

# ANNUAL SURVEY ON INFOCOMM USAGE BY ENTERPRISES FOR 2014

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# CONTENTS

<b>PART I: SURVEY COVERAGE, METHODOLOGY AND COMPANY PROFILE.....</b>	<b>3</b>
1. INTRODUCTION .....	4
2. SURVEY OBJECTIVE AND COVERAGE.....	4
3. NOTES ON DATA.....	4
4. INDUSTRY PROFILE .....	4
<b>PART II: SURVEY FINDINGS .....</b>	<b>6</b>
1. SUMMARY .....	7
2. <b>INFOCOMM USAGE</b> .....	9
2.1 By Employment Size .....	9
2.2 By Sector.....	11
3. <b>INTERNET USAGE</b> .....	12
3.1 Internet Activities.....	12
3.2 Business activities using mobile services .....	13
3.3 E-payment.....	14
4. <b>INFOCOMM SECURITY</b> .....	16
4.1 Infocomm Security adoption.....	16

## TABLES

Table 3.1: Top five barriers to e-payment adoption, 2012 – 2014 .....	15
Table 4.1: Infocomm security measures, 2012 – 2014 .....	16

## CHARTS

Chart 1.1: Distribution of enterprises by sector.....	4
Chart 1.2: Distribution of enterprises by employment size .....	5
Chart 2.1: Computer usage by employment size.....	9
Chart 2.2: Internet usage by employment size.....	10
Chart 2.3: Broadband usage by employment size.....	10
Chart 2.4: Web presence by employment size.....	10
Chart 2.5: Infocomm usage by sector.....	11
Chart 3.1: Devices used for Internet activities.....	12
Chart 3.2: Top 10 Internet Activities on Computers.....	12
Chart 3.3: Top 10 Internet Activities on Mobile/Smart Phones or Tablets.....	13
Chart 3.4: Enterprises that use mobile services to engage customers.....	13
Chart 3.5: Types of business activities using mobile services .....	14
Chart 3.6: Enterprises that use e-payments .....	14
Chart 3.7: Enterprises that use e-payments by employment size .....	14

# **PART I: SURVEY COVERAGE, METHODOLOGY AND COMPANY PROFILE**

## 1. INTRODUCTION

The annual survey on Infocomm Usage by Enterprises for 2014 is the sixteenth in the series of such annual surveys carried out by the Research and Statistics Unit of the Infocomm Development Authority of Singapore since 1999. This survey is conducted under the Statistics Act (Chapter 317) which empowers the Director of the Research and Statistics Unit to collect data on the infocomm activities in Singapore. The Act also guarantees the confidentiality of individual information obtained from the survey.

## 2. SURVEY OBJECTIVE AND COVERAGE

This survey aims to gauge the levels and types of infocomm adoption and usage in enterprises in Singapore; and identify the barriers to infocomm adoption. Representative samples of infocomm and end-user enterprises were selected from the Department of Statistics' (DOS) Establishment Sampling Frame.

## 3. NOTES ON DATA

Past years' data are included for comparison purposes where available. Due to the rounding of numbers, the sum of individual figures may not add up to the total or 100%.

## 4. INDUSTRY PROFILE

Chart 1.1 provides a profile of the respondents by sector, with *Wholesale and Retail Trade* comprising about a third of all sectors.

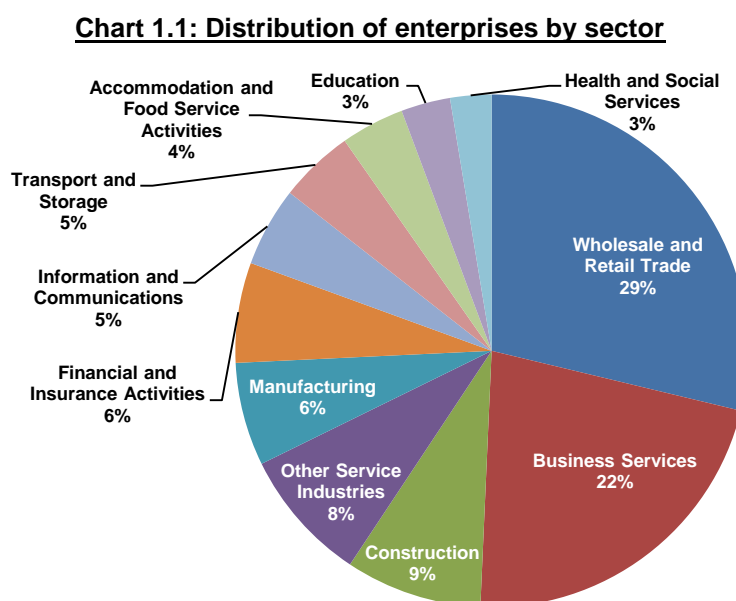
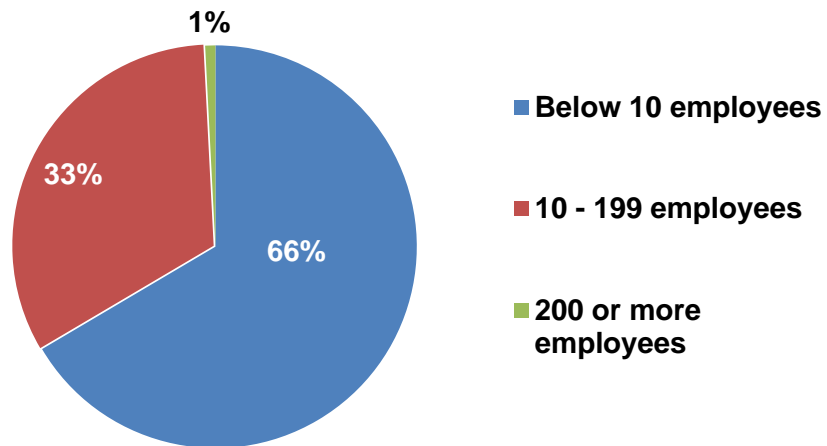


Chart 1.2 provides a profile of the respondents by employment size, with 66% of the enterprises having below 10 employees.

**Chart 1.2: Distribution of enterprises by employment size**



## **PART II: SURVEY FINDINGS**

# 1. SUMMARY

## ***Usage of computers, Internet, broadband and web presence among enterprises continued to increase in 2014***

- Usage of computers, Internet, broadband and website among enterprises continued to increase in 2014. The proportion of enterprises that used
  - Computers increased from 84% in 2012 to 90% in 2014
  - Internet increased from 82% in 2012 to 87% in 2014
  - Broadband increased from 80% in 2012 to 86% in 2014
  - Web presence increased from 46% in 2012 to 49% in 2014
- Infocomm usage was the most prevalent in the *Business Services; Education and Information & Communications* sectors in 2014.

## ***More enterprises are using mobile devices and services to do business***

- Mobile phones are becoming increasingly popular mode of accessing the Internet with proportion of enterprises accessing the Internet via mobile phone increasing from 48% in 2012 to 67% in 2014.
- While ‘*Sending and receiving emails*’ and ‘*Information Search*’ were two most common Internet activities on computers and mobile equipment, enterprises still prefer to use computers for government transactions (i.e., obtaining information from government organizations, download/request/complete/send government forms).
- Proportion of enterprises that used mobile services to engage customers increased significantly from 27% in 2012 to 55% in 2014. Enterprises used it most commonly to send products and promotional information to their customers.



***Proportion of enterprises that used e-payments for their businesses grew in 2014, with larger enterprises are more likely to use e-payments***

- Enterprises had used e-payments in their businesses grew from 40% in 2012 to 46% in 2014, with higher adoption rates among the enterprises with more employees.

***Infocomm security adoption on the rise among enterprises with 'Virus Checking or Protection Software' being the most commonly adopted infocomm security measure among all enterprises***

- Infocomm security adoption was on the rise amongst enterprises with *Virus Checking/Protection Software* being the most commonly adopted security measure among all enterprises, followed by *Firewall* and *Anti-Spyware Software*.

## 2. INFOCOMM USAGE

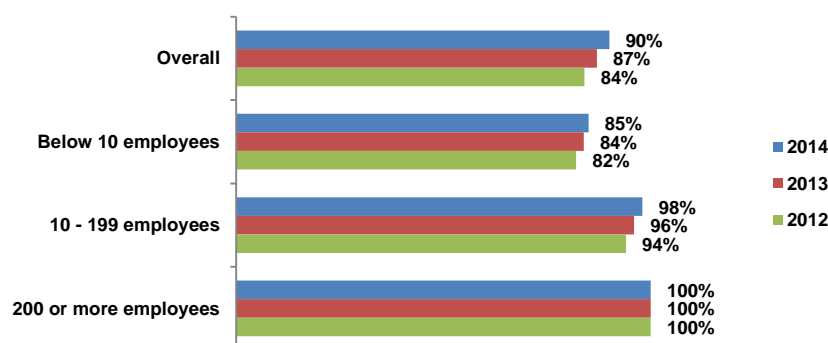
### 2.1 By Employment Size

#### ***Usage of computers<sup>1</sup>, Internet, broadband and web presence<sup>2</sup> among enterprises continued to increase in 2014***

##### Usage of Computers

Computer usage among enterprises reached 90% in 2014 (Chart 2.1). When analysed by employment size, all enterprises with 200 or more employees used computers.

**Chart 2.1: Computer usage by employment size**



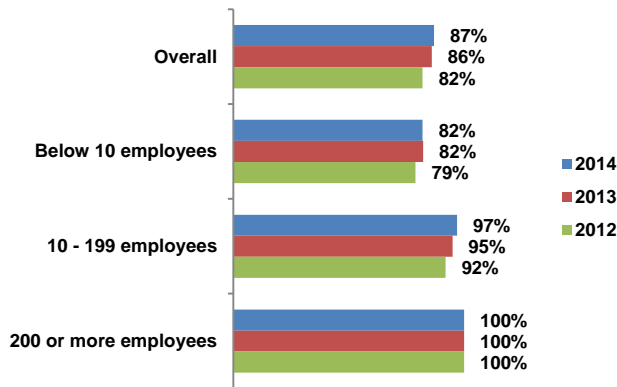
##### Usage of Internet and Broadband

Internet usage amongst enterprises increased from 82% in 2012 to 87% in 2014. Similar to computer usage, all enterprises with 200 or more employees used the Internet (Chart 2.2). Enterprises that connected to the Internet via broadband grew from 80% in 2012 to 86% in 2014 (Chart 2.3). The proportion of enterprises with web presence increased from 46% in 2012 to 49% in 2014. (Chart 2.4).

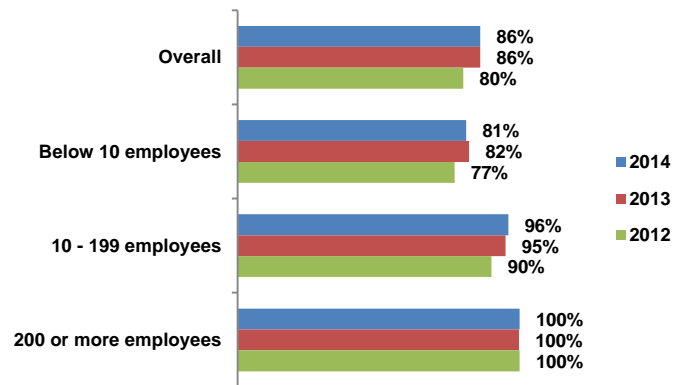
<sup>1</sup> A computer includes a desktop, laptop, netbook, tablet, tablet computer, portable or handheld computer (e.g. a personal digital assistant), minicomputer, mainframe, workstation. A computer does not include equipment with some embedded computing abilities such as game consoles or TV sets, nor does it include computer-controlled machinery or electronic tills.

<sup>2</sup> A web presence means a website (including mobile versions) or any other web pages where the business has control over the content of the page such as home page, or presence on another entity's website (including a related business), or blogsites, or pages on social media platforms or online business directories or online marketplaces.

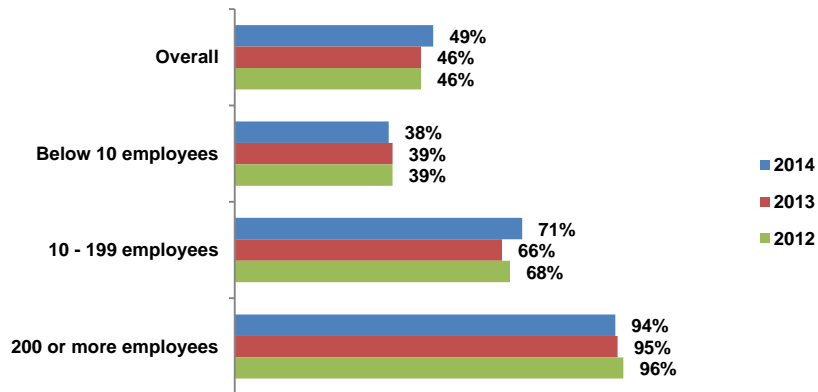
**Chart 2.2: Internet usage by employment size**



**Chart 2.3: Broadband usage by employment size**



**Chart 2.4: Web presence by employment size**

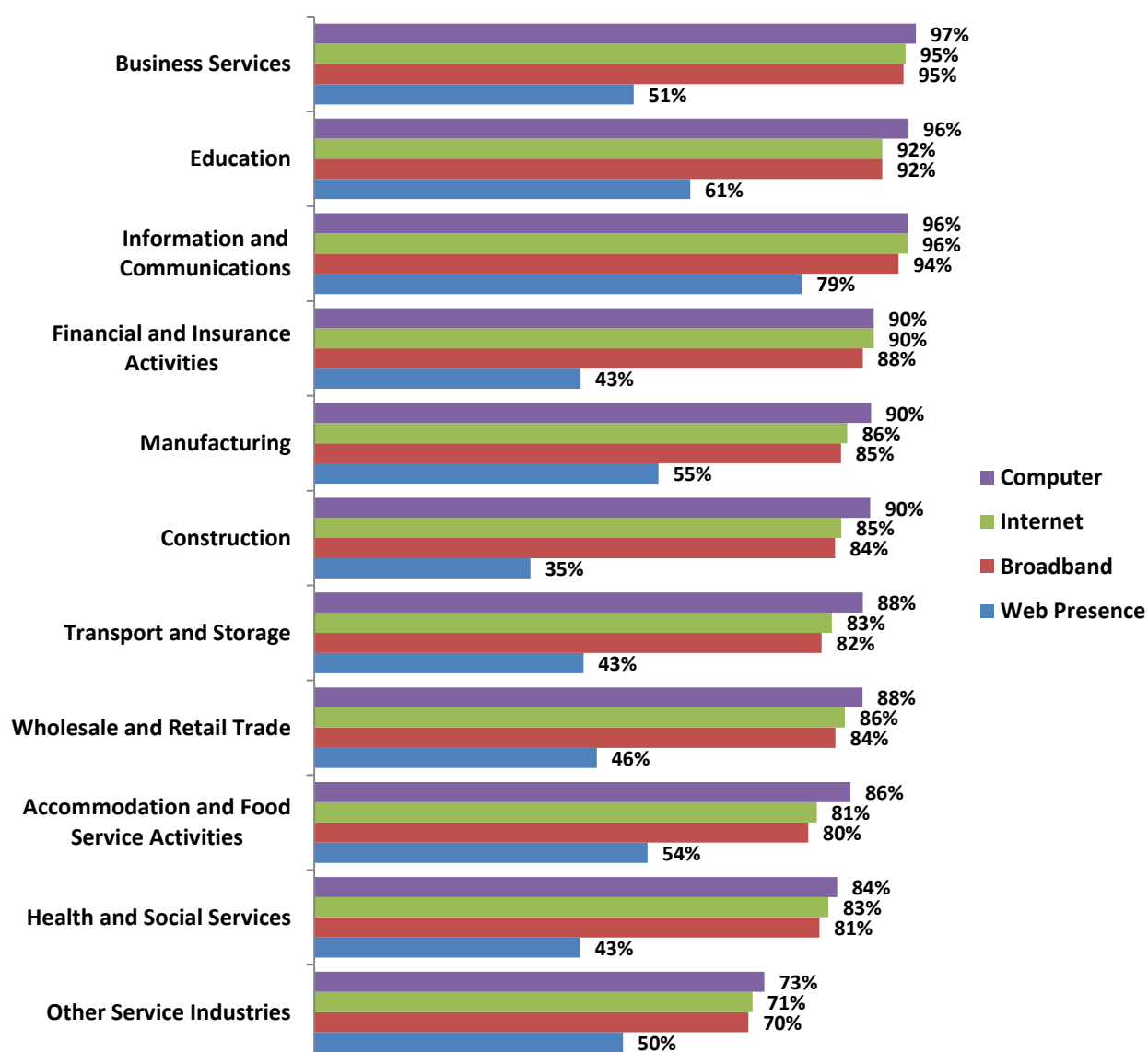


## 2.2 By Sector

***Business Services; Education and Information & Communications sectors were top three sectors that adopted infocomm in 2014***

The Business Services sector led in infocomm adoption in all aspects, with 97% computer usage and 95% Internet usage (Chart 2.5). This was followed by the *Education and Information and Communications sectors*.

**Chart 2.5: Infocomm usage by sector**



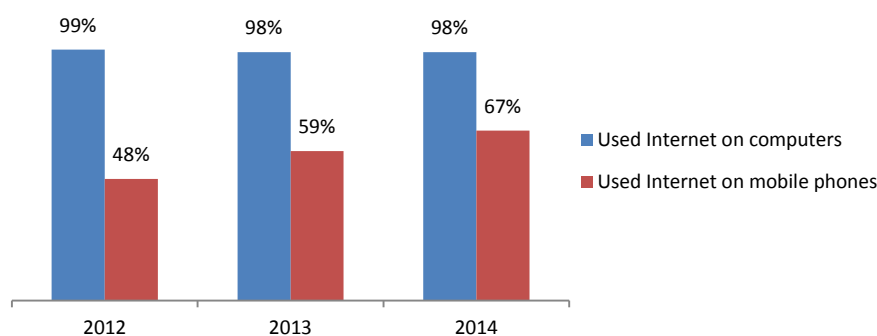
### 3. INTERNET USAGE

#### 3.1 Internet Activities

##### ***Mobile phones becoming increasingly popular mode of accessing the Internet***

90% of enterprises used the Internet (Chart 2.2) and close to all used computers to go about their Internet activities (Chart 3.1). Increasingly, mobile phones have also been used by enterprises for Internet activities, with 67% doing so, rising sharply from 48% in 2012 (Chart 3.1).

**Chart 3.1: Devices used for Internet activities**

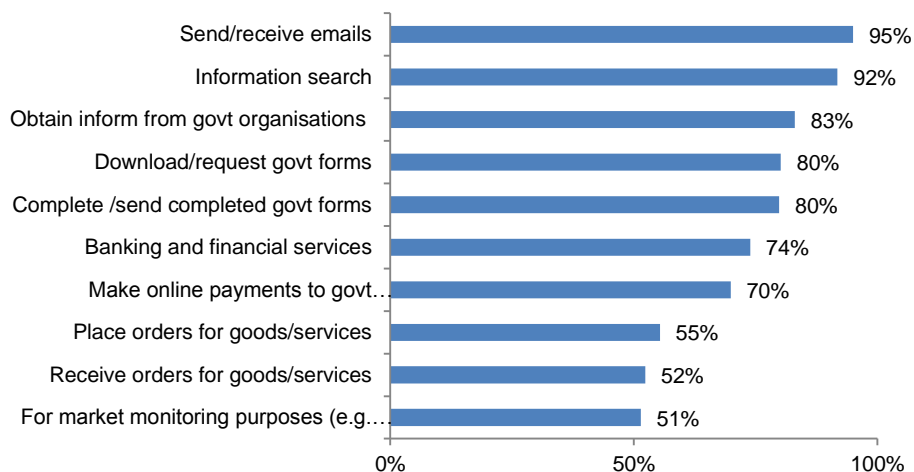


Base: Enterprises with Internet Usage

##### ***While sending and receiving emails and Information Search were two most common Internet activities on computers and mobile equipment, enterprises still prefer to use computers for government transactions***

When using the Internet on computers, the most common Internet activities were sending and receiving emails (95%), information search (92%) and getting information from government organizations (83%) (Chart 3.2).

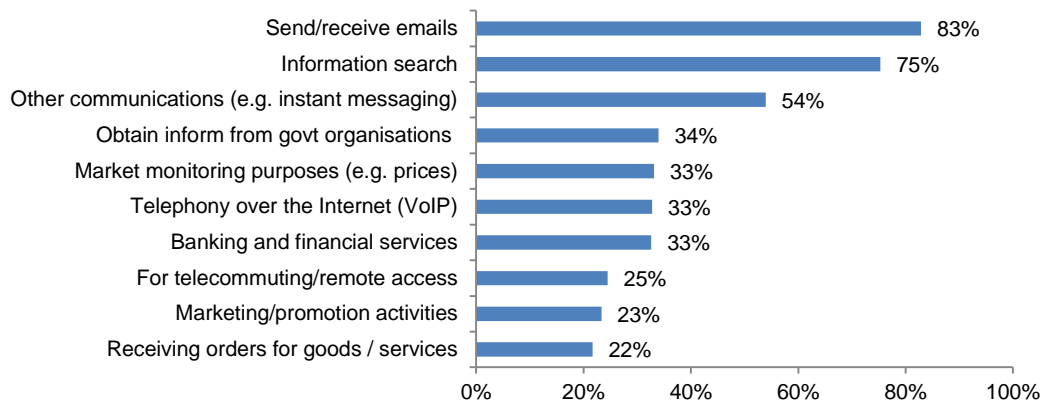
**Chart 3.2: Top 10 Internet Activities on Desktop PCs and Laptops**



Base: Enterprises with Internet Usage on Desktop PCs and laptops

When using the Internet on mobile/smart phones or tablets, sending and receiving mails and information search remained the most common activities. Due to the mobile nature of the devices, instant messaging was also a common Internet activity on mobile/smart phones or tablets ([Chart 3.3](#)).

**Chart 3.3: Top 10 Internet Activities on Mobile/Smart Phones or Tablets**



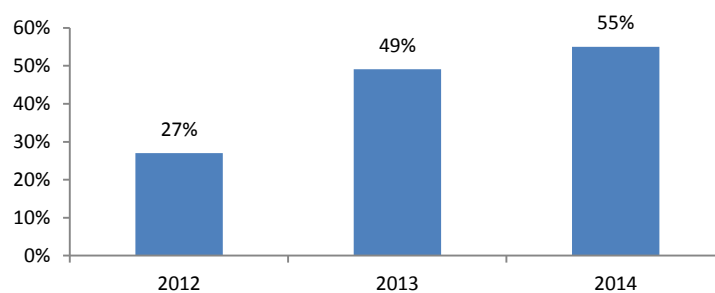
Base: Enterprises with Internet Usage on mobile/smart phones or tablets

### **3.2 Business activities using mobile services**

#### ***Higher proportion of enterprises used the mobile services for business***

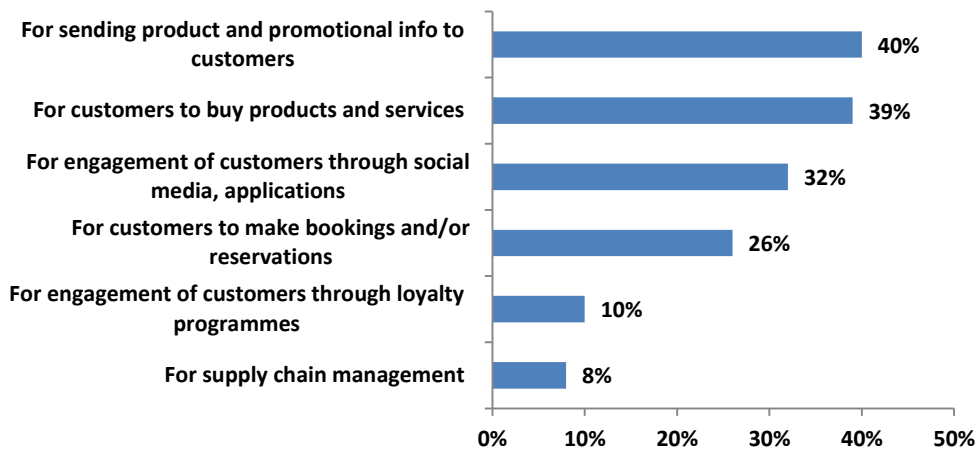
The proportion of enterprises using mobile services (e.g. SMS/MMS, mobile websites, mobile applications) to engage consumers saw a large increase from 27% in 2012 to 55% in 2014 ([Chart 3.4](#)).

**Chart 3.4: Enterprises that use mobile services to engage customers**



Enterprises that used mobile services (e.g. SMS/MMS, mobile websites, mobile applications) to engage their customers mainly used it to send product and promotional information ([Chart 3.5](#)).

**Chart 3.5 Types of business activities using mobile services**



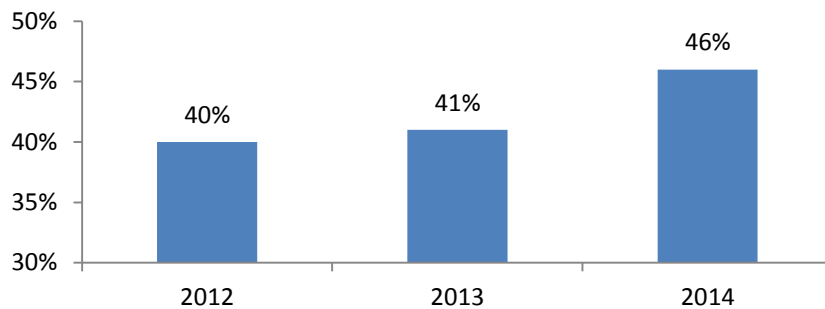
Base: Enterprises which use mobile services

### 3.3 E-payment

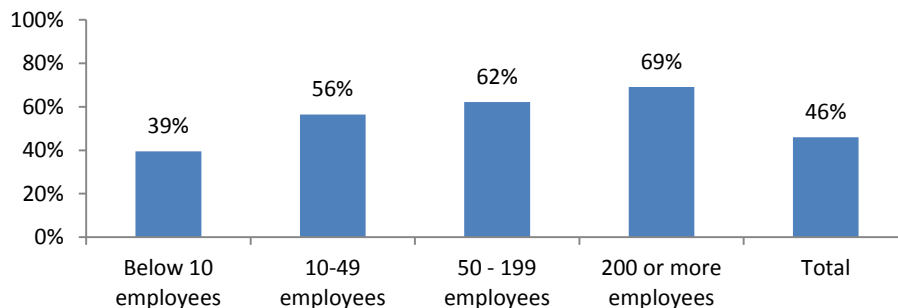
***Proportion of enterprises that used e-payments for their businesses grew in 2014, with larger enterprises are more likely to use e-payments***

Enterprises had used e-payments in their businesses grew from 40% in 2012 to 46% in 2014 (Chart 3.6), with higher adoption rates among the enterprises with more employees (Chart 3.7).

**Chart 3.6: Enterprises that use e-payments**



**Chart 3.7: Enterprises that use e-payments by employment size**



Base: Enterprises that use e-payment

Amongst enterprises that did not use e-payments, the top reason for not using e-payment was that enterprises felt that the nature of their business was not a good fit for e-payment (Table 3.1). A high proportion of those from the *Other Service Industries*<sup>3</sup> and *Health and Social Services* sectors did not see their business as needing e-payment.

**Table 3.1: Top five barriers to e-payment adoption**

Barriers to E-payment Adoption	2014	2013	2012
Nature of business is not a good fit for e-payment	1	1	1
Not sure of e-payment benefits to business	2	3	3
Cost of transaction fees	3	2	2
Poor awareness/understanding of e-payment	4	5	4
Integration costs too high	5	-	-

Base: Enterprise that do not use e-payment

Note: The option "Integration costs are too high" was newly added in 2014.

<sup>3</sup> *Other Service Industries include personal and household services not elsewhere classified such as hairdressing shops, beauty salons and spas, repair and maintenance of motor vehicles, activities of other membership organisations.*



## 4. INFOCOMM SECURITY

### 4.1 Infocomm Security adoption

***Infocomm security adoption on the rise among enterprises with Virus Checking or Protection Software being the most commonly adopted infocomm security measure among all enterprises***

Enterprises have increased their adoption of the various infocomm security measures across the years (Table 4.1). *Virus Checking or Protection Software* was the most pervasive infocomm security measure among all enterprises; with *Firewall* and *Anti-spyware* being the next most commonly deployed infocomm security measures.

**Table 4.1: Infocomm security measure**

	<b>Infocomm Security Measure</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>
1	Virus checking or protection software	94%	95%	94%
2	Firewall	85%	77%	73%
3	Anti-spyware software	70%	77%	68%
4	Regular backup of critical data	68%	72%	64%
5	Spam filter	64%	65%	53%
6	Access control software/hardware	40%	32%	23%
7	Offsite data backup	36%	33%	23%
8	Encrypted transmission of sensitive information (SSL)	31%	27%	21%
9	Intrusion detection system	27%	21%	14%

Base: All enterprises who adopt infocomm security measures and computer usage