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Request for Proposal on:

Digital & Value-Added Service Aggregators

Bringing new possibilities

ethio telecom
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1. Background information

Ethio telecom with a strategic aspiration of being a preferred operator has been working at its full-scale towards the provisioning of competitive value adding telecom solutions and satisfying customers' expectations. To realize its vision, our company designed BRIDGE strategy and has been working hard to build best customer experience, reputable brand, deliver innovative product and services, achieve operational and technology excellence and ultimately ensure financial growth.

Currently Ethio telecom mobile subscriber base has reached 56.45M customers (33% smartphone users and 92% of them are Android OS). Ethio telecom is currently offering wide range of services including voice, internet, messaging along with different value-added service solely and in partnership with various service providers. Moreover, to support the digital transformation happening around the world and in our country, to address customers' needs for fast and reliable internet, Ethio telecom has recently expanded 4G LTE advanced network around the country in major cities as well as 114 towns of the country.

In line with its continuous effort of offering the best service for mobile service customers and as part of Ethio telecom strategy to meet the growing customer demand in qualified and reliable digital and VAS services, Ethio telecom is planning to implement digital and VAS aggregation to the market. The aim of deploying the aggregation modality is to ensure operational efficiency, qualified Digital and VAS service delivery and satisfactory customer experience. Acting as a simplified, direct, and secure bridge between content and application providers and network operators, they help to transmit VAS & digital services as a simple contact to the end user.

Hence, Ethio telecom wants to invite potential aggregators responsible for Digital and VAS aggregation through voice, SMS, WAP, WEB, API, USSD and related services channels. The main objective of the RFP is to call upon prospective aggregators who are interested to work with Ethio telecom on revenue sharing basis based on contractual agreement set.

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2. Project Objective

The main objective of the RFP is to select competent digital and VAS aggregators that are capable to:

- Identify current digital and VAS service delivery challenges
- Create a conducive and effective digital and VAS eco system.
- Provide simplified, direct, and secure connection to content and application providers.
- Securely transport content to and from Ethio telecom and VAS content service provider systems.
- Provide direct link to service providers for content and application providers.

3. Scope of Work

The scope of this Request for Proposal (RFP) includes:

- Providing end to end master aggregation services by engaging capable and experienced VAS partners, application developers, content providers and other key players
- Deliver reliable end to end solution with deep technical expertise and support.
- Integrate different VAS providers in information, educational and entertainment services, content providers, application developers and other related
- Avail a single point for service provisioning, create easy and secure accessibility for mobile customers and provide content that as per the consent of end users.
- Install required system solutions for the digital and VAS aggregation implementation and integrate the solutions with Ethio telecom infrastructure.
- Submit a product information and strategy on the potential aggregation areas mentioned below. The list is not intended to be exhaustive, and aggregators are encouraged to share additional areas that can be monetized:
    a. Digital Services
    b. SMS
    c. USSD
    d. IVR
    e. Web-based
    f. Application-based
    g. Sim tool Kit

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- Aggregators can submit their aggregation plan that can address some or all the areas above. The areas will not be restricted to the above ones and additional areas can be included depending on market potential and segment maturity.
- Aggregators are expected to deliver the solution, operate, and provide in life management support in collaboration with Ethio telecom.
- Provision of billing and revenue collection services to content and application providers as required.
- Engage diverse range of partners with high level of experience and expertise in the provisioning of digital, VAS platform and service applications.
- Protect subscribers from unwanted and unauthorized digital and value-added services provisioning.
- Provide their migration plan for current VAS partners into the aggregation modality.
- Other expected aggregators roles
    - Self-onboarding
    - Life cycle management
    - Authentication and Security
    - Anti-fraud
    - Charging
    - Content management & delivery
    - Automated settlement
    - Customer care tool
    - Approval & notification workflow
    - Contract handling (SP and any 3rd party)
    - Report analytics

All proposals satisfying the requirements of this Request for Proposals will be evaluated to select competitive aggregators the fulfil Ethio telecom requirement. This Request for Proposals, however, does not commit Ethio telecom to award a contract, to pay any costs incurred in the preparation of a proposal. Ethio telecom reserves the right to accept or reject any or all proposals received because of this request, to negotiate with all qualified partners or to cancel this Request for Proposals, if it is in the best interests of Ethio telecom to do so.

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4. Project Requirements

4.1 Preliminary requirements

Interested digital and VAS Service aggregators shall fulfil and provide the following engagement requirements when submitting their response proposal:

- Renewed or new trade license and commercial registration.
- Renewed or new VAS (Value Added Service) license or commitment to engage local business entity/ partners.
- Agreement to work with a minimum of three-year contract.
- Commit to engage local business entity/ partners /content providers/ for service delivery.
- Agree to work with Ethio telecom on a fixed revenue share model.
- Partner shall provide at least two recent mobile operator references endorsing the successful implementation of the digital and VAS aggregation.
- Partner shall be required to allow Ethio telecom to have a site visit with the reference customer, if necessary.

Required Company Experience

The Digital and VAS aggregator shall have:

- Proven knowledge in the Aggregation deployment and implementation experience with mobile operators.
- Proven ability to build, deploy and support differentiated aggregator solutions that are aligned with customer needs and local market demands.
- Ability to integrate VAS/content/application provider's system with Ethio telecom infrastructure.
- Professional staff with required aggregation domain knowledge, ability to plan, manage and execute digital and VAS aggregation implementation.
- Familiarity with standardization, best practices and regulations, security, and privacy around digital and VAS aggregation.
- High level of expertise in working with and managing VAS/content/application providers.

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- Capability to develop an actionable roadmap that will give clear guidelines on to how implement, support, and utilize digital and VAS aggregation in Ethio pia by taking existing assets into consideration and market gaps.

4.2 Technical Requirements

4.2.1. General requirements

Potential Digital and VAS Aggregator system shall comply as per the following general requirements:

General Requirement	Compliance Fully comply/Partially Comply/ Not Comply	Remark
The aggregator system should support any required integration to Ethio telecom system for all the business need like to CBS for charging, CRM system for provisioning and open to integrate to upcoming solutions and systems with standard APIs.		
The integration to other systems is under the scope and it should integrate to Network elements, MSC, SMSC, CBS, bulk platform, CRM module, HLR, FMS, BI and other required Ethio telecom systems.		
The system shall provide hardware that has horizontal and vertical scalability.		
The system shall support a highly reliable platform with a failover system that replicates services and protects the system in the event of failure.		
The aggregator system shall have a competent Content Management System (including content aggregation, content adaptation, content packaging, secured content delivery)		
The aggregator system shall have a Consent Gateway and Fraud management Control capablity for protecting customers from unsecured service delivery and fraudulent actions.		
The aggregator shall have own customer care system for timely responses for customers request and complaints arising out of the aggregation service delivery.		
System Shall have Multiple features through open APIs for portal and mobile app enablement.		
The aggregator should support mobile money payment methods in addition to Direct Carrier Billing.		
The system shall provide open, standards-based interfaces with published APIs to enable integration with other solution components or third parties.		

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Standard and open interface for external entities shall be opened for third parties and it should follow and support relative standards and specifications.		
System must not misuse the obtained customer information for any wrong doings, abuse or any other actions		
The system shall support different business model configuration as needed: • Reconciliation Dashboard with full status of the settlement • Revenue share settlement Report to be shared with Partners.		
Service users can request through IVR/SMS/WEB/USSD and other channels for any service related delivery by the aggregator.		
The system must support clear and secure consent management with Opt-in and Opt-out features for all supported services.		
System shall be configurable and support different local languages such as but not limited to Amharic, Afaan Oromo, Tigrigna, and Af Somali.		
The system shall comply with known security related standards, Ethio telecom policies and regulations.		
The system shall support ✓ user identification and authentication and/or authorization methods, ✓ compliance with least privilege and segregation of duties principles, ✓ password management and credentials protection techniques ✓ compliance with Ethio telecom security policy		
The solution shall allow easy expansion of the interface capacity, addition of new services, new network elements, new protocols, and compatibility to provide different digital services.		
The aggregator solution shall be able to integrate with big data and CVM tools of Ethio telecom when even needed.		
The system shall support and comply with Ethio telecom brandings for the interface between content partners and system platform.		
The system shall have a full reporting system and support exporting reports in different formats • CDR generation for billing purposes and reconciliation for partners revenue share. • Data Reconciliation and Automated Settlement reports. • Describe other reporting features		

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4.2.2. Infrastructure, application, and integration requirements

Response	Description
Mandatory	Those requirements that shall result in rejection of offer if not complied
Weighted	Requirements that shall be weighted for technical evaluation.

Infrastructure Requirements				
S.no	**Scope**	**The solution**	**Importance**	**Compliancy (FC/PC/ NC)**
1	General	shall support full functionality of both IPv4 and IPv6 for systems all level (infrastructures, networks security apps and services).	Mandatory	
2	General	Solution deployment shall have three different cloud environments: 1)Production environment 2) Disaster recovery environment 3)Test/Training/Pre-Production environment (An exact copy of the production environment and capable to simulate the activity of the production environment.) The solution shall be deployed in two DC, working as A-A or A-S. The vendor shall describe their capabilities.	Mandatory	
3	General	All OSs on the solution shall be the latest SUSE/Red Hat. The vendor shall describe their OS version.	Weighted	
4	General	All the DBs in this solution shall be implemented on shared storage and preferable latest oracle DB or other related and well-known DB. The vendor shall describe their DB version.	Weighted	
5	Cloud	The solution shall be deployed in private cloud which will be implemented in Ethiopia.	Mandatory	
6	Cloud	The cloud solution shall have Cloud Management Platform (CMP). The solution shall simplify provisioning and de-provisioning of cloud resources via appropriate automation tools.	Weighted	
7	Cloud	The CMP shall provide monitoring and reporting for all the managed cloud services.	Weighted	
8	Cloud	The CMP shall provide a mechanism for detecting failed hosts (compute nodes), determine the Instances impacted by the failed host and restart those impacted Instances on a functioning host depending on the availability of resources.	Weighted	
9	Cloud	The CMP Shall provide monitoring and reporting for all managed cloud services and advanced monitoring for improved application performance and availability.	Weighted	
10	Cloud	The CMP shall be able to automate and provision of compute, storage, networking, backup, replication, load balancer, and security resources.	Weighted	
11	Cloud	The cloud solution shall provide support a cluster service between instances.	Weighted	

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12	Cloud	The cloud shall maintain a record of significant configuration changes and the administrator/user who initiated them.	Weighted	
13	Server	The servers/compute resources shall provide telecom carrier grade rack server with high performance and density standard x86 architecture.	Weighted	
14	Server	The servers/compute resources shall provide hardware level redundancy including disks, power modules, FAN, and I/O Cards, but not limited to.	Weighted	
15	Server	The servers/compute resources shall support NIC teaming for load sharing and redundancy.	Weighted	
16	Storage	The solution shall offer storage with 100% SSD and Shall be industry-standard x86 architecture.	Weighted	
17	Storage	The storage shall have a minimum of two controller configuration running in an active-active mode with automatic failover capabilities in case of one controller failure.	Weighted	
18	Storage	The storage shall support capability to replicate data to remote site	Weighted	
19	HA	The Solution platforms shall be built to tolerate failures and provide features to help build reliable and highly available systems (99.999 %). The vendor should describe their capabilities how to meet this requirement.	Weighted	
20	HA	All networks, computing/servers, load balancers and storages elements shall meet redundancy.	Mandatory	
21	HA	All applications and infrastructures shall support horizontal and vertical auto or manual scaling.	Weighted	
22	HA	The solution shall design applications to automat load balancing based on health at every layer.	Weighted	
23	HA	Shall provide redundant IO paths in all network connectivity.	Weighted	
24	HA	Shall provide automatic failover in case of node, VM, network, and storage failure.	Weighted	
25	Backup and Recovery	The solution shall have backup and recovery solution which shall be centralized based.	Mandatory	
26	Backup and Recovery	Shall backup all the data including but not limited to file systems, applications, databases, VMs, containers, cloud-native software's/endpoints and shall be carried according to the company's backup policy.	Weighted	
27	Backup and Recovery	shall guarantee 100% service restore in case of failure. Shall support just-in-time restore capability during time/precision based restore. The bidders shall describe their capabilities in this regard.	Weighted	
28	Backup and Recovery	The backup system can be in the PR or DR site or in other DC within metro site but shall backup data from both the PR & DR site.	Weighted	
29	Backup and Recovery	Supports permanent data incremental backup and incremental data restoration, as well as customization of periodic full backup.	Weighted	
30	Backup and Recovery	Shall have Centralized web-based management console for backup and restoration of data. Shall include data retrieval mechanism for backup data. The bidders shall describe their capabilities in this regard.	Weighted	
31	DR	The solution shall support easily (1-click) switchover/back, failover/back. The DR solution shall have DR Management platform.	Weighted	

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		The bidders shall describe their capabilities in this regard.		
32	DR	The solution shall provide asynchronous replication at appropriate level both at Instance and array level.	Weighted	
33	DR	The solution shall provide responsibility in the event of disaster, by activating all services or tenant service, with RPO <= 10 seconds, RTO < = 30 minutes.	Weighted	
34	Log	The solution shall have the capability of storing and taking actions on different logs (like audit logs, database activity logs, user activity log, run logs, login logs, configuration change logs, security logs, access violation logs, interface logs and transaction logs). And shall be able to send all logs to third parry based on the requirement and protocols of the third-party. The bidders shall describe their capabilities in this regard.	Weighted	
35	Log	should minimally record information on the below audit log events that is Subject to selections made by the security administrator: • Operation/activity logs and login logs, • System configuration Changes, • Security configuration Changes, • Modifications of any system software, • Invalid user authentication attempts, • Unauthorized attempts to access resources such as data, the password file, and transactions, • Changes to a user's security profile and attributes, • Changes to users account and credential information in all components, • The identity of the individual invoking commands or functions resulting in a log entry, Shall log all transactions, such that any action performed by the system shall be recorded in a human readable format (as raw text files, XML data, database entries, etc.).	Weighted	
36	Log	The solution shall generate logs that contain information about security relevant events. Items selected for recording should be defined and selected by the security administrator. The logs should enable security administrators to investigate losses and improper actions/activities on the part of users, legitimate and otherwise, and to seek legal remedies.	Weighted	
37	Log	All systems (OS, DB, Application) and components shall generate logs for all activities with at least the following details. ➢ Who access (i.e., Username, service name, Account ID …) ➢ What assets accessed (information, service, folder, ….) ➢ From where (IP, MAC, Device…) ➢ To where (IP, MAC, Device ….) ➢ When started (date, time,) ➢ When ended (date, time,) What modification done (file access, modified, created, deleted, in database (FGA: DB name, table, cell, data, import, export ….)	Weighted	

38	Log	The solution should not record Authentication information such as: passwords, PINs, and cryptographic keys in the security log.	Mandatory	
39	Log	Shall find all the log files online for at least 1 year and shall be pushed to Backup and Recovery system.	Weighted	
40	Monitoring	The solution shall have a monitoring module of the applications, software, OS, DB and the hardware. This solution shall be accessed through GUI. Able to retrieve and report on SNMP statistics and Able to receive and report on Syslogs. Shall have enhanced support for service performance monitoring. Shall support sending of system statuses to centralized monitoring system. The bidders shall describe their capabilities in this regard.	Weighted	
41	Monitoring	The monitoring module shall send alarms to users using SMS and Email.	Weighted	
42	Monitoring	The alarms shall have different levels (minor, major, critical, …). And these alarms shall be sent to users based on users level/delegation.	Weighted	
43	Database	The solution shall use proven, stable, industry standard and well known and latest database version.	Weighted	
44	Database	The solution shall have mechanisms enabling to provide capacity to conduct data synchronization, on a real time basis, of the nodes located geographically in different places/sites.	Weighted	
45	Database	Compatible and shall be able to integrate with different database technologies like Oracle, MySQL etc and Legacy ethio telecom systems.	Weighted	
46	IT Capacity estimation	It is bidder responsibility to avail the required IT capacity based on the given design parameter and shall be consider these as minimum design parameters. The bidder shall also consider the following key requirement for the capacity estimation. 1. Network segregation for both physical and logical at least business, management, storage, backup, and disaster recovery. 2. The PR and DR systems shall have same capacity 3. Network and storage elements of DR system shall follow the same deployment as PR in terms of availability. 4. 30% useable resource reservation is expected for service reliability and SLA assurance using AS (Autoscalling). 5. Storage shall be design based on max (IOPS, Capacity).	Mandatory	
47	Technical Support and Maintenance	The bidder shall have on-site and remote support team to handle any request from ethio team. The supplier should have a consistent and responsive team.	Mandatory	
48	Technical Support and Maintenance	In addition to the above requirement, the bidder should describe channel of communications, average response time and/or methodologies how to handle remote and on-site supports for the solution issues.	Weighted	
49	Technical Support and Maintenance	The bidder shall have proactive maintenance team and daily O&M checking plans of the solution. Since this	Mandatory	

		solution is critical for the business continuity, the bidder shall give quick fix for any issues of the solution.		
50	Technical Support and Maintenance	The bidder shall commit to provide any spare part for all hardware for at least 5 years after go-live.	Weighted	
51	Project and Training	The bidder shall submit project implementation plan (PIP).	Mandatory	
52	Project and Training	The bidder shall implement and/or deploy the project onshore in Ethiopia. So, the bidder should have a project team onshore during design, deployment, and operation phases.	Mandatory	
53	Project and Training	The bidders shall give trainings to ethio telecom team. The bidder shall submit training proposal which have subject contents with descriptions, class materials to be provided, number of classes, class duration, class size.	Weighted	
54	Project Deliverables	The bidder shall commit to prepare the following design documents: ➢ FRS, NFRS, HLD, LLD, DR LLD, Switch Over LLD, ICD, E2E Architecture, and Deployment procedures ➢ Dimensioning approach, PAT, User/Business Documents, Operational Manual Document, ➢ Deployment Document, Business Continuity run book, Training approach (planning, design, implementation, and operation), etc.	Mandatory	
55	Project Deliverables	The bidder shall commit to prepare the following PAT documents. All test cases that are required to be executed is to ensure the solution is implemented based on the requirements and by strictly following the agreed design documents, and these should be prepared before starting the implementation of the solution. The type of test cases will include but not limited to the below list: ✓ Functional test cases, ✓ Non-Functional test cases, ✓ Interoperability test cases, ✓ Hardware test cases, ✓ High Availability test cases, ✓ Backup and Disaster recovery test cases, ✓ Switchover/failover test cases, ✓ Security test cases, ✓ License/Certification related test cases, ✓ Performance and other related test cases, ✓ Integration with third-party systems based on the scope of this RFP, etc.	Mandatory	
56	Migration	The bidder will prepare end to end migration plan and migration design to migrate the existing SDP solution to this solution seamlessly.	Mandatory	
57	Migration	If any adaptability/customization is required to interface with 3rd party systems during migration design, the bidders are responsible to handle or customize their solution.	Mandatory	

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Application and Integration requirement				
S.no	**Scope**	**The solution**	**Importance**	**Compliancy (FC/PC/ and NC)**
1	DSDP, ESB and Micro services	The solution shall have ESB as unified integration central element for service integration - ESB /SOA based architecture for any internal IT systems and Network interface. E.g. CS, PS, BSS, CVM… and the vendor shall describe its architecture	weighted	
2	DSDP, ESB and Micro services	For services deployed based on micro services framework micro service integration will be used like for VAS including DSDP modules with supported APIs including HTTP, gRPC, GraphQL, Kafka, NATS, AMQP, FTP, SFTP, Web Sockets, TCP, flume and zookeeper. The vendor shall describe how to implement.	weighted	
3	DSDP, ESB and Micro services	The offered solution shall be open to integrate to IOT system for different business scenarios. The vendor shall describe how to implement.	weighted	
4	DSDP, ESB and Micro services	The system shall support rapid integration with back-end systems and a quick turnaround time for change requests including daytime changes. The vendor shall describe how to implement.	weighted	
5	DSDP, ESB and Microservices	The offered solution shall be open to integrate to social media for different business scenarios. The vendor shall describe how to implement.	weighted	
6	DSDP, ESB and Microservices	The offered solution shall support integration with CS and PS network using the unified integration bus/ESB/microservices for all network types 2G, 3G, 4G, IMS, fixed line and 5G. The vendor shall describe how to implement.	weighted	
7	DSDP, ESB and Microservices	The solution shall be integrated to IT systems like BSS for charging, provisioning and other business scenarios using the unified integration bus/ESB/micro services. Data consistency and synchronization between BSS and DSDP shall be guaranteed. Sync feature shall be real-time and flexible to add and remove the required fields with other system like CRM; PRM etc. the supplier need to describe how this function implemented. The vendor shall describe how to implement.	weighted	
8	DSDP, ESB and Microservices	It shall support synchronization of SP/CP information in real time upon Partner creation, modification and deletion, Service/Content addition, modification and deletion to PRM, CRM and other systems. The vendor shall describe how to implement.	weighted	
9	DSDP, ESB and Microservices	It shall support synchronization of subscriber's information to CRM and other systems. It shall also support to fetch and synchronize subscriber information from CRM and other customer profile systems. The vendor shall describe how to implement.	weighted	
10	DSDP, ESB and Microservices	It shall support synchronization of device information from other systems like EIR and also it shall support synch of device information from DSDP to other systems like EIR. The vendor shall describe how to implement.	weighted	

11	DSDP, ESB and Microservices	It shall support synchronization of subscription services information to other systems like CP/SP and it shall also fetch and synchronize subscription services information from other systems like CP/SP. The vendor shall describe how to implement.	weighted	
12	DSDP, ESB and Microservices	The offered service bus/ESB/micro services shall perform security functions such as identification, authentication and authorization of service requests. The vendor shall describe how to implement.	weighted	
13	DSDP, ESB and Microservices	The offered ESB/micro services shall shield underlying complex network environments, protocols, encoding, and decoding, and provides the existing telecom network capabilities for upper applications. The vendor shall describe how to implement.	weighted	
14	DSDP, ESB and Micro services	The offered ESB/micro services shall encapsulate mobile service capabilities with a series of simple and uniform web-service interfaces.	weighted	
15	DSDP, ESB and Micro services	Routing Policies The offered ESB/micro services shall support messages traffic control. The following message routing policies shall be supported: 1. Routing service requests by number segment 2. Routing service requests in load balancing mode. 3. Routing service requests with other modalities. The vendor shall describe how to implement.	weighted	
16	DSDP, ESB and Micro services	The ESB/micro services module shall enable to route the messages between elements within DSDP and trusted external IT systems. The vendor shall describe how to implement.	Weighted	
16	DSDP, ESB and Microservices	The solution shall support the following SOA principle These interfaces shall be designed in line with the SOA principles. the platform shall establish an interoperability layer that supports interactions among components via a variety of protocols (HTTP/plain old XML [POX], SOAP, Internet Inter-ORB Protocol [IIOP], .NET remoting, message-oriented middleware [MOM] protocols, file transfer protocols and others) and interaction styles (request/reply, conversational, publish and subscribe, asynchronous messaging and others). Reliable, once-only delivery of messages shall be an available option. Synchronous and asynchronous communication shall be supported. Publication of the services shall be supported through the integration with any standard Service Registry/Repository system (for example Software AG Central Site, or Oracle Service Registry) The vendor shall provide detailed description and snapshots of the provided interfaces. The interface shall be reliable; the vendor shall demonstrate how we can achieve it for synchronous and asynchronous message.	Weighted	
17	DSDP, Consent Management	User Consent APIs shall be supported and can be exposed to third party applications E.g. an API for authentication with OTP and Captcha generation and validation.	Mandatory	

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		The vendor shall describe their capabilities and how to implement.		
18	DSDP, Consent Management	There shall an option of different consent management via USSD, SMS and Web OTP. The vendor shall describe their capabilities and how to implement.	weighted	
19	DSDP, Consent Management	The solution shall have a capability to prevent fraud charging of service/content on-demand/subscription based. The vendor shall describe their capabilities and how to implement.	weighted	
20	DSDP, Consent Management	User consent to receive a promotional message from DSDP can be triggered and synched from CRM upon provisioning or any time. At the same time user consent preference will be synch to CRM and any other system. The vendor shall describe their capabilities and how to implement.	weighted	
21	DSDP, Consent Management	The offered system shall support user black list addition (i.e. single or batch) by system user.	mandatory	
22	DSDP, Consent Management	Subscription based and/or on demand services/contents provided by third parties including digital services based on payment API capability shall be authenticated using Authentication API - OTP and Captcha generation and validation, , double click, OBD, Notifications APIs and User Consent APIs.	weighted	
23	DSDP, Consent Management	Black list shall be supported based on different levels (global, service based, partner based, short code based,…etc.) The vendor shall describe their capabilities and how to implement.	weighted	
24	DSDP, Consent Management	The system shall allow customers to selectively blacklisted from any service/content, service/content category like Payment API services, API capability service, SMS services, audio, video, music…by sending a keyword to a dedicated short code on DSDP. This customer will not receive any service/content if blacklisted. And he/she can return to the service/content by sending opt in keyword.	weighted	
25	DSDP, Consent Management	The system shall support order on demand for SMS MO to link the request with service delivery. For instance, User request for MO by sending keyword then SDP shall link the service delivery via MT to this user. If user not requested then the SDP shall reject a message from SP. On the other hand, if SP doesn't deliver the message the charging shall be refund to the end user. The number of messages to be delivered by SP to the end user using the link ID upon user request for On-demand request shall be configurable.	weighted	
26	DSDP, Consent Management	The solution shall support opt in and opt out feature to stop and start a partner service/content. The vendor shall describe their capabilities and how to implement.	weighted	

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27	DSDP, Consent Management	The solution shall support Global Opt In and Opt Out, to allow customer to manage their incoming services/contents to receive or stop/reject. if customers want stop getting BSMS from CP/SPs, they can send stop/no command to global opt out short code, and CP/SPs service/content will not deliver to customers who opt out. The system shall have whitelist and blacklist management via SMS/USSD/IVR/WEB/APP in addition - the system shall have the feature to send service/content to all for Global consent request and if customers send okay/Yes, the okay list will be in whitelist but if they want to not receive they can opt out by sending x command to global opt in and out short code The vendor shall describe their capabilities and how to implement.	weighted	
28	DSDP, Global	DSDP shall support MNP	weighted	
29	DSDP, Global	Multi SMPP link shall be possible between SDP and SMSC/USSD/LBS/MMS and other enabler modules (No limitation in number).	weighted	
30	DSDP, Global	License sharing configuration for different API capability shall be supported. The vendor shall describe their capabilities and how to implement.	weighted	
31	DSDP, Global	The system shall support license model for events from 3rd parties. (how the number of events via 3rd party interface is licensed). The vendor shall describe their capabilities and how to implement.	weighted	
32	DSDP, Global	Policy management shall have capability to integrate with IMS policy infrastructure.	weighted	
33	DSDP, Global	The system shall be designed with container based microservice framework.	weighted	
34	DSDP, Global	The solution shall support HTML5 specification.	weighted	
35	DSDP, Security Management	The system shall enable to become proactive in managing service frauds by preventing customers from abuse. The vendor shall describe their capabilities and how to implement.	mandatory	
36	DSDP, Security Management	It shall ensure both mobile operator and customer protected from unwanted transactions: o fraud traffic o auto subscription/charging The vendor shall describe their capabilities and how to implement.	mandatory	
37	DSDP, Security Management	The module shall assure to avoid Payment risk and Operation risks in real time. The vendor shall describe their capabilities and how to implement.	mandatory	
38	DSDP, Security Management	It shall allow to set a time window for any API capability and services invoked by third parties.	mandatory	
39	DSDP, Security Management	It shall allow to prevent malicious activities by third parties using Machine learning/AI. The vendor shall describe their capabilities and how to implement.	weighted	

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40	DSDP, Security Management	The solution shall detect and prevent proactively any message contents (like promotional contents) from third parties using the exposed APIs by applying Artificial Intelligence. The vendor shall describe their capabilities and how to implement.	weighted	
41	DSDP, Security Management	There shall be a mechanism to secure various types of frauds and vulnerabilities from internet websites using various types of validations, tokenization, cross scripting… The vendor shall describe their capabilities and how to implement.	Mandatory	
42	DSDP, Security Management	Audit logs shall be kept on the system so that any complaint can be handled. The vendor shall describe their capabilities and how to implement.	mandatory	
43	DSDP, Security Management	There shall be an option to create a consent ID for any transaction. A post validation of user request shall be supported by generating a unique consent ID and saved before further action. The vendor shall describe their capabilities and how to implement.	weighted	
44	DSDP, Security Management	The fraud management shall protect: User Personal Data Hacking Protect Fraud from Internet User Consent before Transaction Unwanted Popup and cookies management The vendor shall describe their capabilities and how to implement.	mandatory	
45	DSDP, Security Management	Depending on the configuration rule on the API management Gateway, it will redirect Third Party request to the user to record his/her consent in any format (configurable) i.e. SMS, Email or Voice. The vendor shall describe their capabilities and how to implement.	weighted	
46	DSDP, Security Management	Security Against D2C Attacks -OWASP shall be supported including: HTTP header Injection Malware Apps Playback Attacks Click Jacking Masking Unwanted Popups The vendor shall describe their capabilities and how to implement.	weighted	
47	DSDP, Security Management	The system shall support Web-application and database attacks prevention and detection including: Cross site scripting SQL injection Path traversal DOS and DDOS The vendor shall describe their capabilities and how to implement.	weighted	

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48	DSDP, Security Management	Secure access methods are required for 3rd party access (security layering by firewall, secure protocol, secure payload for sensitive and payment related transaction, strong password, VPN) via different API capability like SMS and USSD, describe how do you address security requirements. The vendor shall describe their capabilities and how to implement.	weighted	
49	DSDP, Security Management	The system shall support to alert security breaches. The vendor shall describe their capabilities and how to implement.	weighted	
50	DSDP, Operation and Maintenance	End to end trace tool for each API and service capabilities shall be provided. For instance for SMS from user or SP, it shall be possible to trace end to end including: SP-SDP-CBS-SMSC-MSC-End user. The vendor shall describe their capabilities and how to implement.	weighted	
51	DSDP, Operation and Maintenance	The system shall have a data consistency check and fixing tool. The vendor shall describe their capabilities and how to implement.	weighted	
52	DSDP, Operation and Maintenance	Detail Log for API integration shall be available to third party and system user to simplify integration. The vendor shall describe their capabilities and how to implement.	weighted	
53	DSDP, Operation and Maintenance	The system shall keep service/content creator, creation time and date, approval user, approved date and time, … with the service and content forever. And it can be queried on the GUI any time.	mandatory	
54	DSDP, Operation and Maintenance	There shall be a full-fledged tracing and troubleshoot tool for any service and API capabilities as well as integration with other internal platforms. The vendor shall describe their capabilities and how to implement.	weighted	
55	DSDP, Operation and Maintenance	It shall have log management in unified platform to be used to record important operation, configuration and log history. The vendor shall describe their capabilities and how to implement.	weighted	
56	DSDP, Operation and Maintenance	The System shall show and detect alarms , perform fault diagnosis , demarcate the fault , localize the fault , identify the root cause , impacted service, technology , and affected customers number, estimated revenue loss and if it is impacted level with incident threshold definition the declare incident. The vendor shall describe their capabilities and how to implement.	weighted	
57	DSDP, Operation and Maintenance	The system shall check the history alarm, the current alarm and shall make analysis and pinpoint risk and make predictive analysis	weighted	
58	DSDP, Operation and Maintenance	The system shall have seamless, intelligent, automatic fault and incident notification mechanism to defined users with flexible options and third party channels (eg. SMS, Mobile APP, Email,etc). The vendor shall describe their capabilities and how to implement.	weighted	

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4.2.3. Security Requirements and Guidelines

- The partner should have an IT security mechanism based on ISO 27001 standards to protect its asset from cyber related threat. The bidder should describe in detail in the proposal.
    - Asset includes communication and computing service, information and data, personnel, equipment, and facilities.
    - A security threat is defined as a potential violation of security. Examples of threats include:
        - ✓ Unauthorized disclosure of information.
        - ✓ Unauthorized destruction or modification of data, equipment, or other resources.
        - ✓ Theft, removal or loss of information or other resources.
        - ✓ Interruption or denial of services; and
        - ✓ Impersonation, or masquerading as an authorized entity.
- The bidder should avoid using vulnerable products for its platform.
- The bidder should be cooperative for penetration test requests from ethio telecom.
- Shall deploy multi-layer protection at the boundary of their trust level network which include but not limited to IP layer Firewall, application layer firewall (such as WAF) and Intrusion prevent system (IPS).
- Should provide intermediation for billing verification between parties in the VAS value chain.
- Should preserve confidentiality, integrity and availability of customer information or data throughout their network.
- Should securely transport content to and from ethio telecom network and value-added service provider systems.
- Should preserve the privacy of their customers.
- Inbound packet filtering shall be implemented to screen ingress traffic based on source IP.
- They should have API management systems and always create secure connection over HTTPS/TLs for external connection (application/content provider).
- The bidder should have customer/account management system which is capable to identify, authenticate and authorize VAS or Content providers access to their service.
- The bidder should not advertise ethio telecom edge network to VAS/Content provider networks.
- The bidder should not advertise routes from one VAS Provider to another VAS provider network.

- The bidder networks which are connected to ethio telecom network shall not be accessible from the Internet.
- Only required protocols should be allowed for both inbound and outbound traffic.
- Should have fraud control mechanism to detect any fraudulent activities by content or VAS provider.

5. Commercial proposal

Interested Aggregators must provide their commercial proposal to work with Ethio telecom as Digital and VAS aggregator for an agreed period. Specifically, the Aggregators who seeks to work with Ethio telecom shall:

- Be willing to work with Ethio telecom on a fixed revenue sharing model set by Ethio telecom.
- Prepare a business plan, business strategy and revenue projection (for at least three year)
- Provide three-year road map in terms of the implementation of the digital and VAS aggregation in the market with Ethio telecom.

6. Confidentiality and Public Disclosure

- Partners shall treat all information obtained from Ethio telecom which is not generally available to the public as confidential and/or proprietary to Ethio telecom.
- Partners shall exercise all reasonable precautions to prevent any information derived from such sources from being disclosed to any other person.
- If required, Ethio telecom as a government/public corporation, is subject to state and local public disclosure laws and, as such, is legally obligated to disclose to the public documents, including proposals, to the extent required by laws.
- Ethio telecom will keep the confidentiality of the documents and will not expose competitive information to third party.

7. Proposal administration

7.1 Proposal submission

Please use the RFP template provided on page 9 of this RFP for your responses.
All proposals must be submitted in hardcopy to Marketing Division (Eeyor Tower, 6 th floor, Room no. 607) and electronically via aggregation.rfp@ethio telecom.et till December 17, 2021.

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Moreover, they shall comply with the following requirements during preparation of the Proposal:

- The Proposal and all associated correspondence shall be written in English. Any interlineations, erasures or over writings shall be valid only if they are initialed by the authorized person signing the Proposal.
- Proposals received by facsimile shall be treated as defective, invalid and rejected. Only detailed complete proposals in the form indicated above received prior to the closing time and date of the proposals shall be taken as valid.
- Partners are not permitted to modify, substitute, or withdraw Proposals after its submission. Modifications to proposals already submitted will be allowed if submitted in writing prior to the time fixed in the Request for Proposals.
- The partner shall prepare the technical proposal in hard copy along with a soft copy and sealed in a separate cover. Similarly, Commercial Proposal in hard copy along with a soft copy and sealed in a separate cover.

Proposals and any other related documents prepared in response to this RFP will not be considered unless they are filed to the correct address within the period.

Timeline:

Action	Schedule
RFP posted	November 16, 2021
Submission deadline	December 17, 2021

7.2 Proposal Review and Discussion.

Ethio telecom will enter discussion with any one or more applicants regarding business model, engagement approach, price, scope of services, or any other term of their proposals, and such other contractual terms, at any time prior to execution of a final contract.

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RFP Template

RFP template

The proposals submitted in response to this RFP must include a cover letter signed by the person authorized to issue the proposal on behalf of the company.

The proposal should also include:

- A cover letter which summarizes the response, includes areas to which response is made and indicates if supporting documentation is included in your response.
- The RFP shall be prepared shall address the following parts but not limited to:

A. General Information

- Parent company:
  - Business Name, address, telephone number, website,
  - A primary contact, including name, job title, address, telephone and email address.
- Local representative
  - Authorization letter
  - Agent information
  - Business license and taxpayer identification number (Local)

B. Company Profile

- Qualified Aggregators should submit a company profile and experience showing but not limited to the below (as applicable)
  - The prospective authorized Aggregators business experience supported by a brief company profile. They shall present business experience supported by a brief company profile including but not limited to:
    - Track record of the VAS/content/application providers during the execution of its aggregation responsibility which is relevant to the engagement (business license, credentials, certificates, and others)
  - A description of business background, including, country of origin, primary mission of business, business experience and any other information relevant to this RFP.
  - Successful years of experiences in providing Telecom related services
    - Staff resources
    - The qualification of the management

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- The business experience of the management and the staffs preferably in Telecom related services
- Track record related to the role played acted as aggregator into different markets

- Provide at least two references for the successful role carried for digital and VAS aggregation

- Relevant aggregation experience working with operators in African market is desirable.
- Digital and VAS aggregation portfolio:
  - Aggregation platform, equipment and other relevant hardware and software components.
  - Service access channels: How users access to services: via internet/web / mobile client or via USSD, SMS, IVR
  - Product offers/Service type
  - High level service/ solution architecture describing components and key integration points.

C. Project Understanding

Provide a brief narrative statement that confirms your understanding of the project, and agreement to provide required products and services as an aggregator necessary to achieve the objectives of the project. Describe how your strategy and business experience will benefit the project.
Demonstrating clear understanding of Ethio telecom technical and operational requirements

- Brief baseline assessment of Ethio telecom Digital and VAS market size, roadblocks, regulations, and ecosystem, etc
- Digital and VAS roadmap and strategy for business, government, and the critical mass
- Revenue projection by category for five years
- Classification of Digital and VAS
- Assessment of current gaps in Ethio telecom related to delivery of digital and VAS offers with benchmark and gap

D. Engagement scope

Provide a proposed scope of work, including a proposal and project milestones, in accordance with “Scope of Work,” of this RFP. Please make sure to include a statement regarding how you engage a diverse range of partners /content providers & stakeholders from the market at large. Potential Aggregator should describe in detail:

- Proposal scope, objective and how the solution will be realized.

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- Product and Services to be delivered, with different business or technical environments,
- Technical and integration details
- Technology, solution and related issues

E. Proposed content providers / Partners

- State the details to use partners /content providers to the objective of this RFP.
- Provide the name and address of partners /content providers, a description of the work and experience in the subject matter.

F. Statement of Financial Capacity

- General statement of the financial condition
- most recent audited financial statements
- Disclosure of any bankruptcy filings over the past five years

G. Engaging local business entity

- Availability of local business entity that can actively be engaged.
- Readiness and capability in delivering the required services
- List of professionals for project implementation
- Proof of capability/ certification/ relevant experience

H. Commercial proposal

a. Business/ financial strategy

- Present strategic roadmap for project implementation, priority areas and a detailed look at specific recommended projects with costs projections.
- Identify opportunities for quick wins and solutions that produce rapid returns on investment for the earlier stages of implementation
- Detailed cost information for each option/alternative. The cost proposal must identify, by separate item, task and activity required for each deliverable.
- Propose Go to market strategy and Co-marketing approaches

b. Delivery time

- Propose the shortest and feasible delivery time for solution.

I. Technical proposal

- Please provide your responses to the technical compliance statement described
- Provide additional technical requirements and platform capabilities you are offering to avail during the project

J. Additional information

- Case studies, solution brief /demos
- Benefits to Ethio telecom, partners and customer's/ end users
- Resource and integration requirements
- Preconditions, challenges, or areas of concern
- Any additional information on applications, solution delivery, marketing support, business models etc.