensure that the sample was representative of the population (i.e. total number of Singapore-registered companies). The profile of the companies surveyed was as follows:

Profile of Companies Surveyed

Financial intermediation 5%
Hotels & restaurants 5%
Transport, storage & communications 6%
Health 4%
Electricity, gas and water supply and Construction 7%
Education 3%
Wholesale & retail 17%
Manufacturing 36%
Real estate, renting and biz activities & IT services 17%

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[1] The seven technologies are: Intranet, Extranet, Company Computer Networks, WAP, Electronic Data Interchange (EDI), /Web-enabled EDI, Virtual Private Network and Smart Card Technology.

Survey Highlights

In this report, the data was analysed based on total Singapore-registered companies and companies that use Infocomm[2].

Base - Total Companies

a)   Adoption of Infocomm Appliances

- An estimated 83.3% of companies used Infocomm appliances such as computers, laptops or workstations in year 2002, up by 3.6 percentage points from 2000. (Figure 1)
- Approximately 18.8% of companies used mobile devices such as PDAs and WAP phones in 2002, up by 4.3 percentage points from 2000.
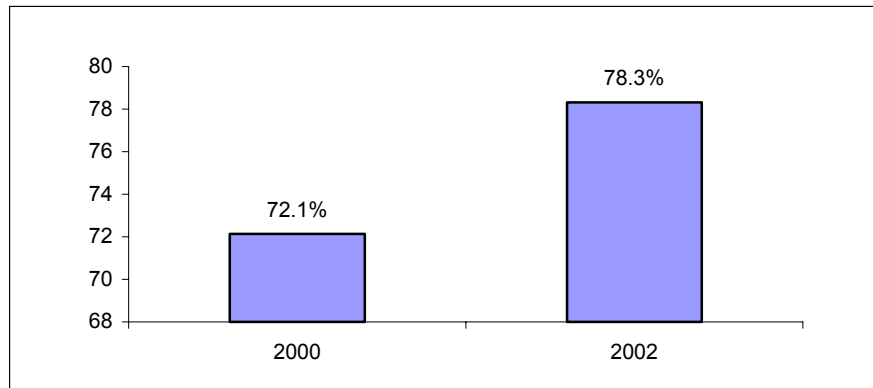
Figure 1: Usage of Infocomm Appliances
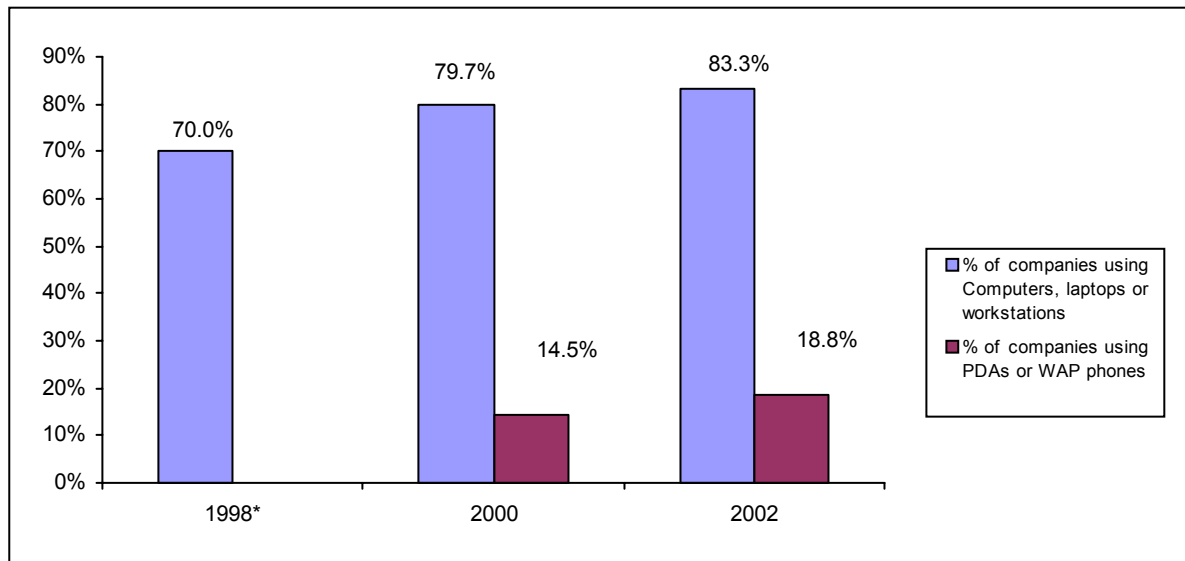
* Source : IDA 1998 ICT Usage Survey

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[2] Companies that use Infocomm technologies such as computers, laptops or workstations.

b)   Internet Access

- Internet penetration among companies was 78.3% in 2002, which represents an increase of 6.2 percentage points from 2000. (Figure 2)
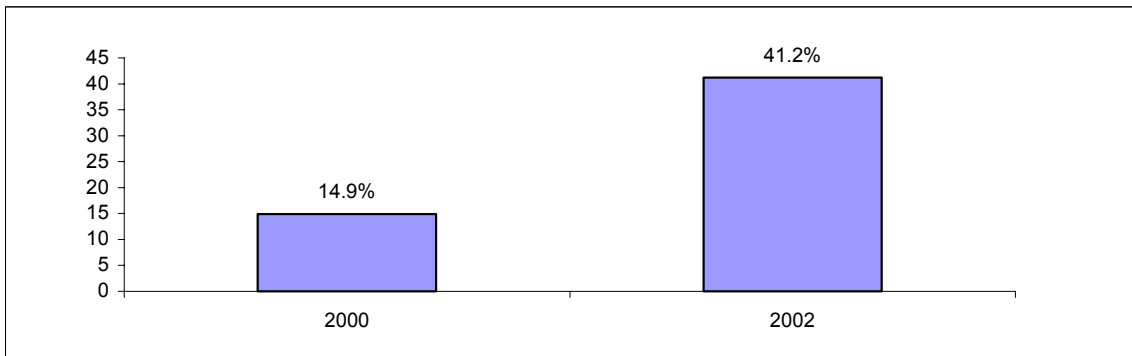
Figure 2: Internet Penetration Among Companies

c)   Broadband Services

- Forty-one percent of companies had broadband access in 2002 as compared to 14.9% in 2000. (Figure 3)

Figure 3: Companies With Broadband Access

- Companies subscribed to broadband access mainly for "On-line research" and "internal communications".

- Companies used broadband services mainly to increase productivity, as well as to lower costs and overheads.

- Reliability and stability (no downtime or interruption to access) were cited as motivating factors for using broadband applications and services

<u>Base - Companies that use Infocomm</u>

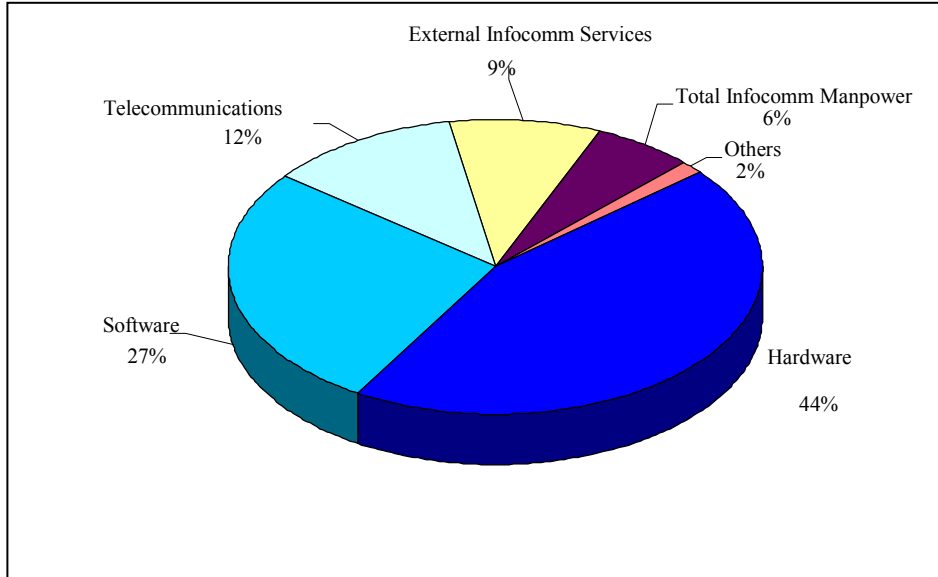**a)   Expenditure on Infocomm Technologies**

- About 97.6% of companies that use Infocomm spent on Infocomm technologies in 2002, compared to 94.1% in 2000.

- 100% of companies in the Construction, Hotels and Restaurants and Healthcare sectors spent on Infocomm in 2002. (Figure 4)

Figure 4: Infocomm Spending by Industry Sector
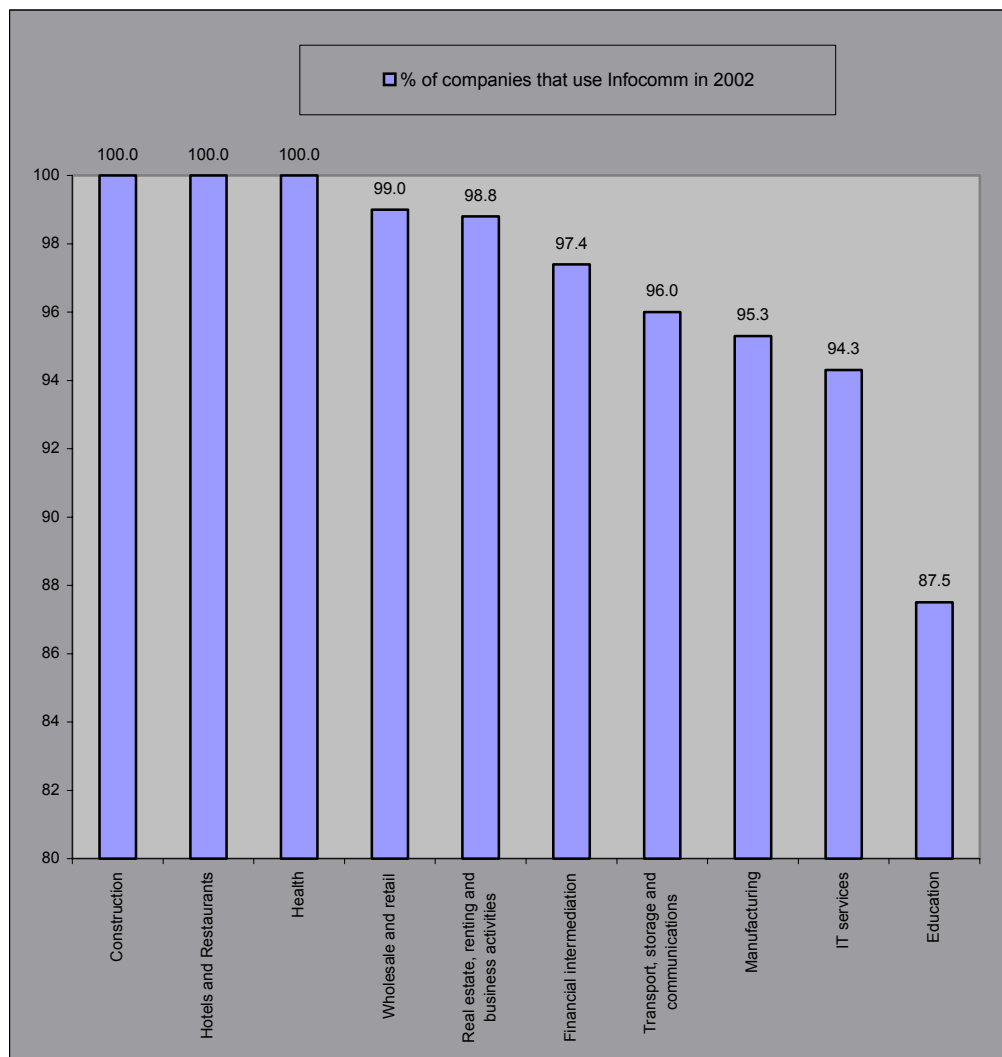
- Companies spent most on hardware, followed by software and telecommunication charges. (Figure 5)

Figure 5: Infocomm Expenditure by Category

External Infocomm Services
9%

Total Infocomm Manpower
6%

Others
2%

Telecommunications
12%

Hardware

44%

Software
27%

b) **Adoption of Infocomm Technologies**

- Close to 60% of companies that use Infocomm made use of at least one of the seven technologies in the Adoption Index[3].

- Intranet/Extranet and LAN/WAN were most widely used among these companies. (Figure 6)

Figure 6: Adoption of Infocomm Technologies

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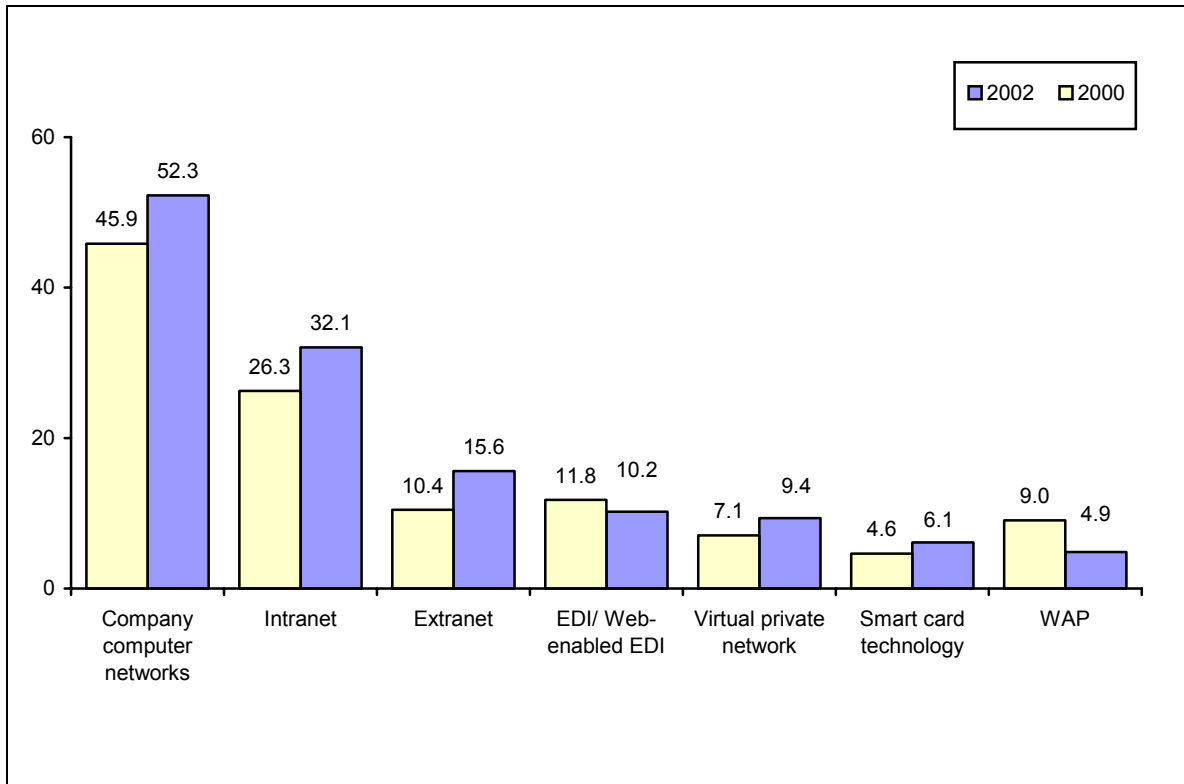
[3] The Adoption Index measures the extent to which companies deploy a wide range of technologies. It ranges from 0 to 7, and is a count of the number of different technologies that is used in companies.

- The top 3 industry sectors that had high usage of Infocomm Technologies were IT Services, Financial Intermediation and Transport, Storage and Communications. (Figure 7)

**Figure 7: Usage of Infocomm Technologies by Industry Sector**
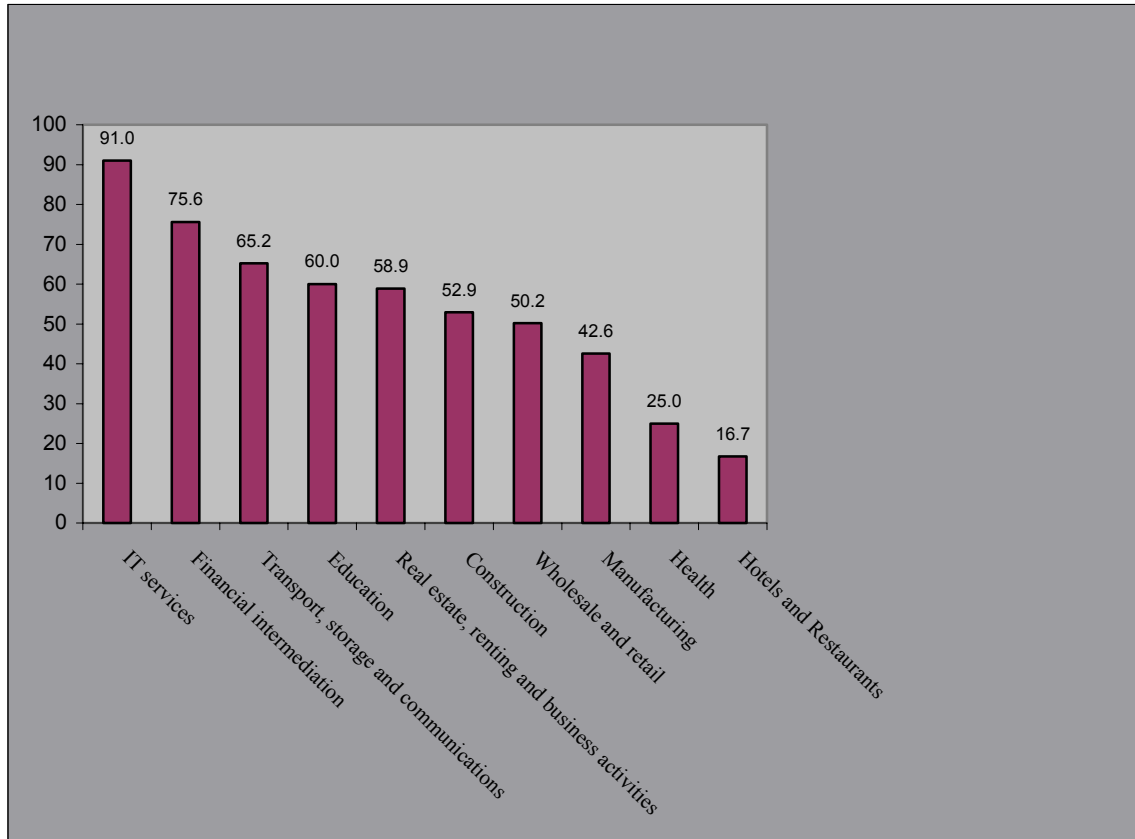
c) Wireless Technologies

- Approximately 9.6% of companies that use Infocomm deployed Wireless LAN in 2002. Another 15% of the companies intend to use the technology in the next 12 months.

- An estimated 2.7% of companies that use Infocomm used GPRS in 2002, with another 9.2% intending to adopt it in the next 12 months.

- The main reasons for using wireless technologies were "optimisation of office space" (e.g. staff are able to work anywhere within the office compound) and "the ability to provide better customer service".

- The top two barriers to adoption of wireless technologies were "does not apply to businesses" and "concerns over security".

- Hacking, unauthorised access, data sniffing, tapping, etc were the main security concerns cited by businesses.

d)   Trends in Web Services Usage

- In 2002, about 8% of companies used web services, with 9% intending to use in the next 12 months.

- Of the companies currently using web services, close to 70% were in the "enterprise"[4] mode of adoption. About 21% were in the "partner"[5] mode and 22% were in the "mass"[6] mode. (Note: A company can have more than one mode of usage)

- Usage of web services was most predominant in the IT services (21.6%), financial intermediation (17.5%) and healthcare (13.3%) sectors. (Figure 8)

Figure 8: Current Usage of Web Services

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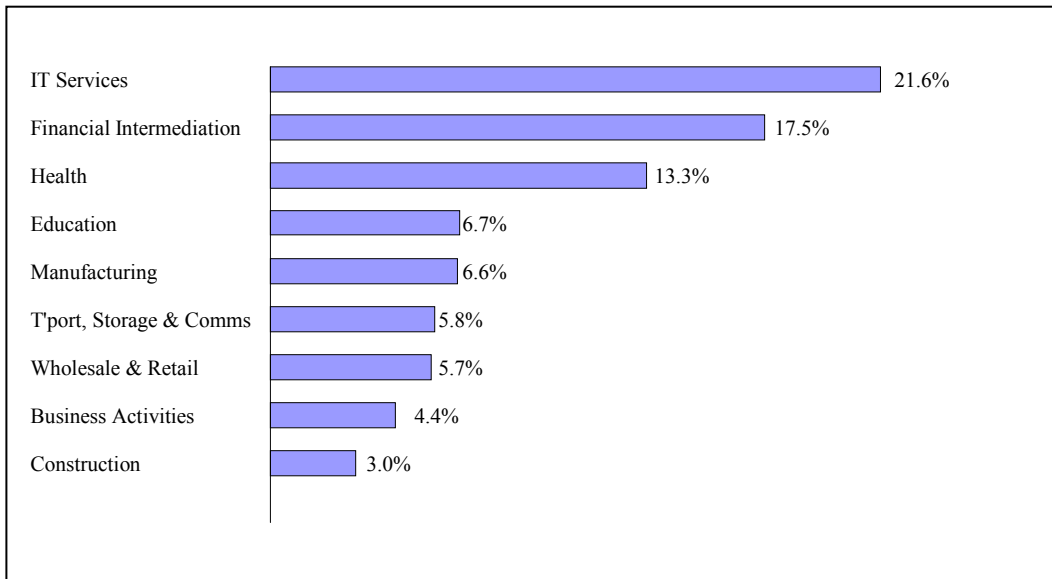
[4] Enterprise i.e. where services within your company are integrated through web services

[5] Partner i.e. where your company's system is integrated with an outside known partner

[6] Mass i.e. where your company's system is integrated with any number of outside partners, known or unknown, which are also using Web Services