



MALAYSIAN COMMUNICATIONS AND MULTIMEDIA COMMISSION

**INVITATION TO REGISTER INTEREST AND SUBMIT
A DRAFT UNIVERSAL SERVICE PLAN**

AS A

**UNIVERSAL SERVICE PROVIDER
UNDER THE COMMUNICATIONS AND MULTIMEDIA
(UNIVERSAL SERVICE PROVISION) REGULATIONS 2002**

**FOR THE PROVISIONING OF CELL BROADCAST SYSTEM (CBS) FOR
EARLY WARNING SYSTEM (EWS) IN MALAYSIA UNDER THE UNIVERSAL
SERVICE PROVISION INITIATIVE**

Ref: SKMM(T)06-SEIR/140.015/Jil.1(21)

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ABBREVIATIONS

AMF	-	Access and Mobility Management Function
ASP	-	Application Service Provider
BOQ	-	Bill of Quantity
CAP	-	Common Alerting Protocol
CBS	-	Cell Broadcast System
CBC	-	Cell Broadcast Centre
CBE	-	Cell Broadcast Entity
CAPEX	-	Capital Expenditure
CMAS	-	Commercial Mobile Alert System
DBGF	-	Device-Based Geofencing
DUSP	-	Designated Universal Service Provider
EPC	-	Evolved Packet Core
ISP	-	Internet Service Provider
ITU	-	International Telecommunications Union
MCMC	-	Malaysian Communications and Multimedia Commission
MME	-	Mobility Management Entity
MNO	-	Mobile Network Operator
MOCN	-	Multi Operator Core Network
NoA	-	Notification of Approval
OPEX	-	Operating Expenditure
PLMN	-	Public Land Mobile Network
POI	-	Point of Interconnection
RAN	-	Radio Access Network
SOP	-	Standard Operating Policies and Procedures
USP	-	Universal Service Provision
VM	-	Virtual Machine
WGS 84	-	World Geodetic System 1984
3GPP	-	3 rd Generation Partnership Project
5GC	-	5G Core
SEB	-	Sarawak Energy Berhad
SESB	-	Sabah Electricity Sendirian Berhad
TNB	-	Tenaga Nasional Berhad

INTERPRETATIONS

Any terms or words used in this Invitation shall, unless expressly stated or if the context otherwise requires, have the same meaning as provided in the Communications and Multimedia Act 1998 [(Act 588)], all subsidiary legislation and instruments issued, made or given by the Minister or the Commission.

- a) "Act" means the Communications and Multimedia Act 1998 (Act 588).
- b) "Approved Universal Service Plan" means the draft universal service plan (as defined herein) that has been approved by the Commission as specified under regulation 8 of the USP Regulations (as defined herein).
- c) "Bill of Quantity" means a document submitted by the Interested Licensee (as defined herein) to the Commission in which materials, parts, equipment, and cost of labour are itemised. The BOQ is to be priced in Ringgit Malaysia and shall be inclusive of any applicable tax imposed by the Government of Malaysia. The sum of the amounts shown in the BOQ shall represent the total cost of the Project.
- d) "Cell Broadcast System" means a technology to rapidly deliver targeted location-based warnings, avoid network congestion, and ensure that recipients are alerted to critical information with audible and unique alerts and on-screen messages.
- e) "Commission" means the Malaysian Communications and Multimedia Commission established under the Malaysian Communications and Multimedia Commission Act 1998 [(Act 589)].
- f) "Common Alerting Protocol (CAP) v1.2" means a simple but general format for exchanging all-hazard emergency alerts and public warnings over all kinds of networks.
- g) "Completion Report" means a report to be compiled and maintained by the Designated Universal Service Provider on the completion of Work (as defined herein) for at least 10 years from the submission of the Declaration (as defined herein) as stipulated in **Appendix 6** in this Invitation.
- h) "Declaration" means a self-declaration made by the Chief Executive Officer or a person who holds an equivalent designation in the Designated Universal Service Provider that the scope of work for each stage as stipulated in the claim schedule attached to the Notification of Approval issued to the relevant Designated Universal Service Provider has been delivered in accordance to the Approved Universal Service Plan, and that all representations and information furnished to the Commission in the self-declaration are accurate and true.

- i) "Designated Universal Service Provider" means any Interested Licensee (as defined herein) designated by the Commission under regulation 9 of the USP Regulations pursuant to this Invitation.
- j) "Draft universal service plan" means a draft of the universal service plan submitted by the Interested Licensee as specified under regulation 6 of the USP Regulations.
- k) "Early Warning System" means a system to broadcast emergency warning alerts to end users through mobile networks, based on the location of the end user devices.
- l) "Government Agencies" means all agencies established by the Government at every level of administration - namely the Federal, State, and District levels, including Local Authorities.
- m) "Interested Licensee" means any person who holds a valid Applications Service Provider (Class) Licence under the Act for the provisioning of public cellular services, meets the eligibility criteria set pursuant to subregulation 5(2)(ga) of the USP Regulations, and registers its interest to respond to this Invitation.
- n) "Licensee" means a person who either holds an individual licence, or undertakes activities which are subject to a class licence, granted under the Act.
- o) "Notification of Approval" means a notification issued by the Commission to the Designated Universal Service Provider pursuant to regulation 9 of the USP Regulations.
- p) "Relevant authorities" include but are not limited to the relevant Ministries, Fire and Rescue Department of Malaysia, the power supply providers (for example SEB, SESB, and TNB, and all relevant local authorities.
- q) "Universal Service Target or UST" means an underserved area and/or an underserved group within the community.
- r) "USP Regulations" means the Communications and Multimedia (Universal Service Provision) Regulations 2002.
- s) "Work" means the entire scope of work to be undertaken and completed by the Designated Universal Service Provider pursuant to the Approved Universal Service Plan and the Notification of Approval issued by the Commission.

- t) “4G” means fourth-generation mobile technology that complies with ITU’s IMT Advanced standards. It includes LTE and LTE-Advanced, which offer high-speed broadband, improved voice quality, and efficient data transmission.
- u) “5G” means fifth-generation mobile technology defined by ITU as IMT-2020. It supports ultra-fast data speeds, low latency, and massive device connectivity to enable services like smart cities, IoT, and important applications.

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SECTION I

INTRODUCTION

1. BACKGROUND

- 1.1. This USP initiative is undertaken pursuant to Section 202(1) of the CMA 1998, which provides for the determination and implementation of a universal service provision system to promote the widespread availability and use of network and applications services. The initiative supports the Commission's ongoing efforts to enhance the dissemination of disaster alerts through the Early Warning System (EWS) utilising the Cell Broadcast System (CBS) in Malaysia, including for underserved areas and communities.
- 1.2. The Commission has pursuant to subregulation 4(1) of the USP Regulations, specified the Universal Service Targets under Notification Ref. No: NT/USP/2/02, Ref. No: NT/USP/1/04, Ref. No: NT/USP/08/01, Ref. No: NT/USP/01/11, and Ref. No: NT/USP/01/21 respectively.
- 1.3. This Invitation is made pursuant to Section 202(1) of the CMA 1998 and regulations 5 of the USP Regulations ("Invitation") to invite Interested Licensee to register their interest and submit its draft Universal Service Plan for the provisioning of Cell Broadcast System for Early Warning System in Malaysia, consists of a Cell Broadcast Entity (CBE) at government domain and Cell Broadcast Centre (CBC) at MNOs domain, as specified in **Appendix 1** of this Invitation.
- 1.4. The objective of this Project is to enhance the timely and effective dissemination of disaster alerts via cellular mobile service to the public throughout Malaysia. By leveraging the capabilities of the Cell Broadcast System, real-time and location-based warnings can be provided to individuals in affected areas, thus improving public safety and enabling informed responses to emergencies.

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SECTION II

DESCRIPTION OF SCOPE OF WORK

2. GENERAL DESCRIPTION OF THE NETWORK SERVICE TO BE PROVIDED

- 2.1. Under this Invitation, the DUSP shall be responsible for the supply, installation, testing, commissioning, and maintenance of a highly reliable, scalable, and interoperable Cell Broadcast System (CBS) for Early Warning System (EWS) deployed for 4G and 5G networks and operated by the relevant disaster management agencies in Malaysia, as specified in **Appendix 1** of this Invitation.
- 2.2. The proposed system shall possess the capability to rapidly disseminate emergency alerts using cellular mobile service and be received by the cellular mobile access device nationwide, while adhering to established regulatory and operational standards.
- 2.3. The CBS shall support both current and advanced mobile network technologies, including 4th Generation (4G) and 5th Generation (5G) mobile networks and facilitate seamless integration with government alerting platforms, in accordance with the Common Alerting Protocol (CAP) v1.2 standard.
- 2.4. Additionally, the DUSP of this Project shall also provide comprehensive support and maintenance services for a period of nine (9) years (108 months) upon the completion of the warranty period, which include hardware, software, including its annual subscription fees, CBE cloud storage subscriptions, and associated services necessary for the successful operation of the CBS.
- 2.5. After the completion of the warranty period and the nine (9) years maintenance and support period (ten (10) years in total), the entire Cell Broadcast System (CBS), including all hardware, software, licences, configurations, cloud storage, documentation, and any related operational components, shall be fully transferred and handed over to the designated government agency. The DUSP shall provide all necessary assistance during the handover process, including system documentation, knowledge transfer, and technical support, to ensure a smooth transition and continued operation of the CBS.

3. SCOPE OF WORK

- 3.1. The scope of work describes the requirements, timeline, documents, and reports for the DUSP. The Interested Licensee shall read, understand and fulfil all obligations specified herein.

General Requirements

- 3.2. In undertaking this Project, the DUSP shall comply with the following:
- 3.2.1. The Act, any subsidiary legislation made under the Act, including but not limited to the USP Regulations, other instruments, plans, mandatory standards, guidelines, or regulatory policies issued, made, or given under the Act, including any amendment(s) or replacement(s) enacted thereafter;
 - 3.2.2. Any other requirements and/or conditions as set forth by the relevant authorities for the implementation of the Project; and
 - 3.2.3. Any other requirements and/or conditions that may be imposed by the Commission from time to time.
- 3.3. The DUSP shall be required to comply with all applicable local laws, by-laws, rules, and regulations that are legally enforceable within any State where the Project is implemented. This includes, but is not limited to, obtaining the necessary permits or approvals from relevant authorities, adhering to safety and environmental standards, and ensuring that all works are carried out in accordance with legal and regulatory requirements to avoid any legal liabilities or enforcement actions.

4. DETAILED SCOPE OF WORK

- 4.1. For the implementation of this Project, the DUSP shall be responsible for, but not limited to, the following:
- 4.1.1. Provide a complete Cell Broadcast System (CBS) to be deployed for all 4G and 5G networks for Malaysia. The CBS includes a centralised Cell Broadcast Entity (CBE) for the government domain and distributed Cell Broadcast Centre (CBC) for the Mobile Network Operators (MNO) domain, which consists of 5 MNOs; CelcomDigi Berhad (CelcomDigi), Maxis Broadband Sdn Bhd (Maxis), U Mobile Sdn Bhd (U Mobile), TM Technology Services Sdn Bhd (TM) and YTL Communications Sdn Bhd (YTLC);

4.1.2. The CBS must be able to allow for mobile users of Mobile Virtual Network Operators (MVNO) to receive alert messages. The CBS must be able to broadcast alert messages for all RAN under Multi-Operator Core Network (MOCN) sharing models including the 5G Single Wholesale Network (SWN) provided by Digital Nasional Berhad (DNB) and the second 5G network deployed by U Mobile;

4.1.3. The overall network architecture of CBS to be proposed is as shown in **Figure 1** below. The DUSP shall provide the detailed network architecture illustrating the overall network architecture of the proposed CBS, including any element management system or network components. Detailed network diagrams may be added as a supplement.

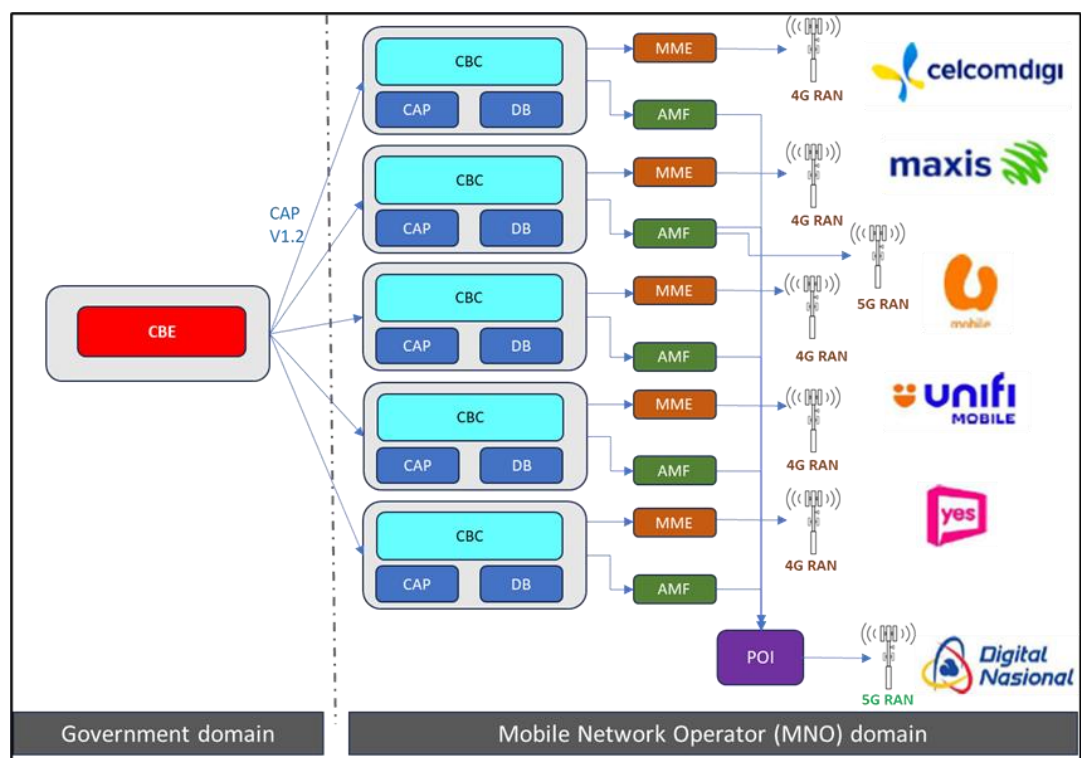


Figure 1: CBS Network Architecture

4.1.4. The provision of CBS license shall be based on the current and forecasted network dimension of each MNOs provided below. It is forecasted that the DNB 5G SWN network and U Mobile 5G network will be expanded further in the next 5 years. The estimated number of cells for CBS license shall be able to cater future network dimension as follows:

	MNO A (4G)	MNO B (4G)	MNO C (4G)	MNO D (4G)	MNO E (4G)	5G SWN (SA + NSA)	5G B (SA + NSA)
Cells (current)	370,000	146,000	143,000	38,000	33,000	82,000	-
Cell sectors (current)	70,000	35,000	32,000	17,000	13,000	27,000	-
Cells (forecast)	-	-	-	-	-	149,100	101,000
Cell sectors (forecast)	-	-	-	-	-	49,700	33,600

4.1.5. Provide the installation, integration, testing, commissioning, and ongoing maintenance and support of all hardware, software, and associated services supplied, necessary for the successful deployment and operation of the CBS. CBE shall be deployed on a secured Tier-1 public cloud with High Availability and geo-redundancy, to be included in the system deployment. For each CBC deployment, a secured private cloud or bare metal deployment options with geo-redundancy, shall be made available by the MNOs, and DUSP shall take this into consideration in the submission. All applications and virtual machines (VM) running on cloud or any data or information, shall be hosted within Malaysia. The system shall include a dashboard for system monitoring. Any additional functions or optional customisation to the system must be included separately where applicable.

4.1.6. The CBS shall support the use of Message IDs as a mechanism to identify the source and type of each Cell Broadcast Message, in alignment with the Message ID ranges and alert classifications proposed for Malaysia's CBS implementation. The system shall be configured to use the following Message ID mappings for the respective alert levels and event types:

Alert level	Type of event	Message ID for Mandatory to display messages	Message ID for optional to display messages	Ringtone	Vibration	Enabled by default	User opt-in/opt-out
National Alerts	National Alerts	4370	4383	Standard CMAS tone	Standard CMAS Vibration	Not visible in UI	No
Emergency Alerts	Extreme Alerts	4371	4384	Standard CMAS tone	Standard CMAS Vibration	Yes	Yes

Alert level	Type of event	Message ID for Mandatory to display messages	Message ID for optional to display messages	Ringtone	Vibration	Enabled by default	User opt-in/opt-out
	Severe Alerts	4373	4386	Standard CMAS tone	Standard CMAS Vibration	Yes	Yes
	Active Shooter Alerts	4374	4387	Silent	Silent	Yes	Yes
	All Clear Alerts	4396	4397	Standard CMAS tone	Standard CMAS Vibration	Yes	Yes
Amber Alerts	Child Abduction Missing Person	4379	4392	Standard CMAS tone	Standard CMAS Vibration	Yes	Yes
Testing	Testing	4380	4393	Standard CMAS tone	Standard CMAS Vibration	No	Yes
Exercise	Exercise	4381	4394	Standard CMAS tone	Standard CMAS Vibration	Yes	Yes
N/A	DBGF Trigger	4400		N/A	N/A	N/A	N/A

- 4.1.7. Provide complete training materials and conduct full hands-on training to at least 50 officers, including MCMC officers, government officers from multiple agencies responsible for the dissemination of disaster alerts, officers from MNOs, and any other relevant personnel identified as users. The training may be done in several separate sessions for different sets of trainees.
- 4.1.8. Refresher training shall be provided annually throughout the maintenance and support period. The refresher training shall be conducted upon request by the Commission or on a mutually agreed date.
- 4.1.9. Ensure that the proposed system meets all the required technical specifications as specified in **Table 1 (CBS Requirements)**, **Table 2 (CBE Requirements)**, **Table 3 (CBC Requirements)**, **Table 4 (Support and maintenance)**, **Table 5 (Security Aspect)**, and **Table 6 (Other requirements)** as follows. In addition, ensure that relevant information is provided based on the requirements stated in **Table 7 (Optional features for future expansion)** below:

Table 1: Technical Specifications for Cell Broadcast System (CBS)

No	Cell Broadcast System Requirements
1.1	In full compliance with International Telecommunication Union (ITU) and 3GPP standards and industry standards, including but not limited to: <ul style="list-style-type: none"> i. Recommendation ITU-T X.1303 bis ii. CAP v1.2 iii. 3GPP TS 23.041 iv. 3GPP TS 29.168 v. ATIS-0700008
1.2	Able to adopt the Common Alerting Protocol (CAP v1.2)
1.3	Geographic locations in CAP must be defined using World Geodetic System 1984 (WGS 84)
1.4	Able to comply with the Commercial Mobile Alert System (CMAS), and able to customize the Message ID alerts specific for Malaysia upon the readiness of Message ID specification
1.5	Able to support precise geo-targeting functionalities, to all mobile devices
1.6	Able to support Device Based Geo-Fencing (DBGF), where mobile phone will match its own geographical location to the location encoded in the Cell Broadcast Message (in this case, the DUSP has to specify the earliest mobile phone firmware for Malaysia that are able to support this feature)
1.7	Able to be an integrated web interface platform for the creation and triggering of alerts, for both CBE and CBC, that is compatible with Microsoft Edge, Google Chrome, Mozilla Firefox, Safari, etc. without any other application required
1.8	Able to be hardware-agnostics, from bare metal infrastructures to virtualized environments, including hypervisor or container management platform.
1.9	Able to be network vendor agnostic and support integration to all network vendors used by MNOs in Malaysia
1.10	Able to support multi-language alert (at least English, Bahasa Malaysia, Tamil and Mandarin)
1.11	Able to include the "National Serial Number" (NSN) functionality on CBE and CBC
1.12	Able to ensure the successful onboarding process and able to be responsible on planning, configuration, testing and validation of the proposed system
1.13	The CBS shall support heartbeat and application-level testing for MME/AMF to monitor link and operational status, automatically re-establish links and generate EMS alarms upon failures or non-responsiveness.
1.14	DUSP shall provide EMS (Element Management System) solution as part of the offering. The EMS shall have the following functionalities: <ul style="list-style-type: none"> i. Fault/Alarm Management ii. Performance Management iii. Configuration Management iv. Inventory Management v. User management
1.15	Able to provide configurable repetition rate for messages, ranging from 2 seconds to over 30 minutes or longer.

Table 2: Technical Specifications Cell Broadcast Entity (CBE)

No	Cell Broadcast Entity Requirements
2.1	Able to provide a multi-tenant application, at least 50 user accounts for initial deployment and may be further increase at no additional cost throughout deployment and warranty period
2.2	Able to be hosted on a Tier-1, hyperscale, with geo-redundancy and High Availability (HA) cloud platform with SLA at least 99.99%, and hosted in Malaysia
2.3	Able to be an integrated web interface platform for the creation and triggering of alerts, compatible with Microsoft Edge, Google Chrome, Mozilla Firefox, Safari, etc. with no additional application installation is required by the users
2.4	Able to provide a user interface with mapping function and geo-fencing capability with custom polygons
2.5	Able to select multiple language for alert messages
2.6	Able to choose the start and stop time for the alert message to be activated
2.7	Able to indicate the number of successful broadcasted cells with accurate time stamp
2.8	Able to comply with CAP v1.2 for message dissemination
2.9	Able to have a role-based access control and comprehensive audit logging for all administrative activities
2.10	The platform must have the capability to assign different user roles, and the administrator must possess the ability to add, delete, change, deactivate, and activate user functions, among others
2.11	Dashboard must be able to retain and display all data obtain during the duration of the contract

Table 3: Technical Specifications for Cell Broadcast Centre (CBC)

No	Cell Broadcast Centre Requirements
3.1	Able to have full reachability to 100% of the RAN nodes for 4G (LTE) and 5G of all MNOs including the MOCN sharing RAN
3.2	Able to facilitate the real-time delivery of broadcast messages to all participating MNOs, supporting LTE and 5G network technologies
3.3	Able to be integrated with the 4G and 5G cell controllers of the MNOs
3.4	Able to be integrated with the centralized CBE located in public cloud
3.5	Able to comply with CAP v1.2 for message dissemination
3.6	Able to be an integrated web interface platform for the creation and triggering of alerts, compatible with Microsoft Edge, Google Chrome, Mozilla Firefox, Safari, etc. with no additional application installation required by the users
3.7	Able to regularly update PLMN data and cell data in the database to ensure alerts can be sent to the intended cell(s)
3.8	Able to have similar functions to the CBE, in the case where connection to the CBE failed and alert messages need to be created and triggered from the CBC

No	Cell Broadcast Centre Requirements
3.9	CBC may be deployed via bare metal, or Virtual Machine (VM) on bare metal or private cloud, using hypervisor or container management platform, depending on the MNOs' preferences
3.10	Able to provide the required specifications for the VM on bare metal, hypervisor, container management platform and bare metal to ensure the infrastructure be made available by the MNOs for the installation and integration
3.11	Able to carry out installation on bare metal on approved hardware on premises
3.12	Able to verify the equipment or platform for the installation of the proposed system
3.13	CBC shall support geo-redundancy with 100% capacity
3.14	CBC shall support VM onboarding on MNO selected OS like Red Hat OpenStack, Ubuntu OpenStack etc.
3.15	DUSP shall provide certification with Openstack as reference (Red Hat, Ubuntu etc).
3.16	DUSP shall provide compute power and storage requirements for the entire duration of the contract term.
3.17	DUSP shall provide documented evidence of Multivendor Verification Integration (MVI) test validating interoperability and connectivity between the CBC and the network element vendors for MME and AMF respectively.

Table 4: Support and Maintenance Requirements

No	Support and Maintenance Requirements
4.1	Able to provide support and maintenance throughout the 1-year warranty period and 9 years maintenance period
4.2	Able to perform CBS platform maintenance and support services consisting of hardware, software, configuration, routing, and optimization
4.3	Able to submit detailed scope of the support and maintenance during warranty and maintenance period
4.4	Warranty period of the CBS platform shall be one (1) year after the complete system commissioning
4.5	Able to provide any software updates or upgrades to the CBS functionality without additional costs during the warranty and maintenance period of the CBS (including any 3rd party software)
4.6	Able to provide log and track the activities/actions for all maintenance and supports services given on annual basis
4.7	Able to provide a full support structure which specifies the level of incidents severity, scope of support, type of communication medium, response time KPI, number of staff and level of qualification
4.8	Able to make available Support Operation Centre with Trouble Ticketing System, flow of fault reporting management, problem tracking, consultation and other support services
4.9	Able to provide 1st level technical support with the scope as below: <ul style="list-style-type: none"> i. Provide 24 hours, seven days a week (24x7x365) on-site/remote support which includes overseeing any necessary diagnoses, and troubleshooting.

No	Support and Maintenance Requirements
	<ul style="list-style-type: none"> ii. Able to support the replacement of defective parts/network module by MNOs. iii. Able to communicate with the Commission while investigating or providing problem resolution and ensure minimal disruption to service as agreed in contractual KPI. iv. Able to perform escalation as per processes and procedure. v. Able to conduct physical fault tracing if required. vi. Able to manage records during incidents and provide the root cause analysis. vii. Able to conduct Preventive Maintenance and submit written reports. viii. Able to provide or highlight any issues or concern encounter during Preventive Maintenance activities. ix. Able to monitor network performance and KPI, and produce KPI reports if required by the Commission. x. Able to perform any testing in test environment or in live network when is permitted.
4.10	Able to provide Level-1, Level-2 and Level-3 technical support throughout the warranty and maintenance period (DUSP shall specify the scope of supports)
4.11	The first level technical support must be located in Malaysia
4.12	Should there be any request for scopes and deliverables that are not stipulated in this Contract exercise, it shall be processed through Change Management Process without any cost.
4.13	Able to be responsible for any incidents restoration and reporting that include isolation of faults, identifying faulty system components, correction of abnormal operations and all repair works
4.14	To provide relevant trained, skilled, professionally certified and experienced personnel who are proficient in undertaking the support and maintenance tasks for consultation and technical advice to support remedial maintenance
4.15	For any outage or service disruption to the system in live environment, which affect any of CBS services, the DUSP shall be able to commence work immediately to rectify the problem with a target time of solving the problem according to the KPI
4.16	Able to provide incident reports in writing on any faults or any incident on service disruptions which includes reason for outage, fault root cause analysis, solution, response time, resolution, etc.
4.17	Able to provide maintenance work and followed by agreed acceptance or proof test to be run on the system to ensure the system is operating satisfactorily
4.18	Able to perform Preventive Maintenance according to an agreed schedule and able to notify the Commission and MNOs 2 weeks prior to the Preventive Maintenance activity
4.19	Able to carry out the Preventive Maintenance Support quarterly for each year or as agreed in the Preventive Maintenance Schedule
4.20	The Preventive Maintenance Services shall consist of (but not limited to) system status, system log analysis, error log analysis, configuration check, database check, software check, license check, system backup, access control and system redundancy test

No	Support and Maintenance Requirements																				
4.21	Should there be any faults found during the activities, the DUSP shall be able to resolve the problems upon agreement with the Commission and MNOs without additional cost																				
4.22	Able to submit written preventive maintenance report on the status, performance and condition of the system not later than 2 weeks after activity completion																				
4.23	Able to ensure that all software upgrades are tested and proven working in a test environment before being rolled out into the production network																				
4.24	Able to provide adequate and qualified engineers for on-site support for the preventive maintenance and corrective maintenance																				
4.25	Able to provide installation of CBS software for any tech-refresh on bare metal deployment or private cloud upgrades and support, which may be performed by the Commission and MNOs throughout the warranty and maintenance period without additional cost																				
4.26	SLA: Trouble Report handling																				
	<table border="1"> <thead> <tr> <th>Severity level</th> <th>Remedy</th> <th>Preliminary trouble report answer</th> <th>Final solution</th> <th>Final trouble report answer</th> </tr> </thead> <tbody> <tr> <td>Critical (Class A)</td> <td>Three (3) hours</td> <td>In advance to implementation of the remedy</td> <td>Three (3) calendar days</td> <td>In advance to implementation of the final solution</td> </tr> <tr> <td>Major (Class B)</td> <td>Eight (8) hours</td> <td>In advance to implementation of the remedy</td> <td>Seven (7) calendar days</td> <td>In advance to implementation of the final solution</td> </tr> <tr> <td>Minor (Class C)</td> <td>Fourteen (14) calendar days</td> <td>In advance to implementation of the remedy</td> <td>Fourty two (42) calendar days</td> <td>In advance to implementation of the final solution</td> </tr> </tbody> </table>	Severity level	Remedy	Preliminary trouble report answer	Final solution	Final trouble report answer	Critical (Class A)	Three (3) hours	In advance to implementation of the remedy	Three (3) calendar days	In advance to implementation of the final solution	Major (Class B)	Eight (8) hours	In advance to implementation of the remedy	Seven (7) calendar days	In advance to implementation of the final solution	Minor (Class C)	Fourteen (14) calendar days	In advance to implementation of the remedy	Fourty two (42) calendar days	In advance to implementation of the final solution
	Severity level	Remedy	Preliminary trouble report answer	Final solution	Final trouble report answer																
	Critical (Class A)	Three (3) hours	In advance to implementation of the remedy	Three (3) calendar days	In advance to implementation of the final solution																
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Minor (Class C)	Fourteen (14) calendar days	In advance to implementation of the remedy	Fourty two (42) calendar days	In advance to implementation of the final solution																	
"Remedy" means a workaround solution. The overall target is to restore the functionalities of the affected system in order to minimize the observable impact on the end user and functionality/services provided by the DUSP.																					
Severity level indicators:																					
<ul style="list-style-type: none"> i. Critical (Class A): A complete or partial system failure which decreases the capacity of the system to function effectively. ii. Major (Class B): Degrades the performance or incorrect behaviour with minor impact to the system in specific area of functionality, but not the whole system. iii. Minor (Class C): small problems that have a minor effect on the functionality of the system. 																					
4.27	DUSP is obliged to offer and deliver Software upgrades, patches and updates, enabling the Commission to introduce new services, new module, new features and/or improved Operational with no additional cost.																				

No	Support and Maintenance Requirements
4.28	Any new Software Package shall be backward compatible with all Network Elements and related interfaces. The backward compatibility implies that the Equipment with new Software Package will inter-operate with existing system, without loss of any functionality, features and/or quality. The DUSP shall ensure that such compatibility is maintained for the life span of the system.
4.29	Provide an up-to-date version of the Software and all relevant documentation within reasonable time. All Software Package related documentation (including Method of Procedure) shall be provided to the Commission.
4.30	Ensure the new Software Package has been tested workable with the infrastructure operating system (e.g.: Red Hat OpenStack, etc.). Any additional resources shall be absorbed by the DUSP.
4.31	System availability of CBC is 99.99% to 99.999% (depending on MNOs' system SLA)
4.32	System availability of EMS is 99.99%

Table 5: Security Aspect Requirements

No	Security Aspect Requirements
5.1	Able to provide Internet Protocol Security (IPsec) for secured interface and message transfer protocol between a Cell Broadcast Entity (CBE) and Cell Broadcast Centre (CBC) and core network, to support Cell Broadcast Services
5.2	Able to provide and specify the secured leased line from CBE (on public cloud) to CBCs (on private cloud or bare metal) and to provide specification of any security measures (firewall, etc.) and the required capacity of the leased line
5.3	Able to provide a secure and intuitive interface for the creation, scheduling, and administration of cell broadcast messages
5.4	Able to ensure a secure solution with adequate protection against the following: <ul style="list-style-type: none"> i. unauthorized customer and business data disclosure ii. fraudulent transactions iii. data tampering iv. data destruction v. content copyright infringement
5.5	Able to ensure the security controls are configured and effective from security threats
5.6	Able to ensure that the proposed solution shall contain no backdoor, malware, unauthorized functionality, and unauthorized remote access
5.7	Able to furnish information of other relevant additional security certification of the proposed solution
5.8	Able to have in place comprehensive security risk management program to ensure all security controls are implemented and effective
5.9	Able to comply to Malaysia Cyber Security Act 2024 (854)
5.10	Able to establish encrypted tunnelling for sensitive data transport to external public services, if required

No	Security Aspect Requirements
5.11	<p>Able to adhere to any security protocols imposed by the MNOs for the installation, configuration and maintenance of the system including but not limited to the following:</p> <ul style="list-style-type: none"> i. submission of any security documentation ii. secure software development lifecycle iii. 3rd party risk management iv. Access and identity control management v. System logs for firewall, logins, servers, applications, etc. vi. Industry best practice network security, firewall configuration
5.12	<p>Able to ensure all remote access connections to the proposed solution is using secure encrypted protocol and authentication with Multifactor Authentication or any other security requirements from the MNOs</p>
5.13	<p>Able to ensure that the subscribed public cloud complies with the following ISO certifications:</p> <ul style="list-style-type: none"> i. ISO/IEC 27001; ii. ISO/IEC 27017; iii. ISO/IEC 27018; iv. ISO 22301; v. ISO 27701; vi. TL 9000; vii. ISO 9001.
5.14	<p>DUSP shall be responsible for identifying and providing the technical scope for the Penetration Testing (Pentest) of the whole system architecture and shall be agreed with the MNOs. DUSP shall also be responsible for appointing an independent third-party company with relevant experience in conducting the Pentest. The third-party company shall have a minimum certification of ISO/IEC 27001 and licensed by National Cyber Security Agency Malaysia (NACSA).</p>
5.15	<p>DUSP shall be responsible for preventing exploitation of technical vulnerabilities by systematically managing vulnerabilities in software, hardware and firmware and perform security testing of systems and services and externally exposed interfaces.</p>
5.16	<p>DUSP shall response to Vulnerability Assessment (VA) report on vulnerabilities including severity levels, type of vulnerability, impact and solution or workaround for security weakness.</p>
5.17	<p>DUSP shall ensure the solution offered is capable to produced logs (audit log and operating system) which shall be sent to the MNOs' log system. The log shall be readable and able to be analysed by the log management and analytical platform of the MNOs (e.g. Splunk).</p>
5.18	<p>DUSP shall support remote access and control policy following with the Commission's and MNOs' remote access standard and access control policy.</p>
5.19	<p>DUSP shall provide Access Management solutions and integration with Microsoft Active Directory (AD), CyberArk or any other solutions used by MNOs.</p>
5.20	<p>Solution offered by DUSP shall support hardening and VA scanning.</p>

No	Security Aspect Requirements
5.21	In case of shared platform or multi-tenancy solution (if applicable), vendor shall ensure that cell data of each tenant are securely contained within respective tenant.

Table 6: Other Technical and Operational Requirements.

No	Other Technical and Operational Requirements
6.1	Able to provide detailed engineering design, system specification (for bare metal and VM) based on network dimension, integration documentation, testing and technical support for onboarding processes for each MNOs
6.2	Provide documentation and user manual for the platform, data dictionary for the system, etc.
6.3	Able to perform site survey prior to commencement of work. The survey shall include preliminary and detailed site inspection and preliminary system design
6.4	The Commission shall also reserve the right to amend any proposal before or after such site surveys have been carried out, and where necessary, to instruct DUSP to resurvey the selected activities without any cost.
6.5	Able to produce hardware, system and service Acceptance Test Plan (hardware, system and service ATP) to be submitted to the Commission for approval prior to system commissioning, and handover the documents once the system has been commissioned according to the format and schedule.
6.6	To provide the complete final test report and documentation upon the completion of the acceptance test and the Commission reserves the right to reject the report if found unacceptable and to request DUSP to repeat the test.
6.7	Able to ensure the product lifespan and the support services of the product until the end of the maintenance period.
6.8	Provide hands-on training sessions to at least 50 users, which can be conducted separately based on different user functions.
6.9	Provide training to equip and certify the MCMC staff as administrators, relevant agencies staff (as CBE users), and relevant MNOs staff (as CBC users), with the capabilities and competencies to administer and operate the CBS.
6.10	Able to provide training on different roles of CBS, including administration and testing of CBS.
6.11	Able to provide training materials, programs, locations, trainer details, prior to the training, for assessment and agreement by the Commission.
6.12	Able to provide specific roles and responsibility of the DUSP, the Commission and MNOs

Table 7: Optional features for possible future expansion requirements

No	Optional Features for Future Expansion Requirements
7.1	<p>Able to provide additional features on integration of CBS to mobile application. To provide:</p> <ul style="list-style-type: none"> i. Platform requirement, license requirements, etc. for CBS ii. Network integration requirement with architecture diagram iii. Cost breakdown iv. Requirements for the application (i.e. support CAPv1.2 protocol, number of applications can be supported, API, etc.)
7.2	<p>CBS platform is able to receive inputs from external sensors or IoT devices used by multiple agencies to detect water level, earthquake, rain volume, etc. and integrate with an AI function to determine alerts required and auto trigger alert message to specific affected areas. To provide:</p> <ul style="list-style-type: none"> i. Platform requirement, license requirements, additional hardware or VM requirements, etc. ii. Network integration requirement with architecture diagram iii. Cost breakdown iv. Requirements for the sensors (i.e. support CAPv1.2 protocol, number of sensors as design, integration, etc.)
7.3	<p>Able to provide additional features on situational awareness where the CBS will be able to provide data on number of users within the affected areas before and after the alerts have been broadcast in almost real time. To provide:</p> <ul style="list-style-type: none"> i. Platform requirement, license requirements, additional hardware or VM requirements, etc. for CBS ii. Network integration requirement with architecture diagram including the integration with additional mobile network functions/elements (4G and 5G). iii. Cost breakdown iv. Requirements on 4G and 5G mobile network for the features to be enabled (i.e. support CAPv1.2 protocol, probes, bandwidth requirements, etc.)
7.4	<p>Able to integrate with other relevant 4G and 5G mobile network management systems/functions for the purpose of providing network performance statistical data including network latency, user throughput, user data packet dropped, signal level (RSRP), signal quality (RSRQ), SINR, etc. To provide:</p> <ul style="list-style-type: none"> i. Platform requirement, license requirements, additional hardware or VM requirements, bandwidth requirement, etc. for CBS ii. Network integration requirement with architecture diagram including the integration with additional mobile network functions/elements (4G and 5G). iii. Cost breakdown iv. Requirements on 4G and 5G mobile network for the features to be enabled (i.e. support CAPv1.2 protocol, probes, security, etc.)

No	Optional Features for Future Expansion Requirements
7.5	<p>Able to provide additional CBS function to include fake BTS detection in almost real time. To provide:</p> <ol style="list-style-type: none"> i. Platform requirement, license requirements, additional hardware or VM requirements, bandwidth requirement, etc. for CBS ii. Network integration requirement with architecture diagram including the integration with additional mobile network functions/elements (4G and 5G). iii. Cost breakdown iv. Requirements on 4G and 5G mobile network for the features to be enabled (i.e. support CAPv1.2 protocol, probes, security, etc.)

Implementation Period

- 4.2. The maximum implementation period to undertake the Work shall not exceed **twenty-six (26) weeks** from the commencement date specified in the Notification of Approval. The high-level overview of the **twenty-six (26) weeks** implementation period is as shown below:

No.	Duration	Focus Activity	Description
1	2 weeks	Project Initiation, System Design and Technical Alignment	<ul style="list-style-type: none"> • Project kick-off with MCMC and relevant stakeholders. • Confirmation of system architecture and deployment approach. • Coordination with all 5 MNOs on integration scope and technical parameters. • Finalisations of the detailed implementation plan.
2	4 weeks	Test bed preparation	<ul style="list-style-type: none"> • Installation & configuration of CBE (Government domain) on Public Cloud. • Installation & configuration of CBCs at MNO domains on test environment.
3	18 weeks	Deployment and Integration	<ul style="list-style-type: none"> • Installation & configuration of CBE (Government domain) on Public Cloud • Installation & configuration of CBCs at MNO domains on live networks. • Completed CBE and CBC integration with all MNOs including routing, secured connection and system interface. • Completed at least one full functionality test on live network of one MNO in October 2026 (subject to the

No.	Duration	Focus Activity	Description
			start date of the project kick-off and readiness of MNO)
4	2 weeks	End-to-End Testing, UAT & Commissioning	<ul style="list-style-type: none"> • End-to-end cell broadcast testing, geo-fencing and performance validation, • User Acceptance Testing (UAT) with MCMC, relevant disaster management agency and all MNOs. • Completion of final documentation, system commissioning, Go-Live approval and project handover.

The Interested Licensee shall propose a detailed implementation timeline in its draft universal service plan. The timeline shall start upon acceptance of the NoA and continue until the completion of system design, deployment, integration, testing, certification, training, and commissioning. This timeline shall serve as the basis for the Commission to monitor the progress of the Work for this Project.

Warranty, Maintenance and Support, and Insurance

- 4.3. The DUSP shall be responsible for providing warranty, maintenance and support, and insurance for the items stipulated below:

Warranty

4.3.1. The period of warranty shall be for twelve (12) months, effective from the date of system commissioning. The warranty provided shall include but not limited to the hardware, software and associated services required for the operation of the CBS.

4.3.2. In the event of CBS failure during the warranty period, the DUSP shall be responsible for immediately rectifying and/or replacing any affected CBS components at its own cost.

Maintenance and Support

4.3.3. The period of maintenance and support shall be for 9 years (108 months), effective immediately upon the completion of the warranty period. The maintenance and support services shall include but not limited to the hardware, software, and associated services for the operation of the CBS.

4.3.4. In the event of CBS failure during the maintenance and support period, the DUSP shall be responsible for immediately rectifying and/or replacing any affected CBS components at its own cost.

Insurance

4.3.5. The DUSP is required to take necessary measures to plan for contingencies at its own cost, such as the purchase and maintenance of all relevant insurances (including but not limited to insure all assets for a natural disaster and having adequate public liability, fire and flood insurance coverage).

4.3.6. The relevant insurance must also be procured and maintained during the Implementation, Warranty and Maintenance Period of this Project. Failure on the part to comply with this requirement shall result in the DUSP being solely responsible for any liabilities and/or losses that may arise. The insurance taken must be comprehensive and provide adequate coverage.

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SECTION III

REGISTRATION OF INTEREST AND SUBMISSION OF THE DRAFT UNIVERSAL SERVICE PLAN

5. REGISTRATION OF INTEREST REQUIREMENTS

- 5.1. The Interested Licensee which wishes to register its interest to become a DUSP pursuant to this Invitation shall submit its new requisite licence application or hold the requisite licences with a minimum validity of three (3) months from the closing date, as stated in this Invitation (or has submitted its licence renewal application pursuant to section 34 of the Act to the Commission) to enable it to carry out the scope of work under this Invitation.

- 5.2. The licensed area shall be “Malaysia”, and there shall be no last-mile limitation. The Interested Licensees must also fulfil the following criteria:
 - 5.2.1. Interested Licensee is required to hold a valid ASP(C) licence issued under the Act. The ASP(C) licence held by the Interested Licensee must allow the holder of the licence to provide public cellular services under Regulation 30 of the Communications and Multimedia (Licensing) Regulations 2000.

 - 5.2.2. The Interested Licensee shall meet the following eligibility requirements:
 - (a) Not an assignment holder of radio spectrum for the provisioning of public cellular services in Malaysia;
 - (b) Must provide proof of minimum (2) years of experience in LTE and 5G mobile network environments, covering core network, radio access network and backhaul network;
 - (c) Must provide proof of commercial agreement or letter of authorization with the Technology Partner that specializes in the deployment of Cell Broadcast System for Early Warning System;
 - (d) The Technology Partner must have minimum five (5) years of experience in the deployment of Cell Broadcast System for Early Warning System supported by proof of working experience; and
 - (e) Not owe any outstanding fees (e.g. licence, spectrum assignment and/or numbering assignment) to the Commission.

- 5.3. The Interested Licensee shall register its interest with the Commission by completing the Registration of Interest form enclosed in **Appendix 2** of this Invitation.
- 5.4. The Interested Licensees are hereby reminded that pursuant to subregulation 6(1) of the USP Regulations, **those who have registered their interest will be legally obliged to submit draft universal service plan** for the system specified in the **Scope of Work** of this Invitation. An Interested Licensee who fails to comply with subregulation 6(1) commits an **offence** under the USP Regulations and shall on conviction be liable to a maximum fine of RM300,000.00 or imprisonment for a maximum term of 3 years or both.

6. THE DRAFT UNIVERSAL SERVICE PLAN

Technical Details

- 6.1. The template for submission of the Technical Details is provided in **Appendix 3** of this Invitation. The Technical Details in the draft universal service plan shall be in accordance with the detailed scope of work for this Project.

Financial Details

- 6.2. The template for submission of the Financial Details is provided in **Appendix 4** of this Invitation. The Financial Details in the draft universal service plan shall clearly reflect the costs for the implementation of work for this Project.

7. SUBMISSION OF THE DRAFT UNIVERSAL SERVICE PLAN

- 7.1. The Interested Licensee shall submit a single document in a separate sealed envelope marked as "**LICENSEE'S INFORMATION**", which shall consist of the following:
 - 7.1.1. Cover letter signed by the Chief Executive Officer or a person who holds an equivalent designation in the Interested Licensee; and
 - 7.1.2. Information of the Interested Licensee and other supporting documents as detailed in **Appendix 5** of this Invitation.
- 7.2. The Interested Licensee shall submit the draft universal service plan based on its Registration of Interest as specified in the **Scope of Work** of this Invitation. The draft universal service plan submitted shall be divided into two (2) separate

documents as follows:

7.2.1. Technical Details; and

7.2.2. Financial Details.

7.3. The draft universal service plan shall be submitted as follows:

7.3.1. One (1) hard copy submission; and

7.3.2. All pages of the Financial Details of the draft universal service plan shall be duly initialled and affixed with the company rubber stamp of the Interested Licensee.

7.4. Pages for the draft universal service plan shall be numbered in the following format: <page number> of <total number of pages>.

7.5. The submission of the draft universal service plan shall be enclosed in a separate sealed envelope(s) labelled as follows:

7.5.1. This Invitation's reference (**INVITATION REF. NO.:SKMM(T)06-SEIR/140.015/Jil.1(21)**)

7.5.2. The description "**SUBMISSION OF DRAFT UNIVERSAL SERVICE PLAN**":

(a) **TECHNICAL DETAILS; or**

(b) **FINANCIAL DETAILS**

7.5.3. "SUBMITTED BY: <Name of Interested Licensee>".

7.6. In addition to the hardcopy, **digital copies of the Technical Details and Financial Details shall be submitted in thumb drives (PDF and Excel format)**. The digital copies shall be in PDF format. In addition, please submit all the relevant working files i.e. the detailed BOQ in Excel format.

7.7. All documents mentioned above, including any appendices annexed thereto, shall be taken as being mutually explanatory of each other.

7.8. The Interested Licensee shall be deemed to have examined and understood all information and documents set out in this Invitation.

- 7.9. All costs and expenses associated with and necessary for the preparation and submission of the draft universal service plan shall be borne by the Interested Licensee and is not claimable from the USP Fund.
- 7.10. All corrections, changes, alterations and/or any other amendments whatsoever made in the draft universal service plan shall be initialled and affixed with the Interested Licensee's company stamp.
- 7.11. All documents, which form part of the draft universal service plan(s), shall be properly and securely bound.
- 7.12. Handbooks and any other literature, if any, shall be bound in separate covers.

8. CLOSING DATE

Submission of Registration of Interest

- 8.1. All Interested Licensees shall submit the duly completed Registration of Interest Form in scanned PDF copy format as enclosed in **Appendix 2** of this Invitation **on or before 3:00 pm, 13 March 2026 (Friday)**, via email at gqs.dept@mcmc.gov.my
- 8.2. The Interested Licensee shall make available the original Registration of Interest form, in hardcopy to the Commission, if required.
- 8.3. Proof of submission shall take the form of the issuance of an acknowledgement email receipt to the sender from the same email address.
- 8.4. Under this Invitation, the Interested Licensee shall register its interest for all locations in its entirety. The Commission will not accept any Registration of Interest for part of a location.
- 8.5. The Commission shall **NOT ACCEPT** any submission of the Registration of Interest form made by way of physical copy, fax, mail and/or any other means.
- 8.6. In the event that an Interested Licensee submits multiple forms for the Registration of Interest, only the latest submission received by the Commission shall be accepted and treated as final.
- 8.7. Any submission of the Registration of Interest Form received after the stipulated closing date and time, shall be rejected. In this respect, the Interested Licensee's proof of postage or other evidence of transmission shall not be accepted as proof of

receipt by the Commission.

Submission of Draft Universal Service Plan

- 8.8. An Interested Licensee shall submit the duly completed draft universal service plan **on or before 3:00 pm, 31 March 2026** at:

**Malaysian Communications and Multimedia Commission
MCMC Centre of Excellence (CoE)
Jalan Impact, Cyber 6, 63000 Cyberjaya, Selangor**

Attention: Quality Management Division

- 8.9. The submission of the draft universal service plan must match the Registration of Interest Form. The Commission will not accept the submission of a draft universal service plan for any part of the specified location.
- 8.10. The Commission shall **NOT ACCEPT** any submission of draft universal service plan made by way of email, fax, mail and/or any other means.
- 8.11. Any submission of the draft universal service plan, including any amendments made thereto, received after the stipulated closing date and time shall be rejected. In this respect, the Interested Licensee's proof of postage or other evidence of transmission shall not be accepted as proof of receipt by the Commission.

9. MATTERS FOR CONSIDERATION IN APPROVING THE DRAFT UNIVERSAL SERVICE PLAN

- 9.1. The Commission will consider the matters specified in regulation 7 of the USP Regulations and all information included in the draft universal service plan in deciding whether or not to approve the draft universal service plan.

SECTION IV

PAYMENT FROM THE USP FUND

10. CLAIMS FOR PAYMENT

- 10.1. The DUSP is entitled to claim the costs undertaken in respect of this Project for **capital expenditure (“CAPEX”) and operational expenditure (“OPEX”)**.
- 10.2. The OPEX funded through the USP fund for this Project applies solely to the maintenance and support, which commenced immediately after the completion of the warranty period, and for a duration of nine 9 years (108 months).
- 10.3. The DUSP shall no longer be entitled to make any claims for any work done during the Implementation Period, no later than one (1) year from the date of the submission of the final Declaration of the Project to the Commission.
- 10.4. Details of the payment schedule, timeline, terms and conditions, and the form and format to submit the claims will be specified in the Notification of Approval issued to the DUSP by the Commission. The claim schedule for the DUSP to claim the costs undertaken in this Project is specified in **Appendix 6** of this Invitation.

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SECTION V

GENERAL TERMS AND CONDITIONS

11. DESIGN SPECIFICATION/CONFIGURATION

- 11.1. The DUSP shall be solely responsible for the correct design and configuration of the entire system, including all work, infrastructure, and equipment under this Project. If subsequent modifications or changes are necessary to enable the requirements for the Project to be met, the DUSP shall bear the additional cost involved for the modification or changes and is not entitled to claim additional costs from the USP Fund.
- 11.2. It is anticipated that some matters may have to be clarified following the evaluation of the submission and during the early stages of installation of the facilities and equipment. In this respect, the Commission reserves the right to require written clarifications to be provided by the DUSP.

12. OPERATIONS, MAINTENANCE, AND SUPPORT

- 12.1. The DUSP shall be responsible for managing and providing maintenance and operational support at its own cost to ensure uninterrupted service. This shall include providing preventive and corrective maintenance during the warranty period and the maintenance and support period to ensure that all related CBS functionalities and services remain continuously available and fully functional.
- 12.2. The DUSP shall adhere to any directive or relevant Standard Operating Policies and Procedures (SOP) which may be imposed and revised by the Commission, from time to time.

13. REPORT TO THE COMMISSION

Project Implementation

- 13.1. During the Implementation Period, pursuant to regulation 13 of the USP Regulations, the DUSP shall submit a report on the progress of the implementation of the Approved Universal Service Plan on a weekly basis or any other frequency deemed suitable by the Commission, in the form and format specified by the Commission.

- 13.2. Upon completion of every claim milestone(s) stipulated in the Notification of Approval, the DUSP shall furnish the Commission with a Declaration signed by its Chief Executive Officer, or a person who holds an equivalent designation in the DUSP, in the form and format specified by the Commission in the Notification of Approval issued to the relevant DUSP.
- 13.3. The Declaration shall only be furnished to the Commission upon completion of the scope of work(s) for the relevant milestone(s) as stipulated in the schedule of claims specified in the Notification of Approval. It is the responsibility of the DUSP to ensure that all Work has been delivered in accordance with the Approved Plan, and that all representations and information furnished to the Commission in the Declaration are accurate and true.
- 13.4. A Completion Report shall be prepared, compiled, and maintained by the DUSP on the completion of Work for at least ten (10) years from the submission of the Declaration as stipulated in the schedule of claims in **Appendix 6** of this Invitation.
- 13.5. The DUSP shall attend and meet with the Commission's representative(s), to provide an accurate update on the progress of the Project, and to provide timely reporting to the Commission as and when required by the Commission from time to time.

14. SUPPLIED MATERIALS AND EQUIPMENT

- 14.1. All items to be used in the implementation of the Project by the DUSP shall be fit for the purpose for which such items are intended and be free from defects arising out of faulty design, faulty and inferior material or faulty workmanship.
- 14.2. All items supplied shall be genuine and brand new (i.e. not second-hand, reconditioned and/or used items), and procured from authorised and legitimate suppliers.

15. APPROVAL FROM RELEVANT AUTHORITIES

- 15.1. The DUSP shall be responsible for obtaining the necessary approvals from the local authority and/or all other relevant authorities or MNOs before the commencement of Work.
- 15.2. The DUSP shall be solely responsible for any failure to obtain the necessary approvals including any additional costs to comply with the said authority's or MNOs' requirements.

16. INSPECTION AND AUDIT

- 16.1. The Commission and/or its appointed third-party agent(s) shall have the right to inspect and verify that all obligations due from the DUSP are fully complied with. The inspection and verification of the universal services provisioning may include:
- 16.1.1. Conducting a physical inspection at the site to verify that the items and services are delivered according to the BOQ, timelines and specifications as contained in the Approved Universal Service Plan;
 - 16.1.2. Verifying all relevant supporting documents submitted by the DUSP in its claims for net universal service costs; and/or
 - 16.1.3. Any other aspects that may be necessary by the Commission.

17. SAFETY

- 17.1. In meeting with safety requirements, the DUSP shall:
- 17.1.1. Be responsible for ensuring the safety of the site(s), its employees and employees of its agents and/or vendors working at the site(s) at all times;
 - 17.1.2. Enforce and take all necessary steps to ensure compliance with all safety measures for workmen, contractors and all other persons at the site as stipulated in all relevant safety-at-work legislation and regulations;
 - 17.1.3. Ensure the structural integrity of the network at all times, and ensure compliance with all relevant laws and guidelines. Maintaining the structural integrity of the systems is critical to providing uninterrupted, high-quality service to users and preventing costly repairs or service outages; and
 - 17.1.4. Indemnify and keep indemnified, protect and defend at its own cost and expense, the Commission and its authorised officer(s) from and against all actions, claims and liabilities arising out of acts done, omissions or breach of any conditions under the Project by DUSP, its employees or its agents.

18. PERFORMANCE BOND

- 18.1. The DUSP is required to submit two performances bonds in the form of a Bank Guarantee issued by a local licensed financial institution under the Financial Services Act 2013 (“**Performance Bond**”) based on the following:
 - 18.1.1. The first Performance Bond shall be submitted prior to the implementation of the Approved Universal Service Plan; and
 - 18.1.2. The second Performance Bond shall be submitted prior to the commencement of the maintenance and support period.
- 18.2. The Performance Bond shall be kept valid by the DUSP at all times, for the following duration:
 - 18.2.1. The first Performance Bond shall be valid from the commencement date of the Project specified in the NoA, until the completion of the Project warranty period;
 - 18.2.2. The second Performance Bond shall be valid from the commencement date of the maintenance and support period until the completion of the maintenance and support period specified in the NoA;
 - 18.2.3. The first Performance Bond for the DUSP shall be **ten percent (10%) of the approved total cost** of the Project **CAPEX**. The DUSP shall ensure that the first Performance Bond is always maintained at the value of 10% of the total approved cost of the Project CAPEX throughout the period specified in the NoA.
 - 18.2.4. The second Performance Bond for the DUSP shall be **ten percent (10%) of the approved total cost** of the Project **OPEX**. The DUSP shall ensure that the second Performance Bond is always maintained at the value of 10% of the total approved cost of the Project OPEX throughout the maintenance and support period specified in the NoA.
- 18.3. It shall be the responsibility of the DUSP to ensure that a valid Performance Bond is furnished to the Commission at all times throughout the time period specified above.
- 18.4. In the event that the designation of the DUSP is revoked pursuant to the USP Regulations, the said Performance Bond or any balance thereof shall be forfeited.

19. APPOINTMENT OF ANOTHER PARTY BY DUSP TO UNDERTAKE THE WORKS UNDER THE PROJECT

- 19.1. The DUSP and its Technology Partner shall not appoint another person to perform the Project in its entirety, save where such appointment is to comply with any requirement and/or condition as set forth by any Authority for the implementation of the Project. If the DUSP appoints another person to perform the Project in its entirety in the absence of such requirement and/or condition of any Authority, the Commission shall have the right to:
- 19.1.1. Instruct the DUSP to terminate forthwith such appointment and shall be liable for all costs and expenses relating to such termination; and/or
 - 19.1.2. Revoke the designation of the DUSP for the Project.
 - 19.1.3. The DUSP, however, may appoint other persons to perform part of the works under the Project and shall be responsible for the acts, defaults or neglects of any person appointed, his contractors, agents or employees as if they were the acts or defaults of the DUSP.

20. CLARIFICATION AND ENQUIRIES

- 20.1. It is inevitable that some matters may have to be clarified following the evaluation of the submission and during the early stages of installation of the equipment. In this respect, the Commission reserves the right to issue written clarifications on the specifications where necessary, to stipulate any requirements more clearly.
- 20.2. By registering its interest and submitting its draft universal service plan, the Interested Licensee is deemed to consent to the use of any of the information in the draft universal service plan or part thereof by the Commission for any purpose whatsoever.
- 20.3. Should there be a need to seek clarification and additional information regarding this Invitation, all enquiries shall be directed only to the Quality Standards Development Department of the Commission via email at qos.dept@mcmc.gov.my
- 20.4. All relevant enquiries pertaining to this Invitation should reach the Commission **on or before 3:00 pm, 17 March 2026.**

21. OMISSIONS OR ERRORS

- 21.1. The Interested Licensee is advised to study all terms, conditions and specifications in this Invitation very carefully, make all necessary site surveys and seek necessary clarification before finalising its draft universal service plan under the USP Regulations.
- 21.2. The Interested Licensee shall be solely responsible for all such omissions/errors without any additional costs being chargeable to the Commission.

22. PRESS RELEASE AND ANNOUNCEMENT

- 22.1. The DUSP shall not issue any publicity release or make any announcement in relation to its designation for this Project. In the event that any public announcement or disclosure of the contents of the NoA is required by law, the DUSP shall, prior to making such announcement or disclosure, consult the Commission and obtain its agreement on the wording, terms, and format of such announcement or disclosure.

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APPENDIX 1 – LIST OF CELL BROADCAST ENTITY (CBE) AND CELL BROADCAST CENTRE (CBC) LOCATIONS

Cell Broadcast Entity (CBE)

No.	Agency	State	Location	Coverage Objective	Latitude	Longitude
1	National Disaster Management Agency (NADMA)	Selangor	Markas Pasukan Mencari dan Menyelamat Khas Malaysia (SMART, Bangunan Pentadbiran, Agensi Pengurusan Bencana Negara (NADMA), Jabatan Perdana Menteri, Jalan Pulau Meranti, 47100 Puchong, Selangor	Nationwide	2.9574	101.6440

Cell Broadcast Centre (CBC)

No.	Service Provider	State	Core Network	Coverage Objective	Latitude	Longitude
1.	Celcom	Kuala Lumpur	Kepong	Nationwide	3.1934	101.6343
2.	Digi	Selangor	Subang Hi-Tech	Nationwide	3.0681	101.5697
3.	Maxis	Kuala Lumpur	Kepong TOC	Nationwide	3.2036	101.6094
4.	Maxis	Selangor	Sungai Besi TOC	Nationwide	3.05151	101.6978
5.	TM	Kuala Lumpur	BRF DC 5GC	Nationwide	3.1404	101.7063
6.	TM	Selangor	KVDC 5GC	Nationwide	2.9324	101.6571
7.	U Mobile	Selangor	LOT 17	Nationwide	3.2058	101.6050
8.	U Mobile	Selangor	LOT 30	Nationwide	3.0671	101.5684
9.	YTL	Kuala Lumpur	EPC Core	Nationwide	3.1841	101.6863

APPENDIX 2 – REGISTRATION OF INTEREST FORM

[To be printed on Interested Licensee's Letterhead]

REGISTRATION OF INTEREST

Ref. No. :

Date :

MALAYSIAN COMMUNICATIONS AND MULTIMEDIA COMMISSION

MCMC Tower 1,

Jalan Impact, Cyber 6,

63000 Cyberjaya,

SELANGOR DARUL EHSAN

(Attention: Quality Management Division)

Dear Sirs,

REGISTRATION OF INTEREST TO BE A UNIVERSAL SERVICE PROVIDER FOR THE PROVISION OF CELL BROADCAST SYSTEM (CBS) FOR EARLY WARNING SYSTEM (EWS) IN MALAYSIA UNDER THE UNIVERSAL SERVICE PROVISION INITIATIVE

Reference is made to the above and to the "Invitation to Register Interest as a Universal Service Provider – Ref. no. SKMM(T)06-SEIR/140.015/Jil.1(21) ("Invitation") issued by the Malaysian Communications and Multimedia Commission ("Commission").

2. We hereby register our interest to be the Universal Service Provider pursuant to Regulation 5(1) of the Communications and Multimedia (Universal Service Provision) Regulations 2002 ("USP Regulations") for the Invitation above.

3. In compliance with the requirements stipulated under the Communications and Multimedia Act 1998 and its subsidiary regulations, we provide below a detailed list of the licence currently held by our organisation.

a) Applications Service Provider (Class) (ASP(C)) : [Specify Licence No.]

4. We are also aware that pursuant to regulation 6(1) of the USP Regulations, we are legally obliged to submit the draft universal service plan(s) on or before the time frame specified in the Invitation.

Signed for and on behalf of

[Company Stamp]

.....

(Signature)

(Name and Designation)

[to be signed by the Chief Executive Officer or a person who holds an equivalent designation in the Interested Licensee]

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APPENDIX 3 – TECHNICAL DETAILS

Note: Pursuant to this Invitation, the Interested Licensees are required to provide complete, accurate, and comprehensive information relating to each of the following sections as part of its draft Universal Service Plan.

SECTION A: EXECUTIVE SUMMARY OF CBS FOR EWS NATIONWIDE

- Overview of the technical details, implementation methodology, and relevant information.
- Organisation chart outlining the project team and manpower allocation.
- Compliance and security requirements of the project.
- Warranty and support services (1-year warranty period and 9 years additional maintenance and support).
- Detailed information of the Technology Partner and relevant experience

SECTION B: PROPOSED NETWORK ARCHITECTURE OF CBS FOR EWS

- Detailed proposal according to the Scope of Work as follows:
 - a) Table 1: Technical Specifications for Cell Broadcast System (CBS)
 - b) Table 2: Technical Specifications Cell Broadcast Entity (CBE)
 - c) Table 3: Technical Specifications for Cell Broadcast Centre (CBC)
 - d) Table 4: Support and Maintenance Requirements
 - e) Table 5: Security Aspect Requirements
 - f) Table 6: Other Technical and Operational Requirements
 - g) Table 7: Optional features for possible future expansion requirements
- Detailed project plan for the provisioning, installation, integration, testing and commissioning of CBS within 26 weeks from the date of NoA.
- Implementation timeline in Gantt Chart

SECTION C: TRAINING AND CAPACITY BUILDING

- The Interested Licensee shall provide training venue agreed by the Commission, complete training materials and conduct hands-on training for a minimum of fifty (50) officers, including officers from MCMC, relevant government agencies, Mobile Network Operators (MNOs), and any other relevant personnel identified by the Commission.
- The training shall cover both theoretical and practical aspects of system operation and administration. The training may be conducted in multiple sessions, as agreed with the Commission.
- The Interested Licensee shall submit a Training Plan as part of the proposal, outlining the venue, scope, content, delivery method, and proposed schedule.

- The Interested Licensee shall also provide annual refresher training throughout the maintenance and support period. The refresher training shall be conducted upon request by the Commission or on a mutually agreed date.

SECTION D: DETAILED BILL OF QUANTITY

Capital Expenditure (CAPEX)

NO.	COST COMPONENT	UNIT	QUANTITY
1	Cell Broadcast Entity (CBE) <ul style="list-style-type: none"> • CBE software, licenses, applications, VMs, etc. • CBE deployment and integration • CBE public cloud specification, terms and conditions. 		
2	Cell Broadcast Centre (CBC) <ul style="list-style-type: none"> • CBC software, licenses, applications, VMs, etc. • CBC deployment and integration ^{Note 1} 		
3	Third-party licenses <ul style="list-style-type: none"> • Please include any third-party licenses necessary for the operation of CBS 		
4	Training and Operation Manuals <ul style="list-style-type: none"> • Hands-on training to at least 50 officers from MCMC and multiple government agencies • Operation manuals 		

Operational Expenditure (OPEX)

NO.	COST COMPONENT	UNIT	QUANTITY
1	Cell Broadcast System (CBS) <ul style="list-style-type: none"> • CBE maintenance and support on a yearly basis • CBC operation, maintenance and support on yearly basis • Any third-party licenses necessary for the operation of CBS 		
2	Training and Operation Manuals <ul style="list-style-type: none"> • Yearly refresher training for at least 50 officers from MCMC to multiple government agencies 		

SECTION E: STATEMENT OF COMPLIANCE

Cell Broadcast System (CBS)

No	Cell Broadcast System Requirements	Comply	Not Comply	Remarks
1.1	To refer to Table 1: Technical Specification for Cell Broadcast System (CBS)			

Cell Broadcast Entity (CBE)

No	Cell Broadcast Entity Requirements	Comply	Not Comply	Remarks
2.1	To refer to Table 2: Technical Specification Cell Broadcast Entity (CBE)			

Cell Broadcast Centre (CBC)

No	Cell Broadcast Centre Requirements	Comply	Not Comply	Remarks
3.1	To refer to Table 3: Technical Specifications for Cell Broadcast Centre (CBC)			

Support and Maintenance

No	Support and Maintenance Requirements	Comply	Not Comply	Remarks
4.1	To refer to Table 4: Support and Maintenance Requirements			

Security Aspect

No	Security Aspect Requirements	Comply	Not Comply	Remarks
5.1	To refer to Table 5: Security Aspect Requirements			

Other Requirements

No	Other Technical and Operational Requirements	Comply	Not Comply	Remarks
6.1	To refer to Table 6: Other Technical and Operational Requirements			

Optional Features for Future Expansion

No	Optional Features for Future Expansion Requirements	Support	Not support	Remarks
7.1	To refer to Table 7: Optional features for possible future expansion requirements			

SECTION F: IMPLEMENTATION TIMELINE

- **Detailed implementation timeline, presented in the form of a comprehensive Gantt Chart, clearly indicating key milestones, deliverables, and dependencies.**

Note:

1. CBC private cloud or bare metal servers shall be provided by the MNOs. In this case, the Interested Licensee shall enlist the set of capacity and requirements for the any installation of virtual machine (VM) or servers for bare metal deployment, based on preference by the MNOs. The Interested Licensee shall provide 2 options for the bare metal or private cloud installation.
2. The Interested Licensee shall customise the BOQ by proposing cost-effective, competitively priced, technologically appropriate, and environmentally sustainable solutions that optimise the efficiency of investments made via the USP Fund.

APPENDIX 4 – FINANCIAL DETAILS

Summary of Capital Expenditure (CAPEX) and Operational Expenditure (OPEX)

- All prices shall be inclusive of any applicable taxes, fees and levies imposed by the Government.

Capital Expenditure (CAPEX)

NO.	COST COMPONENT	UNIT	QUANTITY	UNIT PRICE (RM)	TOTAL PRICE (RM)
1	Cell Broadcast Entity (CBE) <ul style="list-style-type: none"> CBE software, licenses, applications, VMs, etc. CBE deployment and integration CBE public cloud 				
2	Cell Broadcast Centre (CBC) <ul style="list-style-type: none"> CBC software, licenses, applications, VMs, etc. CBC deployment and integration 				
3	Third-party licenses <ul style="list-style-type: none"> Please include any third-party licenses necessary for the operation of CBS 				
4	Training and Operation Manuals <ul style="list-style-type: none"> Hands-on training to at least 50 officers from MCMC to multiple government agencies Operation manuals 				
GRAND TOTAL					

Operational Expenditure (OPEX)

NO.	COST COMPONENT	UNIT	QUANTITY	UNIT PRICE (RM)	TOTAL PRICE (RM)
1	Cell Broadcast System (CBS) <ul style="list-style-type: none"> • CBE maintenance and support on a yearly basis • CBC operation, maintenance and support on yearly basis • Any third-party licenses necessary for the operation of CBS 				
2	Training and Operation Manuals <ul style="list-style-type: none"> • Yearly refresher training for at least 50 officers from MCMC to multiple government agencies 				
GRAND TOTAL					

Signed for and on behalf of

.....
(Name & Designation)

(Company Stamp)

[to be signed by the Chief Executive Officer or a person who holds an equivalent designation in the Interested Licensee]

APPENDIX 5 – LICENSEE’S INFORMATION

1. A certified true copy of ASP(C) licence.
2. A certified true copy of the latest corporate information issued by the Companies Commission of Malaysia namely SSM e-info, which includes, but is not limited to the following information:
 - a) Company name and company registration number;
 - b) Date of incorporation;
 - c) Registered and business address;
 - d) Total issued capital (RM);
 - e) Directors and shareholders; and
 - f) Summary of financial information.
3. Company profile of the technology partner (if applicable).
4. A certified true copy of authorization letter or copy of signed agreement from technology partner.
5. A certified true copy of audited accounts for the past three (3) consecutive financial years, respectively.
6. The Interested Licensee’s (with identified technology partner) shall provide track record in handling previous similar project(s) (please specify the projects, scope of work and delivery timelines, project cost, if relevant) as shown in the table below:

NO.	PROJECT	ROLE PLAYED	SCOPE OF WORK	DELIVERY TIMELINE	PROJECT COST (RM)
1.		<i>e.g: DUSP / subcontractor</i>			

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APPENDIX 6 – CLAIM SCHEDULE

All claims shall be made pursuant to the USP Regulations and shall be based on the relevant percentage of progress and the fulfilment of the conditions stipulated below:

Payment schedule for Project implementation (CAPEX):

No	Claim (%)	Description	Conditions		
Capital Expenditure (“CAPEX”)					
1.	5	First Claim	Submission of a written claim(s) shall be in the form and format specified by the Commission and shall be made upon: <ul style="list-style-type: none"> a) Receipt of DUSP’s acceptance of the Notification of Approval; b) Acceptance of the first Performance Bond by the Commission. 		
2.	50	First Progress Claim	Submission of a written claim(s) shall be in the form and format specified by the Commission and shall be made upon completion of supply and integration of the CBS system, which shall be signified through the submission of a Declaration for each MNO .		
			<table border="1"> <tr> <td>MNO A – 10%</td> <td>MNO B – 10%</td> <td>MNO C – 10%</td> <td>MNO D – 10%</td> <td>MNO E – 10%</td> </tr> </table>	MNO A – 10%	MNO B – 10%
MNO A – 10%	MNO B – 10%	MNO C – 10%	MNO D – 10%	MNO E – 10%	
3	35	Second Progress Claim	Submission of a written claim(s) shall be in the form and format specified by the Commission and shall be made upon: <ul style="list-style-type: none"> a) Completion of User Acceptance Test (UAT) and signing of the UAT; and b) Receipt of Certificate of Final Acceptance (CFA) by the Commission. <p>which shall be signified through the submission of the Declaration.</p>		
4.	10	Final Claim	Submission of a written claim(s) shall be in the form and format specified by the Commission and shall be made upon: <ul style="list-style-type: none"> a) The expiry of the warranty period; b) Completion of training conducted for the Commission, government agencies and MNOs; and c) Receipt of the CBS operation manual by the 		

No	Claim (%)	Description	Conditions
Capital Expenditure ("CAPEX")			
			<p>Commission.</p> <p>d) Submission of the second Performance Bond by the DUSP.</p> <p>The submission of the final claim(s) shall also be accompanied by a declaration of an external licenced auditor appointed by the DUSP at its own cost to certify that the Work has been delivered and that all claims made have been verified to be accurate and true.</p>

Payment schedule for Project maintenance and support (OPEX):

No.	Claim (%)	Description	Conditions
Operational Expenditure ("OPEX")			
1.	100% for 9 years) / (36 Quarters)	Quarterly Claim	<p>Submission of a written claim(s) shall be in the form and format specified by the Commission and shall be made upon submission of the Quarterly Maintenance and Support report, subject to verification by the Commission.</p> <p>The maintenance and support period shall commence immediately upon the completion of the warranty period.</p>

Note:

The Commission reserves the right to verify the written claim(s) for the CBS CAPEX and OPEX of this Invitation, submitted by the DUSP pursuant to the USP Regulations, prior to making any payments, and the verification made by the Commission shall be final.