Annexure A Specification

Scope of Work

Current Infrastructure

ICASA Head Office hosts a Microsoft environment for central authentication, file sharing, centralised application hosting and SAN storage, interconnecting to 9 regional offices through a 4Mbs MPLS line and a 80 Meg bandwidth to the internet.

Appendix A contains the hardware inventory.

Appendix B is a schematic diagram of the proposed solution

Technical Requirements

1. ICASA would like a Service Provider to provide an Integrated Business & IT Service Continuity Solution with fully integrated offsite data backup & protection for a period of 5 years with the following minimum requirements:

		Comply	
		Yes	No
1	ICASA requires a Service Provider to provide a hosting (fixed site) and mobile solution with the following minimum requirements:		
1.1	Recovery facility with hosting of offsite data backup and Work Area Recovery facilities		
1.2	Service provider to indicate if it has a DR site for the proposed site for ICASA		
1.3	Recovery of ICASA's Data Centre on syndicated hardware and infrastructure		
1.3.1	Current storage requirement is for 80TB raw data with growth of 15% per annum		
1.3.2	Hardware to support Hyper- V Cluster and Vmware Cluster and host existing VM's as per Appendix A. Ensure sufficient capacity is available to support every Server in Appendix A		
1.3.3	Service Provider to make monthly backups (13 months cycle required) Backups to tape or other removeable media which needs to be stored at an offsite secure location.		
1.3.4	Annual backups (end of March each year) to be retained permanently which needs to be stored at an offsite secure location. This media to be the property of ICASA upon termination of contract.		
1.4	Recovery Time Objectives (RTO) that need to be supported: Refer Appendix C for Business Impact Analysis and Appendix D for RTO & RPO		
1.5	Dedicated Hardware required		
	2 x Servers (512 Gb Ram each with 300Gig Hard Drive X2 each, CPU Xeon x 2, 24 Core) 2 x 10 Gig Fibre Adapter for connection to Tintri Storage for each server		
1.6	Hosting space required at the offsite DR datacentre for the following ICASA owned devices		
	Tintri 885 Storage-4U		
	Network Switch 1U		

	Firewall 1U		
1.7	Service Provider to supply the following Software licences		
	Veeam		
	Windows, Hyper-v and Vmware licences for dedicated servers		
1.8	Mandatory Reporting		
	Daily Backup status report.		
	Weekly report showing backup status for the week for each server		
	Monthly report showing backup status for each day of the month and available data storage space on recovery volumes		
	Quarterly SLA Meetings		
2	Office recovery encompassing the following		
2.1	1 x office to cater for 20 people – meeting table with minimum of 20 chairs, telephone and LAN connection		
2.2	100 x Work Area Recovery (WAR) seats – each with desk, chair, telephone, PC with monitor, LAN point. Minimum specification for the PC's is i5 8GB RAM and 72GB HDD. Lockable cabinet is required for staff personal effects. Shared areas must have CCTV surveillance for staff and property protection. Environment must have 24 X 7 on-site security and armed response.		
2.3	2 x Multifunction printer with a total speed of 40 plus PPM		
2.4	Internet connectivity – 100MB minimum breakout, (which must be burstable)		
2.5	Basic telephony – no call centre – VOIP based, must allow for ICASA lines to be switched to Recovery centre.		
2.6	The appointed Service Provider to take on the 12 prior monthly backups (from tape)		
2.7	At the end of the contract period the 12 Monthly backups as well as the annual backups must be transferred to ICASA for ownership at no additional cost.		
3	Bidding service providers need to confirm/demonstrate the following with regards to their DR facilities		
3.1	Power systems to include generator and UPS for data centres as a minimum,		
3.2	Fire detection and suppression in data centres		
3.3	Environmental management system in data centres		
3.4	Physical access control and security		
3.5	24x7x365 Access to the DR site when invoking		
4	A minimum of 10 working days per annum for DR testing, during which time two tests must be completed		
5	Dedicated technical support during rehearsals as well as during invocation		
6	Details of data backup and protection requirements		
6.1	Initial setup and configuration for secure storage of ICASA backup data		
6.2	ICASA's preference is to perform a disk to disk backup on the production site, allowing for quick recovery of file, folders or single servers. Then disk to disk at the DR facility (over a WAN link) and finally disk to tape at the DR facility for off-site archiving. See attached schematic diagram.		
6.3	Perform once-off data take-on from current ICASA backup system to the new backup system at the DR facility		
6.4	Testing the recoverability of ICASA systems using the backed-up data at the recovery site		
6.5	Service Provider to provide reporting on the outcome of the recoverability tests for use by ICASA IT management as well as for the Auditor General		
6.6	Service provider to provide for sufficient bandwidth for connection between ICASA datacentre and the DR site to cover all backups and replications to satisfy ICASA's recovery time objectives		
6.7	The Service Provider must be able to consistently and reliably recover all ICASA's systems and in doing so perform the following:		
6.7.1	Audit the backups for data integrity		

6.7.2	Provide technical staff to do testing in conjunction with or independent of ICASA staff		
6.7.3	Provide syndicated hardware at recovery site or ICASA Head Office as required		
6.7.4	Verify that backup processes are correct and revise the processes until successful and consistent recovery is achieved		
6.7.5	Document the processes		
6.7.6	Record the recovery times so that an accurate recovery time-line can be determined with dependencies		
6.7.7	Examine/review the current ICASA Information Processing Management Guide to report and improve the following aspects:		
6.7.7.1	Business Continuity		
6.7.7.2	IT Service Continuity		
6.7.7.3	Business Impact and Risk Assessments with Continuity Strategy		
6.7.7.4	Data Storage and Protection		
6.7.7.5	Information Retention Policy		
6.7.7.6	Compliance with PAIA and POPI Acts		
6.7.7.7	ICASA's Business Continuity policy, DR Policy and DR plan		
	All of the above items to be revised and updated annually		
7	The Service Provider must have certified skills in the delivery capability of the required solutions and must have IT Service and Business Continuity as one of their core competencies and service offerings. A certified ISO22301 Lead Implementer must be available upon request.		
8	The Service Provider must be able to provide a complete managed service for backups, DR testing and recovery as this solution is required to be a complete 'end-to-end' service provided by a single chosen vendor		
9	The Service Provider must own and manage a minimum Tier 3 data centre (**see attached data centre specification)**, which must be located between 10-50 km from ICASA office		
10	The Service Provider must provide the necessary skills to manage all onsite disk-to-disk backups		
11	Provision of an offsite backup solution for the data at the DR site i.e. data archive		
12	Provision of a complete recovery capability for current and future systems		
13	A SLA driven managed service according to internationally recognised standards and best practises to ensure that ICASA meets their Recovery Time and Recovery Point Objectives		
14	Provisioning and securing confidentiality of all data according to proven and current implemented security policies as per the industry recognised standards		
15	Data is of utmost importance and must be secure at all times. The Service Provider must be in a position to demonstrate their security policies and procedures to ensure that this data is secure at all times. This must include network management and monitoring to facilitate the replication process		
16	As this is a managed service, the Service Provider must also be able to provide a dedicated Service Manager with the capability of producing reports relating to the service provided as and when requested by ICASA		
17	The Service Provider must provide a competent DR recovery specialist to develop, manage, maintain and exercise the DR recovery plans and BCP throughout the period of the contract		
18	The Service Provider must have a proven and demonstrable call logging system in the eventuality of a disaster declaration. This must be auditable so as to ensure any post disaster analysis can be tied down and logged accordingly		
19	Proposals must include:		
19.1	A sample Service Level Agreement which will be the basis for negotiation		
19.2	Fixed pricing for a 5-year contract with monthly payments		

19.3	Details of other offerings that may be of assistance to ICASA but not mentioned in this document		

Syndication

1 Prudent syndication of the recovery resources is essential for effective Syndicated Disaster Recovery:

a. The Service provider will demonstrate how syndication is managed.

Service Provider to explain syndication methodology

b. The Service provider will commit to ensuring that any resources syndicated to ICASA will not be syndicated to any other client of the Service Provider which will exceed the maximum capacity of the Service Providers ICT recovery infrastructure as well as seats available to accommodate clients on the SP's premise.

Syndication Constraints		Comply	Do not Comply
I.	Within 5 Kms of ICASA's Data Centre in EcoPark, Centurion		
II.	On the same power grid		
III.	The same river system		
IV.	On or adjacent to the same road network within 10 Kms of each other (ICASA to other client with common syndicate resources).		

Service Provider to explain

Appendix A

Hardware/Virtual Servers 09A – Summary of Servers									
Computer Name	**Operating System**	**Service Pack Level**	**Serial Number**	**Asset Tag**	**Manufacturer**	**Model**	**Memory (KBytes)**	**Processor (GHz)**	**Total Disk Space (MB)**
ICASA-ASMDV-DB	Microsoft Windows Server 2012 R2 Standard		None	No Asset Tag	VMware, Inc.	VMware Virtual Platform	8285748	2597	99
ICASA-ASMDV-WB	Microsoft Windows Server 2012 R2 Standard		None	No Asset Tag	VMware, Inc.	VMware Virtual Platform	8039988	2597	99
ICASA-ASMPD-DB	Microsoft Windows Server 2012 R2 Standard		None	No Asset Tag	VMware, Inc.	VMware Virtual Platform	67108404	2597	99
ICASA-ASMPD-WB	Microsoft Windows Server 2012 R2 Standard		None	No Asset Tag	VMware, Inc.	VMware Virtual Platform	16776756	2597	49
ICASA-ASMQA-DB	Microsoft Windows Server 2012 R2 Standard		None	No Asset Tag	VMware, Inc.	VMware Virtual Platform	67108404	2597	99
ICASA-ASMQA-WB	Microsoft Windows Server 2012 R2 Standard		None	No Asset Tag	VMware, Inc.	VMware Virtual Platform	33553972	2597	99
ICASABLMDC01	Microsoft Windows		1544-7998-4977-3527-6008-3701-75	6848-7362-2424-2789-	Microsoft Corporation	Virtual Machine	12582452	2397	71

	Server 2012 R2 Standard			9924-0024-73					
ICASABLMHYV02	Microsoft Windows Server 2012 R2 Standard				HP	ProLiant DL380 Gen9	134086260	2397	4003
ICASABLMSBA01	Microsoft Windows Server 2008 R2 Standard	Service Pack 1			AC1234	AM4010	2096628	1494	148
ICASACTNDC01	Microsoft Windows Server 2012 R2 Standard		3795-1157-6887-3738-6402-9277-78	2358-0381-6218-2024-8640-3001-02	Microsoft Corporation	Virtual Machine	12582452	2397	71
ICASACTNHYV02	Microsoft Windows Server 2012 R2 Datacenter		CZJ6100MYQ		HP	ProLiant DL380 Gen9	134084724	2397	4003
ICASADBNFS02	Microsoft Windows Server 2012 R2 Standard		9264-1978-8660-8740-5222-0273-33	9264-1978-8660-8740-5222-0273-33	Microsoft Corporation	Virtual Machine	12582452	2397	1358363
ICASADBNHYV00	Microsoft Windows Server 2012 R2 Standard		CZJ6100MYS		HP	ProLiant DL380 Gen9	134084724	2397	4003
ICASADBNSBA01	Microsoft Windows Server 2008 R2 Standard	Service Pack 1			AC1234	AM4010	4193780	1494	148
ICASA-EXCH-MB01	Microsoft Windows		None	No Asset Tag	VMware, Inc.	VMware Virtual Platform	33553908	2597	5191

	Server 2016 Datacenter								
ICASA-EXCH-MB02	Microsoft Windows Server 2016 Datacenter		None	No Asset Tag	VMware, Inc.	VMware Virtual Platform	33553908	2597	5191
ICASA-INMGIC-01	Microsoft Windows Server 2016 Standard		7981-1412-7532-5072-2496-2102-60	7981-1412-7532-5072-2496-2102-60	Microsoft Corporation	Virtual Machine	4193296	2600	198
ICASA-INMGIC-02	Microsoft Windows Server 2016 Standard		0903-5506-5699-5084-9660-3096-81	0903-5506-5699-5084-9660-3096-81	Microsoft Corporation	Virtual Machine	4193296	2600	198
ICASAMPDC01	Microsoft Windows Server 2012 R2 Standard		5068-5789-4871-4803-1046-3676-15	5068-5789-4871-4803-1046-3676-15	Microsoft Corporation	Virtual Machine	12579876	2397	126
ICASAMPHYV01	Microsoft Windows Server 2012 R2 Datacenter		CZJ61100VW		HP	ProLiant DL380 Gen9	134084724	2397	4935
ICASAMPSBA01	Microsoft Windows Server 2008 R2 Standard	Service Pack 1	To Be Filled By O.E.M.	To Be Filled By O.E.M.	To be filled by O.E.M.	To be filled by O.E.M.	4100332	1501	118
ICASAPEBDC01	Microsoft Windows Server 2012 R2 Standard		9456-9916-3539-3786-9736-7501-22	0513-8792-2416-9613-2816-4045-97	Microsoft Corporation	Virtual Machine	33553972	2397	71
ICASAPEBHYV02	Microsoft Windows Server 2012		CZJ6100MYP		HP	ProLiant DL380 Gen9	134084724	2397	4003

	R2 Datacenter								
ICASAPLKHYV00	Microsoft Windows Server 2016 Standard		CZJ64109VR		HP	ProLiant DL380 Gen9	117307508	2098	4880
ICASA-PRD-AGS01	Microsoft Windows Server 2012 R2 Standard		8698-8346-6347-7862-2036-6526-19	8698-8346-6347-7862-2036-6526-19	Microsoft Corporation	Virtual Machine	16776216	2600	126
ICASA-PRD-AGS02	Microsoft Windows Server 2012 R2 Standard		0066-9169-8385-5417-6583-8982-29	0066-9169-8385-5417-6583-8982-29	Microsoft Corporation	Virtual Machine	16776216	2600	625
ICASA-PRD-DB01	Microsoft Windows Server 2012 R2 Standard		6832-6208-9457-8863-7358-5204-08	6832-6208-9457-8863-7358-5204-08	Microsoft Corporation	Virtual Machine	16776216	2600	625
ICASA-PRD-WEB01	Microsoft Windows Server 2012 R2 Standard		6690-2022-2246-7300-6724-3055-98	6690-2022-2246-7300-6724-3055-98	Microsoft Corporation	Virtual Machine	16776216	2600	625
ICASA-STG-AGS01	Microsoft Windows Server 2012 R2 Standard		None	No Asset Tag	VMware, Inc.	VMware Virtual Platform	33553908	2597	178
ICASA-STG-AGS02	Microsoft Windows Server 2012 R2 Standard		None	No Asset Tag	VMware, Inc.	VMware Virtual Platform	16776692	2597	178
ICASA-STG-DB	Microsoft Windows Server 2012 R2 Standard		None	No Asset Tag	VMware, Inc.	VMware Virtual Platform	16776692	2597	348

ICASA-STG-WEB	Microsoft Windows Server 2012 R2 Standard		None	No Asset Tag	VMware, Inc.	VMware Virtual Platform	8388084	2597	99
ICASASTNADFS01	Microsoft Windows Server 2012 R2 Standard		5525-0152-0343-4285-0265-6620-10	5525-0152-0343-4285-0265-6620-10	Microsoft Corporation	Virtual Machine	8387608	2600	78
ICASASTNAPP02	Microsoft Windows Server 2012 Standard		3215-6984-8934-7302-7935-4927-32	8056-3824-3633-9300-4271-9298-63	Microsoft Corporation	Virtual Machine	12582452	2600	199
ICASASTNASMS01	Microsoft Windows Server 2012 R2 Standard		4683-1703-9127-7525-5855-7704-80	4683-1703-9127-7525-5855-7704-80	Microsoft Corporation	Virtual Machine	8387608	2600	198
ICASASTNBCM02	Microsoft Windows Server 2008 R2 Standard	Service Pack 1	0123456789	To Be Filled By O.E.M.	Supermicro	X9DRW	33520960	2601	13018
ICASASTNBCM04	Microsoft Windows Server 2008 R2 Standard	Service Pack 1	0123456789	To Be Filled By O.E.M.	Supermicro	X9DRW	33520960	2601	13018
ICASASTNBCM05	Microsoft Windows Server 2008 R2 Standard	Service Pack 1	0123456789	To Be Filled By O.E.M.	Supermicro	X9DRW	33520960	2601	13018
ICASASTNBCM06	Microsoft Windows Server 2008 R2 Standard	Service Pack 1	0123456789	To Be Filled By O.E.M.	Supermicro	X9DRW	33520960	2601	13018

ICASASTNBCM07	Microsoft Windows Server 2008 R2 Standard	Service Pack 1	0123456789	To Be Filled By O.E.M.	Supermicro	X9DRW	33520960	2601	13018
ICASASTNBCM08	Microsoft Windows Server 2008 R2 Standard	Service Pack 1	0123456789	To Be Filled By O.E.M.	Supermicro	X9DRW	33520960	2601	13018
ICASASTNBKS01	Microsoft Windows Server 2016 Standard		2MNB002		Dell Inc.	PowerEdge R320	33507880	2200	74641
ICASASTNBTDV01	Microsoft Windows Server 2012 R2 Standard		4326-8843-2753-8366-7985-4519-27	4326-8843-2753-8366-7985-4519-27	Microsoft Corporation	Virtual Machine	8387608	2600	244
ICASASTNCA01	Microsoft Windows Server 2012 Standard		0330-9109-7468-9269-9373-5878-98	6900-7085-5059-9742-5704-9996-39	Microsoft Corporation	Virtual Machine	4189748	2600	71
ICASASTNCLU07	Microsoft Windows Server 2016 Datacenter		CZ3224LM1D		HP	ProLiant BL460c Gen8	134182168	2600	136
ICASASTNCLU08	Microsoft Windows Server 2016 Datacenter		CZ3224LM1D		HP	ProLiant BL460c Gen8	134182168	2600	136
ICASASTNCRMDV04	Microsoft Windows Server 2012 R2 Standard		1413-2387-8841-6808-1665-4338-32	1413-2387-8841-6808-1665-4338-32	Microsoft Corporation	Virtual Machine	12581912	2600	548

ICASASTNCRMPD02	Microsoft Windows Server 2012 R2 Standard		0175-4162-5090-1959-3351-1214-70	0175-4162-5090-1959-3351-1214-70	Microsoft Corporation	Virtual Machine	16776216	2600	249
ICASASTNCRMSQ02	Microsoft Windows Server 2012 R2 Standard		2587-0870-9800-1576-5598-8444-49	2587-0870-9800-1576-5598-8444-49	Microsoft Corporation	Virtual Machine	16776216	2600	2144
ICASASTNDC01	Microsoft Windows Server 2012 R2 Standard		CZC9144Z8L		HP	ProLiant DL380 G5	4192196	3167	136
ICASASTNDC02	Microsoft Windows Server 2012 R2 Standard		CZC9144Z84		HP	ProLiant DL380 G5	4192196	3167	136
ICASASTNDC03	Microsoft Windows Server 2012 R2 Standard		2869-6825-2945-4590-3868-6074-19	2869-6825-2945-4590-3868-6074-19	Microsoft Corporation	Virtual Machine	8387608	2600	71
ICASASTNFAX01	Microsoft Windows Server 2012 R2 Standard		2393-9104-1070-7890-1522-0914-47	2393-9104-1070-7890-1522-0914-47	Microsoft Corporation	Virtual Machine	8285748	2600	126
ICASASTNFSRV01	Microsoft Windows Server 2012 R2 Standard		3829-1839-6526-8340-5993-3229-05	3829-1839-6526-8340-5993-3229-05	Microsoft Corporation	Virtual Machine	8387608	2600	10076
ICASASTNHR01	Microsoft Windows Server 2012 R2 Standard		0273-3781-1942-1226-1602-0348-64	0273-3781-1942-1226-1602-0348-64	Microsoft Corporation	Virtual Machine	16776216	2600	244

ICASASTNHRDV01	Microsoft Windows Server 2012 R2 Standard		0273-3781-1942-1226-1602-0348-64	0273-3781-1942-1226-1602-0348-64	Microsoft Corporation	Virtual Machine	8387608	2600	244
ICASASTNHYV01	Microsoft Windows Server 2012 R2 Standard		CZ210603HT		HP	ProLiant DL380 G7	37738288	2799	1104
ICASASTNKOFAX01	Microsoft Windows Server 2008 R2 Standard	Service Pack 1	8635-9104-7131-9952-9197-2482-79	9643-2989-7905-5427-3970-9006-83	Microsoft Corporation	Virtual Machine	6291000	2600	155
ICASASTNLS01	Microsoft Windows Server 2008 R2 Standard	Service Pack 1	CZC9467FJV		HP	ProLiant DL380 G6	12572404	2666	434
ICASASTNLYNFE01	Microsoft Windows Server 2012 Datacenter		4670-2572-3025-5307-5946-0922-64	4224-2494-6337-4714-5475-8114-42	Microsoft Corporation	Virtual Machine	12582452	2600	145
ICASASTNLYNFE02	Microsoft Windows Server 2012 Standard		9689-8884-1573-4630-1896-0436-93	8734-7459-7135-4572-0775-9501-56	Microsoft Corporation	Virtual Machine	12582452	2600	145
ICASASTNMERID01	Microsoft Windows Server 2008 R2 Standard	Service Pack 1	4314-2400-6404-5295-9164-3607-07	6773-3156-8441-6464-9646-9790-40	Microsoft Corporation	Virtual Machine	12582456	2600	225
ICASASTNOWAS01	Microsoft Windows Server 2012 Standard		9807-5546-1065-1924-5142-4276-95	9318-0349-8704-0885-0189-8234-84	Microsoft Corporation	Virtual Machine	8388148	2600	71

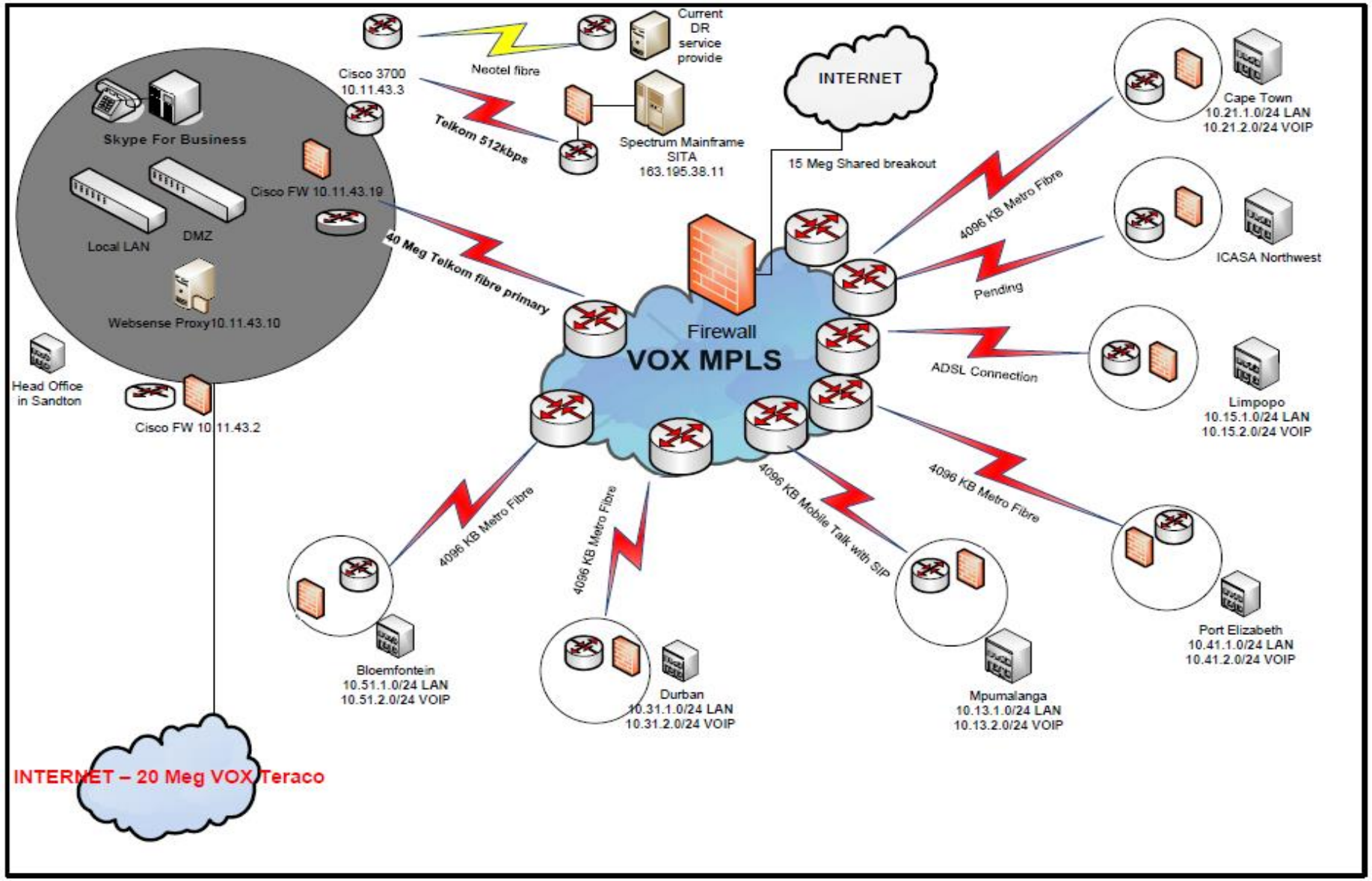
ICASASTNPMS01	Microsoft Windows Server 2012 R2 Standard		CZ2506007R		HP	ProLiant DL380p Gen8	33518868	2594	837
ICASASTNPMS02	Microsoft Windows Server 2012 R2 Standard		CZJ50702NH		HP	ProLiant DL360p Gen8	16741652	2594	558
ICASASTNPS01	Microsoft Windows Server 2012 R2 Standard		8603-0089-3987-8313-8406-8494-49	8603-0089-3987-8313-8406-8494-49	Microsoft Corporation	Virtual Machine	12581912	2600	99
ICASASTNPTS01	Microsoft Windows Server 2012 R2 Standard		6889-5857-9602-8899-5060-2359-12	6889-5857-9602-8899-5060-2359-12	Microsoft Corporation	Virtual Machine	25164824	2600	444
ICASASTNPTSDV01	Microsoft Windows Server 2012 R2 Standard		3627-2620-4238-0152-0954-8617-31	3627-2620-4238-0152-0954-8617-31	Microsoft Corporation	Virtual Machine	25164824	2600	598
ICASASTNRMS01	Microsoft Windows Server 2016 Standard		None	No Asset Tag	VMware, Inc.	VMware Virtual Platform	4193844	2597	59
ICASASTNRPL01	Microsoft Windows Server 2012 R2 Standard		3085-2855-4814-7814-1488-3678-03	3085-2855-4814-7814-1488-3678-03	Microsoft Corporation	Virtual Machine	12581912	2600	1644
ICASASTNSCOM01	Microsoft Windows Server 2016 Standard		None	No Asset Tag	VMware, Inc.	VMware Virtual Platform	16776756	2597	244

ICASASTNSCSMP01	Microsoft Windows Server 2012 R2 Standard		7525-4161-9359-5315-2286-5750-28	7525-4161-9359-5315-2286-5750-28	Microsoft Corporation	Virtual Machine	8387608	2600	126
ICASASTNSPPRD01	Microsoft Windows Server 2012 Standard		1751-4751-4093-6601-0073-3647-45	5779-2429-9044-5904-0718-4464-61	Microsoft Corporation	Virtual Machine	16776756	2600	150
ICASASTNSQL01	Microsoft Windows Server 2012 Standard		1970-7346-4980-8257-6289-2838-37	8712-3124-1276-5803-9183-7029-76	Microsoft Corporation	Virtual Machine	12582452	2600	170
ICASASTNSQL02	Microsoft Windows Server 2012 Datacenter		9848-8399-3905-2532-1980-7804-28	3331-2637-1977-0613-7569-0448-17	Microsoft Corporation	Virtual Machine	12582452	2600	216
ICASASTNSQL03	Microsoft Windows Server 2012 Standard		3321-2172-7170-9032-8714-4702-66	8741-3358-2333-3569-6720-6015-12	Microsoft Corporation	Virtual Machine	6290996	2600	570
ICASASTNSQL04	Microsoft Windows Server 2012 R2 Standard		6305-4870-0503-5295-3731-9065-78	6305-4870-0503-5295-3731-9065-78	Microsoft Corporation	Virtual Machine	8387608	2600	145
ICASASTNTEMS01	Microsoft Windows Server 2012 R2 Standard		CZ151700Z5		HP	ProLiant ML150 Gen9	8126068	1898	465
ICASASTNTM01	Microsoft Windows Server 2016 Standard		None	No Asset Tag	VMware, Inc.	VMware Virtual Platform	12582388	2597	149

ICASASTNTMS01	Microsoft Windows Server 2012 R2 Standard		5219-6633-8461-7478-6132-3871-59	5219-6633-8461-7478-6132-3871-59	Microsoft Corporation	Virtual Machine	4189748	2600	71
ICASASTNVIP01	Microsoft Windows Server 2012 Standard		5934-8058-7556-6582-2917-0051-54	5934-8058-7556-6582-2917-0051-54	Microsoft Corporation	Virtual Machine	8387604	2600	820
ICASASTNVMCLU01	Microsoft Windows Server 2016 Datacenter		CZ3224LM1D		HP	ProLiant BL460c Gen8	100627736	2600	136
ICASASTNVMCLU02	Microsoft Windows Server 2016 Datacenter		CZ3224LM1D		HP	ProLiant BL460c Gen8	100627736	2600	136
ICASASTNVMCLU03	Microsoft Windows Server 2016 Datacenter		CZ3224LM1D		HP	ProLiant BL460c Gen8	100627736	2600	136
ICASASTNVMCLU04	Microsoft Windows Server 2016 Datacenter		CZ3224LM1D		HP	ProLiant BL460c Gen8	134182168	2600	136
ICASASTNVMCLU05	Microsoft Windows Server 2016 Datacenter		CZ3224LM1D		HP	ProLiant BL460c Gen8	134182168	2600	136
ICASASTNVMCLU06	Microsoft Windows Server 2016 Datacenter		CZ3224LM1D		HP	ProLiant BL460c Gen8	125793560	2600	136

ICASASTNVMCLU07	Microsoft Windows Server 2016 Datacenter		CZ3224LM1D		HP	ProLiant BL460c Gen8	134182168	2600	136
ICASASTNVMCLU08	Microsoft Windows Server 2016 Datacenter		CZ3224LM1D		HP	ProLiant BL460c Gen8	134182168	2600	136
ICASASTNVMCLU09	Microsoft Windows Server 2016 Datacenter		CZ3224LM1D		HP	ProLiant BL460c Gen8	134182168	2600	136
ICASASTNVMM01	Microsoft Windows Server 2016 Datacenter		CZC9144Z8N		HP	ProLiant DL380 G5	4192132	3167	135
ICASASTNWN01	Microsoft Windows Server 2012 Standard		4519-9238-9776-5213-7720-4622-14	6781-3142-7678-8794-8357-2983-05	Microsoft Corporation	Virtual Machine	4189748	2600	71
ICASASTNWS02	Microsoft Windows Server 2012 Standard		2537-8943-9988-4994-8385-7594-63	2537-8943-9988-4994-8385-7594-63	Microsoft Corporation	Virtual Machine	16776212	2600	298
JDEDEV	Microsoft Windows Server 2008 R2 Standard	Service Pack 1	1911-2563-1613-2817-2102-6323-01	1911-2563-1613-2817-2102-6323-01	Microsoft Corporation	Virtual Machine	8388152	2600	220

Appendix B


Current DR service provide
Neotel fibre
Cisco 3700
10.11.43.3
Telkom 512kbps
Spectrum Mainframe
SITA
163.195.38.11
INTERNET
15 Meg Shared breakout
Cape Town
10.21.1.0/24 LAN
10.21.2.0/24 VOIP
4096 KB Metro Fibre
ICASA Northwest
Pending
Skype For Business
Cisco FW 10.11.43.19
Local LAN
DMZ
40 Meg Telkom fibre primary
Websense Proxy10.11.43.10
Head Office
in Sandton
Cisco FW 10.11.43.2
Firewall
VOX MPLS
ADSL Connection
Limpopo
10.15.1.0/24 LAN
10.15.2.0/24 VOIP
4096 KB Metro Fibre
4096 KB Metro Fibre
4096 KB Mobile Talk with SIP
4096 KB Metro Fibre
Port Elizabeth
10.41.1.0/24 LAN
10.41.2.0/24 VOIP
Bloemfontein
10.51.1.0/24 LAN
10.51.2.0/24 VOIP
Durban
10.31.1.0/24 LAN
10.31.2.0/24 VOIP
Mpumalanga
10.13.1.0/24 LAN
10.13.2.0/24 VOIP
INTERNET – 20 Meg VOX Teraco

Appendix C

Business Impact Analysis (to clarify whether this is necessary to provide as part of bid documents)

The table below shows a summary of all Risks, Impacts and Strategy options.

Organisation			*Continuity Drivers*		*Continuity Strategy Summary*		
Primary Group	**Business Unit / Function**	**Mission Critical Activities**	**Key Risks**	**Significant Impacts**	**Preventive Measures**	**Detective Measures**	**Corrective Measures**
Regulation, Inspection, licensing & Consumer Complaints	**Administration**	• Accommodation • E-Mail • File and Print Services • Maintenance of and Access to physical Records • Ability to work	• Failure of IT Systems • Unavailability of Records • Accommodation • Loss of communications	• Inability to perform mandate tasks • Delays • Loss of records • Potential loss of control communications environment	• Sound Security • Sound OHS Practice	• Monitoring	• Work area recovery • Remote access to systems
Administration and Support	**Financial Control**	• General Ledger • Procurement	• Loss of financial control • Inability to procure timeously	• Losses & inaccuracy • Logistics impacts	None	None	• Work Area Recovery
	Human Resources	• Human Resources • Labour Relations • Salaries	• Labour Union Action • BBBEE Quotas • Staffing & Skills • Leakage of confidential information	• Monitor Labour/WPF • BBBEE status • Training program failure • Reputational damage & POPI impact	• Engage with labour/WPF & unions • Good hiring policy • Business driven training • Digitisation & security of staff records	• Monitor Labour/Union action	• Work Area Recovery
Information Technology	**Systems**	• E-Mail • Internet Access • Systems and Infrastructure Support	• Systems Failures • Data loss & corruption • Network failure • Infrastructure failure • Security Breaches	• Systems not operable • Data leakage • Loss of information	• Maintenance • System replication • Backup • Effective Change control	• Monitoring • Capacity planning • Integrity checking • Security Testing	• Failover • Data Replication
	Infrastructure	• Data Backup & Archiving • System Replication • IT Service Continuity	• Environment failure • Hardware Failure • Network failure • Power Failure	• Inability to access systems	• Sound Maintenance • Security monitoring • Security policy • Data protection	• Monitoring • Capacity planning • Integrity checking • Testing	• Tested recovery • Failover to GCSA Linksfield • Off-site storage
Universal	**All**	• Worker accommodation • Security	• Inability to accommodate • Staff and assets at risk	• Inability to work • Loss of assets or damage	• Sound Security • Sound OHS Practice	• Surveillance • Emergency Response	• Work Area Recovery

Appendix D

RTO & RPO

Entity	Bus Unit	Mission Critical Activities	ICT Systems Dependency	RTO Hrs	RPO Hrs	Potential Impact	Impact Unit	Comments
All	All	e-Mail	Microsoft Exchange, Servers, Local Area Network, Wide Area Network, Domain Control	4	0	Loss of communications with Branches, Loss of Communications with Licensees & Counterparties, Loss of Communications with all external parties, Inability to mail files and reports internally and externally, Inability to communicate with key stakeholders (consumers)	Time & Effort	e-Mail is a universal enabler for routing electronically based work between parties. Mimecast will provide resiliency.
All	All	File & Print Services	Servers, Local Area Network, Wide Area Network, Domain Control	4	4	Inability to share files easily, Inability to access shared files, Impaired operational capability	Time & Effort	
All	All	Log on to systems and authenticate	Domain Controller	2	48	Non-availability of IT systems and shared infrastructure	Time & Effort	
Finance	Finance	Availability of General Ledger	Servers, Local Area Network, Wide Area Network, Domain Control, JD Edwards System	8	2	Loss of control over finances in the longer term	Time & Effort	
Finance	Finance	Availability of Debtors System	Servers, Local Area Network, Wide Area Network, Domain Control, JD Edwards System	8	2	Loss of control over debtors book and revenue in the longer term	Cash Flow, Time & Effort	
Finance	Finance	Availability of Creditors System	Servers, Local Area Network, Wide Area Network, Domain Control, JD Edwards System	8	2	Inability to procure & pay. Reputational damage & supply chain risk.	Cash flow, supply shortages.	
Procurement	Finance	Availability of Procurement systems	Servers, Local Area Network, Wide Area Network, Domain Control, JD Edwards System	8	2	Impaired ability to procure goods and administer creditors	Project delays, supply shortages.	

Entity	Bus Unit	Mission Critical Activities	ICT Systems Dependency	RTO Hrs	RPO Hrs	Potential Impact	Impact Unit	Comments
Procurement	Finance	Supplier Verification	Servers, Local Area Network, Wide Area Network, Domain Control. Internet based verification services	48	N/A	Inability to verify Supplier Validity, Tax Clearance, CIPC, BBBEE, Bank Details & National Treasury Blacklist	Compliance Risk, Supply Chain Risk	
All	All	Voice Communications	Wide Area Network, Local Area Network, PABX, Inbound Telkom Service	4	N/A	Impaired ability to carry out voice communications.	Time & Effort	
Information Technology	IT	Backup and archiving	All Servers, Local Area Network, Wide Area Network, Domain Control. Backup Servers and storage at Pin Mill Farm and Recovery Centre.	4	4	Risk of inability to recover. Potential data loss. Inability to recover.	Information Security risk.	
Licensing	Licensing	License Administration	Spektrum or ASMS. Servers, Local Area Network, Wide Area Network, Domain Control	8	4	Inability to issue or administer licenses	Cash Flow, Time & Effort	
All	All	Access to Internet	Local Area Network, Wide Area Network, Domain Control	4	N/A	Internet banking, research, supplier verification impaired	Time & Effort	
Human Resources	Human Resources	Production of Payroll	Servers, Local Area Network, Wide Area Network, Domain Control, VIP Payroll System	48	24	Delays in payroll production. Internal Reputation.	Time & Effort. Internal reputation	
All	All	Provision of Workplace facilities and workstations	All Servers, Local Area Network, Wide Area Network, Domain Control, Workstations.	4	8	Disruption of all work activities.	Time & Effort. Internal reputation	
Various	All	Regulatory - Complaints	All Servers, Local Area Network, Wide Area Network, Domain Control, Workstations, EDRMS & CRM System	48	24	Disruption of all work activities related to complaints and / or inspections. Inability to track resolution	Time & Effort. Reputation	

Entity	Bus Unit	Mission Critical Activities	ICT Systems Dependency	RTO Hrs	RPO Hrs	Potential Impact	Impact Unit	Comments
Various	All	Regulatory - Interference complaints	All Servers, Local Area Network, Wide Area Network, Domain Control, Workstations, EDRMS & CRM System	48	24	Disruption of all work activities related to complaints and / or inspections	Time & Effort. Reputation	
Various	All	Inspections	All Servers, Local Area Network, Wide Area Network, Domain Control, Workstations, EDRMS & CRM System	24	24	Disruption of all work activities related to complaints and / or inspections	Time & Effort. Reputation	
Human Resources	Human Resources	Human resources administration	Servers, Local Area Network, Wide Area Network, Domain Control, EDRMS	48	24	Impaired HR Administration	Time & Effort. Internal reputation	
Finance	Select	Electronic Banking	Local Area Network, Wide Area Network, Domain Control - Banking Dongal.	24	N/A	Inability to pay or obtain banking information	Time & Effort Delays	
Compliance & Consumer Affairs	Compliance & Consumer Affairs	Requests for interconnect agreements	Servers, Local Area Network, Wide Area Network, Domain Control, EDRMS, ASMS (Spektrum)	5 Days	0.25	Inability to meet SLA	Time & Effort. Reputation	