**REQUEST FOR PROPOSAL (RFP):**

**Data EntRY (OCR/ICR), VALIDATION & INTEGRITY RFP**

# Technical Requirements

**Scope and Objective**

The objective of this project is to improve the quality of data held by MIC2 for its subscribers. Enhance with confidence the overall onboarding journey for customers by reducing the time taken to have any transaction (new line, swap line,..). Reducing the time needed to perform transactions and enhance the quality, truthful and genuine information of customers purchasing new lines through different MIC2 channels; such as – but not limited to- photographs uploaded into MIC2 NGBSS System, identification documents, data entry, etc….

As part of this project, MIC2 will take several measures to protect the mobile customers and implement rules in line with GPDR. It is anticipated to deploy the solution, at all point of sales. It shall use existing cameras and scanners at all point of sales. Minimal or no additional hardware at the agent side should be required. Enhancements solution could be proposed (example use of the agent’s mobile phone).

* Unknown percentage of existing subscribers with inaccurate information mainly those with prepaid SIMs cards. Inaccuracy is caused mostly by human data entry and validation of KYC operations for scanned documents and face capture.
* Manual data entry of new customers without document authenticity check and demographic information validation.
* Existing customers’ data is not clean, and might be duplicated. Existing images for face and documents are not reliable.
* Ensuring all the proper and legal documents from Non-Lebanese residence based on the council of ministers directives to buy new lines.

1. **Solution Controls:**

The Solution shall be web-based with an administrative portal for managing, in real-time, operational activities, in order to lock specific users to one machine, in specific geo-location.

* The Solution shall be compatible with the newest browser versions of IE, Edge, Chrome, etc... and shall open on any OS
* Agent shall use his credentials to access only one session of the Solution on only one machine or device.
* Simultaneous sessions shall not be possible on same machine even from different Employer’s credentials.
* Agent’s credentials (mainly username) shall be blocked from accessing The Solution after trying to open a second session from same or from any other machine.

1. **Killing Factors:**

* Detect Liveness in Photo less than 5 seconds
* Cleansing of Existing data – provide method and how it will be done
* Previous Experience in similar deployments – provide 2 references
* Integration with NGSS existing solution
* License to be Perpetual – Solution can’t be stopped and shouldn’t impact the selling/ onboarding of the different lines
* Solution should do Transliteration from any language (mainly Arabic) to English
* Solution should allow the search for all details and records using an image provided
* Solution to be fully on-premises no data to be sent to cloud for any reason

1. **OCR & ICR capabilities:**

* The Solution shall have Optical Character Recognition capability (OCR) to convert the image of typed text into machine-encoded text from the scanned document.
* The Solution shall accordingly do the automated data entry from IDs/passports/or any other defined templates/etc.
* The Solution shall have Intelligent Character Recognition capability (ICR) to convert handwritten text into machine-encoded text from the scanned document.
* The Solution shall recognize Arabic and Latin characters from the scanned documents to automatically fill touch CRM and touch custom application required fields (to be filled in English)
* Solution shall come with a fully automated OCR translation packaged with the main languages (English, Arabic, French, German, Japanese, Korean, Russian, Spanish, etc…) and capable to support additional languages.  Solution should capture the scanned document and instantly translate to English as default language in real-time.
* ID document validation using AI trained automated system checks document image content, security features and fraud indicators
* In special cases, we might allow the agent to fill some or all fields. (Per user, and / or per field
* Bidder shall recommend a process to enhance the existing process with main aim to make it simpler and more efficient, such as but not limited to reducing the current time required to perform the services (new line, swap line, lost line,..)

1. **Liveness detection during image capturing:**

In order to prevent cases of “picture on picture” capture by people with dishonest intentions, the Solution shall detect liveness of an image to ensure that every image is for a human being face taken in real-time – max of 5 seconds delay. The aim of this feature is to avoid pretentious photographs with no link to real living humans such as users cheating the system by capturing an unrecognizable image.

1. **Uniqueness of data and 3D face detection/or recognition:**

* The importance of having a database with unique data is important for tracking blacklisted individuals. The Solution shall utilize a deduplication engine for face recognition in its database.
* The solution shall detect any mismatch in the current taken information: user’s face image, his scanned document and agent input.
* Solution should match the collected information with the user’s existing data, if any, to flag or block any anomalies based on configurations defined by the administrator.

1. **Special case handling**

* In special cases, the solution should allow to proceed without taking a face picture for specific ID types (example for security agencies).
* In this case, the solution shall provide a dummy image per ID type set by the administrator.
* If for any reason, a real picture was taken for this special ID type, replace the taken image with the corresponding dummy image.

1. **Parameters and Type of documents**

* The Solution shall be configured to accept any pre-defined type of document
* The Solution shall be configured to accept number and type of identification document based on pre-defined criteria such as, but not limited to the following examples:
  + If the customer’s Nationality is Lebanese, only 1 document is needed: an ID or a passport are allowed to be scanned and eventually the OCR module runs afterwards.
  + If customer’s Nationality is Syrian, 2 documents shall be scanned: ID and Ikameh are allowed to be scanned and eventually OCR module performs the job.
  + Etc..
* The Solution shall allow to configure dummy images for special ID types.
* At any time, type and number of documents may be updated. The Solution shall allow MIC2 admin to define a new type of document, number of documents needed per nationality, etc…
* Solution shall have the capability to translate from any language (mainly Arabic) to English (name, numbers,..)
* Solution shall adopt a unified naming convention.
* Solution should read low-resolution images and give options to edit text for configured fields if not clearly captured or available.
* Solution should provide various options for administrators in terms of control, records creation

1. **Data Cleansing and Fraud detection**

* Solution shall have Data Cleansing module to check the existing data making sure it doesn’t contain any non-genuine info such as – but not limited to- wrong documents , pictures not related to human shape, inconsistent data etc...
* Batch processing of existing documents (Pictures and document scans) and user data to perform data cleansing.
* Provide a process for fraud detection (Existing and New).
* Flag inconsistencies for any data
* Flag duplicates

1. **Alarms, reporting and Log Management:**

* Solution should build up its database with touch data.
* Solution should have reporting module to provide stats on different levels
* Solution should have alarm module to capture all faults on the system
* Solution should have log management to capture all detailed logs
* Solution should have unified interface to create users and permissions based on roles
* Ability to search for a picture in the database
* Ability to generate reports on different criteria
* Solution should allow searching for a user based on different search criteria
* Solution shall provide a 360 view of user like the different IDs, photos, GSM numbers etc..
* Solution should allow searching for users based on a face image.
* Solution shall provide reporting and analytics capabilities to help MIC2 track and analyze key performance indicators such as accuracy rates, fraud detection rates, and processing times.

1. **Digital Onboarding:**

* Optional SIM activation through this new digital onboarding platform. Data will be extracted from OCR, Chip information (in case of electronic document and current device is NFC enabled)
* Ensure liveliness of the photo captured by customer as indicated previously above.
* Location and device information can be collected during onboarding.
* Full fledge administration backend tool that can monitor onboarding operations.
* Data will be automatically populated from OCR / Electrical profile of document. Data entry is limited/prevented.
* Data will be saved in a temporary database
* Data will be extracted when user collects the line.
* This solution can also be used to re-validate existing subscribers remotely (as part of data cleansing for example).

1. **Mobile Digital Onboarding:**

* Solution should support mobile digital onboarding, the customer can upload all the needed documents, take live photo, and be able to do digital signature
* After confirmation and validation of the information and data MIC2 will be able to send Esim QR code to the user.
* It can be that the customer do all the needed documentation and photo liveness after which it will provide him with QR code that he can use to get the physical SIM from any outlet.
* The workflow for mobile digital onboarding need to be shared with time for the operation not to exceed 2 minutes.
* Solution should be managed from centralized solution to define the workflow, document needed, ..
* Solution need to be integrated with payment gateway
* Full fledge administration backend tool that can monitor onboarding operations.
* Data will be automatically populated from OCR / Electrical profile of document. Data entry is limited/prevented.

1. **E-Wallet:**

* Solution should support E-wallet digital onboarding of new customers
* All workflows related to E-wallet must be included (verification, integration,..)
* The application should support the onboarding of new customers for new lines/ swap lines,.. and for the new E-Wallet customers
* Database can be separate for both applications.

1. **Right to Access and Right to be forgotten:**

Customers will have right for their personal data and the information stored and processed and why. In addition, they can request to have their personal data deleted in accordance with the GDPR and Data Protection Act.

1. **Integration**

The points of integration with Touch -Huawei NGBSS for real time transactions are:

* Send images to NGBSS (photo and scans) using SFTP protocol and API.
* Receive a call back from NGBSS before committing a transaction. In the callback function, it is possible to continue the transaction or abort it.
* Possibility to embed the NGBSS web based user interface in a custom application using an embedded web browser. The custom application can append a custom parameter to the Login URL, which NGBSS sends to a third party application along with the username when the user submits his credentials. This third party application can allow or abort the login phase.
* The current process to capture a photo and scan documents is as follows: NGBSS triggers the camera and scanner capture by launching a separate web browser with a specific URL. This URL contains an Order Id parameter or a customer ID parameter that will be used to correlate the taken picture and the scanned document with the current transaction at hand. It can also tell if the action is for camera capture or scan capture. In addition, the URL will contain the operator ID, and a hash to verify the integrity of the URL. The URL does not contain any other information, like the type of transaction for example.
* Calls to camera capture or scan capture are done independently.
* The camera capture module and the scan capture module shall upload the images to touch server which in turn will send them to NGBSS.
* The scan module should be able to take multiple scans and upload them to the server at once.
* No direct access to the touch NGBSS database is allowed.
* Solution shall have open APIs that allow easy integration with other systems in the future.
* Integration with payment gateway

All transactions are done from NGBSS web based user interface.

However, selling of prepaid idle numbers is done from within a custom web application built in-house by touch. An API specific to this business is provided by NGBSS. Only this application can be customized.

Any data needed to build the solution database is provided offline.

Provided solution should also be able to integrate with touch API or third party API like any watch list.

1. **Project Plan and Responsibility matrix**

* The Bidder shall provide a detailed project plan with responsibility matrix
* Project need to be finalized within 8 months of PO issuance
* The Bidder shall share previous implementations of such project.

1. **References**

* The Bidder shall provide references in similar environment
* At least 2 references must be included
* If more than 2 reference please provide details

1. **Security Requirements**

* The Solution shall ensure the protection of personal data by complying with international data protection laws such as GDPR.
* The Solution shall have user authentication and authorization mechanisms that ensure only authorized personnel can access the system and data.
* The Solution shall have audit trail functionality that allows tracking of all actions performed by users in the system.
* The Solution shall have data encryption mechanisms to ensure the confidentiality of data during transmission and storage.

1. **PoC**

* To demonstrate the capability of the solution, a PoC for 4 weeks is a must
* The PoC will be considered part of the technical evaluation
* PoC should cover the points mentioned in Annex (PoC)

1. **Support & SLA**

* Vendor must provide support for 3 years that start with the acceptance of the solution
* Support should ensure that no delay in any transaction from customer perspective at any time.
* Vendor to provide the support level details that will be provided

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| Crucial Priority (Severity A) - Impact on MIC2’s operation | Immediate response  by phone or email as of escalation | Maximum 2 hours resolution time  as of the response /  24 hours - 7 days a week |
| Average Priority (System Urgent or Severity B) | Response by phone or email within maximum 3 hours as of escalation | Maximum 6 hours resolution time as of the response / 24 hours - 7 days a week |
| Not Critical (System is running with no threat) | Response by phone or email  within maximum 5 hours as of escalation | Maximum 5 working days for resolution as of the response including site visit upon MIC2’s request |
| Query | Response by phone or email  within maximum 1 day as of escalation | Maximum 2 weeks  for resolution as of the response including site visit upon MIC2’s request |
| Hardware Repair and Return | Response by phone or email within maximum 1 day as of escalation | Maximum 6 weeks for resolution as of the response |

1. **General Terms**

* Scalability: Solution should be scalable to accommodate future growth and expansion of MIC2’s operations, without compromising on performance on data accuracy.
* Customization: The solution should allow for customization based on MIC2's specific requirements, such as language support, document types, and data validation rules.
* Flexibility: The proposed solution should be flexible enough to adapt to changing business requirements, without requiring significant changes or modifications to the system.
* Vendor Experience and Expertise: The vendor should have a proven track record of delivering OCR and data cleaning solutions to similar clients, and possess the required technical expertise and resources to implement and support the proposed solution.

1. **Training**

* Vendor should provide different levels of training to MIC2 personnel on how to use the system efficiently and effectively
* Advanced training for system admin to include all accommodation and travel costs (5 seats)

1. **Pricing**

* The proposal should include a detailed pricing model that outlines all costs associated with implementing the solution, including hardware, software, and services.
* The pricing model should include a breakdown of one-time costs, recurring costs, and any additional costs that may arise during the implementation or maintenance phase.
* MIC2 would have the option to buy specific modules based on the pricing structure provided
* Detailed Unbilled price list to be provided in the technical offer
* MIC2 can chose any or all of the features provided.
* Any license or feature mentioned in the compliancy sheet and/or in the technical response will be considered as part of the solution/ additional features that are not included in the solution should be clearly mentioned as additional – not priced and not part of the current offering