



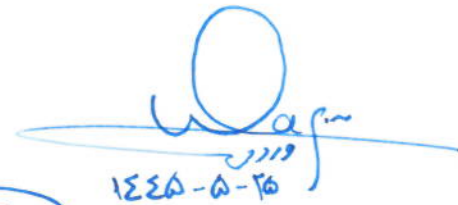
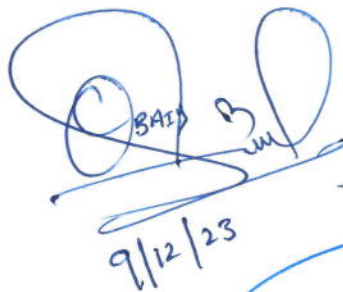
**Terms of Reference
For
NEW BILLING SYSTEM**

2023/12/03



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Version Control

Version	Date	Author	Reviewer	Notes
V1.0	03/12/2023	BSS/OSS Directorate	CIO- M.Aalem Hameedi	

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1. About Afghan Telecom:

Afghan Telecom (AFTEL) stands as a prominent telecommunications company in Afghanistan, operating under a government-owned and operated framework. With a 25-year license, the company provides a comprehensive suite of telecommunication services, encompassing fixed line, wireless voice, and data connectivity. In 2005, the Afghanistan Ministry of Communications initiated the transformation of AFTEL into a private entity, while still maintaining regulatory oversight.

As a trailblazer in Afghanistan's telecommunications landscape, AFTEL has consistently embraced technological advancements, remaining at the forefront of network evolution. With the ever-growing demands of subscribers and the rapid development of telecom technology, AFTEL has consistently demonstrated its pioneering spirit. This commitment underscores its leadership in shaping the future of mobile networks, emphasizing the delivery of new and advanced services to subscribers on a daily basis.

Incorporated in 2013, Salaam has emerged as a dynamic addition to Afghanistan's telecommunications industry. Conceived by the Ministry of Telecommunications and Information Technology, Salaam is dedicated to revolutionizing the nation's telecommunication sector. The company complements the nationwide fixed network with cutting-edge 3G GSM voice and data services.

Setting itself apart from the competition, Salaam takes pride in its customer-centric approach, offering transparent packages devoid of restrictions or hidden charges. Salaam provides its customers with the freedom to relish the most competitive call rates, whether for domestic or international calls, and hassle-free internet access at unmatched rates, all while maintaining the highest standards of service quality.



The bottom of the page features three blue ink signatures. The first signature is on the left, the second is in the center, and the third is on the right. Below the signatures is a circular official stamp of Afghan Telecom Corporation. The stamp contains the text "Afghan Telecom Corporation" at the top, "افغان" in the center, and "شرکت ارتباطات افغانستان" at the bottom. The stamp is partially overlaid by the third signature.

2. Project Background: AFTEL NEW BILLING SYSTEM

AFTEL, a key player in the telecommunications industry, has maintained operational excellence through its current billing system, comprising CVBS, NGIN, Mediation, and Settlement components. Initially procured in 2014 and expanded in subsequent years, the system has served us well. However, the evolving industry landscape required a strategic reevaluation.

Challenges and Objectives:

Despite its reliability, the current billing system faces challenges:

- Market Trends: Inadequate support for innovative products and new market trends.
- User Interface: Outdated USSD and IVR apps, lacking modern usability.
- Infrastructure: Aging hardware at the end of its operational life.

The AFTEL Billing System Upgrade aims to:

- Support Innovation: Enable the system to swiftly adapt to and support innovative products.
- Enhance Online Billing: Implement a dynamic online billing and charging mechanism.
- Upgrade Infrastructure: Migrate to modern infrastructure for both production and disaster recovery.

Alignment with Goals:

This initiative aligns with AFTEL's goals, ensuring technological innovation, improved user experience, and resilient infrastructure. The upgrade is pivotal for sustaining growth, enhancing customer satisfaction, and securing AFTEL's position in the telecommunications sector.

In summary, the AFTEL new Billing System responds strategically to industry evolution, overcoming challenges, and positioning AFTEL as a leader in telecommunications services.

3. Project Objective

The overall goal of this project is to establish a robust and versatile billing system that seamlessly integrates Production (PR) and Disaster Recovery (DR) functionalities. The project aims to:



Implement a Comprehensive Billing System:

Develop and deploy a new billing system that encompasses both Production and Disaster Recovery components, ensuring the continuity of services during regular operations and unforeseen events.

Support current AFTEL Billing System Functionalities:

Ensure that the new billing system supports all existing functionalities of the AFTEL PR billing system, providing a smooth transition for users and maintaining operational continuity.

Agile Responsiveness and Continuous Innovation:

Foster agile responsiveness and continuous innovation within the billing system to adapt swiftly to changes in the telecom market in Afghanistan.

Creating a new Billing System with Disaster Recovery (DR) Capabilities:

Design the upcoming PR billing system with robust Disaster Recovery features to ensure continuity and data integrity. This includes developing failover mechanisms, data replication strategies, and regular testing procedures to guarantee a swift and seamless transition in the event of unforeseen disruptions, thereby minimizing any potential impact on billing operations.

Improve Customer Experience:

Prioritize enhancements to customer experience through the introduction of versatile products and offers, ensuring a positive and engaging interaction for telecom users.

Versatile Product Offerings:

Develop a billing system that facilitates the creation of versatile products and offers, catering to diverse client needs and domains within the telecom market.

Facilitate Partner Collaboration:

Design the billing system to support seamless collaboration with partners, providing friendly APIs to 3rd parties to meet industry demands and foster mutual growth.

Increase ARPU Level:

Work towards increasing the Average Revenue Per User (ARPU) level by optimizing revenue streams while providing enhanced telecom services through the new billing system.

4. Technical Requirements

Clause No.	Statement of Compliance for Selection of NEW BILLING SYSTEM	Compliance (C)	Non-Compliance (NC)	Comment
1	All features of CVBS, NGIN, Settlement and mediation system of current system(please see annex-01 for existing features of the current AFTEL billing system)			
2	Emerging Features in Telecom BSS/OSS Systems as per Current Global Market Trends in billing, charging, order management, and service fulfillment (Please list this in table 2.1)			
3	A complete BSS/OSS on-premises infrastructure with cloud functionalities			
4	An online charging system (OCS) supporting charging, billing, and rating of voice(national & international), sms, content, data, and Wifi Offloading			
5	Voucher center (VC) Generating Voucher Card & PIN with no need of license, by standalone machine for GSM, PSTN, WiMAX, ADSL, along with calling cards			
6	New versions of NGIN components including SCPs, SIU, USSD gateway, USSD application & a complete configurable IVR system.			
7	An up-to-date AAA (Authentication, Authorization, and Accounting) system for ADSL, GSM data, and wifi offloading			
8	Integration of all system nodes (PR&DR) with core network elements			
9	The system should support new features requested by AFTEL (Please see the annex-02 for the list of new required features)			



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5. Functions and Capacity of New billing (BSS/OSS) system:

The main function of the business and operation support system is to provide an end-to-end solution for business and operation support, covering the GSM / Fixed Line services.

It's worth mentioning that our current Convergent Billing system (CVBS) supports up to 6.2M user licenses and the new proposed system should also support a minimum of the current capacity.

The new billing system should cover all functionalities of the current system along with new features and trends in business and operation support systems. The proposed solution should be a scalable and flexible telecom business and operation support system, enabling AFTEL to break away from restrictive billing boundaries, rapidly configure and deploy personalized plans by themselves, turning their BSS from being a bottleneck for innovation to their source of revenue generation.

The new business and operation support system platform should allow AFTEL to easily interact with all the partners within their ecosystem, whether they are mobile virtual network enablers or operators, IoT providers, interconnect and roaming partners, payment service providers or any other type of partner. Strong partner relationship management capabilities address these partners' unique needs and enable AFTEL to extend their role in the value chain.

The system should be able to provide different reports related to online / offline rating and charging on various services (voice/data/content) of fixed / mobile / data networks, VC, for all prepaid and postpaid subscribers)

6. Responsibility matrix

R = Responsible

S = Support

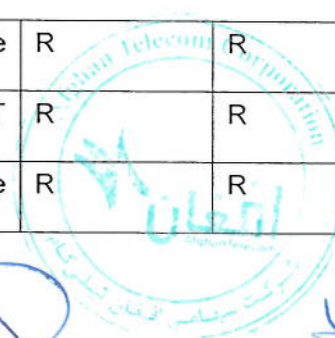
The contractor is responsible for all costs for delivering the goods to the project implementation site, as per Delivered Duty Paid (DDP-2015) Incoterm rules

No.	Item	Contractor	AFTEL
1	NEW BILLING SYSTEM IMPLEMENTATION		
1.1	Project Implementation planning and progress control	R	S



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1.2	Project communication planning	R	S
1.3	Quality control	R	S
1.4	Project Documentation and Reporting	R	S
1.5	Reports approval	R	S
1.6	Acceptance procedure proposal submission	R	S
1.7	Acceptance procedure proposal approval	S	R
1.8	Health, safety, environmental and quality (HSEQ)	R	S
1.9	Equipment availability & readiness for installation at the sites (DDP)	R	S
1.10	Equipment installation & engineering service	R	S
1.11	Equipment commissioning	R	S
2	Hardware Delivery and Site-Survey		
2.1	Hardware Manufacture & site-survey report	R	S
2.2	Power on and OS Pre Installation	R	S
2.3	Deliver equipment to Afghanistan, AFTEL Warehouses (DDP)	R	S
2.4	All related documents for custom clearance	R	S
2.5	Customs clearance	R	S
2.6	Equipment delivery from the AFTEL warehouse to the related sites	R	S
2.7	Provision of secure space in AFTEL (customer) warehouse and on-site for the storage of equipment	S	R
2.8	Signature on GRN (Goods Received Notes), specifying the number of boxes received in the presence of contractor representative after delivery on-site	R	R
2.9	Hardware Installation & Integration	R	S
2.10	Hardware Installation Test and Connection Test	R	S
2.11	Hardware configuration	R	S
2.12	Migration Tool Development	R	S
2.13	System Service Integration with all relevant nodes	R	S
2.14	Service Migration	R	S
2.15	System Service Engineering and Implementation	R	S
2.16	Software Installation & Configuration	R	S
2.17	Service function test	R	S
2.18	Migration(3 Rounds)	R	S
3	Acceptance Responsibilities		
3.1	PAT(Partial Acceptance Test) to be conducted on-site within the agreed time	R	R
3.2	Signature on PAT documents on the completion of PAT on-site	R	R
3.4	PAT(Partial Acceptance Test) to be conducted on-site within agreed time	R	R



7. System Life span

The minimum life span of Ten Years is required, all equipment and software are expected to be the latest versions available at market and be able to operate and ideally perform in the above-mentioned life span period.

8. Operation manuals, (SOPs), Documentation, and Training:

The contractor is responsible to provide operation manuals and documentation covering all aspects of the newly procured BSS/OSS system

The contractor is responsible to provide basic overseas training covering all aspects of the newly procured BSS/OSS system for 20 local employees.

The contractor is responsible to provide Advance overseas training covering all aspects of the newly procured BSS/OSS system for 6 local employees for 12 working days.

9. Warranty maintenance and Support

The contractor is responsible for maintenance, support and hardware failure replacement and a warranty performance for a period of one year starting from the date of signing FAC.

10. Access Control and Security

The contractor shall insure the adaptation of the proper security mechanisms on OSS/BSS platforms to prevent unauthorized platform access, policy changes, or subscriber data changes.

11. Payment Terms

- 20% of the contract price as advance payment against 20% advance payment guarantee.
- 30% of the contract price on equipment delivery to the AFTEL warehouse
- 30% of the contract price after system installation, data migration, service functionality test, and PAC.
- 20 of the contract price after project handover, training, providing documentation and FAC

12. Acceptance

Upon completion of the project, testing, integration, and data migration, the process



of acceptance will begin, AFTEL will ensure all aspects of the deployed system are as per the agreed terms and conditions.

1. Project Duration

The project duration would be around 14 months based on calendar days.

No.	Task Name	Plan Start Date	Plan Finish Date
1	PO Issued	PO Day	
2	Equipment purchase, delivery, Shipment and custom clearance	PO Day+1 Day	PO Day+120 Days
	Equipment installation and construction	PO Day+120 Days	PO Day+150 Days
	Equipment GRN	PO Day+150 Days	PO Day+153 Days
3	Scoping & Analysis & HLD	PO Day+1 Day	PO Day+120 Days
	SRS Sign	PO Day+120 Days	PO Day+125 Days
4	PR System installation and construction	PO Day+150 Days	PO Day+180 Days
5	Service function on PR System	PO Day+180 Days	PO Day+270 Days
6	Training staff and documentation	PO Day+240 Days	PO Day+270 Days
7	Data Analysis & Configuration	PO Day+180 Days	PO Day+330 Days
8	E2E and performance testing on PR System	PO Day+270 Days	PO Day+330 Days
9	Migration Survey	PO Day+120 Days	PO Day+150 Days
	Migration Script And Tool Develop	PO Day+150 Days	PO Day+210 Days
	Migration Testing	PO Day+210 Days	PO Day+330 Days
	Migration(3 Rounds)	PO Day+330 Days	PO Day+360 Days
10	Reconciliation	PO Day+180 Days	PO Day+330 Days
11	Dry run and RFS sign	PO Day+330 Days	PO Day+360 Days
12	Go live	PO Day+360 Days	PO Day+365 Days
13	DR Construction	PO Day+365 Days	PO Day+420 Days
14	Project Handover and acceptance	PO Day+420 Days	PO Day+425 Days

14. PRICE SCHEDULE

The providing party is responsible for providing breakdown price of all items, and equipment along with their specification as per Delivered Duty Paid (DDP-2015)

15. HARDWARE BREAKDOWN

table 1.1

#	Name of Items	Details of Technical Specification	QTY	Price in DDP/item	Total Price in DDP	Item End of Life	Remarks

16. VENDOR/3RD PARTY APPLICATIONS (SOFTWARES) BREAKDOWN

table 1.2

#	Name of Items	Details of Technical Specification	QTY	Price/item	Total Price	Item End of Life/License	Remarks

17. ENGINEERING SERVICES/INTEGRATION & MIGRATION BREAKDOWN

table 1.3

#	TASK	DETAILS	Total price/task	Remarks

18. SYSTEM DIAGRAM FOR (PR AND DR):

add a detailed network diagram of PR & DR sites here.



19. LIST ALL NEW FEATURES OF YOUR SYSTEM:

table 2.1

SN	FEATURE NAME	DESCRIPTION	Comment

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