

Aurizon Network – IT Services Market Price

8 December 2014

Final – v3-0

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Notes and Assumptions

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ITNewcom

Section 1

Introduction

Introduction ► Background, Scope and Objectives

Aurizon Network operates the Central Queensland Coal Network. Access to the Central Queensland Coal Network is regulated by the Queensland Competition Authority (QCA). Aurizon Network sources and deploys a range of IT services to meet the needs of the Aurizon Network business. Aurizon Network is required to demonstrate to the QCA that the forecasted UT4 spend for the run IT services is efficient when compared to the Australian market for similar IT services.

Background

- Aurizon Network operates the Central Queensland Coal Network.
- Access to the Central Queensland Coal Network is regulated by the Queensland Competition Authority.
- Aurizon Network sources and deploys a range of IT services to meet the needs of the Aurizon Network business.
- Aurizon Network is required by the regulator to demonstrate that the costs of providing the 'run' IT services is efficient when compared to the Australian market for similar IT services.

Scope

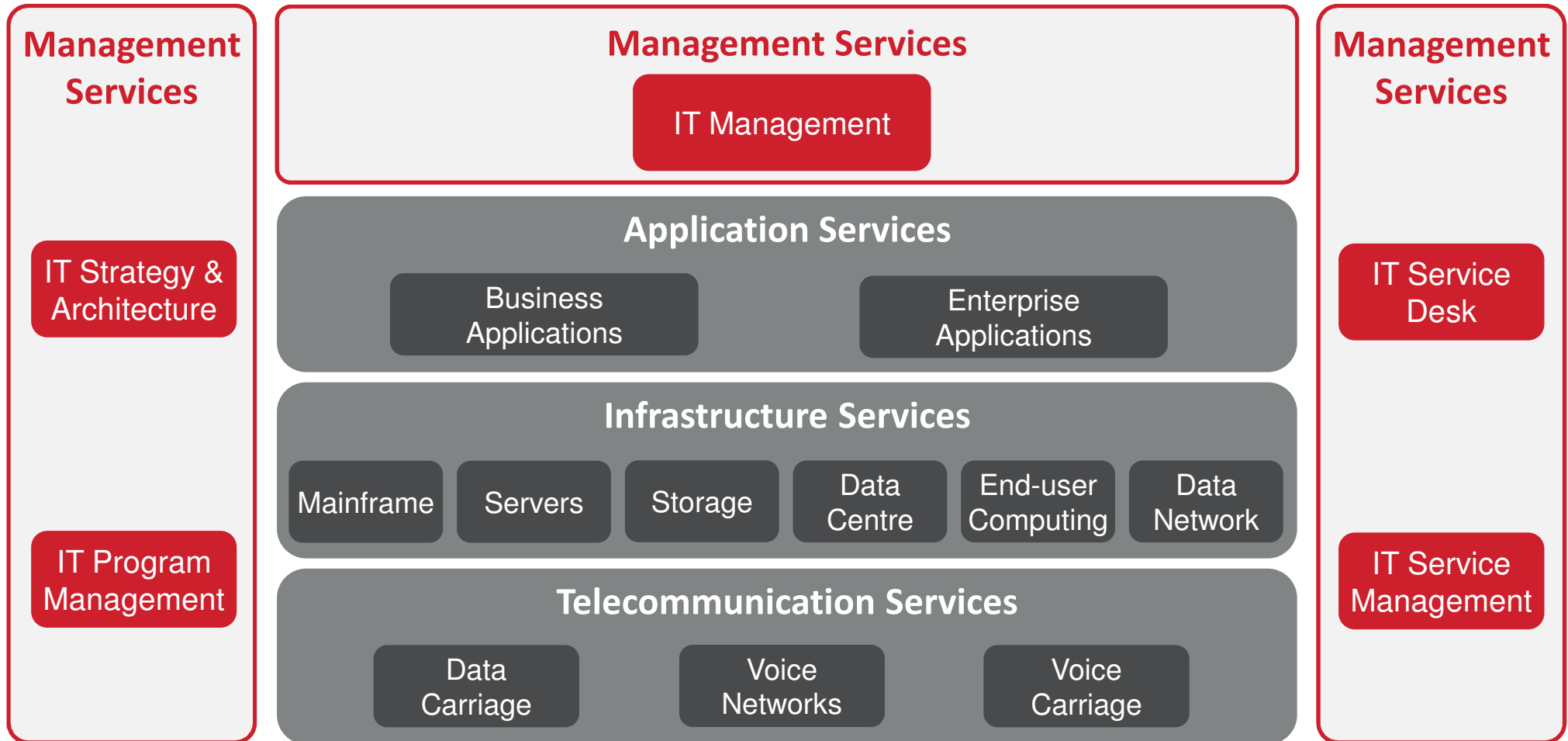
- Prepare a report which estimates the cost of Aurizon Network providing the in-scope run IT services on an efficient and stand-alone basis when compared to the Australian market for similar IT services.
- The report will include a volumetric estimate of the cost of the run IT services (ie. the 'business as usual' costs) based on current practices for all in-scope IT services including Service Desk, End User Computing, Servers, Storage, Network (LAN / WAN), Telecoms (voice and data), Data Centres and in-scope Applications.

Objectives

- The objective is to provide an independent view, validation and explanation of the cost of the run IT services for the in-scope IT services.
- The report will be provided by Aurizon Network to external parties such as the QCA, and be made publicly available to demonstrate the make-up of the IT cost structures and to make transparent the methodology and assumptions used to determine the industry standard cost estimates for the volumetrics and in-scope services.

Introduction ► The IT Supply Chain - Overview

The IT organisation delivers IT products and services to the business. ITNewcom's IT supply chain groups these IT products into 3 major service delivery groups, ie. application services, infrastructure services and telecommunication services. The service delivery groups are supported by a range of cross-functional management services.



Introduction ► IT Supply Chain – Key IT Functions

The IT organisation delivers each of these products and cross-functional management services through a standard set of IT services during the IT 'life cycle'. ITNewcom groups these IT services by IT function, product and lifecycle phase to identify key IT functions. The functions highlighted in red below are the in-scope IT services.

	Application Services		Infrastructure Services					Telecom Services			
	Business Applications	Enterprise Applications	Centralised Computing				End-User Computing	Voice & Data Networks		Voice & Data Carriage	
			Mainframe	Servers	Storage	Data Centre		Data Networks	Voice Networks	Data Carriage	Voice Carriage
Plan	IT Strategy and Architecture										
	IT Program Management										
Build	Requirements, Analysis and Design for Applications		Requirements and Solution Design for Computing Platforms				Requirements and Network Design for Voice and Data Networks				
	Develop, Integrate, Test and Deploy Applications		Build Computing Platforms				Build Voice and Data Networks				
Run	Support and Maintain Applications		Support and Maintain Computing Platforms				Support and Maintain Voice and Data Networks				
	IT Service Desk										
	IT Service Management										
	IT Management										

Organisational and Benchmark Scope

IT Services Scope

- All in-scope hardware, software, staff, facilities and carriage services.
- Currently Aurizon Network shares its IT services with other business units of Aurizon Holdings. The analysis has assumed that Aurizon Network is sourcing and deploying its IT services on a stand-alone, insourced and non-shared basis.

Geographic Scope

- All Aurizon Network locations in Australia.

Measurement Period

- FY14

Section 2

Executive Summary

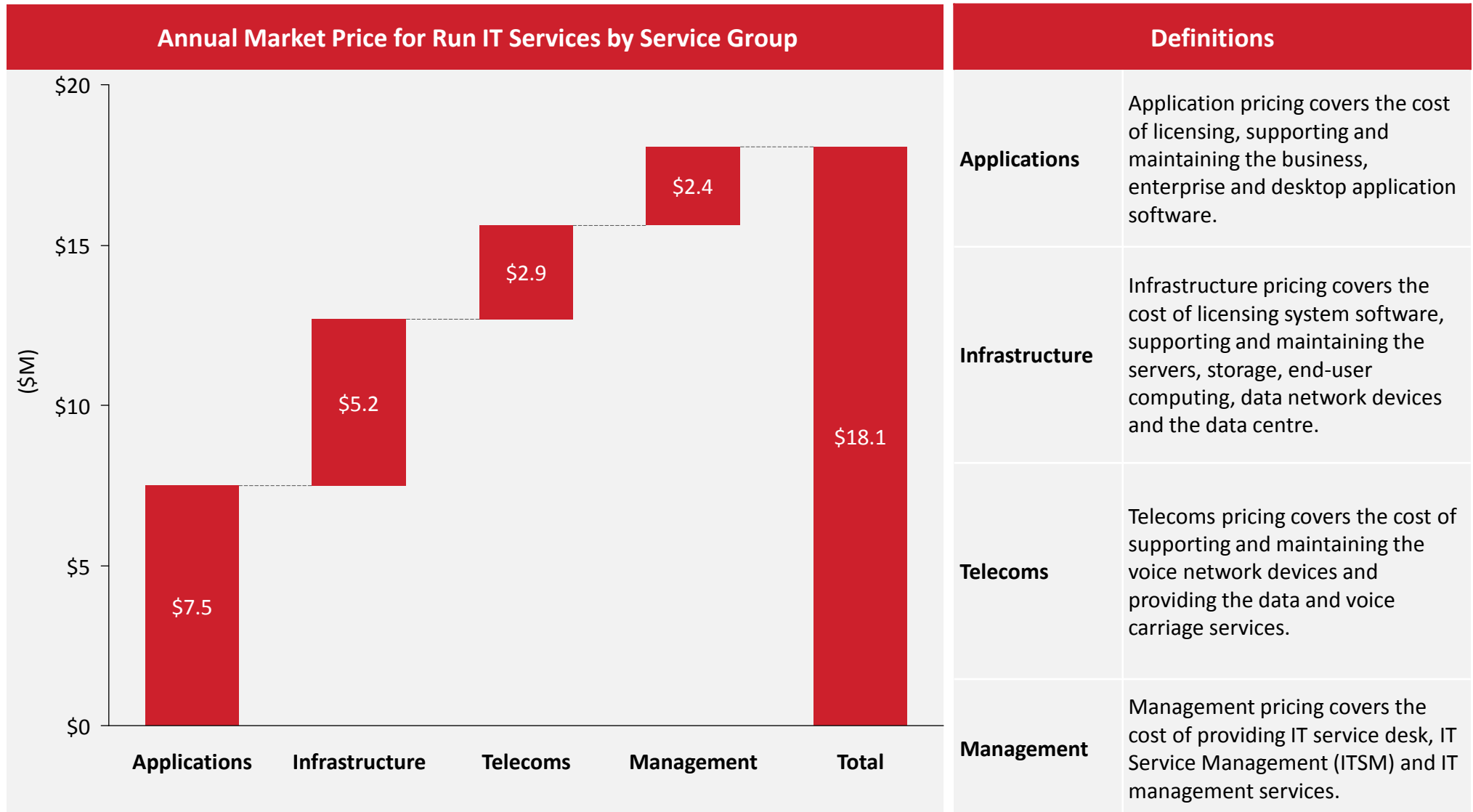
Executive Summary ► Benchmarking Peer Group

The composite peer group for this benchmark comprises a total of 16 deals and observations, with at least 6 observations for each IT Service Category.

Peer Group Statistics	Building the Peer Groups, Normalisation and Adjustments
<p>Peer Group Statistics</p> <p>Industry Distribution:</p> <ul style="list-style-type: none"> Transportation: 7 Industrials: 3 Utilities: 3 Manufacturing: 3 <p>Tier Distribution:</p> <ul style="list-style-type: none"> Tier 1: 71% Tier 2: 29% Tier 3: 0% 	<p>Building the Peer Groups, Normalisation and Adjustments</p> <p>Selecting Peers</p> <ul style="list-style-type: none"> When selecting members of the peer group, ITNewcom seeks to include 6-8 IT environments with similar operational characteristics, including: <ul style="list-style-type: none"> Scale of IT environment; Complexity of IT environment; and Countries of operation. <p>Normalisation of Peer Group Data</p> <ul style="list-style-type: none"> It is accepted that the IT environment of an organisation being benchmarked will never be identical to the IT environments of the peer group and that the benchmarker must consider and normalise for differences between these IT environments. The normalisation process requires careful comparison of how each difference affects the IT costs of the organisation's environment and the peer group organisations must be normalised to reflect any such differences. Specific normalisation factors will vary from IT service to IT service, however examples of normalisation factors include differences in: <ul style="list-style-type: none"> Volumes; Scope; Service Delivery Locations; Technology; Service Levels; and Hardware Refresh Periods. <p>Market Price</p> <ul style="list-style-type: none"> The IT benchmarking industry typically sets '<i>efficient</i>' pricing in the market at the average of the peer group. It is generally accepted IT benchmarking industry practice that a reasonable margin of error for the average of the peer group is plus or minus 5%.

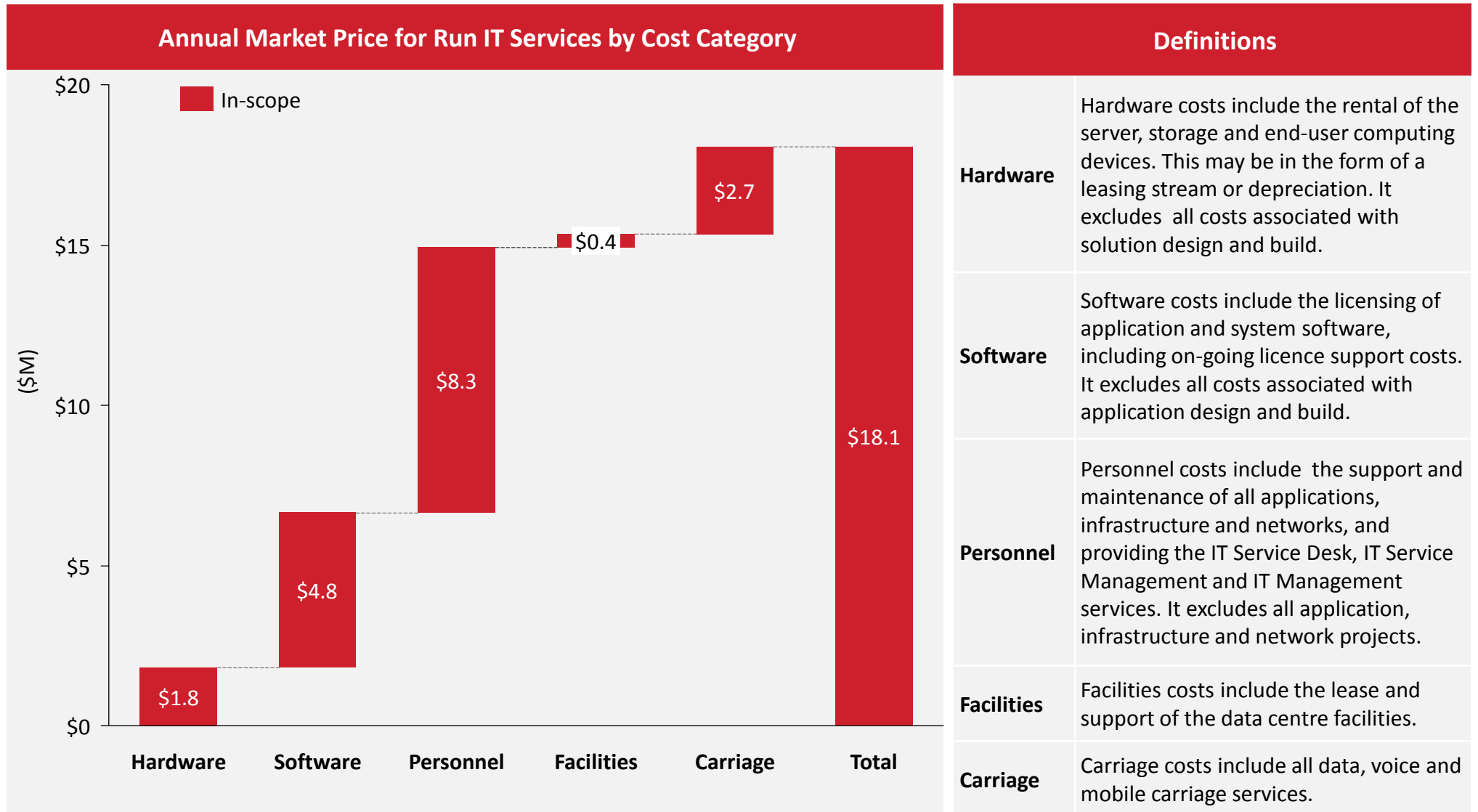
Executive Summary ► Market Price - By IT Service Category

In order to estimate an efficient price for the Aurizon Network IT function, ITNewcom derived the resource unit volumes for each major IT service group, and then multiplied these resource unit volumes with the market price for the relevant resource unit. A summary of the market price for the run IT services is detailed below.



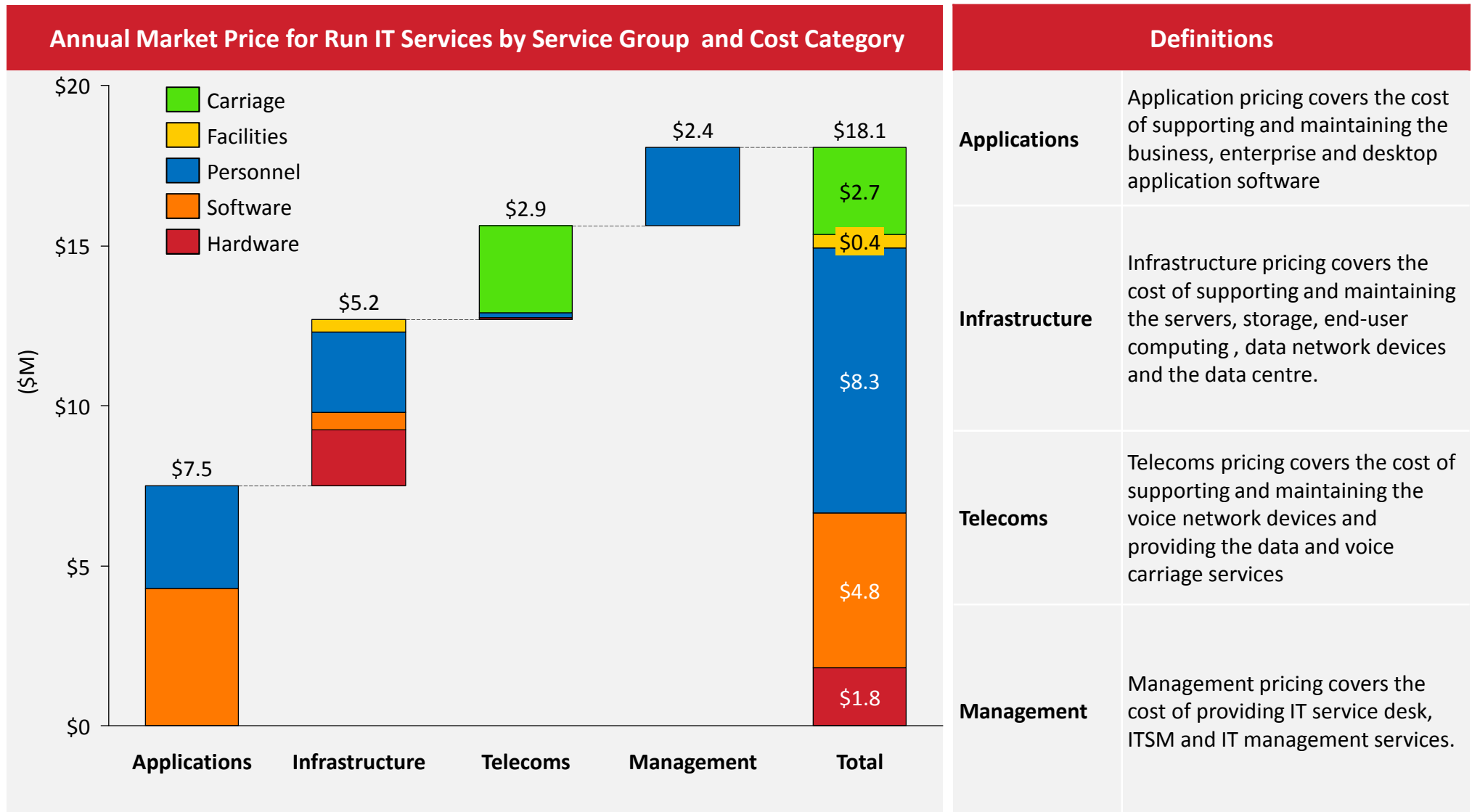
Executive Summary ► Market Price - By IT Cost Category

The table below gives a breakdown of the Market Price by IT Service Category into the major IT cost categories.



Executive Summary ► Market Price - By IT Service Category and IT Cost Category

The table below gives a breakdown of the Market Price by IT Service Category into the major IT cost categories.

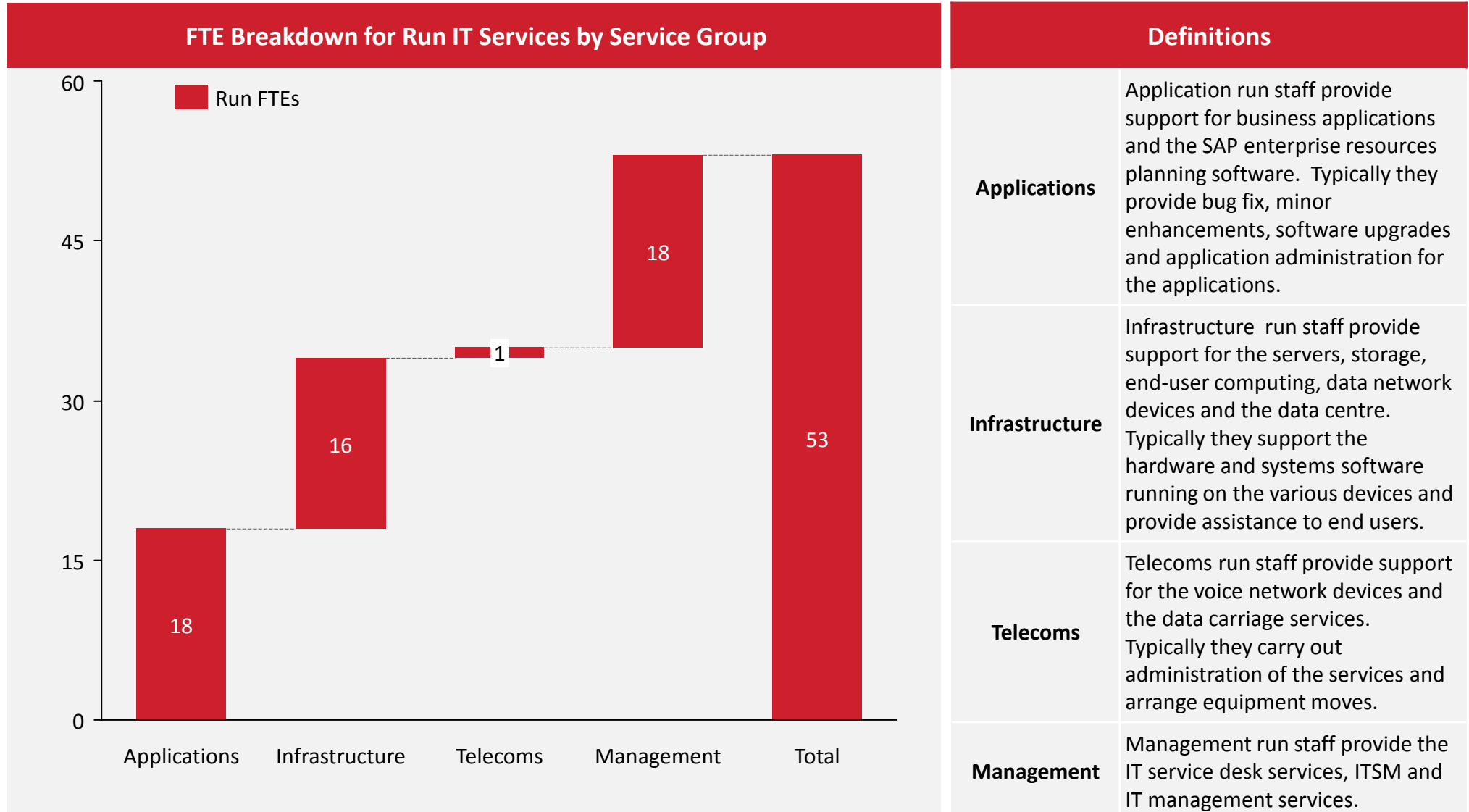


Section 3

Staff

Staff ► Run Services by Service Group

Based upon the profile of the software applications currently supporting Aurizon Network, the enabling infrastructure and telecom services, and the requirement to operate a 24/7 service desk, ITNewcom has found that Aurizon Network will be required to employ or contract a total of 53 FTEs to provide the run IT services.



Definitions	
Applications	Application run staff provide support for business applications and the SAP enterprise resources planning software. Typically they provide bug fix, minor enhancements, software upgrades and application administration for the applications.
Infrastructure	Infrastructure run staff provide support for the servers, storage, end-user computing, data network devices and the data centre. Typically they support the hardware and systems software running on the various devices and provide assistance to end users.
Telecoms	Telecoms run staff provide support for the voice network devices and the data carriage services. Typically they carry out administration of the services and arrange equipment moves.
Management	Management run staff provide the IT service desk services, ITSM and IT management services.

Staff ► Run Services by Service Category

Staff Category	FTEs	Comments
Applications Services		
Business Applications Support	11	Bug fix, minor enhancements, application administration for over 17 business applications.
SAP Applications Support	7	SAP Functional and Basis support of a SAP v6.0 production environment for 1,043 users.
Infrastructure Services		
Servers	7	VMware ESX support and Windows support for 26 physical servers and 120 logical servers
Personal Computers	5	Support for 350 desktops, 381 laptops and mobile devices at city and high safety regional locations
Storage	2	Support for approximately 175 terabytes of user data on a Storage Area Network (SAN) device.
Data Network	1	Support for 66 local area network (LAN) and 15 wide area network (WAN) devices
Data Centre	1	Support for 10 racks of equipment in 2 data centres.
Telecommunications Services		
Voice Network	1	Support for 731 digital handsets and associated communications equipment.
Management Services		
IT Service Desk	12	Support for a mission critical service desk operating 24x7 (4 shifts, 12 hours each, 4 days on 4 days off).
IT Service Management Support	3	1 FTE each providing service operations, service design and service transition (ITIL processes).
IT Management	3	1 CIO, supported by an applications operations lead and an infrastructure operations lead.
Total 'Run' Staff	53	

Section 4

Key Volumes

Key Volumes ► Resource Units

Service Category	Volumes	Comments
Infrastructure Services		
Servers		
Total - Unix Physical Servers	0	There are no physical Unix servers.
Total - Unix Logical Servers	7	There are 7 VMware Unix guests. This is based upon the virtualisation ratio of the current environment supported by Fujitsu.
Total - Windows Physical Servers	26	All VMware hosts are Window with x86s architecture. There are no stand-alone Windows servers.
Total - Windows Logical Servers	113	The majority of the VMware guests are Windows servers. The Windows logical servers comprise 65 applications servers and 48 Infrastructure servers.
Storage		
Enterprise SAN Storage		
Installed SAN TBs	219	Based on ITNewcom ratio (# Note).
Allocated SAN TBs	197	Based on ITNewcom ratio (# Note).
Used SAN TBs	175	Based on ITNewcom ratio (# Note)
Data Centre		
Number of Sites	2	Primary and Secondary data centre.
Actual Data Centre space (Sqm)	40	Based upon 4.0 sqm per rack.
Number of Racks	10	To house servers and storage, with spares.

Note

ITNewcom has performed over 1,400 IT benchmarks in the Australian market since 2001 and has built up a detailed set of volumetric ratios for hardware, software and personnel based on organisation size and industry. These ratios have been used to estimate device volumes and sizes.

Key Volumes ► Resource Units

Service Category	Volumes	Comments
End User Computing		
Personal Computers Infrastructure		
Desktop	350	Based on profile of Aurizon Desktop fleet.
Notebook	381	Based on profile of Aurizon Notebook fleet.
Thin Client Devices	0	
Total - PC Devices Infrastructure	731	
Personal Computer Support		
Desktop	350	Based on profile of Aurizon Desktop fleet.
Notebook	381	Based on profile of Aurizon Notebook fleet.
Thin Client Devices	0	
Total - PC Devices Support	731	
Other EUC Devices Infrastructure		
Monitors	731	Based on ITNewcom ratio for monitors per Desktop and Notebook. (# Note)
B & W Laser Printer	38	Based on estimated volume to print 500 black and white pages per user per month.
Colour Laser Printer	4	Based on estimated volume to print 60 colour pages per user per month.
LAN Switches	66	Based on ITNewcom ratio (# Note).
Data Network		
WAN		
WAN Routers/Switches	6	Based on ITNewcom ratio (# Note).
WAN Appliances	9	Based on ITNewcom ratio (# Note).
WAN Devices Supported	15	Based on ITNewcom ratio (# Note)

Note

ITNewcom has performed over 1,400 IT benchmarks in the Australian market since 2001 and has built up a detailed set of volumetric ratios for hardware, software and personnel based on organisation size and industry. These ratios have been used to estimate device volumes and sizes.

Key Volumes ► Resource Units

Service Category	Volumes	Comments										
Telecommunications Services												
Voice Network												
Analogue Handset Hardware	0											
Digital Handset Hardware	731	Based upon 1 handset per Desktop and Notebook										
Supported Analogue and Digital Handsets	731	Based upon 1 handset per Desktop and Notebook										
Data Carriage												
Total Bandwidth	1.35 GB	5 x 50Mbps lines between the data centres and regional locations 1 GB link between data centres 2 x 50Mbps links to the Internet										
Voice Carriage												
Mobile Voice Plans	268	Based on the mix of plans with 20% over plan spend.										
		<table border="1"> <thead> <tr> <th>Mobile Monthly Plan</th> <th>% of usage by fleet</th> </tr> </thead> <tbody> <tr> <td>\$10</td> <td>10%</td> </tr> <tr> <td>\$20</td> <td>20%</td> </tr> <tr> <td>\$40</td> <td>10%</td> </tr> <tr> <td>\$80</td> <td>60%</td> </tr> </tbody> </table>	Mobile Monthly Plan	% of usage by fleet	\$10	10%	\$20	20%	\$40	10%	\$80	60%
Mobile Monthly Plan	% of usage by fleet											
\$10	10%											
\$20	20%											
\$40	10%											
\$80	60%											
Mobile Handsets	268	Based upon analysis of Aurizon Network call plans										

Key Volumes ► Organisational

Category	Volumes	Comments
Staff		
Total Organisation Staff (Head Count)	1,043	Total for Aurizon Network
Total number of End Users	1,043	Total for Aurizon Network
Total Aurizon Holdings personal computers	4,140	Total for Aurizon Holdings, including Aurizon Network

Section 5

Software

Software ► Business and Enterprise Applications

Business and Enterprise Applications

Software Supplier Name	Software Name	Licence Volume	Comment
SAP AG	Enterprise SAP ERP	1,260	Includes all major modules
ESRI	ArcGIS Suite	8	
Google	Google Earth Pro	35	
Mapinfo Corporation	Map Info Professional	3	
Mapinfo Corporation	Map Info Runtime	10	
QR National	Data Warehouse (SQL Server)	76	
Oracle	BRIO / Hyperion	176	
HP	TRIM	247	
Primavera	Primavera	9	
ICG	ViziRail	346	
Innov8	Meridian	41	
RMCon Australia (Rail Management Consultants)	SIMU++	26	
Oracle	Integrated Quality Management Systems (IQMS /OASIS)	76	
AutoDesk	AutoCAD	65	
Figtree Systems	FigTree	8	
Bentley	Microstation	48	
AXIOM	Axiom Productivity Toolkit	1	

Software ► Desktop Applications

Desktop Applications

Standard Operating Environment (SOE) Software

Software Supplier Name	Software Name	Licence Volume	Comment
Microsoft	Windows Server	113	
Microsoft	Office 365	731	
Microsoft	Project Pro for Office 365	219	30% of Desktops and Notebooks
Microsoft	Visio Pro for Office 365	219	30% of Desktops and Notebooks
WinZip	Winzip 9	731	
Trend Micro	Trend Office Scan 10	731	
UltraEdit	UE/UC Mobile	731	
Mindjet	Mind Manager	731	
Symantec	Symantec Enterprise Vault Client version 8	731	
Adobe	Adobe Acrobat Pro	73	10% of Desktops and Notebooks
Adobe	Adobe CS Suite	73	10% of Desktops and Notebooks

Non-Standard Operating Environment (SOE) Software

Software Supplier Name	Software Name	Licence Volume	Comment
Nuance	Omnipage Professional	73	

Software ► System Software

System Software

Infrastructure System Software

Software Supplier Name	Software Name	Licence Volume	Comment
Oracle	Oracle Database	113	
VMware	VMware	20	
webMethods	Interfaces and Integration (webMethods)	2	
InterDynamics Pty Ltd	Planimate	52	

Appendix A

Notes and Assumptions

Notes and Assumptions

Item	Description
Benchmarking Peer Group	<ul style="list-style-type: none"> • The benchmarking peer group does not include any government organisations. • The transportation organisations within the benchmarking peer group include organisations in the following industries: <ul style="list-style-type: none"> ○ Air Freight and Logistics, that is organisations providing air freight transportation, courier and logistics services, including package and mail delivery and customs agents; ○ Airlines, that is organisations providing primarily passenger air transportation; ○ Road and Rail, that is organisations providing primarily goods and passenger rail transportation and organisations providing primarily goods and passenger land transportation; and ○ Transportation Infrastructure, that is operators of airports and companies providing related services; owners and operators of roads, tunnels and railtracks; and owners and operators of marine ports and related services.
Data Sources	<p>In conducting this analysis ITNewcom analysed the following types of documents:</p> <ul style="list-style-type: none"> • Data collected in performing the Aurizon Holdings / Fujitsu price benchmark; • Data collected from Aurizon Network regarding the profile and requirements for its environment.
Measurement Period	FY 2014
Currency	AUD
GST	All charges are exclusive of GST.
Rounding	Some of the totals in this report may not equal the sum of the parts. This would be due to a rounding effect.

ITNewcom ► Introduction to ITNewcom

Unparalleled knowledge of IT costs and suppliers in the Asia Pacific region, combined with a proven track record of results achieved through influencing over \$20B of IT spend for the market's largest and most complex clients.

The Facts

- The Leading Australasian IT Spend Optimisation Advisors with unparalleled local market knowledge.
- Advised on over 250 consulting engagements and over 1,400 IT benchmarks since 1997.
- Influenced over \$20B of IT spend for over 75 companies and government agencies, delivering optimisations of between 8-20%.
- 30 highly qualified advisors with an average of more than 20 years IT experience across 6 offices throughout the region.

The Differentiators

- Truly vendor independent advisors, we pride ourselves on being held to the highest levels of probity and independence.
- A track record of delivering results above target with support for flexible engagement and commercial models.
- Exclusively focussed on optimising IT spend, supported by advisors with deep technical, commercial and execution experience.
- Dedicated research capability devoted to assisting clients and consultants with latest market trends and targeted research.

The Recognition

- Routinely score more than 4.0 out of 5.0 for all aspects of client satisfaction. Overall ITNewcom averages more than 4.5 for client satisfaction measured for all engagements carried out.
- Business success recognised by BRW in their Fast 100 Survey for three consecutive years.



ITNewcom ▶ Strong Industry Experience

Demonstrable experience across both industry and government ensuring maximum value for Australasian's largest IT spenders.

Financial Services



Government



Manufacturing, Resources and Utilities



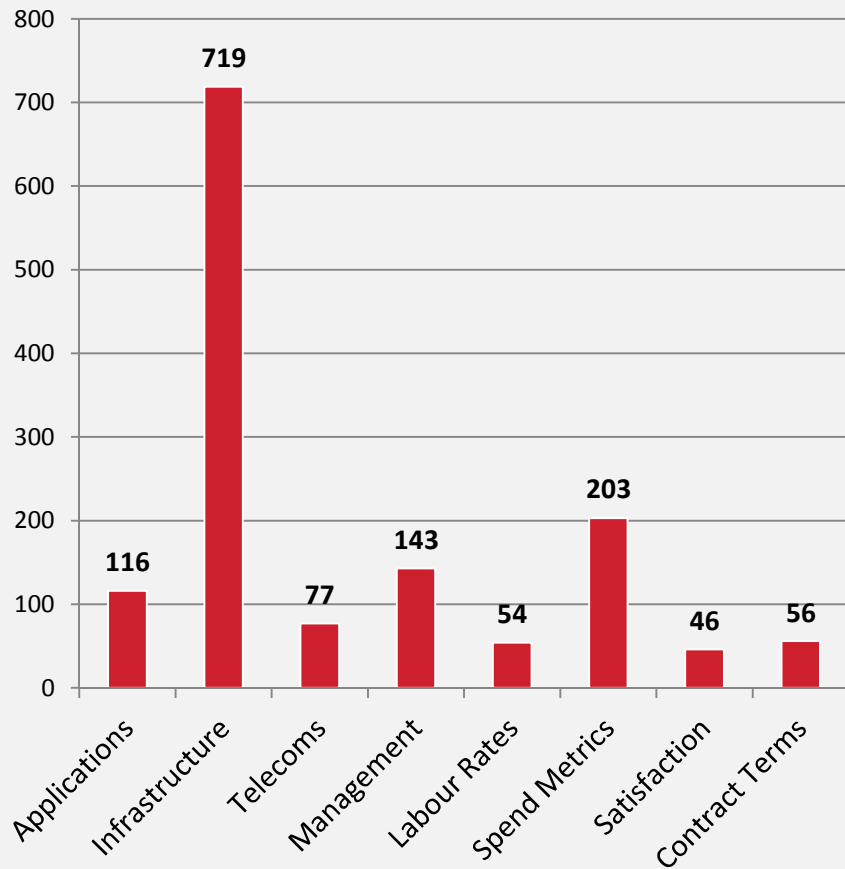
Consumer, Industrials and Transportation



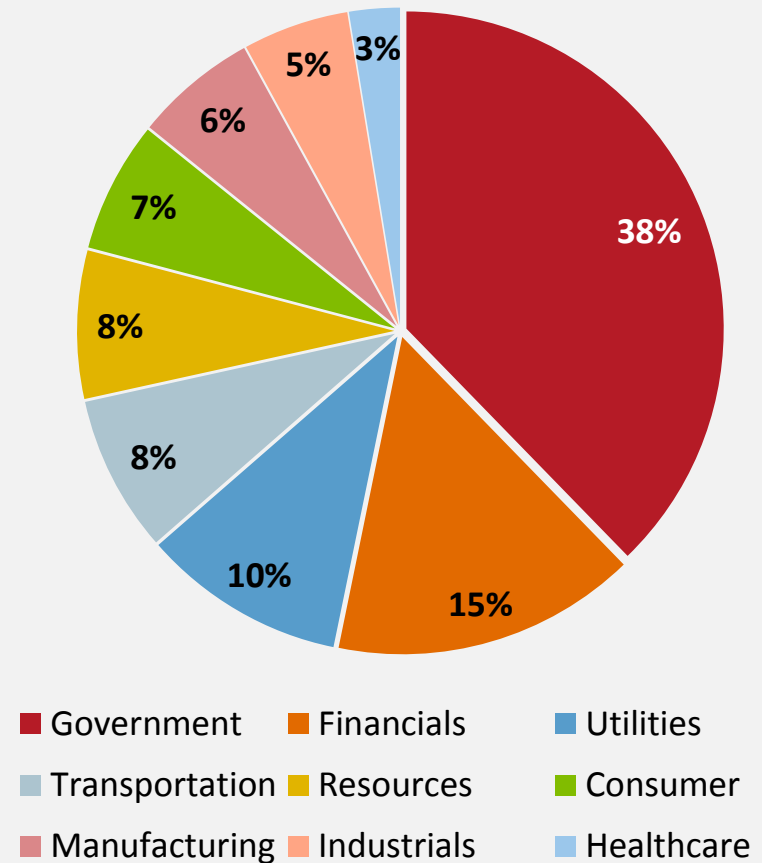
ITNewcom ► Unmatched Regional Insights

ITNewcom has performed over 1,400 IT benchmarks within the Asia Pacific region which, in conjunction with consulting and best-in-class market research, have enabled ITNewcom to build the most current and comprehensive benchmarking databases in the market.

IT Benchmarks - by Category



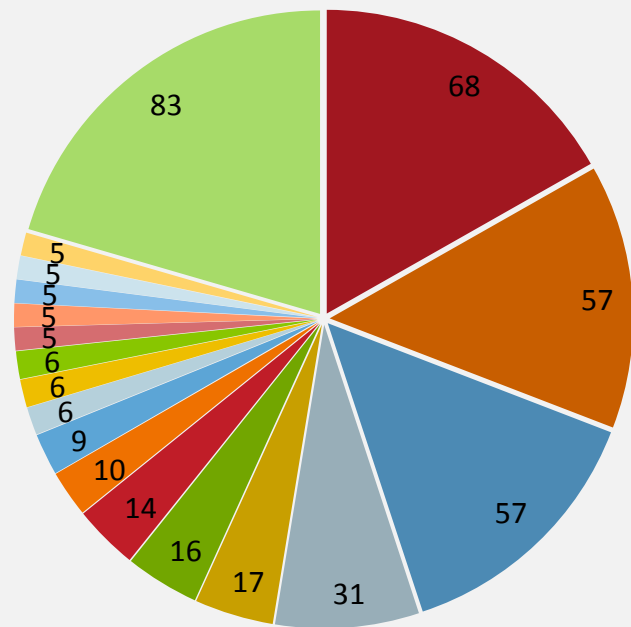
IT Benchmarks - by Industry Sector



ITNewcom ▶ Deep Supplier Experience

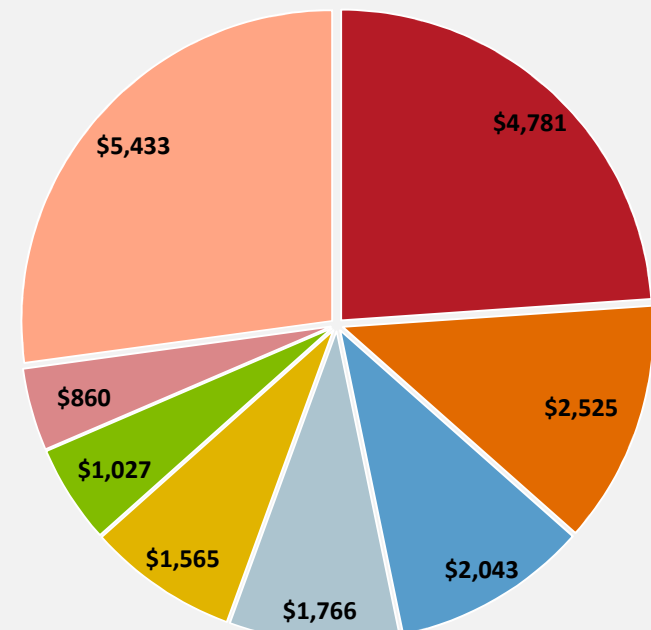
Extensive experience in driving maximum value from IT suppliers including optimising IT sourcing events, remediating current contracts or enhancing supplier performance through sophisticated analytical tools and benchmarking data.

Number of Negotiations and Price Benchmarks with Major Suppliers



- CSC
- Fujitsu
- IBM
- HP
- Telstra
- Accenture
- Optus
- Unisys
- SAP
- TCS
- Shared Services
- Infosys
- HCL
- Datacom
- gen-i
- Wipro
- BT
- Other

Total Contract Value of Deals Negotiated with Major Suppliers (\$M)



- IBM
- CSC
- HP
- Telstra
- Optus
- Fujitsu
- Accenture
- Other

ITNewcom

depth · rigour · results

BRITBANE

Riparian Plaza
L36, 71 Eagle Street
Brisbane QLD 4000
Phone: +61 (0)7 3121 3146
Fax: +61 (0)7 3121 3030

CANBERRA

23 BrindAbela Circuit
BrindAbela Business Park ACT 2609
Phone: +61 (0)2 6230 1061
Facsimile: +61 (0)2 8904 7788

MELBOURNE

L27, 101 Collins Street
Melbourne VIC 3000
Phone: +61 (0)3 9653 9278
Facsimile: +61 (0)3 9653 9307

PERTH

45 Ventnor Avenue
West Perth WA 6005
Phone: +61 (0)8 9389 4433
Facsimile: +61 (0)8 9389 4400

SINGAPORE

Marina Bay Financial Centre
Level 39, Tower 2
10 Marina Boulevard
Singapore 18983

SYDNEY

L6, 71 Walker St
North Sydney NSW 2060
Phone: +61 (0)2 8904 7777
Facsimile: +61 (0)2 8904 7788