

1. BACKGROUND

The University requires qualified, experienced, and skilled service providers to supply, install, support, and maintain bespoke Research IT equipment, as well as any incidental, ancillary, or complementary items related to it (Research IT equipment), in support of its research activities, based on its specific research needs.

2. UNIVERSITY'S OBJECTIVES

The University aims to appoint a panel of service providers to acquire bespoke Research IT equipment that is supported and backed by OEM warranties.

3. SCOPE OF WORK

3.1. The University will request two main types of Research IT equipment:

- Component 1: Data Centre equipment (High performance computers and storage) or;
- Component 2: user equipment (desktop/laptop/tablet or similar devices for office/lab and fieldwork equipment).

Applicants must specify if they are applying to supply either or both types.

3.2. Research IT equipment provided must meet the following requirements for Component 1:

3.2.1. Provide bespoke Research IT equipment that supports research activities and is both backwards and forward compatible, allowing for flexibility and longevity.

3.2.2. The Supplier is required to be able to supply, install and maintain the equipment provided if requested to do so. Onsite installation and maintenance may be required, depending on the requirements.

3.2.3. The infrastructure built should seamlessly integrate with our current infrastructure, receive regular updates and upgrades, and be expandable to meet evolving research needs. It must be compatible with the University's current architecture, as set out below, unless otherwise specified in writing by the requesting academic in consultation with eResearch:

3.2.3.1. Intel, AMD or ARM processors

3.2.3.2. Attached to the network via a 10Gb/s copper link.

3.2.3.3. Linux: running Ubuntu (minimum version v24-LTS) or Rocky 9.

OR Microsoft: The equipment OS must be compatible.

OR Cloud compatible

OR hybrid cloud: a computing environment that combines public cloud services with a private cloud or on-premises infrastructure

- 3.2.4. Must supply the Research IT equipment purchased and/or leased, as well as provide the services as included in this Scope of Work, while the warranty is in place.

3.3. Research IT equipment provided must meet the following requirements for Component 2:

- 3.3.1. Provide bespoke end user Research IT equipment that supports research activities and is both backwards and forward compatible, allowing for flexibility and longevity.
- 3.3.2. The Supplier is required to be able to supply, install and maintain the equipment provided, including migrating and setting up the end user device, if requested to do so. Onsite installation, data migration and maintenance may be required.
- 3.3.3. It must be compatible with the University's current architecture, as set out below, unless otherwise specified in writing by the requesting academic in consultation with the Research Office:
- 3.3.3.1. Intel, AMD or ARM processors
- 3.3.3.2. Attached to the network via a 1Gb/s copper link or WiFi.
- 3.3.3.3. LTE SIM card capability if required.
- 3.3.3.4. Drop protection if required.
- 3.3.3.5. Linux: running Ubuntu (minimum version v24-LTS) or Rocky 9.
OR Microsoft: The equipment OS must be compatible.
- 3.3.4. Must supply the Research IT equipment purchased and/or leased, as well as provide the services as included in this Scope of Work, while the warranty is in place.
- 3.3.5. Supply specific Research IT equipment requirements as needed by various research instruments, like high end microscopes. The academic will provide the specifications and will validate if the item is suitable.

4. WARRANTY

- 4.1. The service provider must ensure that:
- 4.1.1. Warranties can surpass the length of the contract. Service providers are expected to honour the warranties until their expiry. This includes any OEM warranties and/or any warranties provided by the service provider.
- 4.1.2. The registration of all Research IT equipment and components inside built systems qualifies for the OEM warranty. During the warranty period, the successful service provider must maintain the Research IT equipment and repair and/or replace defective components in accordance with the warranty at no additional charge to the University. Where applicable, the service provider must be accredited to support the Research IT equipment. Due to the nature, placement and

integration of the equipment, an onsite service may be required. The details are listed in 4.1.3

4.1.3. must be at no additional cost to the University, for the duration of the applicable OEM warranty for the Research IT equipment and components:

4.1.3.1. Provide support and maintenance, labour and parts as per the OEM's specifications;

4.1.3.2. replace such parts as may be deemed necessary by the University;

4.1.3.3. attend callouts due to malfunctions; and

4.1.3.4. inspect, adjust, clean, lubricate, repair and configure the Research IT equipment as may be necessary to keep the Research IT equipment in good working order for the period of the awarded contract;

provided that:

4.1.3.5. The Research IT equipment is under warranty, and;

4.1.3.6. the repairs pertain to hardware, firmware, or instrument-specific software.

4.1.4. Must ensure that the Research IT equipment is fit for the purpose and of good quality;

4.1.5. All warranties in respect of the Research IT equipment will only commence from the date of burn-in approval of the Research IT equipment to the University and must be activated as such with the OEM as well.

5. SUPPORT AND MAINTENANCE AS PART OF THE WARRANTY

5.1. The service provider must, where practical, provide support and maintenance for the awarded contract to resolve any warranty issues that the University experiences.

5.2. Service Levels

5.2.1. The University will manage all tier 1 support.

5.2.2. Configuration and hardware issues that are unsolvable by Tier 1 must be managed and rectified by the service provider.

5.2.3. Unless otherwise agreed, the successful service provider is required to adhere to the Response and Resolve Times as set out in the table below:

Issue Type	Response Time	Resolve Time
Replace failed disks under warranty	1 working day	8 working days
Any other configuration issues or failed hardware under warranty	1 working day	8 working days

5.2.4. The successful service provider acknowledges and agrees that failure to adhere to the provisions of section 5.2.3 will be deemed a material breach by the University.

5.3. Escalation can happen due to the following conditions:

- 5.3.1. Service levels, support and maintenance as part of the warranty have been violated;
- 5.3.2. Service levels, support and maintenance as part of the warranty have not been violated, but the circumstances require a quicker response than previously anticipated;
- 5.3.3. Poor customer service.

ESCALATION PROCEDURE		
<i>Escalation Situation</i>	<i>The service provider, Escalation Point and Method</i>	<i>The University Escalation Point and Method</i>
1 st Escalation	Service provider to provide names, job designations and contact details for responsible contacts	Senior Systems Engineer, Backup and Storage, Wits ICT - Service Management, where applicable
2 nd Escalation	Service provider to provide names, job designations and contact details for responsible contacts	Head eResearch
3 rd Escalation	Service provider to provide names, job designations and contact details for responsible contacts	Head of the research project or their designate

6. SAMPLE SOLUTION SPECIFICATIONS

Due to the nature of this agreement, it is difficult to specify all types of Research IT equipment that may be required. The table below is an example of a type of bespoke system that will generally be required to be provided.

In most cases, the Research IT equipment requested will be similar to this evaluation example request below. Note that you must be able to meet the minimum specifications outlined for the specific components described in this document.

Note: your quotes must meet or exceed the following specifications as described in the tables below:

<u>Component 1</u>	
<u>Worker Nodes:</u>	
Cost a worker Node to the following specifications.	
Quantity	description
1	Rackmount chassis
1	Server board, minimum (2x) 10Gb Ethernet – Dual CPU, remote management
2	12 physical core CPUs – Minimum Intel Xeon Silver or other brand equivalent -Please provide quotes on possibly better CPUs – state processor generation
4	64 GB RAM --- Note this refers to installing 4 DIMMS at a time

	<p>64 GB DIMM units minimum. That way, we have scope for maximising RAM (DIMMs) in the future.</p> <p>Please specify the maximum amount of RAM or DIMMs that the machine can support. Please specify the number of empty slots. We may buy more RAM.</p>
2	6 TB SATA hard drive
2	480 GB SATA SSD drive
<p style="text-align: center;"><u>Storage Controller</u></p> <p style="text-align: center;"><u>1 petabyte storage – each with:</u></p> <p>Please note that storage may be configured in various ways. Use your discretion and experience to provide a solution that works. This could be configured in different ways to meet the University's requirements.</p>	
As many as needed	Rackmount chassis
As many as needed	<p>Server board, minimum (2) 10Gb Ethernet – Dual CPU, remote management</p> <p>Please quote separately for a fibre option.</p>
As many as needed	24 core CPUs – Minimum Intel Xeon Silver or other brand equivalent – state processor generation
As many as needed	64 GB RAM per controller
As many as needed	<p>SAS3 24-port Hardware RAID controller with battery backup</p> <p><input type="checkbox"/> RAID60</p> <p><input type="checkbox"/> Running NFS and possibly Lustre</p>
As many as needed	480GB SSD boot disk drive (non-MMC)
<p style="text-align: center;"><u>Storage Chassis – each with:</u></p>	
As many as needed	24-bay, Chassis SAS3 uplink (12 Gb/s), Remote management, rack mount
As many as needed	<p>20 TB or larger SATA 7200-rpm minimum.</p> <p>Please use discretion to maximise storage. e.g. quote separately for larger drives</p>

<u>Component 2</u>
<u>Personal Computer devices</u>

There are two systems listed below. One is a high specification, while the other is a low specification. These represent the dichotomous needs of the University. Please consider each and use your discretion to provide a quote on each of the two equipment below.	
As suggested by the research project	<p>TYPE 1 – High Specification</p> <p>These could be more robust units, for office or fieldwork, graphics design, Artificial Intelligence, Machine Learning or other mathematical calculations.</p> <p>Higher graphics or RAM than standard.</p> <p>Provide:</p> <p>CPU: i7 – state processor generation</p> <p>RAM: 32 GB</p> <p>SSD: 1 TB</p> <p>Screen: size, resolution: 17 inch</p> <p>Accessories: bag, docking station, etc.</p>
As suggested by the research project	<p>TYPE 2 – Low Specification</p> <p>These could be more robust units for fieldwork and data collection.</p> <p>Basic graphics or RAM could be than standard.</p> <p>Provide:</p> <p>CPU: Atom, Celeron, AMD ZEN, or ARM – state processor generation</p> <p>RAM: 1 GB</p> <p>SSD: 64 GB</p> <p>Screen: size, resolution: 14 inch</p> <p>Accessories: bag, docking station, etc.</p>

If your quote deviates from what has been requested, the University will review the revised proposal to ensure it meets the University's requirements. Every effort will be made to clearly explain the specifications.

7. TRAINING

- 7.1. The service provider will, at no additional cost to the University, provide the required training on the use of the Research IT equipment.
- 7.2. Where applicable, the service provider will transfer the requisite knowledge and skills related to the Research IT equipment and services to the identified University personnel throughout the life cycle

of the Agreements.

8. INDICATIVE TIMELINES

Unless otherwise agreed in writing, the indicative timelines are:

Equipment delivered to Supplier:	8 weeks	(From the date of order)
Equipment Build:	2 weeks	(from date of delivery)
Component 1: Install in Data Centre (Wits will install)	1 week	(from date of delivery)
Component 2 setup as per the requesting Academic (Wits will install)	1 week	(from date of delivery)
Install OS	1 week	(from date of installation)
Burn-in where applicable	2 weeks	(once the equipment is configured)

9. ACCEPTANCE CRITERIA

- 9.1. The Research IT equipment, once installed, must be proven to function correctly within the existing University infrastructure and must comply with the University's acceptance criteria. The acceptance criteria below, together with their associated remedies and tests, will be used to confirm the correct function of the Research IT equipment:
 - 9.1.1. Acceptance testing will be conducted by the service provider in the presence of an authorised University representative (e.g. a technician) at such times and places as agreed upon by the parties in writing.
 - 9.1.2. Following each acceptance testing session, the University will provide the successful service provider with a list of defects (if any) to be rectified within the correction period specified for each defect. It will inform the successful service provider of the time and place where the acceptance testing may be re-conducted.
 - 9.1.3. The successful service provider acknowledges that time is of the essence and undertakes to complete the acceptance testing within a further defect correction period of 5 (five) working days.
 - 9.1.4. The successful service provider must provide the University with all documents and reports which are developed by the successful service provider for these acceptance tests.
 - 9.1.5. The successful service provider must correctly complete the University's prescribed installation form.
 - 9.1.6. Stability is established with a 14-day burn-in period where applicable.

10. RISKS, ASSUMPTIONS, DEPENDENCIES & EXCLUSIONS (RADE)

- 10.1. The service provider will replace or firmware patch any Research IT equipment that is not compatible with the current infrastructure

11. CHARGES AND PAYMENT

- Subject to the acceptance criteria (Section 9 above) for each proposal.
- Stability is established with a 14-day burn-in period.
- As per the University's standard payment terms.

12. STANDARDS & HEALTH AND SAFETY

- 12.1. Data Centre safety protocols will be provided to the service provider by the University.