FUNCTIONAL OVERVIEW · VERSION 1.0

WORKFORCE MANAGEMENT AND ATTENDANCE VERIFICATION SYSTEM

Attendance recorded and verified for every category of employee — including field staff who carry no device and never pass an attendance machine — with payroll computed directly from the verified record.

3	18	11	8
CAPTURE CHANNELS	VERIFICATION FUNCTIONS	USER ROLES	WEEKS TO LIVE

SYSTEM OVERVIEW

ONE RECORD OF ATTENDANCE. EVERY CATEGORY OF STAFF.

Most attendance systems work well until they meet the people who are never at a desk. Linemen, meter readers, sanitation crews, security staff, drivers, field inspectors — they carry no device, pass no machine, and end up on a paper muster that nobody can verify.

This system closes that gap. It records and verifies attendance for the whole workforce through three methods of capture that write to a single unified record, maintains the complete employee record from appointment to separation, and computes payroll directly from verified attendance. It comprises a web application for administration, a self-service portal for employees, and a mobile application for marking and self-service. It integrates with the biometric devices already installed at your premises — existing equipment is used, and replacement is not required.

Method 01

Biometric device

Records collected automatically from installed devices on a schedule and on demand. Records buffered during a loss of connection are collected once it is restored, without duplication.

ATT-001 DEV-002 DEV-004

Method 02

Employee mobile

An employee marks their own attendance from the mobile application, subject to face verification and a location check against the boundary assigned to them.

ATT-002 MOB-004 VER-009

Method 03

Supervisor marking

A supervisor marks every member of an assigned team from one handset. The employee requires no device of any kind. Each face is identified automatically — no name is selected from a list.

ATT-003 VER-002 TEA-006

Built for the conditions on the ground

- **Works with no network.** The mobile application operates fully offline. Records are held on the handset with their original time and location, and transmitted automatically when connectivity returns.
- **Works on low-cost handsets,** with large controls, icon-led navigation and minimal text entry for staff with limited literacy.
- **Works in Urdu and English,** with further languages capable of being added without alteration to the software.
- **Works on a shared handset.** Several supervisors sign in under their own accounts on one device; every record stays permanently attributed to the individual who created it.
- **Works at any size.** No ceiling on employees, locations or attendance devices — and no per-seat, per-site or per-device licence. Capacity is provisioned to your organisation and re-provisioned as it grows.

Roles that match how an organisation actually runs

Eleven defined roles, each with its own permitted actions and its own view of the data: system administrator, HR administrator, HR officer, finance, internal audit, external audit, head of organisation, section head, supervisor, employee and help desk agent.

The separation is deliberate. A system administrator configures the system but has **no authority to approve payroll**. Audit roles are read-only and cannot alter a record by any route. External audit access is granted for a defined period and lapses automatically on expiry.

ADM-002 ADM-003 ADM-004 ADM-005 PAY-020

EIGHTEEN FUNCTIONS · VER-001 TO VER-018

THE RECORD HAS TO MEAN SOMETHING.

An attendance system is only worth the confidence you can place in a single line of it. This module exists to ensure that a record reflects the person it claims to, captured where and when it claims to be.

Identification, not selection

Each employee is enrolled once, with a quality check on the enrolled image and a recorded consent entry. At the point of marking, the system identifies the employee from their face. The supervisor does not select a name from a list — which removes the ability to attach a record to the wrong person.

VER-001 VER-002 MOB-005

Three outcomes, no grey area

ACCEPTED	Above the upper threshold — accepted without human intervention.
REFERRED	Between the thresholds — held and referred to HR for decision. Neither accepted nor rejected automatically.
REJECTED	Below the lower threshold — rejected, reason recorded, supervisor prompted to repeat the capture.

VER-003 VER-004 VER-005 VER-006

What the system refuses to accept

- **A photograph of a photograph.** Images must come from the camera at the time of marking; selection of an existing image from the device is prevented, and liveness checking detects a printed image or a screen held up to the lens.
- **A falsified position.** Simulated or falsified location data is detected and rejected, and the attempt is recorded. Marking is prevented outright where the handset cannot obtain a location fix of sufficient accuracy.
- **An implausible round.** Session pattern analysis flags an entire team marked within an improbably short period, or a supervisor whose recorded position did not change across a large site.
- **A recycled face.** Image similarity checking detects near-identical images within a session, or an image closely resembling one captured on an earlier date.
- **A quiet disagreement.** Verification performed on the device and verification performed centrally are compared, and any divergence is raised for investigation.

VER-007 VER-008 VER-010 VER-011 VER-012 VER-013 VER-014 MOB-016

THE REVIEW QUEUE

A referred record is decided by a person, on the evidence

Each referred record is presented with the captured image beside the enrolled image, the confidence score, the location on a map and the identity of the supervisor. The reviewing officer may accept, reject or escalate. The system may also require a second capture of a randomly selected team member during a session.

VER-015 VER-016

SUPERVISOR INTEGRITY RECORD

Patterns surface without an accusation

For each supervisor the system maintains referral rate, rejection rate on review, distribution of marking times and exceptions raised, with outliers highlighted. Management sees a pattern rather than a rumour.

Retention. Images are held in full for a configurable period, after which only the verification template, a thumbnail and the score are kept. Records subject to dispute are retained in full.

VER-017 VER-018 SYS-015

PROCESSING · PAYROLL · STATUTORY

SALARY COMPUTED FROM THE VERIFIED RECORD.

Attendance and payroll are not two systems joined by a spreadsheet. The monthly attendance statement that closes one is the statement that opens the other.

PROCESSING RULES

Raw records become figures

Shifts with grace periods, half-day thresholds and night-shift handling. Rosters and rotating patterns. Configurable late arrival, early departure, short time and overtime rules with rate multipliers and holiday treatment. Absence is determined automatically where no record exists and no approved leave is present — and a day can never be both.

PRC-001 PRC-006 PRC-008 PRC-009 PRC-013

PAYROLL

Twenty-one functions, one audit trail

Every earning, deduction and employer contribution defined as a fixed amount, a percentage, a formula or attendance-linked. Loans and advances recovered automatically with a full ledger. Off-cycle payments and arrears attributed to the period they relate to. Approved periods lock; correction only through a recorded, audited reversal.

PAY-002 PAY-006 PAY-009 PAY-011 PAY-014

STATUTORY AND TAX

Configured, not programmed

EOBI, social security, provident fund, gratuity and income tax on configurable slabs, with separate treatment of filer and non-filer status. Annual tax deduction certificates and withholding statement data. A warning is raised where computed gross pay falls below the applicable minimum wage.

STA-002 STA-004 STA-006 STA-007 STA-009

EFFECTIVE-DATED PARAMETERS

A rate change never rewrites history

Every rate, wage base, ceiling and threshold is stored with the date from which it takes effect. A payroll re-run for an earlier period continues to compute on the rates that applied at that time. Every change to a statutory parameter is logged with the officer, the date and the previous value.

STA-001 STA-010

DISBURSEMENT

The system prepares. The organisation pays.

Bank letters and transfer files are generated in the form your disbursing bank requires, with separate handling of bank transfer, cheque and cash. The system does not access organisational accounts. Authority for disbursement remains entirely with the organisation.

PAY-016 PAY-017 PAY-018

Separation settles itself

When HR records the end of an employee's service, the final settlement is created automatically — no separate manual step. Leave encashment as at the date of separation, provident fund including employer share and credited profit, accrued gratuity, EOBI position, and recovery of outstanding loans and advances shown line by line. Clearance is obtained from designated sections before the settlement becomes payable, and system and mobile access is withdrawn automatically with effect from the date of separation.

SEP-001 SEP-003 SEP-007 SEP-008 SEP-010

Payroll seen differently by each role

HR initiates. Finance reviews and posts. Internal audit reads everything and can change nothing. External audit sees a defined period and a defined scope, and loses access on expiry. The head of the organisation gets an executive view. Payroll analysis compares against the previous period, shows cost by section and location, reconciles headcount and highlights variances *before* approval — not after the money has moved.

PAY-007 PAY-008 PAY-020 PAY-021

BEYOND ATTENDANCE

ONE SYSTEM, NOT ELEVEN SUBSCRIPTIONS.

Everything an HR and administration section does day to day, in the same installation, against the same employee record, with the same audit trail.

Employee records & organisation

Complete record from appointment to separation: personal particulars, CNIC, appointment and posting history, service history, bank and statutory identifiers, dependants and nominees, qualifications, disciplinary record with restricted visibility. Documents are attached to the record by type with expiry alerts — no separate document system required. Sections to any depth, designations, pay scales, locations with coordinates, geo-fences, and working calendars per location.

EMP-001 – 017 · ORG-001 – 009 · TEA-001 – 008

Leave

Leave types configured to your own rules — entitlement, accrual, carry-forward, encashment eligibility, attachment requirement. Balances maintained per period. Multi-level approval following the reporting structure, with delegation when an approver is absent. Section and team leave calendars for duty planning. Leave without pay transmits to payroll as a deduction automatically.

LVE-001 – 012

Recruitment, training & performance

Requisition through advertisement, screening, panel assessment and offer, with the applicant record converting into an employee record without re-entry of data. Training programmes with automatic need assessment from appraisal outcomes, and certificates generated from a template. Performance indicators by designation, section or grade, multi-source evaluation, and appraisal outcomes recorded against the service record.

REC-001 – 010 · TRN-001 – 008 · PMS-001 – 008

Field operations & expenses

Routes with ordered stops and expected timing, planned and ad-hoc visits, check-in at each stop with coordinates and time, and variance reporting of planned against actual. Any section may raise visits without alteration to the software. Expense claims with receipts photographed on the handset, configurable limits routing over-limit claims to higher approval, and settlement through payroll or finance.

FLD-001 – 007 · EXP-001 – 007

Help desk, surveys & communication

Requests routed automatically to the responsible section by a configurable category table, with service levels and automatic escalation on breach. Surveys with optional untraceable anonymity. Official announcements with read confirmation, and internal messaging that gives staff a channel of record in place of unofficial applications — retained as organisational records, subject to export and retention rules.

HLP-001 – 008 · SUR-001 – 006 · COM-001 – 008

Self-service & reporting

Employees see their own particulars, attendance, leave balance, pay slips, documents, loan position, training record and appraisal outcome — which removes a very large share of the queries an HR section answers by hand. Every report and every list exports to Excel and PDF, reflecting the requesting officer's permitted scope, so an export can never disclose records they may not otherwise see.

ESS-001 – 010 · RPT-001 – 008

CONFIGURATION, NOT CUSTOM DEVELOPMENT

Most changes you will want are settings, not invoices

Attendance rules, leave rules, pay components, statutory parameters, routing tables and approval workflows are all configurable without alteration to the software. Additional fields can be added to the principal records, new expense and ticket categories created, and further interface languages maintained — none of it requiring a change request to us.

IT LOOKS LIKE YOUR ORGANISATION

Your name, emblem and colours

Branding is applied across the administrative interface, the reports and the mobile application, so what reaches an employee's hand carries your organisation's identity rather than ours. Configuration can be exported and imported as a set, to keep multiple installations consistent.

ADM-009 · ADM-010 · ADM-011 · ADM-012 · ADM-013

265 FUNCTIONS · 24 AREAS · EVERY ONE REFERENCED

NOTHING IS DESCRIBED THAT CANNOT BE SHOWN.

Every function in this system carries a stable reference of the form XX-nnn. Those references are used in the demonstration script, in acceptance testing, in change control and in support correspondence — so a request, a test and a fix all name the same thing. This is what you evaluate against, and what you sign off against.

Code	Area	Functions
EMP	Employee records	17
ORG	Organisation & locations	09
TEA	Teams & supervisors	08
ATT	Attendance capture	14
VER	Verification & integrity	18
DEV	Device management	08
PRC	Processing & rules	13
LVE	Leave	12
PAY	Payroll	21
STA	Statutory & tax	10
SEP	Separation & settlement	10
REC	Recruitment	10
TRN	Training	08
PMS	Performance & KPI	08
FLD	Field operations	07
EXP	Expenses	07
HLP	Help desk	08
SUR	Surveys	06
COM	Communication	08
ESS	Employee self-service	10
MOB	Mobile application	16
RPT	Reporting & export	08
ADM	Administration & security	14
SYS	Deployment & operation	15

Ask us to demonstrate these

A shortlist from the acceptance checklist — the functions most usefully verified by watching them happen rather than reading about them.

ATT-007, MOB-007	Place a handset beyond network coverage, mark attendance, restore coverage, and show the record transmitted with its original time and location unaltered.
VER-002	Mark a team without selecting any name, showing each employee identified automatically from their face.
VER-012	Show an implausible marking session identified automatically and raised for investigation.
ATT-009	Sign in as two different supervisors on the same device and show each record attributed correctly.
STA-001	Change a statutory rate with a future effective date and show earlier periods unaffected.
MOB-014	Operate the mobile application in Urdu.
SYS-004	Perform a complete export of all data.

TWO MONTHS FROM COMMENCEMENT TO LIVE OPERATION

EIGHT WEEKS, ENDING IN A PARALLEL RUN.

Indicative programme for a distributed organisation of several thousand employees. The same stage structure applies at larger scale; only the survey, migration and enrolment effort changes.

WEEKS 1–2	**Assessment and planning**	Survey of offices and sites. Review of existing attendance devices. Confirmation of leave rules, shift patterns, pay structure and approval hierarchy. Collection of employee data. Agreement of the implementation plan.
WEEKS 3–4	**Installation and configuration**	Installation. Configuration of structure, sections, designations and locations. Definition of duty boundaries. Constitution of teams and designation of supervisors. Configuration of attendance, leave and pay rules.
WEEKS 5–6	**Migration and enrolment**	Transfer of employee records, service particulars, leave balances and outstanding recoveries, reconciled against existing records. Enrolment of employees. Connection and verification of attendance devices. Configuration of supervisor devices.
WEEK 7	**Training**	Separate sessions for system administrators, HR staff, finance staff, supervisors and employees — in the language your staff use, with material provided.
WEEK 8	**Parallel operation and acceptance**	Operation alongside the existing method for a complete cycle, with attendance and payroll reconciled line by line and any discrepancy resolved before acceptance.

OUR RECOMMENDATION

Acceptance should follow successful reconciliation of a complete parallel cycle. It is the most effective safeguard against disruption to salary disbursement — and it is the one step organisations are most often tempted to skip.

Deployment, ownership and security

Your installation

Installed on your own servers or hosted. Either way you have a separate installation, not shared with any other body. Capable of operating on a closed network without internet access where required. No fixed limit on employees, locations or devices.

SYS-001 SYS-002 SYS-013

Your data

All data remains your exclusive property. You may export the entire holding at any time, without charge and without recourse to us. On conclusion, a complete export is provided and our copy is permanently deleted.

SYS-003 SYS-004 SYS-005 SYS-006

Kept running

Encryption in transmission and at rest, including backups. Daily backup with a tested restoration procedure. Availability not less than 98% each month. Critical failure attended within 4 hours, major within 12, general within 24. Biometric data is used solely for attendance verification.

SYS-007 SYS-008 SYS-010 SYS-012 SYS-015

ABOUT THE SUPPLIER

PHALANX SYSTEMS

Phalanx Systems Limited is a Pakistan-based software engineering and systems integration partner, working with clients across the US, UK, EU and GCC. We build custom systems from first principles and make separate systems behave as one — and we stay accountable for whether the whole thing works, from the first diagram to the running deployment.

We work in the conditions our clients work in — distributed sites, intermittent connectivity, staff with limited literacy, and procurement processes that require every claim to be demonstrable. That is why this document is written as a list of functions you can test, rather than a list of adjectives you cannot.

Software development

Custom systems built from first principles — product experience, application logic, data layer and the infrastructure underneath it — against a written specification.

Systems integration

Making separate systems behave as one, so information moves on its own instead of through a person re-typing it into a second screen. Attendance devices included.

Handover in full

Source code, documentation and infrastructure handed over outright. Fixed quote against a defined scope, billed against delivered milestones. No platform you cannot leave.

Implementation and support

Migration, enrolment, role-based training in the language your staff use, parallel running, and a defined support response after go-live.

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CODE. CREATE. CONQUER.

WEB PHALANXSYSTEMSLTD.COM
EMAIL INFO@PHALANXSYSTEMSLTD.COM
LINKEDIN /COMPANY/PHALANX-SYSTEMS-LIMITED
OFFICE OFFICE 103, TWIN TOWER, MR 12, MULTI GARDENS B-17
ISLAMABAD 44000, PAKISTAN