ATM MONITORING SOLUTION

Business Requirements Document

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Author	:	*Vashti A. Velasco*
		Shealtiel Jan M. Guarnes
		and Subject Matter Experts
Owner	:	**AMS Project Team**

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			Shealtiel Jan M. Guarnes
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			Shealtiel Jan M. Guarnes

Recommendations for Approval
This document has been recommended for approval by:

Name	Position/Title	Approval Date	Signature
Alvin S. Tumaneng	Project Manager		
Lolilta S. Somaylo	TMG – IT Security Office (ITSO)		
Marissa B. Pineda	Business Team Lead		
Divine Grace B. Kuan	Technical Team Lead		
Maria Rosa Lorelie H. Concepcion	Change Management Team Lead		

Approvals
This document has been approved by:

Name	Position/Title	Section	Approval Date	Signature
FVP Alden F. Abitona	Project Sponsor/ Head, TMG	All Sections		

Distribution
This document has been distributed to:

Name	Position/Title
ALDEN F. ABITONA	FVP / Head, TMG/ Project Sponsor
Project Control Book (PCB)	
Project TeamRoom	
IT Project Management Dept (IT PMD)	

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1.0 *Project Background*

1.1 Project Rationalization

The ATM Monitoring tool will provide real-time monitoring of the Bank's ATM environment allowing LBP to clearly see what is happening within the business as well as monitoring the normal operations along with detection and management of problem situations before they make an impact. The tool will provide comprehensive data, reports, and analysis of all Automated Teller Machine / Cash Deposit Machine (ATM / CDM) terminals with the capability to provide a graphic presentation of information significant to the bank.

Among the primary benefits of this tool is the capability to gather needed information and generate valuable and significant reports and analysis to the bank. Currently, LANDBANK's monitoring tool is via Information Switching Technology Graphical User Interface (IST-GUI). And like any ordinary tool/system it has its own share of challenges faced by the users. To name a few, there is a significant amount of manual effort by the bank's users in generating reports and conducting analysis: lack of reports with both comprehensive and significant information on ATM/CDM terminal performance; lack of automated tools to generate timely and accurate data, information and analysis

Real time tools shall be provided to monitor the bank's whole ATM/CDM environment to prevent delayed identification the causes of ATM/CDM related problems. Upon implementation of the project, it shall outright cater the business needs as well as support the objectives of the project. The System Owner is the Technology Management Group (TMG) and the tool will be administered by the Network Operations Department (NOD).

1.2 Project Scope Definition

In Scope
- Monitoring – includes monitoring of First Level Maintenance (FLM) and Second Level Maintenance (SLM) (response time, status and resolution)
- Event Logging
- Event Reporting/Ticketing
- Escalation
- Availability Reports
- Remote/Mobile Access
- Remote Software Distribution
- Predictive Analysis
- Interface with IST Logs
- Asset Management – (ATM/CDM) profile and status

Out-of-Scope

- Cash Management
- Supplies Management – e.g. inventory management, procurement
- Remote Key Loading
- First Level Maintenance (FLM) – any activity and process to be done by third party that will entail additional costs.

1.3 Assumptions and Constraints

1.3.1 Assumptions

- The new system will be vendor agnostic and is compatible with all ATM/CDM units of the Bank
- AMS can interface with LANDBANK's Host systems
- AMS shall have the latest version of XFS
- All consumables shall be monitored

1.3.2 Constraints

- Response time due to network bandwidth

2.0 Definition of Terms

Accessibility Schedule	Operational hours in which the ATM/CDMs are accessible in specific locations.
Adhoc Reporting	Creation of reports anytime based on required parameters as needed.
Asset Management	ATM Monitoring module wherein authorized users can define and maintain ATM/CDMs profiles as well as monitor the status of ATM/CDMs parts / devices / consumables.
ATM/CDM Emulation	Imitating a hardware/software program/platform on another program/platform of another ATM/CDM model/type.
ATM/CDM IP Address	Numerical label assigned to each ATM/CDM unit connected to a computer network that uses the Internet Protocol(IP)for Communication
ATM/CDM Application Software	Programs and other operating systems used by the ATM/CDMs.
ATM Location/Address	Physical location where specific ATM/CDM units are located
Terminal Risk Classification	Bank identified risk level per terminal.
ATM/CDM Availability	Number of hours that the ATM/CDM is operational
ATM/CDM Fleet	All ATM/CDMs under LBP ownership
ATM/CDM Profile	Record of ATM/CDM information which includes but not limited to hardware and software version, location, model/type, date acquired, etc.
ATM/CDM Terminal ID	Eight digit identifier assigned to an ATM/CDM terminal. It is used to identify the ATM/CDM terminal transacted by the client
ATM/CDM Terminal Name	ATM/CDM branch name where the machine is located
ATM/CDM Terminal Status	Real time status of the ATM/CDM terminal (e.g. Online, Offline)
Automated Teller Machine (ATM)	Refers to cash dispensing machine; electronic banking outlet that allows clients of a financial institution to perform basic financial & non-financial transactions without the need of a bank representative or teller is an electronic telecommunications device that enables customers of financial institutions to perform financial transactions, such as cash withdrawals, deposits, transfer funds, or obtaining account information, at any time and without the need for direct interaction with bank staff.
Branch (servicing)	Branch that handles Cash Operations of a specific terminal. Example: Offsite ATM of Boac Branch (requesting branch), turned over handling to Cash Operations Unit (COU) Lucena (servicing branch) upon activation.
Brand	Specific ATM brand e.g. Diebold, Wincor or NCR
Cash Loading	Cash Replenishment to a certain ATM

Cluster	Group of branches co-located in a specific geographic region.
Control Number	Reference Number of raised ticket
CPU/Processor	Responsible for executing a sequence of stored instructions called a program.
Date Installed	Date when the ATM/CDM was installed
De-installation / De-installed	Temporary or permanent pull-out of ATM/CDM from its original location due to valid reason/justification (i.e., re-installation to other location, replacement or decommissioning); this process requires de-activation of machine from the LANDBANK Information Switching Technology (IST) – ATM Switch and/or Network Consortium
Disconnected	Failed communication between router and ATM/CDM
Downtime	An interval during which a machine is not productive, as during repair, malfunction or maintenance
Escalation	Scenario where a certain-ticket is reported to a higher level within the Bank or to the Third Party Service Provider for immediate attention/resolution
Event	This includes occurrences specific hardware problem that occurs in an ATM/CDM Terminal as well as maintenance check which includes but not limited to state, port and supply status.
Event Logging / Ticketing / Reporting	A process of filling out a form in order to record details of an encountered event or error per terminal
First Level Maintenance (FLM)	Service maintenance to be performed by personnel of the Servicing Branch or of the Third Party Service Provider (TPSP) (i.e. Cash Loading Service Provider/ which covers basic trouble shooting and check-up of the machine and its paraphernalia (Uninterruptible Power Supply, Automatic Voltage Regulator, modem, router, switch); FLM shall include machine & modem resetting, power checking, modem status checking, dispense test, receipt reloading, cash loading and cash retrieval
Branch Group	Grouping based on LANDBANK's branch structure
Hardware Error	A malfunction of a hardware component in a computer system
Hardware Problem	Classified as a fault in an actual component or in the configuration of that component leading to issues with the computer.
Incident	Event and Error
LANDBANK Information Switching Technology (IST)-ATM Switch	Bank's ATM Host System that serves as a multi-channel gateway and manages the Bank's customers entire payment lifecycle (merchants, issuers, acquirers, processors, payment gateways and card associations) whether transactions are performed at ATM/CDM terminals, Point-of-Sale or other electronic banking facilities
Last message time / Heart beat	A periodic signal generated by hardware or software to indicate normal operation or to synchronize other parts of an ATM/CDM.
Load Fail	Sending of Load command has been unsuccessful

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Long Outstanding/ Overdue	Tickets that are more than xxdays overdue based on defined parameters.
Model	Specific Model of an ATM/CDM terminal (merge it with Brand)
Node	Connection points that can receive, create, store or send data along distributed network routes.
Offline	Status of an ATM/CDM that is currently not connected to bank's network, hence, not available for use.
Offsite	ATMs which are installed in a public place other than the premises of the owning bank.
Online	Status of an ATM that is currently connected to bank's network and available for use.
Onsite	ATMs which are installed within the branch premises
OS Version	Version of an operating system
Out-Of-Service	State in which the ATM/CDM unit is not available for use.
Power On And Off	Turning on and off a device
Predictive Analysis	Process of extracting information from existing data sets in order to determine patterns and predictive future outcomes and trend.
Second Level Maintenance (SLM)	Service maintenance to be performed by the Vendor/Service Engineers which cannot be resolved through FLM services; this servicing is highly dependent on the technical expertise of the Vendor and other TSP in order to make the ATM/CDM operational
Serial Number	Number indicating place in a series and used as a means of identification
Service Location	Location of ATM/CDM terminals based on vendor service areas.
State Status	Current status or condition
Supervisor Mode	Mode in which the system is protected from user tampering by the hardware.
Third Party Service Provider (TPSP)	Supplier of services to perform certain banking and other support functions (e.g., ATM servicing such as cash loading/retrieval, FLM/SLM and telecommunications services) on behalf of the Bank
Tickets	Incident report that contains details of an encountered specific hardware error that occurs in the ATM/CDMs
Unit Number (Per Branch)	Number of ATM/CDM terminals per branch

3.0 *Project Drivers and Dependencies*

- To improve the productivity of ATM Monitoring Unit thru automation and elimination of manual work
- Enhance current monitoring tool to immediately detect ATM problems.
- Accurate data/reports for monitoring of SLAs with ATM vendors and concerned Bank units.
- Automated generation of reports e.g. (ATM availability, status reports).
- Automated ticketing workflow.

4.0 *Detailed Functionalities*

This section provides the details of both the functional and nonfunctional requirements of the system. Functional requirements define the internal workings of the system, i.e., the calculations, technical details, data manipulation and processing, etc. They are supported by nonfunctional requirements, such as performance requirements, security, quality standards, design constraints, etc., which impose constraints on the design or implementation.

Each requirement is classified as one of the following:

- MANDATORY (M)   An absolutely essential feature; project will be cancelled if it is not included.
- RECOMMENDED (R)   Individual features are not essential but together they affect the viability of the project.
- DESIRED (D)   Nice-to-have feature; one or more of these features could be omitted without affecting the project viability.

4.1 Functional Requirements

4.1.1 ATM/CDM Monitoring

AMS-411-001	The system shall be compatible with all existing ATM/CDM model/type/wireless/wired of the Bank.	Mandatory
AMS-411-002	The system shall have a facility to monitor ATM/CDM Movement (e.g., re-location, re-definition, etc.)	Mandatory
AMS-411-003	The system shall be able to display the status of the whole fleet only to authorized personnel (parameterized)	Mandatory

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AMS-411-004	The system shall be able to monitor ATM/CDM **Terminal Status** real-time in a single view (dashboard-color coded) based on the following status:
	  a. Online
	     i. Available
		Mandatory

AMS-411-005	ii. Ongoing Transaction/Processing	Mandatory
AMS-411-006	iii. With error 1. Cash Low	Mandatory
AMS-411-007	2. With hardware problem	Mandatory
AMS-411-008	iv. Out-of-service 1. Supervisor mode	Mandatory
AMS-411-009	2. With hardware error	Mandatory
AMS-411-010	3. Loading of CIs	Recommended
AMS-411-011	4. CI Load Fail	Recommended
AMS-411-012	b. Offline i. port disconnected	Mandatory
AMS-411-013	ii. out of session	Mandatory
AMS-411-014	iii. Communication error (e.g. Disconnected in the Modem, Power Outage, etc.)	Mandatory
AMS-411-015	The system shall have a facility to view/display ATM/CDMs in color-coded status (e.g., GREEN – online, RED – offline, etc.) in a single view per : a. LBP Region/Group	Mandatory
AMS-411-016	b. Branch (servicing)	Mandatory
AMS-411-017	c. Terminal Location (onsite / offsite)	Mandatory
AMS-411-018	d. Specific Hardware Problem	Mandatory
AMS-411-019	e. Selected TelCo Network	Mandatory
AMS-411-020	f. ATM/CDM Profile (hardware/software info extracted from the machine)	Mandatory
AMS-411-021	g. ATM Terminal ID	Mandatory
AMS-411-022	h. Terminal Risk Classification	Mandatory
AMS-411-023	i. Node	Recommended
AMS-411-024	j. ATM/CDM Terminal Status	Mandatory
AMS-411-025	k. Brand	Recommended
AMS-411-026	The system shall be able to sort the ATM/CDMs units based on the color-coded status in a single view per: a. LBP region/Group	Mandatory

AMS-411-027	b. Branch (servicing)	Mandatory
AMS-411-028	c. Terminal Location (onsite / offsite)	Mandatory
AMS-411-029	d. Specific Hardware Problem	Mandatory
AMS-411-030	e. Selected TelCo Network	Mandatory
AMS-411-031	f. ATM / CDM Profile (hardware/ software info extracted from the machine)	Mandatory
AMS-411-032	g. ATM Terminal ID	Mandatory
AMS-411-033	h. Terminal Risk Classification	Mandatory
AMS-411-034	i. Node	Recommended
AMS-411-035	j. ATM/CDM Terminal Status	Mandatory
AMS-411-036	k. Brand	Recommended
AMS-411-037	The system shall be able to search ATM/CDM color-coded status of ATMs in a single view per : a. LBP Region/Group	Mandatory
AMS-411-038	b. Branch (servicing)	Mandatory
AMS-411-039	c. Terminal Location (onsite / offsite)	Mandatory
AMS-411-040	d. Specific Hardware Problem	Mandatory
AMS-411-041	e. Selected TelCo Network	Mandatory
AMS-411-042	f. ATM / CDM Profile (hardware/ software info extracted from the machine)	Mandatory
AMS-411-043	g. ATM Terminal ID	Mandatory
AMS-411-044	h. Terminal Risk Classification	Mandatory
AMS-411-045	i. Node	Recommended
AMS-411-046	j. ATM/CDM Terminal Status	Mandatory
AMS-411-047	k. Brand	Recommended
AMS-411-048	The system shall have a facility for real time monitoring of ATM/CDM terminal based on the following: a. Cash Level (no. of pcs and total amount) : i. Per Cassette	Mandatory
AMS-411-049	ii. Per Machine	Mandatory
AMS-411-050	b. Accessibility schedule	Mandatory
AMS-411-051	c. Events	Mandatory
AMS-411-052	d. ATM/CDM Status (Online/Offline)	Mandatory
AMS-411-053	e. Last message time/Heart beat	Mandatory

AMS-411-054	The system shall be able to monitor ATM/CDMs real-time based on the following **Events:** a. Supervisor Mode/maintenance mode i. Log-on	Mandatory
AMS-411-055	ii. Log-off	Mandatory
AMS-411-056	b. Specific hardware problem *(see Annex A – List of Error and Error Types)*	Mandatory
AMS-411-057	c. Vault Activities i. Open	Mandatory
AMS-411-058	ii. Close	Mandatory
AMS-411-059	d. Maintenance Door Activities i. Open	Mandatory
AMS-411-060	ii. Close	Mandatory
AMS-411-061	e. Supply status i. Receipt	Mandatory
AMS-411-062	ii. Cash (per cassette)	Mandatory
AMS-411-063	f. Power on	Mandatory
AMS-411-064	g. Power off	Mandatory
AMS-411-065	h. Port Status i. Connected	Mandatory
AMS-411-066	ii. Disconnected	Mandatory
AMS-411-067	i. State Status i. Loading	Mandatory
AMS-411-068	ii. Load Fail	Mandatory
AMS-411-069	iii. Loading completed	Mandatory
AMS-411-070	The system shall be able to monitor connection, terminal and host slow down.	Mandatory
AMS-411-071	The system shall have a facility to categorize and filter Errors and Events as to criticality a. High – there may be a suspected fraudulent activity and offline status	Mandatory
AMS-411-072	b. Medium - online but no transaction can be performed	Mandatory
AMS-411-073	c. Low – online and limited transaction can be performed	Mandatory
AMS-411-074	The system shall have a facility to manually set accessibility schedule per terminal (e.g., ATM/CDM operational hours in malls, agencies and LGUs.)	Mandatory

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AMS-411-075	The system shall be able to list and log if there is any ATM/CDM activity done (e.g. withdrawal, balancing, skimming device detected, maintenance log-in, etc.) during non-accessible hours.	Mandatory
AMS-411-076	The system shall be able to auto-refresh dashboard and status based on defined frequency (e.g. 30secs).	Mandatory
AMS-411-077	The system shall have a facility to monitor ATM/CDMs based on defined events/errors and error types *(see Annex A – List of Error and Error Types)*	Mandatory
AMS-411-078	The system shall have a facility to issue commands to the ATM/CDM *(see Annex B – List of Commands)*	Mandatory
AMS-411-079	The system shall have a graphical and geographical display of ATM/CDM (with number and percentage) per: a. Status	Mandatory
AMS-411-080	b. Events	Mandatory
AMS-411-081	c. Error types *(see Annex A – List of Error and Error Types)*	Mandatory
AMS-411-082	d. Long Outstanding	Mandatory

4.1.2 Incident Reporting

AMS-412-001	The system shall have a real-time incident reporting/ticketing	Mandatory
AMS-412-002	The system shall have a parameterized facility to define Error Type with corresponding error codes *(see Annex A - List of Error and Error Types)*	Mandatory
AMS-412-003	The system shall be able to define ticket/s recipient/s based on Error Type.	Mandatory
AMS-412-004	The system shall be able to automatically detect the cause of ATM/CDM unavailability real-time based on *Annex A – List of Error and Error Types.*	Mandatory
AMS-412-005	The system shall be able to automatically generate tickets based on reported incidents from branches, with the following details: a. Error/Event encountered *(see Annex A – List of Error and Error Types)*	Mandatory
AMS-412-006	b. Error Types *(see Annex A – List of Error and Error Types)*	Mandatory
AMS-412-007	c. Terminal ID	Mandatory
AMS-412-008	d. Terminal Name	Mandatory

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AMS-412-009	e. Branch (servicing)	Mandatory
AMS-412-010	f. Date and Time Error Encountered	Mandatory
AMS-412-011	g. Date and Time Ticket was raised	Mandatory
AMS-412-012	h. Date and Time of Vault Activity and/or Supervisor Mode (automatically)	Mandatory
AMS-412-013	i. Date and Time of part replacement	Mandatory
AMS-412-014	j. Unique Ticket Number	Mandatory
AMS-412-015	k. Recipient (Third Party Service Provider, Branch, FLM, SLM, etc.)	Mandatory
AMS-412-016	l. Date and Time of Escalation to branch (servicing) 　　i. First Level	Mandatory
AMS-412-017	ii. Second Level	Mandatory
AMS-412-018	iii. Third Level	Mandatory
AMS-412-019	m. Remarks *Note: Shall have pre-defined remarks based on the errors encountered (e.g. for restart, for resetting, etc.)*	Mandatory
AMS-412-020	n. Status 　　i. Open	Mandatory
AMS-412-021	ii. Closed	Mandatory
AMS-412-022	o. Date and Time Ticket was closed	Mandatory
AMS-412-023	The system shall have a facility to manually create and update tickets with the following details: a. Error/Event encountered *(see Annex A – List of Error and Error Types)*	Mandatory
AMS-412-024	b. Error Types *(see Annex A – List of Error and Error Types)*	Mandatory
AMS-412-025	c. Terminal ID	Mandatory
AMS-412-026	d. Terminal Name	Mandatory
AMS-412-027	e. Branch (servicing)	Mandatory
AMS-412-028	f. Date and Time Error Encountered	Mandatory
AMS-412-029	g. Date and Time Ticket was raised	Mandatory
AMS-412-030	h. Date and Time Vendor arrived to servicing branch	Mandatory
AMS-412-031	i. Date and Time of Vault Activity and/or Supervisor Mode (automatically)	Mandatory
AMS-412-032	j. Date and Time of part replacement – as part of Asset Management	Mandatory
AMS-412-033	k. Reported By	Mandatory

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AMS-412-034	l. Unique Ticket Number	Mandatory
AMS-412-035	m. Recipient	Mandatory
AMS-412-036	n. Date and Time of Escalation i. First Level	Mandatory
AMS-412-037	ii. Second Level	Mandatory
AMS-412-038	iii. Third Level	Mandatory
AMS-412-039	o. Remarks *Note: Remarks shall be editable in ticket*	Mandatory
AMS-412-040	p. Status i. Open	Mandatory
AMS-412-041	ii. Closed	Mandatory
AMS-412-042	q. Date and Time Ticket was closed	Mandatory
AMS-412-043	The system shall be able to update/customize remarks.	Mandatory
AMS-412-044	The system shall able to generate SMS notification for each ticket raised.	Mandatory
AMS-412-045	The system shall be able to generate email notification for each ticket raised.	Mandatory
AMS-412-046	The system shall be able to count the total number of notification/escalation via : a. Email	Recommended
AMS-412-047	b. SMS	Recommended
AMS-412-048	The system shall have a facility to manually close tickets.	Mandatory
AMS-412-049	The system shall be able to automatically close tickets on a per error basis (parameterized).	Mandatory
AMS-412-050	The system shall have a facility for manual closing of multiple tickets at a given time.	Mandatory
AMS-412-051	The system shall have a Ticket Recipients Profile facility to add/edit/delete branch representatives / SLM / FLM representatives, ATM / CDM point person profile with the following details: a. Recipient/Viewer Name	Mandatory
AMS-412-052	b. User ID	Mandatory
AMS-412-053	c. Branch Name / Head-office Units	Mandatory
AMS-412-054	d. Third Party Service Provider / Cash Loading Service Provider	Mandatory
AMS-412-055	e. Email address	Mandatory
AMS-412-056	f. Mobile No.	Mandatory
AMS-412-057	g. Access/Role (e.g. viewing, editing, etc.)	Mandatory

AMS-412-058	h. Escalation Level	Mandatory
AMS-412-059	i. Other contact details (e.g. Landline)	Mandatory
AMS-412-060	The system shall be able to assign and/or forward tickets to the following based on specified error per error category: a. Branch (automatically/manually triggered)	Mandatory
AMS-412-061	b. Other units of the Bank (e.g. NOD-LAN) (manually)	Mandatory
AMS-412-062	c. Third party Service Provider FLM (manually triggered)	Mandatory
AMS-412-063	d. Third party Service Provider SLM (automatically/manually triggered)	Mandatory
AMS-412-064	e. Cash Loading Service Provider (automatically/manually triggered)	Mandatory
AMS-412-065	The system shall have a facility to upload and save the supporting documents to tickets (e.g. email, images, etc.).	Recommended
AMS-412-066	The system shall be able to automatically generate list of tickets with the following details: a. Date and time the ticket was generated	Mandatory
AMS-412-067	b. Date and time the ticket was first escalated.	Mandatory
AMS-412-068	c. Date & time the ticket/issue was reported and acknowledged by the recipient.	Mandatory
AMS-412-069	d. Date & time of the follow-ups for a certain issue/ticket.	Mandatory
AMS-412-070	e. Date & time the ticket was closed shall also be reflected	Mandatory
AMS-412-071	f. Number of times the ticket was escalated	Mandatory
AMS-412-072	g. Recipient / Escalated to	Mandatory
AMS-412-073	h. Updated / Closed by	Mandatory
AMS-412-074	The system shall have a facility to tag/view tickets based on the following: a. long outstanding (parameterized)	Mandatory
AMS-412-075	b. open	Mandatory
AMS-412-076	c. closed	Mandatory
AMS-412-077	d. pending ticket entries	Mandatory
AMS-412-078	The system shall be able to filter display of incidents: a. per terminal	Mandatory
AMS-412-079	b. per error	Mandatory
AMS-412-080	c. date and time	Mandatory