ANNUAL SURVEY ON INFOCOMM MANPOWER FOR 2002

EXECUTIVE SUMMARY

Introduction & Key Findings

The Annual Survey on Infocomm Manpower for 2002 was the latest edition in a series of infocomm manpower surveys carried out by IDA. It was intended to track infocomm manpower profile and requirements of the Singapore industry. It covered a total of 2,274 organisations comprising 732 infocomm industry organisations and 1,542 non-infocomm industry end-user organisations.

The survey provided inputs for Singapore's infocomm manpower planning and policy formulation. It also provided useful information on the demands for each occupational category and opportunities for training and development in specific skills areas.

The survey showed that the current pool of infocomm manpower stood at 103,880, an increase of 1.8% from the year before. About half of the Infocomm manpower worked in the Infocomm industry sector and the other half in supporting end user organisations in other industry sectors. Generally, there were no major deviations from the previous year's survey results and expected trends.

The survey showed that largely the Infocomm manpower capabilities matched industry needs as the gaps were quite small. The largest skill gaps for both local and international infocomm manpower were for Intrusion Detection[1] and .NET.

The highest number of job vacancies was in Applications Development and Integration (22.6%). This was followed by vacancies in Technical Support (20.6%) and Infocomm Education and Training (13.4%).

Overall Infocomm Manpower Numbers

The number of Infocomm manpower in employment in 2002 was 103,880, comprising about 5.1% of the labour force[2] in Singapore, as shown in Figure #1. Approximately half of the infocomm manpower was employed by the Infocomm industry organisations.

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[1] Entails inspection of all inbound and outbound network activity and the identification of suspicious patterns that may indicate a network or system attack from someone attempting to break into or compromise a system.
[2] Labour force figure was obtained from Report on Labour Force in Singapore 2002, Ministry of Manpower.

#1: Number of Infocomm Manpower in Employment for 1999 - 2002
Pool of Manpower Recorded 1.8% Growth for 2002
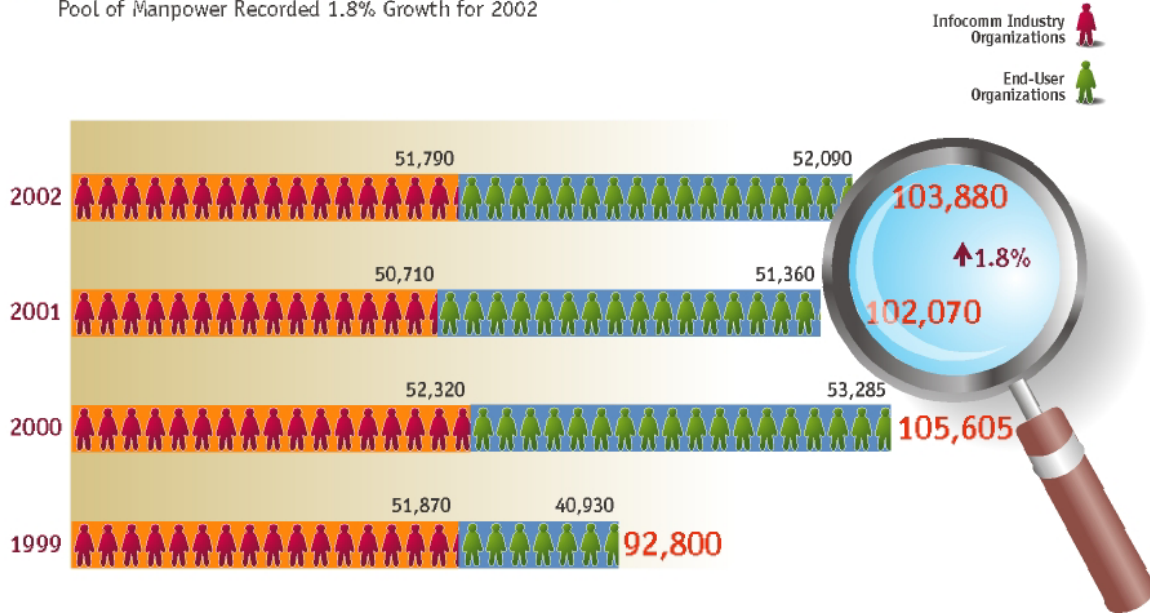
In the distribution of manpower across the infocomm industry, more than 50% were employed by the Hardware and IT Services sectors. Software, Telecommunications, and Media made up the rest.
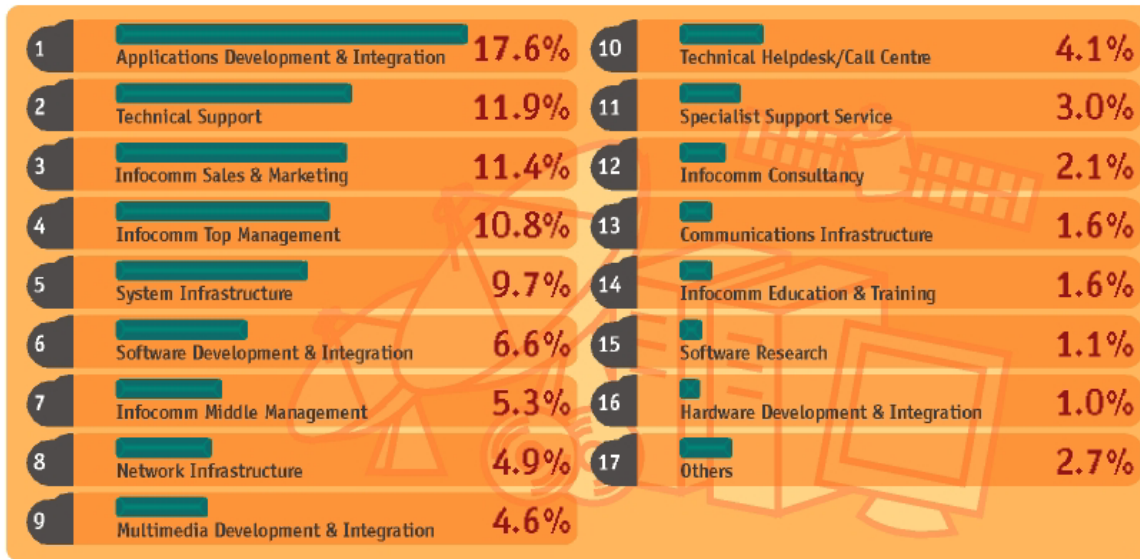
In the distribution of manpower across the end user organisations, Financial Intermediaries employed over 32.5% and Business Services employed 24.8%. Wholesale and Retail Trade made up 18.0%. Manufacturing and Others made up the rest.

Occupation Categories & Profiles

As in the previous year, Application Development & Integration, Technical Support and Infocomm Sales & Marketing were the top three occupational categories comprising over 40% of infocomm manpower, as shown in Figure #2.

At least eight out of ten infocomm manpower have tertiary qualifications with more than two-fifths possessing a basic degree, 15.6% with postgraduate qualifications and 24.6% with diploma qualifications, as shown in Figure #3. Overall, there was a slight increase in the proportion of infocomm manpower with at least a basic degree.
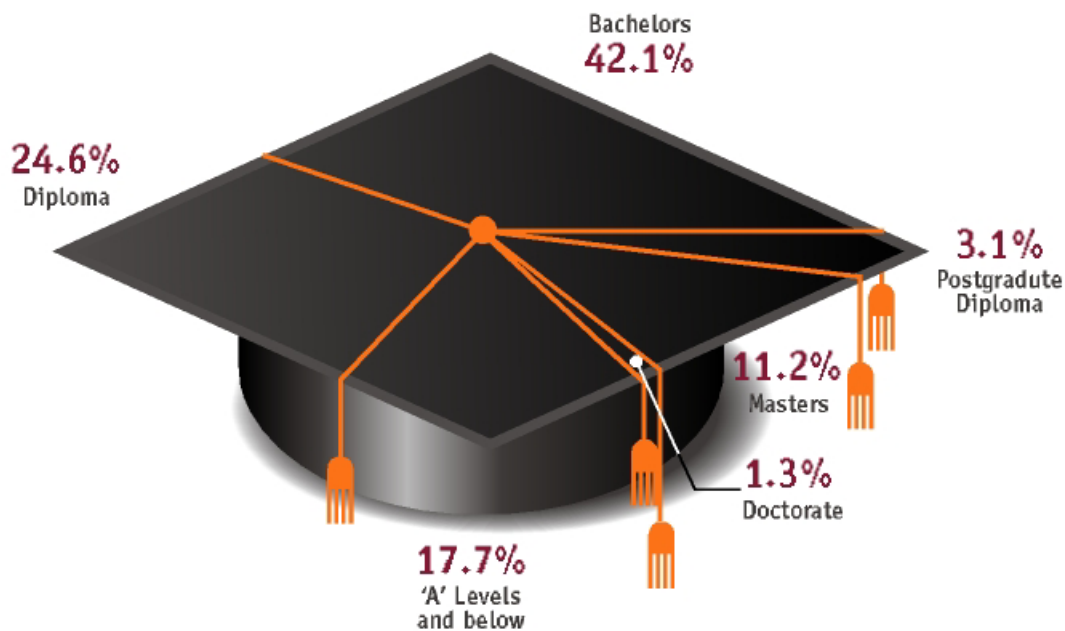
#2: Distribution of Infocomm Manpower Across Occupational Categories

#	Category	%	#	Category	%
1	Applications Development & Integration	17.6%	10	Technical Helpdesk/Call Centre	4.1%
2	Technical Support	11.9%	11	Specialist Support Service	3.0%
3	Infocomm Sales & Marketing	11.4%	12	Infocomm Consultancy	2.1%
4	Infocomm Top Management	10.8%	13	Communications Infrastructure	1.6%
5	System Infrastructure	9.7%	14	Infocomm Education & Training	1.6%
6	Software Development & Integration	6.6%	15	Software Research	1.1%
7	Infocomm Middle Management	5.3%	16	Hardware Development & Integration	1.0%
8	Network Infrastructure	4.9%	17	Others	2.7%
9	Multimedia Development & Integration	4.6%			

Base: All infocomm manpower (103,880)

#3: Profile of Infocomm Manpower by Highest Qualifications Achieved
Eight out of Ten had Tertiary Education

Bachelors 42.1%

24.6% Diploma

3.1% Postgradute Diploma

11.2% Masters
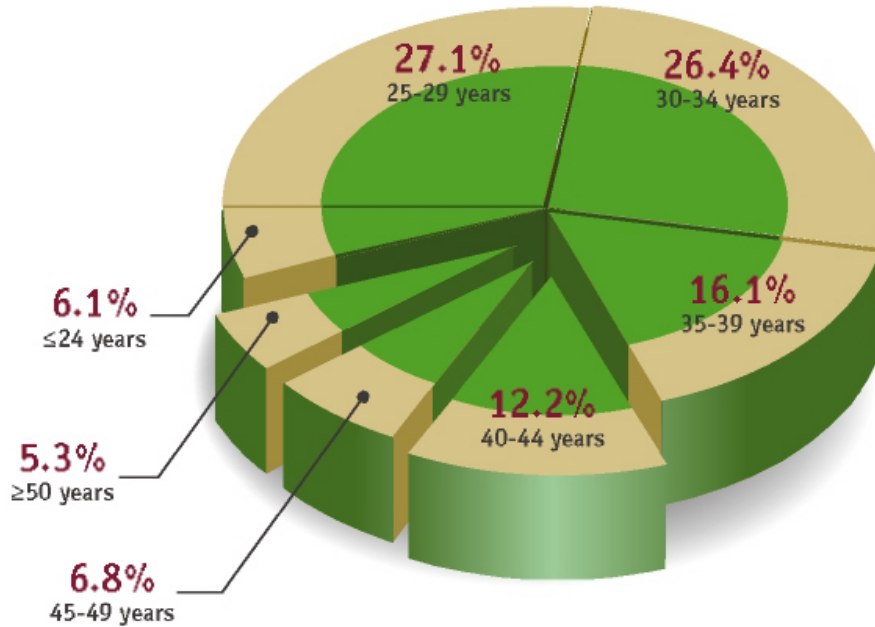
1.3% Doctorate

17.7% 'A' Levels and below

Base: All infocomm manpower (103,880)

Two-thirds of the Infocomm manpower were male. More than 75% of infocomm manpower were less than 39 years old. This is a significantly higher percentage than the Singapore labour force of about 54.7% as shown in Figure #4.

#4: Profile of Infocomm Manpower by Age

Under 40s dominated the pool of manpower

27.1%
25-29 years

26.4%
30-34 years

6.1%
≤24 years

16.1%
35-39 years

5.3%
≥50 years

12.2%
40-44 years

6.8%
45-49 years

Base: All infocomm manpower (103,880)

Top Five Skills to Acquire and Shortage of Skills

The overall top five skills that companies deemed most important were IT Project Management, Operating Systems, Multimedia, Database Administration/Management and Networking. These skills were also the ones with the highest shortages in terms of number of infocomm manpower required.

#5: Top Five Skills to Acquire
Highest Shortage of Manpower in these Five Skills

Networking

Database Administration/ Management

Multimedia

Operating Systems

IT Project Management
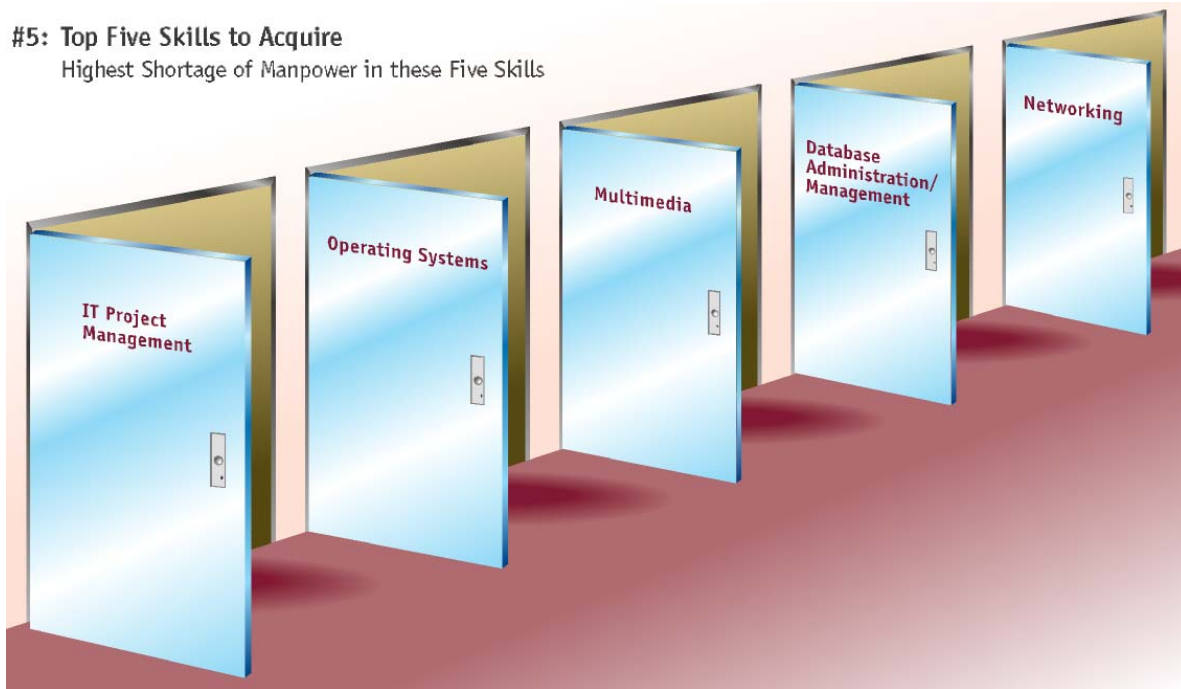
Preferred Way to Acquire the Top Five Skills

The most preferred way for organisations to acquire the top five skills essential to their core business was to upgrade existing employees through classroom training (31.8%). The second most preferred way was to hire experienced people with requisite skills from other organisations (28.9%).

Training

The average spending on training per organisation for organisations which spent on training was estimated to be nearly $49,840. Nearly 80% of courses were non-infocomm ones.

Infocomm industry organisations spent more on training infocomm manpower than non-infocomm manpower unlike end-user organisations.

Certification

71.2% of organisations were unwilling to pay premium for employing professionally certified infocomm manpower. This comprised 81.3% of infocomm industry organisations compared to 64.0% for end-user organisations.

Vacancy and Growth

There were over 3,000 job vacancies for infocomm manpower in 2002. More than two-thirds of these were in end-user organisations. The number of vacancies was projected to increase to more than 4,500 for 2003

The overall demand for infocomm manpower jobs was expected to rise marginally for the next 2 years, i.e. 0.2% in 2003 and 1.2% in 2004.

#6: Projected Demand for Infocomm Manpower
Pool of manpower expected to rise marginally at 0.2% and 1.2% for 2003 & 2004