SCHEDULE K: SERVICE DEFINITION FOR ENHANCED OPERATIONAL MANAGEMENT LEVEL – AZURE MANAGED

The Azure Managed enhanced operational support level provides management and support to the Customer on CSP based Microsoft Azure environments on a 24x7x365 basis. This enhanced operational support level provides support for all Azure resources within the Customer's Azure tenancy ("Supported Items").

Exponential-e will provide management of the Customer Virtual Machines within Azure as set out below.

The service is designed to operate as an "IT to IT" model where the Customer IT Management Team will be approved to interact with Exponential-e Managed Services team through the Service Desk. End Users will not be permitted to contact the Exponential-e Managed Services team.

Definitions

Acronym	Definition
AD	Active Directory
AD-FS	Active Directory Federated Services
BC	Business Continuity
BCP	Business Continuity Plan
CMDB	Customer Management Database
CSP	Cloud Services Provider
DR	Disaster Recovery
ITSM	IT Service Management
MFA	Multi Factor Authentication
OS	Operating System
RI	Reserved Instance
RMM	Remote Monitoring and Management
SSO	Single Sign On

"Good Industry Practise" – the exercise of the degree of skill, diligence and prudence which would reasonably and ordinarily be expected from a skilled and experienced technology professional. engaged in the same type of activity under the same or similar circumstances but which shall not be construed as requiring every new release of software to be deployed where Exponential-e has good reasons for not so doing.

Service Description

Exponential-e will undertake the following management tasks within the Azure Managed enhanced operational support level:

Aspect	Exponential-e Responsibilities
Azure Backup (if used)	Configuring daily backups of all Supported Items to include the ability to restore individual files and whole Operating System environments and the data they contain. Limitations of Azure backup are listed in the "Backup Support Matrix" provided by Microsoft which is updated regularly. https://learn.microsoft.com/en-us/azure/backup/backup-support-matrix The following checks are included as part of the Exponential-e Service: - • Monitoring backups daily.

Aspect	Exponential-e Responsibilities
	• Test application-specific backups and restores during the On-Boarding activity to prove the recoverability of backed-up data. • Use reasonable endeavours to detect and remediate backup faults for OS and application issues of Supported Items. • Carry out full system restores from backup as requested by the Customer. Each Supported Item includes one full system restore event per annum without additional charge. Additional full system restores can be completed at an additional charge. • Carry out OS and application file level restores from backup as requested by the Customer. Each Supported Item includes sixty (60) file system restore events per annum without additional charge. Additional file-level restores can be completed at an additional charge. • Produce and maintain a document in the CMDB detailing the backup settings used to back up Supported Items and the processes to do this.
Azure Site Recovery (if used)	• Provide the Customer with standard Disaster Recovery and Business Continuity process document(s) for the Supported Items. • Request sign-off from the Customer stakeholders for the standard format Disaster Recovery and Business Continuity process document(s) for the Supported Items. • Participate in isolated DR exercises for the Supported Items once a year (to support DR failover exercises delivered remotely on a sample and isolated environment as detailed in the Disaster Recovery and Business Continuity process document(s), unless agreed otherwise in writing by the Parties). • Participate in chargeable Disaster Recovery simulations with the Customer on Supported Items if the Customer requests. This is subject to a minimum of ten (10) Working Days' notice provided to the Service Desk by the Customer. • Coordinate with the Customer's representatives to execute DR processes per the Disaster Recovery & Business Continuity process document(s). Exponential-e is responsible for carrying out all activities agreed for completion by Exponential-e in the Disaster Recovery and Business Continuity process document(s). • Participate with the Customer annually to review and improve the process document(s) for Disaster Recovery and Business Continuity.
Azure Service Monitoring	• Exponential-e will monitor Azure services with existing Exponential-e ITSM integrations. • Document all monitoring settings for all Supported Items during the On-Boarding activity and make this information visible to the Customer in the CMDB. Update the documentation when monitoring changes are made or via customer request.
Virtual Machine monitoring	• All Supported Items will be configured with an Remote Monitoring and Management ("RMM") method that will be used to monitor the health and availability of the Supported Items proactively.

Aspect	Exponential-e Responsibilities
	• Configuring and maintaining standard, automated OS and application monitors for Supported Items to notify Exponential-e of OS and application issues and outages. • Document all monitoring settings for all Supported Items during the On-Boarding activity and make this information visible to the Customer in the CMDB. Update the documentation when monitoring changes are made. It is customer responsibility for ensuring the identified list of Resources is complete and accurate. • Proactive monitoring of Supported Item CPU, RAM, disk space, and network utilisation if the Supported Item provides access to and stores this information for thirty (30) days. • Proactive monitoring of all Supported Items at regular intervals (as agreed during On-Boarding) to collect standard OS and application metrics. • Carrying out Exponential-e standard automated health check and performance monitoring for Supported Item Operating Systems and applications. • The Customer may choose up to five (5) additional OS monitors from Exponential-e's list of available additional OS and application monitors that Exponential-e will monitor for Supported Items. • Logging issues uncovered by OS and application monitoring within the management platform. • Process issues uncovered by OS and application monitoring to remediation (where possible). • Manage and maintain the monitoring agent software.
Azure Management Tasks	**Global Azure Management** • Manage the Azure tenancy and its configuration settings on behalf of the Customer. • The cost anomaly detection will be agreed with the Customer and Exponential-e will notify the Customer if anomalies are detected. It is the Customer's responsibility to review all costs and ensure they are as expected, and any Reserved Instances ("RI") or Savings Plans are correctly applied. • Quarterly cost optimisation report • Quarterly performance review of service recommendations • Annual Review of the Azure Environment • Decommissioning of Azure services if requested by the Customer, based on Exponential-e's ITIL-compliant decommissioning process. • Configuration and management of the Azure tenancy environment, including any Azure options, features, or supported applications installed onto Azure. **Access and Rights** • Manage Azure Lighthouse integration with the Customer's Azure tenancy • Manage Microsoft Single Sign On ("SSO") authentication using the Azure AD tenant.

Aspect	Exponential-e Responsibilities
	• Manage Azure AD Connect to provide the following features to the Customer correctly: password hash synchronisation, pass-through authentication, federation using AD FS, synchronisation of AD objects with Azure, and robust health monitoring of on-premise identity infrastructure. • Manage the management of users created in the Azure tenancy for Exponential administrative, Customer administrative, data access, and Azure end user services purposes. • Manage the management groups created in the Azure tenancy for Exponential-e and the Customer. • Configure and manage Azure AD Multi Factor Authentication ("MFA") policies for Azure administrators and users for access to supported hardware, operating systems, and applications. • Configure and manage Azure AD conditional access policies to Customer information on Microsoft 365 and Office 365. • Configure and manage Azure AD Self-Service Password Reset. **Commercial** • Configure and manage Azure budgets and spending threshold notifications as requested by the Customer. **Health** • Monitor Azure Service Health and notify the Customer of detected health problems. **Monitoring** • Configure Azure Monitor for required resources within the tenancy • Raising incidents in the event of Azure infrastructure health and availability problems. • Remediating Azure infrastructure health and availability problems. • Aspect Exponential-e's Responsibilities • Installation and configuration of the required software needed to support Exponential-e's service delivery of the managed services (including monitoring software and the setup of VM tools where applicable).
Cost Optimisation – Quarterly Review and Recommendations for performance optimisation (i.e. resizing)	• Undertake a quarterly review of cost optimisation and recommendations within Azure with the Customer • At Customer request, discuss impact of change and propose recommendations to Customer for resizing Azure Virtual machines. • Review recommendations relating to Reserved Instances • Review previous two (2) quarters Azure spend to identify cost change trends
Patch Management – if applicable Exponential-e will manage patching on Azure VMs for the Customer	• Schedule the delivery of patches in line with the Exponential-e standard patching process (as detailed in this Flex Manage Service Document)

Aspect	Exponential-e Responsibilities
	• Exponential-e carry out patch tests in a lab environment where possible to ascertain whether patches are safe to deploy and look to notify customers where known issues apply. Customers are required to schedule 2-4 weeks behind vendors' release cycles so that faults identified are corrected before installation in this scenario. • All patching is carried out in line with the agreed Change and Release processes during scheduled windows. Where possible, automation is used.

Service Hours

Exponential-e will provide the Azure Managed enhanced operational support level on a 24 x 7 x 365 basis.

Azure Service Exclusions

Exponential-e does not maintain technical skills for all Azure services in-house. However, customers leveraging non-supported services can still log incidents with Exponential-e, and Exponential-e will escalate with Microsoft on the Customer's behalf through Exponential-e's Premier Support Agreement with Microsoft to provide the Customer with Microsoft based support for Azure related issues and support requirements.

The services Exponential-e does not support directly includes, but is not limited to:

Azure Orbital	Load Testing
Internet Analyzer	Managed Grafana
Vnet Manager	Microsoft Dev Box
Avere vFXT	SignalR Service
Azure Elastic SAN	Visual Studio App Center
Azure NetApp Files	Energy Data Services
Confidential Ledger	Health Data Services
Data Share	Notification Hubs
HPC Cache	Web PubSub
Managed Lustre	Azure Maps
StorSimple	Azure Sphere
Azure Batch	Defender for IoT
Azure Quantum	Digital Twins
Azure Red Hat OpenShift	IoT Central
Cloud Services	IoT Edge
Azure AD EI (MS Identity)	IoT Hub
Kubernetes Fleet Manager	Object Anchors
Managed Apps	Remote Rendering
Apache Cassandra MI	Spatial Anchors
Database for MariaDB	Time Series Insights
Database for PostgreSQL	Azure Comms. Gateway
Redis Cache	Media Services
Data Catalog	
Data Explorer	
Operator Insights	

Applied AI Services	
Bot Service	
Microsoft Genomics	
Open Datasets	
Project Bonsai	
Azure Chaos Studio	
Azure Spring Apps	
Lab Services	

Service Dependencies

- Exponential-e must be the Azure Cloud Services Provider (CSP) for the services under Azure Managed enhanced operational support levels.
- The Service is underpinned by Microsoft Premier Support.
- Exponential-e will use Azure Lighthouse for access to the Customer Azure environment.

Customer Dependencies

The following Customer dependencies exist for Exponential-e to deliver the Azure Managed enhanced operational support level. Failure of the Customer to meet these Customer Dependencies may affect the service Exponential-e can deliver to the Customer and Exponential-e's obligations under the Flex Manage service levels.

- The Customer shall provide documented active Customer IT policies for all Supported Items when starting the On-Boarding process.
- The Customer shall provide Exponential-e with advice in advance of any peculiar, special, or particular modifications made to the Azure Managed enhanced operational support levels.
- The Customer shall be responsible for documenting and maintaining any differing configuration and requirements pertaining to the Azure Managed enhanced operational support levels that are peculiar, special, or have had particular modifications applied.
- The Customer shall ensure that Customer endpoints and management environments are secure, patched, and maintained in accordance with Good Industry Practice.
- The Customer shall ensure that any Customer-managed Azure Managed enhanced operational support levels are secured, patched, and maintained in accordance with Good Industry Practice.
- The Customer shall work with Exponential-e to replace all End-of-Life Supported Items before the End-of-Life date arrives.
- The Customer shall provide Exponential-e with appropriate rights on Azure Managed enhanced operational support levels to provide appropriate support.
- The Customer must use Exponential-e as Azure CSP
- The Customer will permit the use of Azure Monitor to be used for the purposes of monitoring an alerting against configured Azure services
- The Customer will permit the use of Azure Lighthouse for Exponential-e Management Services
- The Customer shall review the Cost Optimisation Report on a quarterly basis, and notify Exponential-e of any wish to make changes to existing services.
- The Customer will permit the deployment of additional services required to deliver enhanced service capabilities, and associated charges. For example, Azure VMs to run additional collectors, bastion hosts, jump servers etc.
- The customer must agree to providing Exponential-e with all relevant Admin privileges for the tenancy through GDAP, this must include but not be restricted to Azure role-based access control (RBAC) role assignments with *Microsoft.Support/supportTickets/write* permissions, all additional roles can be found here: GDAP role guidance : https://learn.microsoft.com/en-us/partner-center/gdap-least-privileged-roles-by-task

Service Onboarding

The Supported Items will undergo the following technical gates during On-Boarding:

Acceptance into Service 1 (AIS 1)

AIS 1 is achieved once the Azure Services have been enabled by Exponential-e or a combination of Exponential-e and the Customer. During this phase, the Azure Managed enhanced operational support level is not delivered to the Customer by Exponential-e.

Acceptance into Service 2 (AIS 2)

AIS 2 is achieved once the Azure Services have been enabled and configured by Exponential-e or a combination of Exponential-e and the Customer and any migration activities have been completed. During this phase, the Azure Managed enhanced operational support level is not delivered to the Customer by Exponential-e.

Early Life Support (ELS)

ELS is achieved once the Onboarding activity has been completed and Exponential-e commences delivering the Azure Managed enhanced operational support level. The period for ELS is agreed on an individual basis with the Customer during the On-Boarding activity and is at least one (1) month following the On-Boarding completion date. The Azure Managed enhanced operational support level is provided during the ELS phase, and the Flex Manage Service Level Agreement (SLA) will apply, but no Service Credits shall be payable.

Business as Usual (BAU)

BAU is achieved once the ELS period has elapsed and once all projects, programmes and expected activities that might introduce change have been concluded. During the BAU phase, Exponential-e will deliver the Azure Managed enhanced operational support level, the Flex Manage SLA will apply, and Service Credits will be payable thereunder.

The Service Commencement Date for the Supported Items is the date that the Supported Item has been On Boarded by the Exponential-e Service Desk and Early Life Support has commenced.

Service Education

Exponential-e will provide information to the Customer about the service's details, and how to effectively interact with the Azure Managed enhanced operational support levels. Exponential-e will provide the following service information during onboarding.

Information/Process	Timeline	Method
Raising incidents for faults/issues	On-Boarding	Face-to-face CMDB Document
Raising changes for system changes	On-Boarding	Face-to-face CMDB Document
Reporting	On-Boarding	Face-to-face CMDB Document
Requesting the creation of new Supported Items	On-Boarding	Face-to-face CMDB Document
Requesting the addition of Supported Item resources	On-Boarding	Face-to-face CMDB Document

Information/Process	Timeline	Method
Solution design documentation for Supported Items	First 3 months of BAU	CMDB Document
Solution configuration documentation for Supported Items	First 3 months of BAU	CMDB Document

Accountabilities and Responsibilities

RACI

A responsibility assignment (RACI) matrix showing whether Exponential-e, the Customer or any relevant third parties are Responsible, Accountable, Consulted or Informed in respect of a particular aspect will be drawn up to ensure a joint understanding. The RACI is bespoke to the Customer, is formalised during the On Boarding phase, and is documented in the CMDB.

The following table details who is responsible for high level ITIL-level RACI activities for managed resources within the Azure Managed Enhanced Operational Management Level. Some activities are shared between Exponential-e and the Customer, where the Customer will be responsible for activities such as raising or approving change requests. Specific details are documented within the CMDB.

ITIL Process	Exponential-e	Customer
Asset Management	RA	CI
Change Management	ACI	R
Configuration Management	RA	CI
Event Management	RA	CI
Incident Management	RA	CI
Patch Management	RA	CI
Release Management	RA	CI
Request Management	ACI	R

The Customer is responsible for all RACI activities for areas that Exponential-e is not responsible for. During the On Boarding activity the Customer shall identify key internal and 3rd line primary and back-up contacts to the Service Desk and promptly inform the Service Desk of any changes during the term of the Contract.

Service Requests

Service Requests are requested changes to a Supported Item or a request for an operational task made by the Customer.

Types of Service Requests may include those set out in the table on the following pages.

Where a Quantity and Frequency are specified in the table on the following pages, this is a maximum allowance included free of additional Charges over the corresponding timeframe. Service Requests in excess of this allowance will be accepted by Exponential-e but shall be invoiceable in arrears in accordance with Exponential-e's then-current Professional Services rates. For the avoidance of doubt, allowances apply on a "use it or lose it" basis and unused portions of any allowance cannot be rolled-over or the subject of any credit. Where the Quantity is designated as N/A, there is no maximum allowance and no additional charges shall apply.

All Service Requests that are designated in the table on the following pages as PR and any other Service Requests of a type not listed in the table are not included within the Charges for the Flex Manage Services and will be invoiceable in arrears in accordance with Exponential-e's then-current Professional Services rates plus any additional charges that apply as agreed in writing at the time of Service Request acceptance.

All Service Requests will be reviewed, verified and subject to approval by Exponential-e and Exponential-e will confirm if additional charges apply.

Service Requests will be subject to the applicable Target Time to Complete (if any) set out in the table on the following pages. Exponential-e shall use reasonable endeavours to complete the Service Request within this timeframe. The Customer may request the delivery time for all Service Requests to be scheduled for a future date/time in which event, the Target Time to Complete will commence at the relevant date/time.

Service Requests will be carried out by Exponential-e during the Hours stated in the table on the following pages. Should the Customer request that they be carried out outside of the applicable Hours, additional charges in accordance with Exponential-e's then-current Professional Services rates will apply.

ID	Request Description	Availability		Type*	Hours	Time to Complete	Quantity	Frequency
		Email	Phone					
SROAM01	Shut down OS	Yes	Yes	OSR	24 x 7 x 365	1 hour	10	Per month
SROAM02	Reboot OS	Yes	Yes	OSR	24 x 7 x 365	1 hour	10	Per month
SROAM03	Request new physical SI	Yes	Yes	PR	Normal Business Hours	7 Working Days following hardware delivery	N/A	As required
SROAM04	Request new virtual SI	Yes	Yes	PR	Normal Business Hours	1 Working Day	N/A	As required
SROAM05	Change IP address	Yes	Yes	OSR	24 x 7 x 365	1 hour	1	Per quarter
SROAM06	Change hostname	Yes	Yes	OSR	24 x 7 x 365	1 hour	1	Per quarter
SROAM07	Complete emergency patching	Yes	Yes	SO	24 x 7 x 365	8 hours	1	Per quarter
SROAM08	Complete emergency AV scanning	Yes	Yes	SO	24 x 7 x 365	8 hours	1	Per quarter
SROAM09	Complete additional backups of the SI	Yes	Yes	SO	24 x 7 x 365	8 hours	5	Per quarter

ID	Request Description	Availability		Type*	Hours	Time to Complete	Quantity	Frequency
		Email	Phone					
SROAM10	Restore the full physical server from backup	Yes	Yes	OSR	24 x 7 x 365	1 Working Day	1	Per annum
SROAM11	Restore the full virtual server from backup	Yes	Yes	OSR	24 x 7 x365	1 Working Day	1	Per annum
SROAM12	Restore individual files from backup	Yes	Yes	SO	24 x 7 x365	1 hour	60	Per annum
SROAM13	Test restore files from backup to test backup validity	Yes	Yes	PR	Normal Business Hours	2 Working Days	N/A	As required
SROAM14	Fail over the virtual SI to another location	Yes	Yes	OSR	24 x 7 x 365	1 hour	1	Per month
SROAM15	Adjust the physical resources allocated to the SI upon Customer request	Yes	Yes	PR	Normal Business Hours	2 Working Days following hardware delivery	N/A	As required
SROAM16	Adjust the virtual resources allocated to the SI upon Customer request	Yes	Yes	SO	24 x 7 x 365	1 Working Day	1	Per month
SROAM17	Create and format physical disk volumes	Yes	Yes	PR	Normal Business Hours	2 Working Days following hardware delivery	N/A	As required
SROAM18	Create and format virtual disk volumes	Yes	Yes	OSR	24 x 7 x 365	1 Working Day	1	Per month
SROAM19	Create fault tolerant physical disk systems	Yes	Yes	PR	Normal Business Hours	2 Working Days following hardware delivery	N/A	As required
SROAM20	Create fault tolerant virtual disk systems	Yes	Yes	OSR	24 x 7 x 365	1 Working Day	1	Per month
SROAM21	Complete one-time performance trend analysis of SI environments (CPU, RAM, disk space, network utilisation)	Yes	Yes	OSR	24 x 7 x 365	2 Working Days	1	Semi annually
SROAM22	Review DR and BC plan	Yes	Yes	SO	Normal Business Hours	5 Working Days	1	Per annum
SROAM23	OS and application patch installation	Yes	Yes	SO	24 x 7 x 365	8 hours	1	Per month
SROAM24	Hardware firmware installation	Yes	Yes	SO	24 x 7 x 365	2 hours	1	Semi annually
SROAM25	Reset SI management account password	Yes	Yes	SO	24 x 7 x 365	1 hour	1	Per quarter

ID	Request Description	Availability		Type*	Hours	Time to Complete	Quantity	Frequency
		Email	Phone					
SROAM26	Review OS and application audit logs	Yes	Yes	OSR	24 x 7 x 365	2 Working Days	1	Per annum
SROAM27	Restart applications	Yes	Yes	OSR	24 x 7 x 365	1 hour	10	Per month

* PR = Project Requirement, OSR = Operational Support Request