



STUDY TO ASSESS ICT USAGE AMONG BUSINESSES IN MAURITIUS

Presentation of Key Survey Results

15 April 2010



DCDM
MARKETING RESEARCH

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Chapter 1: Introduction

Project background and Objectives

- The Government of Mauritius has elaborated a **National Information and Communications Technology Strategy Plan (NICTSP)** for 2007-2011
- This plan has for aim to realise the **National ICT Vision for Mauritius: make ICT the fifth pillar of the Mauritian economy** and make Mauritius a **regional ICT hub**
- One of the priority projects identified in the plan is the **definition of indicators for the ICT sector** and the **publication of a biennial report on the State of ICT Development** which will indicate the current state of ICT exploitation as well as the ICT industry development
- The objective of the study is to:
 - Carry out a study among 3000 large establishments in Mauritius to assess ICT Usage in businesses

Methodology – Questionnaire & Sample Design

■ Questionnaire

- Based on indicators provided by the client
- Pilot-tested among a sample of companies and validated with the client prior to start of fieldwork

■ Random stratified sampling procedure was applied

- According to business activity and size of establishments based on no. of employees
- Based on Universe of 2,344 large establishments [excluding those located in Rodrigues] using CSO's latest Survey Employment and Earnings in Large Establishments [March 2009]
- Sample of 910 companies randomly selected from the universe, with a minimum sample of 50 companies in strata with low population size

■ Interviews conducted with IT/ General/ Finance/ HR Managers in selected companies

■ Fieldwork conducted between 11th January and 5th March

Methodology – Field achievements

■ Sample achievements – Weighted Figures – [Ensuring sample is representative of pop. distribution]

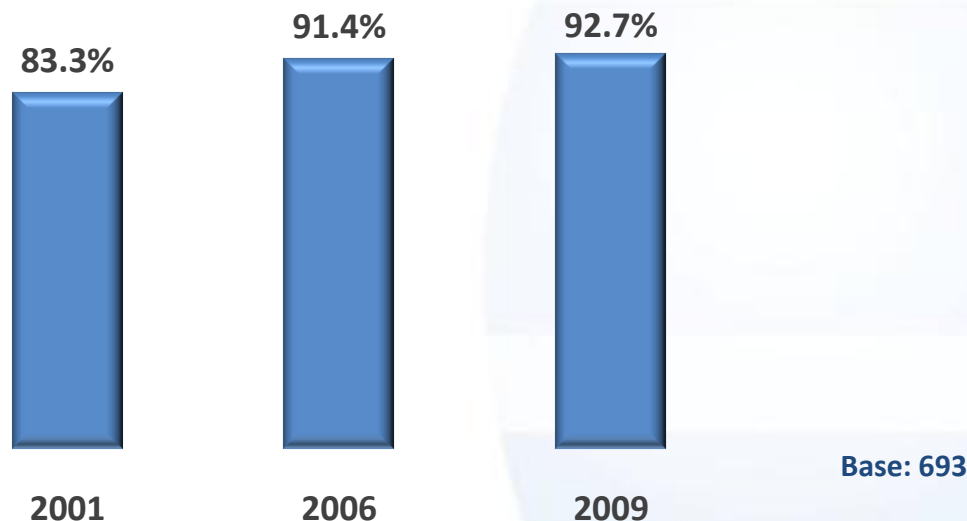
	<10	10 - 49	50 - 399	400+	Not specified	Grand Total
Agriculture, hunting, forestry & fishing	6	21	11	3	1	41
Construction		17	11		2	31
Education	1	21	18	1		42
Electricity, water & gas		1	1	1		2
Financial intermediation		13	10	1		24
Health and social work		9	3	1		12
Hotel and restaurants	3	20	16	5	1	45
ICT		22	15		1	39
Manufacturing	10	131	74	11	5	232
Mining and quarrying	1					1
Other community and personal services	2	16	8	1	1	29
Public administration	1	5	4	0		10
Real estate and business activities	2	29	13	1	1	46
Transport and communication	1	16	10	2		29
Wholesale and retail	5	72	27	2	4	110
Grand Total	33	394	221	29	16	693

Part 1: ICT USAGE IN BUSINESSES IN MAURITIUS

Chapter 2: Analysis of computerization levels across businesses

Computer usage across businesses

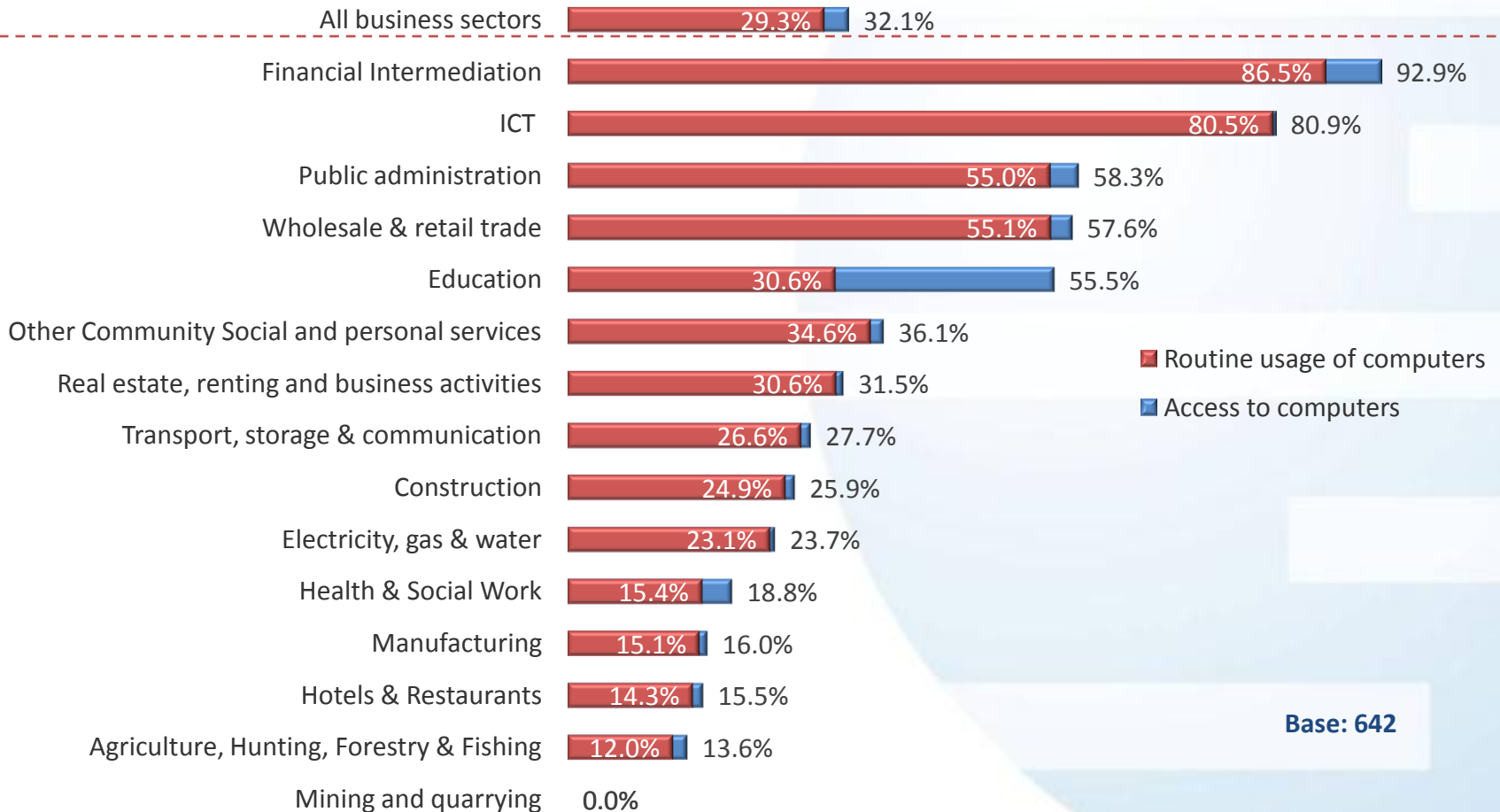
Percentage of establishments using computers



- Compared to previous years, computerization level seems to have stabilised in 2009, reaching 92.7% in 2009 vs. 91.4% in 2006
 - Growth rate slowed down between 2006 – 2009 (0.4% p.a.) as compared to 2001 – 2006 (1.6% p.a.)
- Computerisation levels slightly lower among companies
 - In the agriculture, hunting, forestry and fishing (79%) and Mining and quarrying (0%) sectors
 - With less than 50 employees (90%)
 - Operating locally (90%)
 - With a level of turnover not exceeding Rs 11m (78%)

Employee usage of computers

Breakdown of employee usage of computers by business activity



Base: 642

- **Within computerized establishments,**

- While 32% of employees have access to computers, only 29% routinely use them

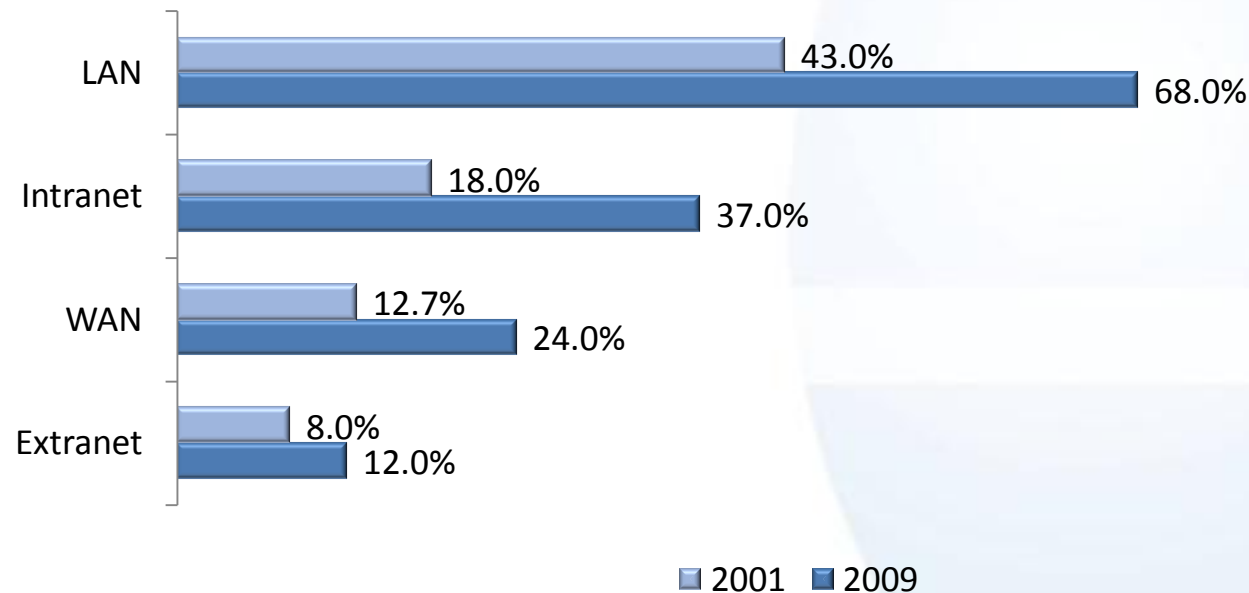
- **Higher access and routine usage of computers by employees noted in**

- Financial intermediation companies and ICT companies

Chapter 3: Presence and usage of ICT infrastructure within businesses

















Types of information technologies used (1/2)

Percentage of businesses having the following information technologies




- Higher presence of information infrastructures within computerised companies in 2009 vs. 2001
- Of all types of information technologies,
 - Predominance of LAN (68%) noted far ahead of Intranet (37%), WAN (24%) & Extranet (12%)
 - Interestingly, Intranet usage doubled in 2009 compared to 2001

Types of information technologies used (2/2)

Sector of Activity	LAN [%]	Intranet [%]	WAN [%]	Extranet [%]
Financial Intermediation	96.9 	74.3 	77.4 	16.9
ICT	86.2 	68.0 	46.2 	26.6 
Public administration	52.5	30.6	6.4	3.6
Wholesale & retail trade	76.5 	36.8	26.3	17.2
Education	65.0	22.6 	3.9 	1.9 
Other Community, Social and personal services	71.7	39.8	11.0	13.0
Real estate, renting and business activities	76.3	43.9	26.9	12.4
Transport, storage & communication	74.0	49.8	37.5	16.9
Construction	60.9	27.0	20.2	2.8
Electricity, gas & water	100.0	100.0	78.6	0.0
Health and social work	24.6	16.4	5.9	4.5
Manufacturing	60.2 	26.2 	17.0 	8.4 
Hotels and restaurants	70.0	51.6	29.3	23.2 
Agriculture, Hunting, Forestry & Fishing(..)	55.5	38.8	22.8	6.8
Mining and quarrying	0.0	0.0	0.0	0.0

 Indicates significantly lower % compared to overall

 Indicates significantly higher % compared to overall

■ Higher presence of all 4 technologies in

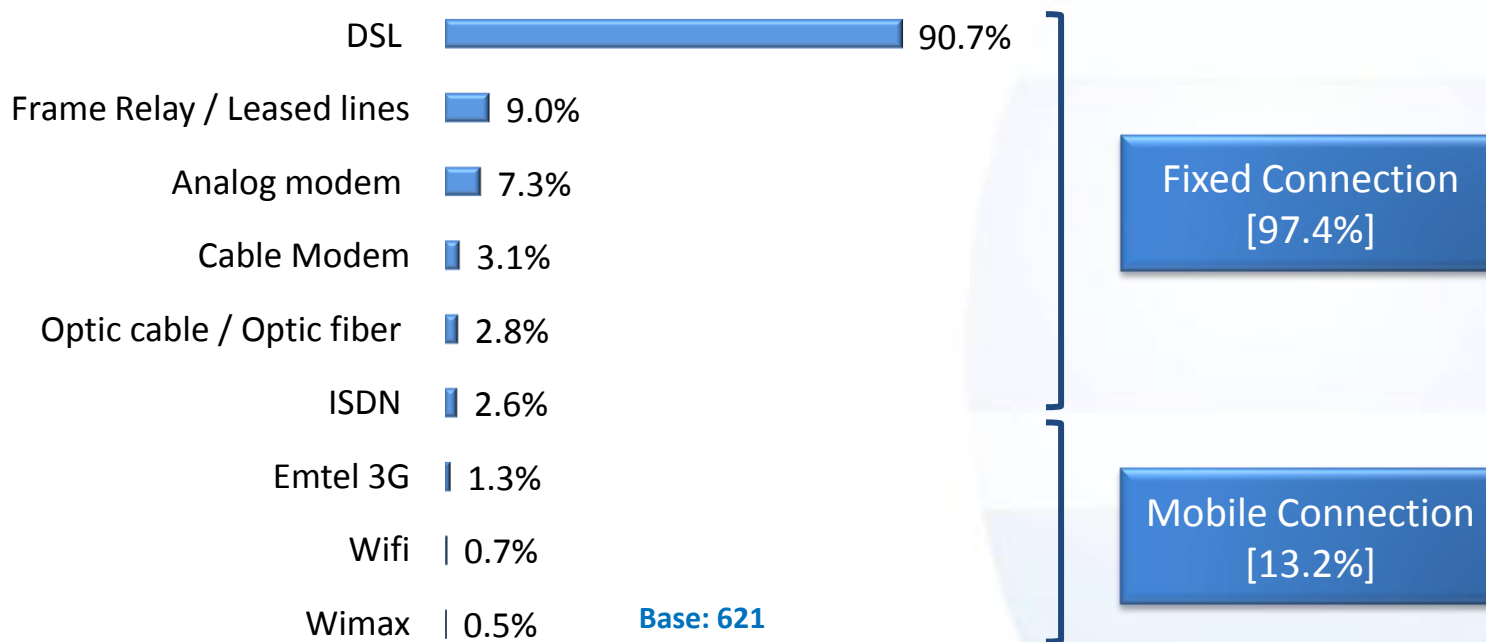
- Medium to large size companies [With over 50 employees and a level of turnover >Rs41m]
- Having a regional or international scope of operation

Internet penetration within computerized companies

Sector of Activity	2001 [%]	2006 [%]	2009 [%]
ALL SECTORS	-	84.7	96.7 ↑
Financial Intermediation	88.9	-	100.0 ↑
ICT	-	-	100.0
Public administration	-	-	96.4
Wholesale & retail trade	76.1	-	96.4 ↑
Education	63.2	-	95.7 ↑
Other Community, Social and personal services	100.0	-	100.0 →
Real estate, renting and business activities	72.7	-	97.4 ↑
Transport, storage & communication	92.3	-	93.6 →
Construction	58.3	-	95.4 ↑
Electricity, gas & water	-	-	100.0
Health and social work	40.0	-	92.6 ↑
Manufacturing	-	-	96.0
Manufacturing (Textile & wear)	86.0	-	-
Manufacturing (Other)	77.6	-	-
Hotels and restaurants	75.0	-	100.0 ↑
Agriculture, Hunting, Forestry & Fishing(..)	45.0	-	94.8 ↑

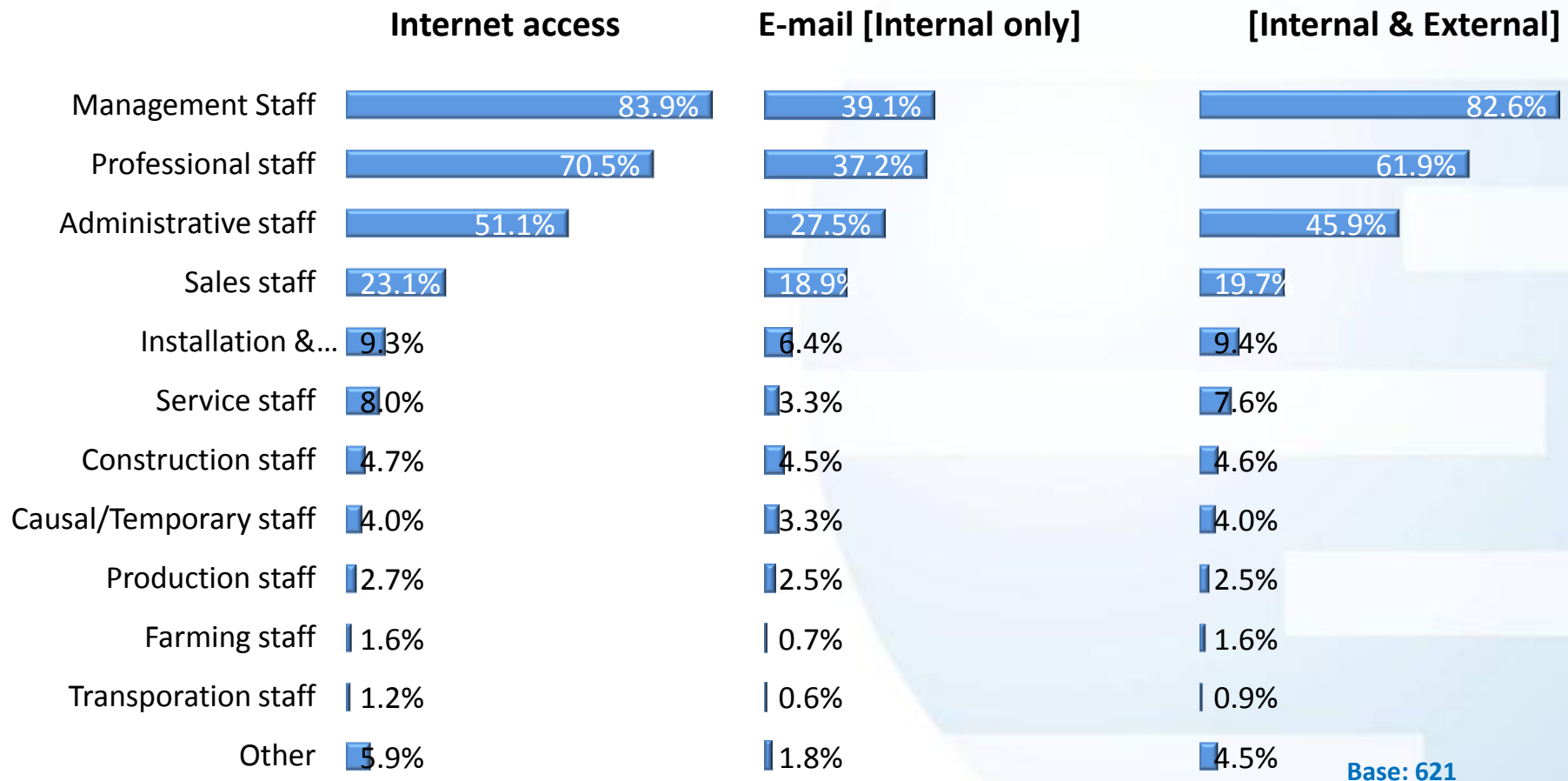
- Higher internet penetration overall compared to 2006 [↑ from 85% in 2006 to 97% in 2009]
 - Also higher across nearly all sectors of activity

Mode of connection to the Internet



- **DSL - by far the most widely used mode of connection (91%) far ahead of other modes**
- **Other connection modes seem to be favoured by specific business segments:**
 - ❑ **Frame Relay / Leased lines** - Financial Intermediation (41%) & Hospitality (21%) sectors, in particular large sized companies and those dealing internationally (16%)
 - ❑ **Analog modem** – Construction (18%) & Manufacturing (11%) sectors, in particular by small sized companies, with a turnover of less than Rs 2m (23%)
 - ❑ **Optic cable** – ICT sector (10%)
 - ❑ **ISDN** – Agriculture (10%) & ICT (9%)
 - ❑ **WIFI & WIMAX** – Manufacturing (2%) & ICT (5%) respectively, in particular in younger companies (operating since 1 – 10 years)

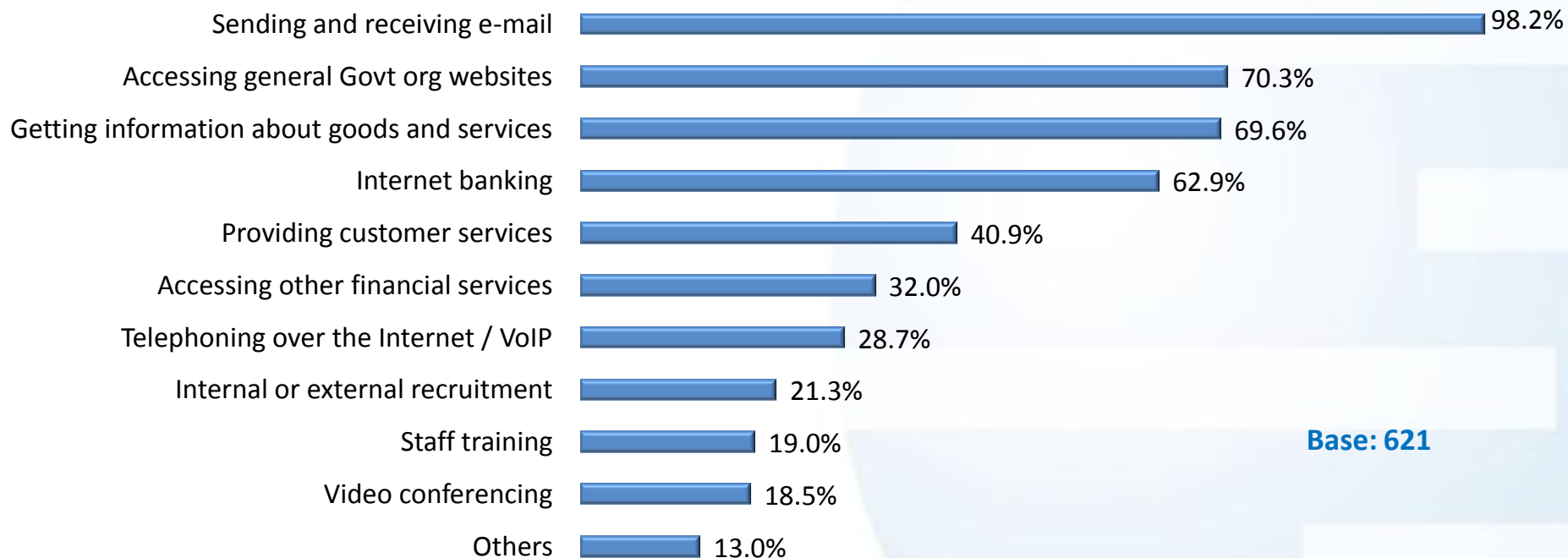
Employee access to the Internet and E-mail



Base: 621

- Access higher among
 - Management, Professional and Administrative staff
- Increased internet and e-mail access noted for Managerial staff compared to 2001
- While Administrative staff also enjoy higher internet access in 2009,
 - No change noted in e-mail access

Purpose of Internet Access



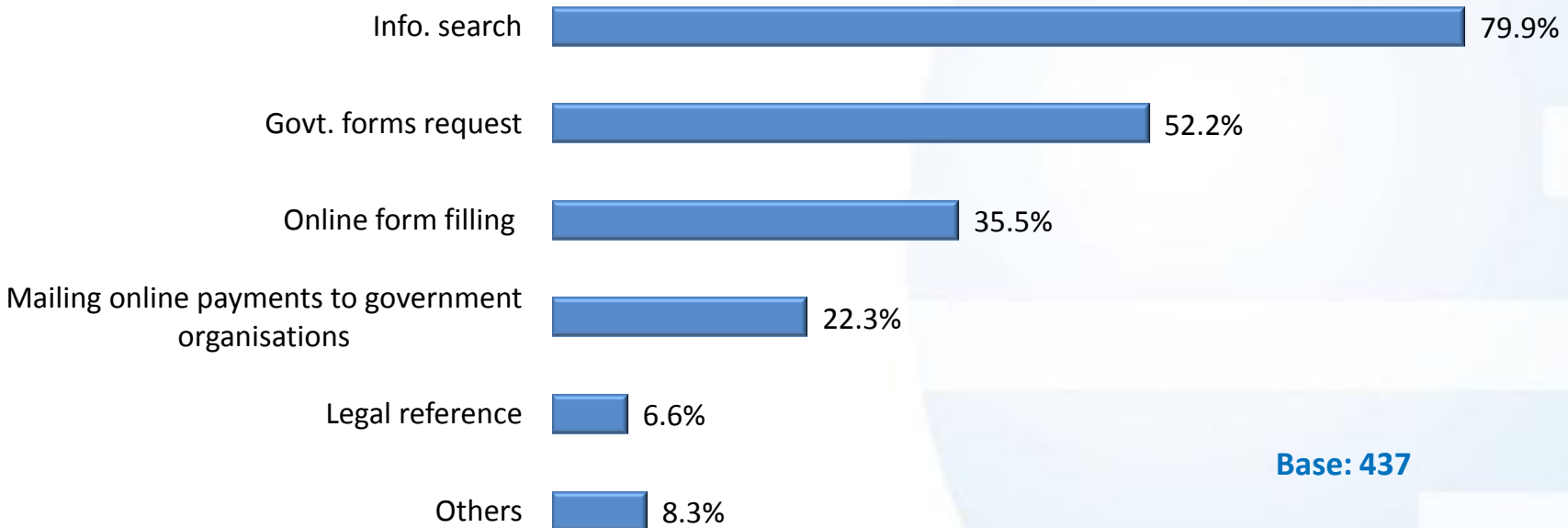
■ 4 main purposes of accessing internet

- ❑ Sending and receiving e-mails (98%)
- ❑ Accessing Government organisations websites (70%)
- ❑ Getting information about goods and services (70%)
- ❑ Internet banking (41%)

■ Government websites mainly accessed by:

- ❑ Real estate, renting and business activities sector (92%)
- ❑ Large companies with 50 – 399 employees (77%) and a turnover level of Rs 100m (85%)
- ❑ Companies having an IT staff (74%)

Reasons for accessing govt. org.'s websites

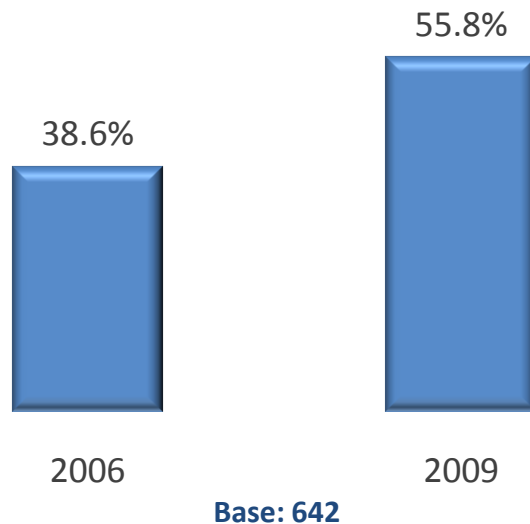


- **Govt. websites mainly accessed for information search (80%) far ahead of**
 - Request for government forms (52%) and
 - Online form filing (36%) – Mainly by companies in the Manufacturing sector (43%)
- **On the other hand, the hospitality industry mainly do so for legal reference (17%)**

Chapter 4: Prevalence of web-sites among computerized companies

Existence of Companies' Websites

Percentage of companies having a website



Companies having an operational website

- Sectors of activity: Hotels & Restaurants (85.7%), followed by ICT (84.7%) and Financial Intermediation (80.5%)
- Scope of operations: Regional (63.5%) and international scope (66.3%)
- Turnover: 66.5% with turnover more than Rs 100m
- Presence of IT staff: 59.8% of companies having an IT staff

Companies having a website under construction

- Greatest % in Real estate, renting and business activities sector (19.0%)

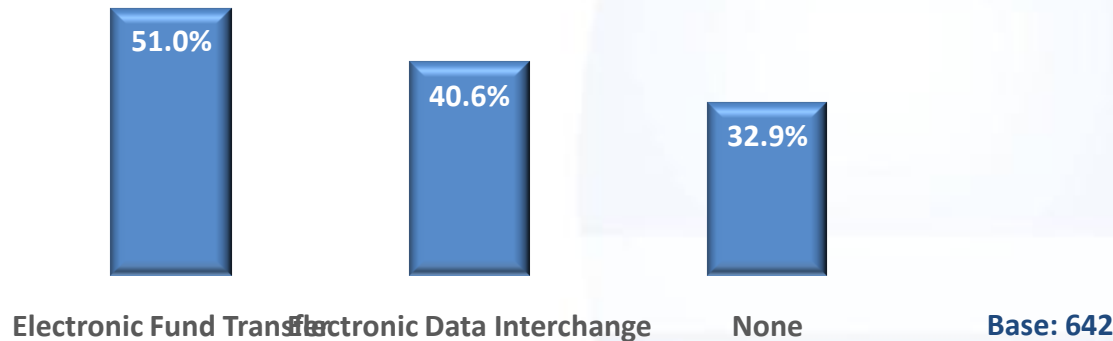
- Significant increase in the proportion of companies having a **website** in **2009 (56%) vs 2006 (39%)**
 - In 2009, 48% of companies claim to have an operational website and 7% to have one under construction)

Chapter 5: Extent of e-commerce penetration within businesses

Types of e-commerce technologies used

- Of those companies having a website, only **15.4%** offer e-commerce facilities

Percentage of businesses using E-commerce technologies



Companies using EDI

- 76.5% of companies in **Financial intermediation** sector and **74.9%** in **Transport, storage & communication**
- Companies having **50 and more employees**
- 61.9%** with a **turnover of more than Rs 100m**

Companies using Electronic Transfer of Funds

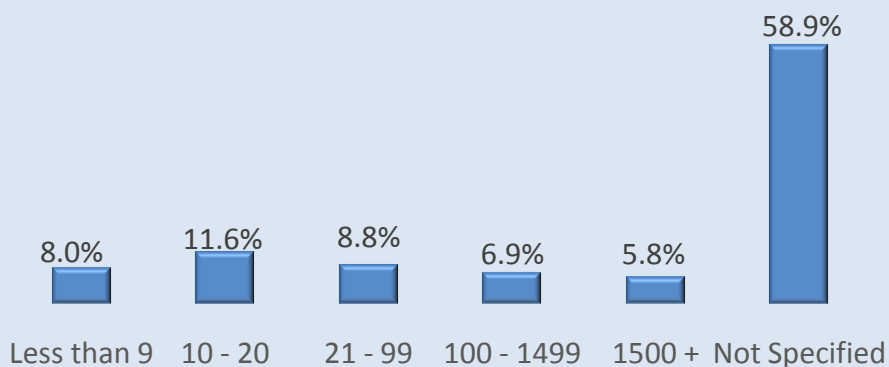
- Sectors of activity:** Financial Intermediation (79.5%), ICT (66.6%), Real estate, renting & business activities (70.2%)
- Employment size:** 50 – 399 employees (58.0%)
- Scope of operations:** Regional (66.4%)
- Turnover:** Rs 41m or more (69.9%)

Companies not using EDI and Electronic Transfer of Funds

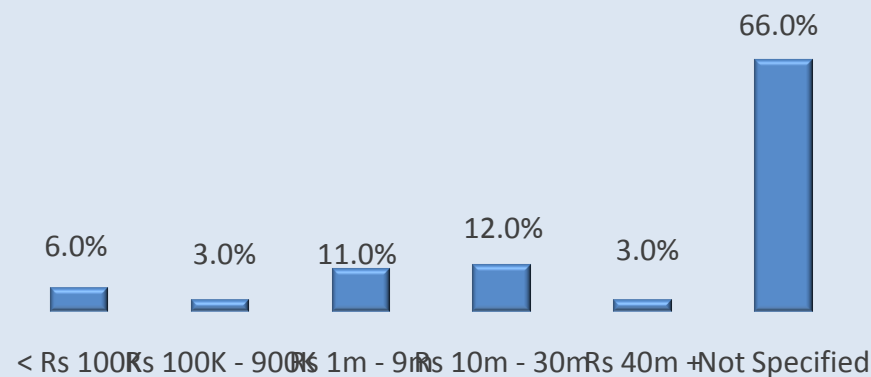
- 68.9% in **Education** sector,
- Companies having **less than 50 employees (%)**
- Turnover: less than Rs 11m (%)**

Orders received via the Internet

Annual no. of orders received via Internet



Annual value of orders received via Internet



Base: 155

- In 2009, only 24% of the companies received orders via the internet - Mainly

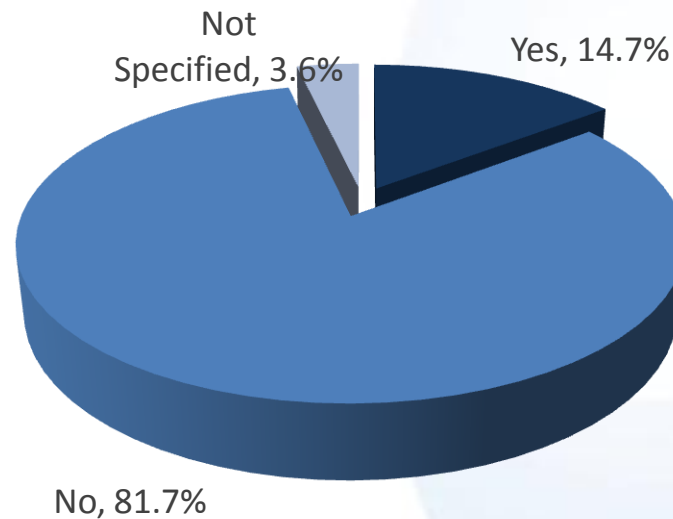
- Hotels and restaurants (49%) and Manufacturing (33%)
- Companies dealing internationally (34%)

- Worth noting that

- Higher % of companies (28%) claim to have received no more than 99 orders via internet over the last financial year
- Comparatively, 32% affirm that the value of internet orders received did not exceed Rs 30m

Effecting e-commerce transactions via internet

Percentage of companies effecting e-commerce transactions during last financial year



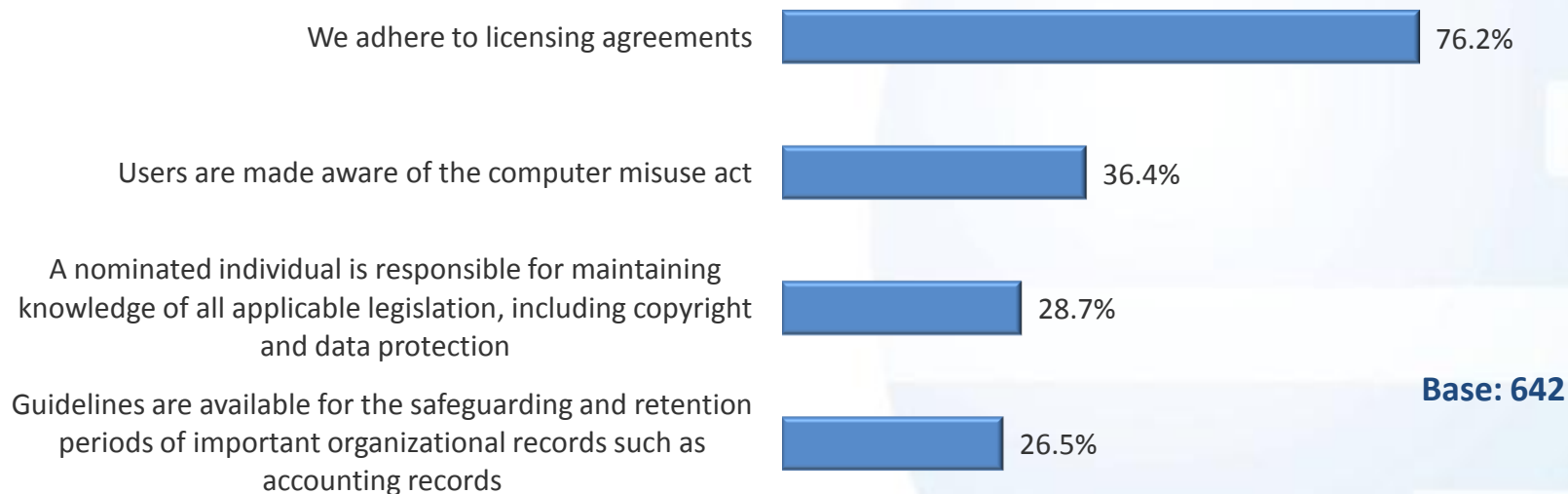
Base: 642

- % of companies effecting e-commerce transactions (15%) even lower than those receiving orders (24%)
 - Mainly by companies in the ICT sector (32%) and those in the Real estate, renting and business activities sectors (26%)
 - Comparatively only 19.0% of companies in Financial Intermediation sector claim to effect e-commerce transactions

Chapter 6: Companies' relationship with ICT laws and regulations

Means of ensuring respect of ICT laws & legislations

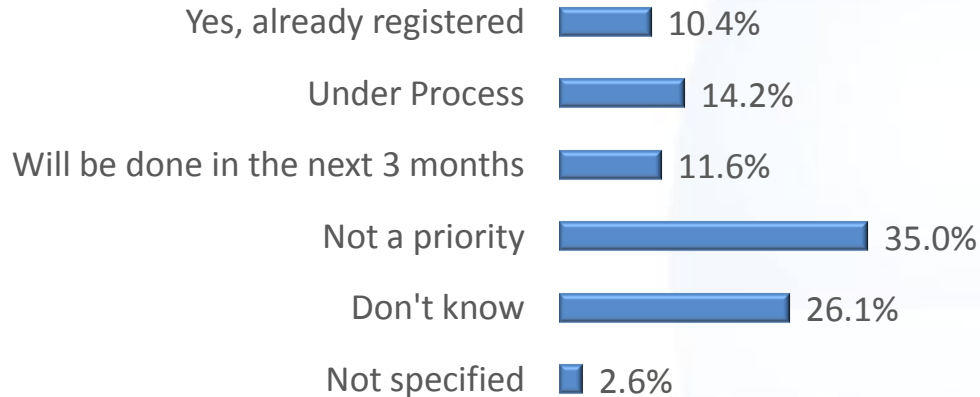
Means by which companies ensure respect of ICT laws and legislations



- **To the majority of companies, respect of ICT laws and legislations mainly involve adherence to licensing agreements (76%)**
 - Mainly adhered to by large companies with 400 employees or more (91%) and a level of turnover exceeding Rs 100m (88%)
- **Interestingly they are also more prone to:**
 - Make users aware of the computer misuse act (59% and 55% respectively)
 - Nominate someone for maintaining knowledge of all applicable legislation, including copyright and data protection (46% and 39% respectively)

Data Protection Act

Registration with Data Protection Commissioner



Base:419

■ Albeit a relatively high awareness of the Data Protection Act (65%)

- ❑ Only 10% of the companies assert to have already registered with the Data Protection Commissioner
- ❑ For 35% of companies, registration is not a priority, while 26% are either in the process of registering or plan to do so in the near future

■ Companies having already registered include

- ❑ **Financial Intermediation (33%)** and **Public administration & defense, compulsory social security (42%)**
- ❑ Companies having either a **regional (20%)** or an **international scope of operation (17%)**
- ❑ Companies with a level of **turnover of Rs 40m or more (31%)**

Chapter 7: CONCLUSION



Conclusion

- **Survey reveals that ICT usage in the business sector in Mauritius remains very basic specially in small sized companies and those operating locally**
 - In spite of a **relatively high computerisation level (93%)**, there has been **no major improvement** in this regard **over the past 3 years**, leading to a stabilisation of the level of computerisation
 - Moreover, apart from internet (97%) and LAN (68%), **only few computerised companies have invested in** such ICT infrastructures as **Intranet (37%), WAN (24%) and Extranet (12%)**
- **Yet, a sectoral comparison indicates a higher level of sophistication in the Financial Intermediation sector and ICT sector**
 - Both depicting a significantly higher level of computerisation and usage of ICT infrastructures compared to other business sectors
- **Moreover, while internet access seems to be quite widespread across business activities (97%), registering a significant growth compared to 2001 (84%)**
 - Worth mentioning that **access is generally restricted to Management staff (84%), Professional staff (71%) and to Administrative staff (51%)**

Conclusion

- **Confirming the lack of sophistication in ICT usage in businesses,**
 - The majority of the companies (98%) assert using the **internet mainly for sending and receiving e-mails** and to a lesser extent to access govt. websites (70%), gather information about goods and services (70%) and for internet banking (63%)
 - Likewise, despite an increase compared to 2006, **only 56% of the companies currently have an operational or under construction web-site**
 - Yet, **websites are barely used for offering e-commerce facilities (15%),** and in general, only 15% of the companies did effect an e-commerce transaction during the last financial year
- **In terms of laws and regulations as well, there seems to be a low concern except as regards adhesion to licensing agreements (76%)**
- **Hence, much remains to be done to increase the level of sophistication as regards ICT usage despite a high computerisation level**