Official Functional Specification & Implementation Tracker for Agdar HIS Project

Prepared by: Agdar Center for Behavioral and Developmental Disorders
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Purpose

This document serves as the **official and comprehensive reference** for all deliverables, functionality, testing requirements, and progress tracking related to the HIS software project developed by Galaxy Group. It supersedes any informal status files and will be used as the binding framework to assess progress, verify completion, and ensure alignment with operational needs.

Section 1: Project Scope Summary

- Institution: Agdar Center for Behavioral and Developmental Disorders
- Target Users: Receptionists, Therapists (Senior, Assistant, Junior), Finance, Clinical Coordinator, Admin
- Primary Modules:
  - Appointment Management
  - Package & Consent Workflow
  - Therapy Session Module (Documentation)
  - Therapist Reports & Assessments
  - Financial & Billing Module
  - Clinical Documentation (Forms)
  - MDT Notes & Collaboration
  - Role-Based Permissions & Notifications
  - Patient Profiles with Visual Progress
  - Logs & Audit Trails

Section 2: Functional Modules Breakdown & Deliverables

2.1. Appointment Management

Objective:

Enable efficient and error-free session scheduling across clinics while integrating patient compliance (consents, package sessions, payment verification) and automating stakeholder notifications. This is achieved through system validations such as conflict alerts, consent/payment status verification, and therapist availability checks.

Expected Features:

- Reception-exclusive booking control
- Auto-scheduling of full package sessions at time of creation
- Conflict-free calendar handling for shared clinic spaces
- Multi-Therapist Room Conflict Checker:
    - System must detect and prevent scheduling conflicts when multiple therapists share the same clinic room.
    - Blocking logic enforced per physical space, not just per therapist.
- View: Therapist's calendar view with session types color-coded
- Consent Forms Auto Generation upon booking based on Session type
- Consent check:
    - Prevent booking without General Consent (and Package Consent for package sessions)
- Session prepayment requirement check
- Support for cancellation/reschedule with business rules

- Re-credit logic for valid cancellations
- Missed Appointment Logging:
    - Ability to log missed appointments with predefined reasons (e.g., no-show, late cancellation).
    - Used in analytics and therapist performance
- Notification System:
    - SMS/WhatsApp to patient: Upon booking + confirmation
    - Notification to therapist: Upon confirmation
- Session Reminders:
    - Automated reminders 24 hours and 1 hour prior to session for patients.
- Session Reminders:
- Appointment Quick Actions:
    - Quick-access options to reschedule, cancel, or mark sessions as attended/no-show directly from calendar view.
- Session history: Fully accessible with audit trail for any changes
- Linked to financial/invoice generation
- Editable rescheduling and session-type assignment

Status: In Progress
Assigned Team Member (Vendor): [To be filled]
UAT Feedback: Pending full workflow simulation

2.2. Package & Consent Workflow

Objective:

Ensure all patients receiving services under a package have completed and signed consents and that all package sessions are scheduled and monitored for compliance. Maintain medical-legal alignment, operational clarity, and seamless integration with session and financial flows.

Expected Features:

- **General Consent Enforcement:**
  - Must be Generated and Signed by the patient through e-Device before the first appointment.
  - System prevents booking or session initiation without it.
  - Consent Validity Periods:
    - Each consent form must include a validity period, and the system flags expired consents.
  - Auto Consent Status Checks:
    - Automatic validation of consent status at appointment booking or session start.
- **Package Consent Enforcement:**
  - For any treatment package (multi-session), a specific Package Consent form must be signed and recorded and Signed by the patient through e-Device.
  - Linked directly to the created package and visible on patient profile.
  - Consent Forms Version Control:
    - Ability to manage multiple consent templates with version tracking and history.
- **Package Creation Rules:**
  - Created by Reception/Admin only.
  - Requires immediate scheduling of **all sessions** tied to the package.
  - Includes default session types, order, and therapists (editable).
  - Session Order Enforcement:

        - Sessions must follow a specific clinical sequence unless overridden by admin.

- **Modification Controls:**
    - Ability to update session times, assigned therapist, and clinic if needed, while retaining audit logs.
    - Auto-adjustment of session counters and validity period upon schedule changes.
- **Package Tracker:**
    - Clear tracking of used, pending, canceled, and remaining sessions.
    - System flags expiring packages (based on session validity window).
    - Notification reminders for patient and coordinator if sessions remain unused after defined days.
    - Therapist Dashboard Alerts:
        - Remaining sessions and approaching expiry shown directly in therapist view.
    - **Partial Package Visibility:**
        - Therapists can view only sessions assigned to them unless they are senior therapists.
    - **Cancellation and Package Integrity:**
        - Rebooked sessions after cancellation automatically update session counter.
        - Full audit logs for session adjustments.
- **Consent Repository:**
    - **Digital Signature Capture:**
        - Consents can be signed directly on electronic devices (e.g., tablets) by parents/guardians.

        - Captured signatures are securely stored with timestamps and user ID.
        - Signature field must support Arabic language inputs.
        - Signed forms rendered into non-editable PDF with embedded signature image.
    - Signed consents archived per patient, with versioning and access logs.
    - Printable and exportable with timestamp and creator identity.

Status: In Progress
Assigned Team Member (Vendor): [To be filled]
UAT Feedback: Requires enforcement testing + session scheduling logic check

2.3. Therapy Session Module

Objective:

Allow therapists to manage, document, and track all therapy session activities by type (Consultation, Assessment, Intervention, Free Follow-up), ensuring integration with patient packages, session records, and reporting, while maintaining clinical integrity and enhancing multidisciplinary collaboration.

Expected Features:

- **Therapist Dashboard:**
    - List of assigned patients and session schedule
    - Filter by date, clinic, or patient name
    - Indicator for "incomplete session notes"
    - Patient Priority Flags (e.g., urgent cases, safety concerns)
    - Progress Snapshot Widget: View of latest 3 sessions
    - Assigned Tasks Panel: Shows pending reports or assessments
- **Session Entry & Notes:**

  - Session forms based on session type and clinic (OT, ABA, SLP, etc.)
  - Fields editable during session, and modifiable post-session by therapist
  - Each form to be mapped to the type and clinic logic
  - Objective field at session start, outcome summary at end
  - Free Follow-up marked as non-billable but requires note entry
  - Auto-save every 2–3 minutes and draft status with resume capability
  - Timer to capture session start/end or manual entry
  - Option to attach media files (photos, videos, audio) to session entry
  - Ability to flag session as "complex" or "needs review"
- **Therapy Goal Tracking:**
  - Select/update therapy goals per session (linked to initial assessment)
  - Progress notes per goal with optional comments
- **Linked Assessment Results:**
  - Attach assessment tool results (e.g., Vineland, GARS) used during session
  - Results timestamped and stored in session record
- **Role-based Report Signing:**
  - Junior and Assistant therapists can write and sign drafts
  - Session reports only considered final once co-signed by Senior
  - Supervisor can add feedback or comments to reports (educational/training use)
  - Senior receives automatic notification if reports or notes are not finalized within 5 working days
- **Session Status Tracking:**

    - Status options: Scheduled, Completed, Missed, Canceled
    - Visibility of session progress per patient
    - Alerts for overdue or missed documentation
- **Notification System:**
    - Patient to receive WhatsApp/SMS for session confirmation
    - Therapist notified upon confirmation
    - Auto-reminder for therapists if draft not submitted within 24h
    - Weekly workload summary sent to therapist and senior
- **Final Report Generation:**
    - Based on total sessions (per package)
    - Report type selection: Assessment, Progress, Re-Assessment, Discharge
    - Data must be gathered from documentation of session types
    - Output as structured editable report format
    - Final version exportable as PDF after signing
- **Session History & Editing:**
    - Therapists can edit past notes prior to co-signature
    - Audit trail for all changes
    - Linked to patient medical file
    - Therapist can refer the patient to another department
    - Patient referral must notify receptionist to book the referred appointment.

Status: Pending
Assigned Team Member (Vendor): [To be filled]
UAT Feedback: To be structured and tested per clinic

2.4. Therapist Reports & Assessments

Objective:

Provide therapists the ability to generate session-based and final assessment reports per patient and ensure they are appropriately signed, formatted, and accessible for internal and external review, with embedded visual summaries and workflow clarity.

Expected Features:

- **Defined Report Types:**
  - Initial Assessment Report
  - Progress Report (mid-package or periodic)
  - Re-Assessment Report (post-regression or upon request)
  - Discharge/Exit Summary
- **Report Generation Triggers:**
  - Completion of specific number of sessions (based on package)
  - Therapist-initiated reassessment or exit
  - Supervisor directive or Clinical Coordinator recommendation
- **Clinic-Specific Report Templates:**
  - Pre-built fields and logic tailored to clinic type (OT, ABA, SLP, Psychology)
  - Auto-populated fields (e.g., patient data, session goals, progress tracking)
  - Editable draft mode with draft watermarks until final approval
- **Clinic-Specific Report Templates:**
  - Pre-built fields and logic tailored to clinic type (OT, ABA, SLP, Psychology)

    - Auto-populated fields (e.g., patient data, session goals, progress tracking)
    - Editable draft mode with draft watermarks until final approval
- **Visual & Tabular Summaries:**
    - Embedded graphs and charts for therapy progress
    - Session summary table (session count, goals addressed, progress notes)
    - Section for therapist commentary and outcome observations
- **Export & Sharing:**
    - Export to PDF (finalized) and DOCX (for internal editing if needed)
    - Stored securely in patient profile
    - Shareable upon request via secure internal channel
- **Export & Sharing:**
    - Export to PDF (finalized) and DOCX (for internal editing if needed)
    - Stored securely in patient profile
    - Shareable upon request via secure internal channel
- **Multilingual Compatibility:**
    - Ability to generate bilingual reports (Arabic/English) where needed
- Clinic-specific assessment templates
- Auto-population of patient information
- Auto-fill from session history
- Visual progress representation (graphs, charts)
- Session summary table per package
- Editable until approved by Senior therapist
- Exportable PDF and printable

- Stored in patient profile with version history

Status: Pending
Assigned Team Member (Vendor): [To be filled]
UAT Feedback: Pending template mapping + report rendering test

2.5. Financial & Billing Module

Objective:

Enable robust financial management, invoice generation, and billing transparency tied directly to appointments, packages, and therapy sessions, while maintaining audit integrity and user access control.

Expected Features:

- **Invoice Generation:**
  - Auto-generate invoices upon appointment/package creation
  - Session-level billing for standalone services
  - Package-level invoice with breakdown per session
  - Ability to add custom notes or patient ID to invoices
  - Option to assign payment type (Cash, Bank Transfer, POS)
  - Add reference number for Bank Transfer payments
  - No commission applied to bank transfers
- **Payment Modes & Logic:**
  - Accept and record multiple payment modes: Cash, POS, Bank Transfer
  - Add reference field for bank transfers (mandatory)
  - Flag commission-free payment methods
- **Real-Time Payment Status Tracking:**
  - Display status: Paid, Unpaid, Partially Paid, Refunded

    - System prevents session check-in without verified payment
    - Tie payments to both appointment and session records
- **Real-Time Payment Status Tracking:**
    - Display status: Paid, Unpaid, Partially Paid, Refunded
    - System prevents session check-in without verified payment
    - Tie payments to both appointment and session records
- **Reports & Analytics:**
    - Revenue by clinic, therapist, or department
    - Session vs. financial reconciliation reports
    - Daily, weekly, Monthly, quarterly, and yearly income summaries
    - Debtor report for unpaid or partially paid sessions
    - Exportable in PDF, Excel, and CSV
- **Audit & Compliance:**
    - Timestamp all invoice actions (create/edit/delete)
    - User ID and device/IP recorded for sensitive actions
    - Invoice log stored per patient and per day
- **Alerts & Flags:**
    - Notify Finance Manager of overdue/unpaid invoices
    - Session lock alert for non-payment
    - Alert on duplicate invoice attempts
- **Integration Notes:**
    - Finance module to be compatible with external accounting software (future)
    - APIs for finance export and synchronization

- **Multilingual Compatibility:**
  - Invoice templates available in Arabic and English
- **Package Billing Logic:**
  - Prepayment required for packages
  - Package cost auto-divided per session
  - Session credit tracking (used vs. remaining)
- **Invoice Management by Reception:**
  - View, print, reissue invoices
  - History of payments and edits stored

Status: In Progress
Assigned Team Member (Vendor): [To be filled]
UAT Feedback: Pending finance review + invoice logic testing

2.6. Clinical Documentation (Forms)

Objective:

Ensure that each clinic has access to digital forms tailored to its therapeutic scope, allowing therapists to efficiently document session information, track clinical history, and contribute to patient records with accuracy, consistency, and role-based validation.

Expected Features:

- **Form Customization & Configuration:**
  - Templates tailored per clinic (OT, ABA, SLP, Psychology, Medical)
  - Support for different types: Intake, Consultation, Assessment, Intervention, Follow-Up
  - Dynamic fields based on session type
  - Auto-fill fields from previous sessions where applicable

- **Data Entry & User Flow:**
    - Role-based access to create, edit, and finalize forms
    - Draft mode with auto-save for incomplete documentation
    - Editable by therapists until signed-off by Senior
    - Mandatory fields and validation logic to reduce human error
- **Approval Workflow & Supervision:**
    - Assistant/Junior therapists can draft and sign reports
    - Senior therapist must approve and co-sign for finalization
    - Supervisor notified if reports or notes are not submitted within 5 working days
- **Attachments & Media Uploads:**
    - Ability to upload supporting documents (images, test results, worksheets)
    - Media linked to session or form ID and saved in patient record
- **Form Versioning & Audit:**
    - Template version control per clinic
    - Full change log: who edited, what changed, when
    - Locked after approval with visibility only to assigned roles
- **Output & Reports:**
    - Export to PDF with clinic-specific branding
    - Include therapist name, role, clinic, and timestamps
    - Stored in patient profile with tagging by form type
- **Referral & Cross-Clinic Use:**
    - Therapist may flag case for internal referral
    - Referred clinic receives notification with referral note

    - Reception notified to schedule session in the new clinic
- Multilingual Compatibility:
    - Form content displayed in Arabic or English based on therapist's system language

Status:
Assigned Team Member (Vendor): [To be filled]
UAT Feedback:

2.7. MDT Notes & Collaboration

Objective:

Facilitate interdisciplinary coordination and documentation through a shared, structured, and traceable MDT (Multi-Disciplinary Team) note system. This ensures that all professionals involved in a child's care can contribute insights, track development collaboratively, and finalize joint assessments or recommendations.

Expected Features:

- **MDT Note Creation & Access:**
    - Each patient has a dedicated MDT section in their profile
    - Notes can be initiated by any authorized therapist
    - Access restricted to professionals involved in the case
    - Visibility settings configurable per role (Junior, Assistant, Senior)
- **Collaborative Editing Workflow:**
    - Therapists can tag colleagues for input across departments
    - Contribution tracking with timestamps and user identification
    - Notes remain editable until marked final by the Senior Therapist
- **Approval & Finalization:**

- Finalization requires approval and signature by at least one Senior from two different departments
- Once finalized, the note is locked and archived

- **Version Control & History:**
  - Every edit version is tracked with full history
  - Supervisors can audit the full contribution timeline
  - Comments and change justifications can be logged during editing
- **Notification System:**
  - Contributors receive reminders for pending MDT input
  - Referred therapists receive alerts when tagged
  - Senior notified when co-signature is pending for over 48 hours
- **Integration with Patient Profile & Sessions:**
  - MDT notes can reference specific session data (e.g., forms or observations)
  - Linked sessions are clickable for quick review
  - Final MDT summary shown in the patient dashboard
- **Export & Sharing:**
  - PDF export with full contributor list and final approval info
  - Branded report with note date, patient info, and departments involved
- **Security & Confidentiality:**
  - Role-based visibility ensures non-relevant clinics can't access sensitive info
  - Internal use only — export access restricted to assigned Senior therapists
- **Multilingual Interface:**

    - Notes can be written in Arabic or English with toggling per user preference

Status: In Progress

Assigned Team Member (Vendor): [To be filled]
UAT Feedback: progress graph design and safety flag configuration

2.8. Role-Based Permissions & Notifications

Objective:

Define granular user roles with precise access scopes and enforce communication workflows through dynamic notifications. This ensures proper data handling, compliance with clinical oversight, timely documentation, and proactive accountability across all user levels.

Expected Features:

User Roles & Access Levels

- **Receptionist**
    - Book/edit appointments, manage packages, manage packages, issue and reprint invoices
    - Upload documents to patient profiles
    - Print management reports (session status, center occupation, department statistics, etc.)
    - Cannot access clinical notes or edit patient records
    - Print final medical Reports, and Access Patient medical file
- **Therapist - Junior**
    - View only their assigned patients
    - Fill forms, write session notes, create draft reports

    - Cannot finalize reports without Senior co-sign
- **Therapist – Assistant**
    - All Junior privileges
    - Can write and sign assessment reports
    - Requires Senior approval for finalization
- **Therapist – Senior**
    - View all patients under their department
    - Approve and co-sign final reports
    - Monitor documentation progress of juniors/assistants
    - Full edit rights on notes, sessions, and clinical forms
- **Clinical Coordinator**
    - Access to cross-department dashboards
    - Approve or flag appointments
    - Monitor MDT collaboration and referral flow
    - Receive alerts for delays across clinics
- **Finance**
    - View all invoices, payment records, access finance reports, session billing summaries, and billing reports
    - Cannot view patient clinical data
- **Admin**
    - Full access to all system settings, logs, and user permissions
    - Can generate global reports and audit logs
- **Permission Enhancements**
- **Clinic-Scoped Visibility:** Therapists can only access patients and notes within their assigned clinic(s).

- **Session Conflict Checks:** Automatically prevents overbooking of physical space for shared clinic rooms.
- **Referral Trigger Visibility:** When a referral is initiated by a therapist, only the receiving clinic's authorized users gain access after reception logs the appointment.
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Notification Triggers

- **Patient Notifications:**
  - SMS/WhatsApp upon session booking and confirmation
  - Reminders sent 1 day before the session
  - Alerts for missed sessions or rebooking
- **Therapist Alerts:**
  - Notification upon session confirmation
  - Reminder for documentation deadlines (within 48h, 5 days)
  - MDT request alerts if tagged in a case
- **Senior Notifications:**
  - Alert if any staff member delays documentation >5 working days
  - Pending co-sign alerts for MDT or final reports
- **Reception & Coordinator Notifications:**
  - New referral logged → auto-notify for appointment scheduling
  - Alerts for unconfirmed bookings older than 48 hours
- **Finance Notifications:**
  - Daily report on unpaid sessions
  - Alerts for canceled packages or refunded credits
- Admin Notifications:

- System warnings: failed logins, permission violations
- Update logs and version rollout summaries

Status: In Progress
Assigned Team Member (Vendor): [To be filled]
UAT Feedback: Pending rule mapping and notification testing

2.9. Patient Profiles with Visual Progress

Objective:

Establish a centralized, structured, and continuously updated patient profile system that aggregates demographic, clinical, financial, behavioral, and developmental data. The profile must support visual progress tracking, integrated session logs, safety alerts, and interdepartmental access, while remaining role-restricted and auditable.

Expected Features:

- **Unified Patient Record:**
  - Central dashboard showing:
    - Full appointment history (scheduled, completed, missed)
    - Session status and therapist notes
    - Package details with session usage tracking
    - Linked consents (general and package-specific)
    - Financial overview: invoices, payments, outstanding balances
  - Editable demographic and guardian information
  - Secure document uploads (previous reports, evaluations, referrals)
- **Developmental & Clinical Profile:**
  - Sections for:
    - Developmental history and diagnosis

        - Family dynamics and caregiver details
        - Preferred reinforcers and sensory sensitivities
        - Clinical objectives and therapy plans
    - Editable only by assigned therapist; finalized by Senior
- **Visual Progress Indicators:**
    - Dynamic graphs and charts displaying:
        - Quantitative metrics (e.g., behavioral scales, language assessments)
        - Progress over time by clinic/module (OT, ABA, SLP, etc.)
    - Color-coded improvement indicators (per session or aggregate)
    - Ability to export visual reports for internal or parent feedback
- **Safety Flag & Special Notes:**
    - Safety flag section for:
        - Aggression risk
        - Allergies or medical warnings
        - Crisis behavior protocols
    - Auto-flag on therapist/receptionist dashboard upon profile access
    - Can only be created/updated by Senior Therapist or Admin
- **Referral Tracker:**
    - Displays referrals made to/from other clinics
    - Status log for whether appointment was booked
    - Historical archive of referral notes and outcomes
- **MDT & Documentation Access:**
    - View MDT contributions and summaries

- Session notes sorted by type, clinic, and contributor
- Linked access to assessment and discharge reports

- **Document Upload:**
  - Secure upload and access of scanned records (previous evaluations, medical forms, etc.)
- **Audit & Version History:**
  - All profile edits timestamped and user-tagged
  - Full change log with ability to revert critical fields if needed
  - Visibility of previous versions of therapy goals, notes, etc.

Status: In Progress
Assigned Team Member (Vendor): [To be filled]
UAT Feedback: Pending progress graph design and safety flag configuration

2.10. Logs & Audit Trails

Objective:

Ensure comprehensive, secure, and transparent logging of all user actions, system activities, and patient-related changes within the HIS. This enables traceability, supports operational oversight, and complies with auditing and security requirements.

Expected Features:

- **User Action Logging:**
  - Records all key interactions such as:
    - Appointment creation, editing, cancellation
    - Session note entry and edits
    - Package modifications
    - Invoice generation and updates

    - Timestamped entries with:
        - User ID and role
        - IP address and device info
        - Module/location of action
- **Clinical Documentation & Report Audit Trails:**
    - Version history for:
        - Session notes
        - Therapy forms
        - Final reports (assessment, progress, re-assessment, discharge)
    - Displays:
        - Who edited what and when
        - Approval workflow (e.g., draft by junior, signed by senior)
        - Option to view and compare previous versions
- **Login & Access History:**
    - Log of login attempts (successful and failed)
    - Detection of logins from new or unauthorized devices/IPs
    - Forced logout option by Admin in case of suspicious activity
- **System Activity Logs:**
    - Automated logs of:
        - System downtime
        - Session crashes
        - High-volume data operations (bulk edits, imports, deletions)
    - Alert system for repeated technical errors or access violations
- **File Access & Data Export Logs:**

    - Track file downloads, report exports, patient record views
    - Log who accessed or exported sensitive data and when
    - Visibility of report printing activity per user/role
- **Administrative Oversight Tools:**
    - Admin panel to:
        - Search logs by user, date, module, or action type
        - Filter critical actions (e.g., note deletions, consent overrides)
        - Generate audit reports on-demand (exportable in PDF or Excel)
- **Compliance & Legal Traceability:**
    - All logs must be retained securely for a minimum of [10 Years] per Saudi regulatory standards
    - Fully encrypted logs with restricted Admin-only access

Status: Pending
Assigned Team Member (Vendor): [To be filled]
UAT Feedback: Pending structured logging format and test entries These test entries should include sample user actions (e.g., login, edit, delete), form submissions, and system alerts to verify proper logging and audit tracking functionality.

2.11. General Notes & Information:

Objective:

Ensure system stability, development quality, and clinical operational continuity through environment control, development standards, and staging/testing practices.

Expected Features & Practices:

- **Staging & Testing Environment:**
    - A separate, fully functional staging server must be maintained for:

        - UAT (User Acceptance Testing)
        - QA (Quality Assurance) and bug reproduction
        - Staff training before live deployment
    - No development or testing directly on the live environment
    - Any update must be tested and approved in staging before deployment to production

- **Version Control & Deployment Protocol:**
    - All system modules and updates must follow strict versioning
    - Deployment process to include:
        - Changelog document for every release
        - Manual/automated backup before deployment
        - Post-deployment validation checklist
- **Regression Testing Mandate:**
    - All system updates must include a regression check to ensure no damage to previously working modules
    - System functions to be retested after any feature rollout or bug fix
- **Bug Reporting & Patch Cycle:**
    - All bugs to be logged by Agdar team via centralized tracker (Excel, ticketing system)
    - Response within 1 business day for non-blocking issues
    - Resolution window:
        - Critical bugs: 24 hours
        - Major bugs: 72 hours
        - Minor bugs: As agreed upon
    - Patch documentation to include issue summary, affected modules, and actions taken
- **Quality Assurance Requirements:**
    - QA process to include:
        - Structured UAT scripts signed by Agdar team
        - Screenshots/video proof of test runs
        - Test results shared per feature before go-live
- **Change Request (CR) & Scope Control:**

    - Any additional functionality not documented in this specification must follow a formal CR process:
        - Description of change
        - Business justification
        - Timeline and impact analysis
        - Agdar written approval required
- **Emergency Support Plan:**
    - In case of system downtime:
        - Emergency contact must be designated by Galaxy Group
        - Defined response time for system recovery
        - Printable offline backups of appointment logs and therapist schedules must be available
- **Configuration Control:**
    - No live edits to core system configurations without prior documentation and Agdar approval
    - Settings changes to be documented and versioned

Status: Ongoing

Assigned Team Member (Vendor): [To be filled]

UAT Feedback: Pending deployment process simulation and staging validation

2.12. Updated Reception Role:

Objective:

Define the operational boundaries and system access privileges for Reception users to ensure accurate booking, financial compliance, and daily workflow efficiency.

Expected Responsibilities & System Access:

- **Appointment Management:**
    - Book, reschedule, and cancel appointments across all departments.
    - Prevent booking if:
        - General consent is missing

        - Package consent is not signed (for package sessions)
        - Session payment is not completed
- View therapist calendar availability per clinic and room
- Quick action tools for same-day changes and walk-ins
- **Consent & Compliance Checks:**
    - Upload and verify required consent forms
    - Flag patients missing required documentation
    - Generate consent reminders for new or expired patients
- **Invoice Handling & Payment Tracking:**
    - Auto-generate invoices upon appointment/package confirmation
    - Record payment type and details (cash, transfer, POS)
    - Print/reprint invoices and receipts
    - Alert finance/admin in case of unpaid or rejected payments
- **Reporting Tools:**
    - Generate daily and weekly reports including:
        - Session status (scheduled, completed, missed)
        - Department/room utilization (center occupation)
        - Patient attendance summaries
        - Therapist appointment logs
- **Communication & Notifications:**
    - Trigger SMS/WhatsApp notifications to patients for:
        - Appointment booking
        - Appointment confirmation
        - Appointment cancellations/reschedules

    - Notify therapist once the session is confirmed

- **Document Management:**
    - Upload patient records and supporting files
    - Attach lab forms, consents, or other required documents
- **Access Restrictions:**
    - No access to clinical notes or MDT documentation
    - Cannot edit therapist-entered reports or patient medical records
    - Cannot view financial summaries beyond session-level invoices

2.13. Updated Access Management:

Objective:

Establish a secure, role-based access control model that limits each user's access and editing permissions based on clinical hierarchy, department affiliation, and responsibility scope. This ensures operational integrity, confidentiality, and streamlined workflows.

Expected Features & Role Definitions:

- **User Types & Role Tiers:**

Each user must be assigned one of the following system roles, with permissions tailored to their job function:

1. **Receptionist**
    - Access to scheduling, package creation, invoice generation.
    - No access to clinical forms, reports, MDT notes, or sensitive patient data.
    - Can upload documents and generate operational reports.
    - Can trigger SMS/WhatsApp messages to patients.
2. **Therapist Roles (Department-Specific Access Only)**

- **Junior Therapist:**
  - View assigned patients.
  - Fill and sign session forms (draft only).
  - View session history and internal MDT notes (read-only).
  - Cannot finalize reports.
- **Assistant Therapist:**
  - Same as Junior, plus ability to generate draft progress reports.
  - Submit reports for Senior approval.
- **Senior Therapist:**
  - Full access to their department's patient forms, reports, and session data.
  - Co-sign and finalize reports.
  - Edit past sessions.
  - Review and approve documentation.
  - Receive alerts for missing notes >5 working days.

3. **Clinical Coordinator**
   - Cross-department access.
   - View full clinic activity logs.
   - Manage appointments across clinics.
   - Generate department-specific reports.
   - Escalate missed documentation to department heads.
4. **Finance Staff**
   - Access to:
     - Invoice dashboards

        - Session payment tracking
        - Package billing overview
    - No access to medical data, session forms, or patient documents.

5. **Administrator (Admin)**
    - Full system access and configuration rights.
    - Manage user roles, permissions, audit settings.
    - Override access in emergency cases (logged).
    - Can impersonate users for support (with alert flag).
    - Control application configurations and global settings.

- **Departmental Boundaries:**
    - Therapists can only view/edit patients assigned to their clinic (OT, ABA, SLP, etc.).
    - MDT notes are accessible only if the therapist is involved with the patient.
    - No therapist can view session forms of other clinics unless MDT-tagged.
- **Access Logs & Alerts:**
    - Unauthorized access attempts to be logged and reported to Admin.
    - Any privilege escalation (role change) must trigger an admin alert and require two-step approval.
    - Changes to roles or access must be logged in audit trail.
- **Referral Access Workflow:**
    - When a therapist refers a patient to another department:
    - Only the receiving department gains access to referred sessions.
    - Reception is alerted to book an appointment accordingly.

    - Referrals are tracked and auditable.

Status: In Progress

Assigned Team Member (Vendor): [To be filled]

UAT Feedback: Pending access role simulation and boundary condition tests

2.14. Security & Safety Requirements:

Objective:

Ensure the system adheres to strict data security standards and implements safeguards for patient safety, privacy, and operational risk mitigation. The module reinforces compliance with healthcare regulations, particularly for vulnerable pediatric patients with behavioral or developmental disorders.

Expected Features:

- **Data Security Controls:**
    - Role-based visibility: No user can access data beyond their defined scope.
    - Encrypted database storage for sensitive fields (e.g., diagnosis, reports, contact data).
    - Secure document upload system with file type and size validation.
    - Session timeout and auto-logout for idle accounts.
    - HTTPS enforced on all platforms with SSL certificate.
- **Audit & Traceability:**
    - Every user action (view, edit, delete, create) is logged with user ID, timestamp, and IP address.
    - Data export/download actions require Admin authorization and are logged.
    - Historical versions of reports and forms maintained for audit.

- **Clinical Safety Flags:**
    - Ability to tag patient profiles with behavioral risk indicators (e.g., aggression, elopement risk).
    - Color-coded visual flag system in calendar and patient views.
    - Alert message appears upon booking or accessing flagged patient data.
    - Flags are editable only by Senior Therapists or Clinical Coordinator.
- **Emergency Access Protocol:**
    - "Break the Glass" feature allows Admin override in emergencies (e.g., unconscious patient).
    - All such access events are logged and flagged for review.
- **Backup & Disaster Recovery:**
    - Daily automatic backups on secure cloud and local storage (Synology or equivalent).
    - Backups retained for at least 30 days.
    - Manual export option for critical documents and schedules.
- **Communication Safety:**
    - WhatsApp/SMS templates must not contain confidential clinical details.
    - System prompts warning when sending external messages containing sensitive terms.
- **Device & Network Security:**
    - Admin panel includes session management to terminate logged-in devices remotely.
    - Optional IP restriction per user group for in-clinic-only access.
    - Detection and alert system for login from unknown devices.
- **Legal Compliance:**

    - Adheres to Saudi MOH and local healthcare data standards.
    - Ensures readiness for system inspection or audit.

Status: In Progress

Assigned Team Member (Vendor): [To be filled]

UAT Feedback: Pending security penetration test and safety flag simulation

2.15. Compliance:

Objective:

Ensure that the entire HIS system and its supporting modules are fully compliant with healthcare laws and standards mandated by the Saudi Ministry of Health (MOH), data privacy regulations, and internal clinical quality protocols. This compliance ensures legal defensibility, quality assurance, and accreditation readiness.

Expected Features:

- **Saudi MOH Standards Alignment:**
    - All patient data forms and therapy documentation aligned with MOH health center guidelines for child development and behavioral clinics.
    - Includes mandatory demographic fields, consent logs, and encounter records as per inspection requirements.
    - Therapy reports and assessments must include structured formats accepted by governmental and educational bodies.
- **Legal & Documentation Readiness:**
    - Consent templates to include standardized legal clauses translated into Arabic.
    - All clinical documentation must be traceable, timestamped, and stored with revision control.
    - Support for printing reports in Arabic and English upon request.

- **Licensing & Audit Readiness:**
  - Enable audit-ready export of patient files, invoices, and consents.
  - Logs and access reports exportable in a structured format.
  - Role-based access ensures MOH audit separation between clinical, financial, and admin activities.
- **System Behavior for Regulatory Control:**
  - Lock-in of finalized reports and consents to prevent tampering.
  - Alerts for expired or unsigned consents.
  - Inactive patient records flagged for periodic review.
- **Arabic Language Compliance:**
  - Interface supports full Arabic and English switch with RTL compatibility.
  - Arabic printing standards for government correspondence and school handover letters.
- **Data Sovereignty & Hosting:**
  - All data hosted on approved KSA-based servers unless otherwise stated in compliance waiver.
  - Admin alert if external API or integration attempts to access patient data without approval.
- **ZATCA Compliance:**
  - Invoices generated must follow ZATCA (e-invoicing) Phase 1 and Phase 2 requirements.
  - Include QR codes, tax breakdowns, invoice UUID, and XML archival.
  - Timestamped e-invoice issuance with signature hash support.
  - Finance team must be able to export ZATCA-compatible reports.

Status: In Progress

Assigned Team Member (Vendor): [To be filled]

UAT Feedback: Pending MOH compliance validation and document audit testing

2.16. Third Party & Governmental Integrations

Objective:

Facilitate seamless integration with relevant national systems to support reporting, regulatory updates, and patient data verification through secure APIs and standardized protocols.

Expected Features:

- **Nafis / Wassel Integration:**
  - System to support reporting and exchange of child development case summaries with approved government platforms.
  - Allows secure API connection to retrieve national ID verification and case tracking.
  - Ensures compliance with national child support coordination bodies.
  - Audit logs must capture all data sent or received through this integration.
- **Future Compatibility:**
  - Integration placeholders for Tawakkalna, Sehhaty, or additional MOH platforms.
  - Scalable API architecture to support modular integration expansion.
- **Access Controls:**
  - Role-based permission for who can initiate or view integrated system responses.
  - Visibility settings for government response logs and errors.

Status: Planned

Assigned Team Member (Vendor): [To be filled]

UAT Feedback: Pending API documentation review and government-side approval

Section 3: Implementation Roadmap

Objective:

To establish a phased and measurable implementation schedule that ensures alignment with operational priorities, contractual timelines, and readiness for training, testing, and deployment.

3.1. Phase 1: Core Infrastructure & System Setup

Timeline: 1st June 2025 – 30th June 2025
Deliverables:

- **System Environment Setup:**
  - Deployment of staging and live environments
  - Initial database and schema setup (patients, clinics, users)
  - Basic audit and logging framework activated
- **User Access & Configuration**
  - Role and permission setup for all user types
  - Basic Customization for interface terminology, logo, and color scheme
- **Core Operational Modules:**
  - Appointment Management (Receptionist controls)
  - Package and Consent Workflow (with enforcement logic)
  - Therapist access to patient list and appointment calendar
  - Basic session note input for therapists and 2 Occupational Therapy form templates

  - Consent Form Signature functionality prepared for tablet integration (General & Package Consents)
- **Finance & Billing Foundation:**
  - Invoice generation and financial logs
  - Session types and calendar rules enforced
- **Communication & Reporting:**
  - Notification system activated (for appointments and confirmations)
  - Session Statistics and Details per Center / Clinic / Therapist

3.2. Phase 2: Therapy Documentation & Clinical Forms

Timeline: 1st July – 31st July 2025

Deliverables:

- **Therapy Session Expansion:**
  - Full rollout of session note entry across all clinics (OT, ABA, SLP, Psychology, Medical)
  - Dynamic forms for Consultation, Assessment, Intervention, and Follow-up sessions
  - Auto-save and draft logic fully operational
  - Session editing access with audit tracking
- **Clinical Forms Infrastructure:**
  - Finalization and implementation of at least 50% of the clinic-specific documentation templates
  - Setup of versioning and submission tracking
- **Workflow Management:**
  - Therapist dashboard filters by clinic, patient, and status
  - Session referral system across departments with alert to Reception for booking
  - Session finalization logic and report co-signing (Senior sign-off logic)

- **Notification Enhancements:**
  - Reminder triggers for pending session reports
  - Flagging of overdue documentation
- **UAT & Feedback Loop:**
  - Internal UAT for session module
  - Feedback round for form usability and report output

3.3. Phase 3: MDT Notes, Reporting & Visual Patient Profiles

Timeline: 1st August – 31st August 2025

Deliverables:

- **MDT Collaboration Module:**
  - MDT Notes creation flow enabled with multi-role contributors
  - Inter-clinic access control logic deployed
  - Version control and contributor logs in place
- **Therapist Reporting:**
  - Final report types setup: Assessment, Progress, Re-Assessment, Discharge
  - Structured report outputs (editable, PDF export after signing)
  - Graphical session summaries and improvement tracking
- **Patient Profile Enhancements:**
  - Full demographic and clinical profile interface
  - Visual progress charts activated with therapy-specific scaling
  - Safety flag system enabled with alert triggers
- **UAT & Clinical Review:**
  - Final testing of MDT and reporting tools
  - Clinical coordinator review of integration points across forms, reports, and session logs

3.4. Phase 4: Logs, Audit Trails & Permissions Finalization

Timeline: 1st September – 30th September 2025

Deliverables:

- **Logs & Audit Framework:**
  - Full user action logs by module
  - Report version history and form audit tracking
  - IP and device-based login tracking
- **Access & Role Enhancements:**
  - Finalization of permission tiers for all roles
  - Testing of restricted access logic (e.g., juniors limited to draft views only)
  - Admin oversight dashboards and access logs
- **Testing & Compliance Checks:**
  - Data security validation
  - Compliance alignment with local health record laws
  - QA pass/fail reports and checklists
- **Notification Finalization:**
  - Admin alerts for system errors or unauthorized access
  - Finance alerts for outstanding balances

3.5. Phase 5: Final Testing, Training & Go-Live Prep

Timeline: 1st October – 31st October 2025

Deliverables:

- **Full UAT Execution:**
  - End-to-end user acceptance testing for all modules
  - Real-life scenario testing across Reception, Therapist, Finance, Admin roles

- **Training Program Rollout:**
  - In-person and virtual training sessions per role
  - Training materials: video walkthroughs, SOP booklets, live Q&A
  - System usage assessments to ensure readiness
- **Bug Resolution & Refinement:**
  - Fixing of any blocking or critical bugs
  - Minor UI/UX optimizations based on UAT feedback
- **Go-Live Checklist Finalization:**
  - Launch readiness sign-off
  - Final backups, staging/live sync
  - Technical readiness validation by vendor and internal IT

Section 4: Testing & Acceptance Criteria

Objective:

Define standardized testing procedures and acceptance benchmarks to ensure that all system modules meet Agdar's operational, legal, and performance requirements prior to launch.

4.1. General Testing Requirements:

- User Acceptance Testing (UAT) scenarios prepared per module and user role.
- All modules to be tested in a staging environment before live deployment.
- Active involvement of Reception, Therapists, Finance, and Admin in UAT.
- Documentation of all test cases and their outcomes.
- Formal sign-off required from Agdar management per module.

4.2. Acceptance Criteria Per Module:

- **Appointment Management:** Must block booking without valid consents or confirmed payments. All appointment types must appear correctly on the therapist’s calendar with appropriate color coding. Double-booking within shared clinic spaces must be prevented.

- **Package & Consent Workflow:** Booking must be restricted without signed consents. All sessions tied to a package should reflect immediately in the system with proper session-type and therapist assignments.
- **Therapy Session Module:** Session notes must save and track correctly. Editing rules and approval logic (including senior co-signatures) must function as specified.
- **Therapist Reports & Assessments:** Reports must generate accurately based on selected templates. Graphical progress summaries must reflect the session data. Reports must be editable until signed by the Senior.
- **Financial & Billing Module:** Invoices must match session and package bookings. Payment statuses should be accurately reflected. Finance reports must show correct totals.
- **Clinical Documentation (Forms):** Forms must load dynamically per clinic and session type. Version tracking and finalization logic must be active. Forms should save in draft and finalized states with audit trails.
- **MDT Notes & Collaboration:** Notes must be sharable across departments, with controlled access based on assignment. Finalization and contributor logging must be functional.
- **Role-Based Permissions & Notifications**: Access restrictions must work per defined role. Notification logic (e.g., booking confirmation, overdue documentation) must be validated in real-time.
- **Patient Profiles with Visual Progress:** Unified profile must include correct clinical and financial data. Charts must auto-update with session input. Flags and attachments should display as expected.
- **Logs & Audit Trails:** All actions must appear in the audit logs with user ID, timestamp, and action type. Admin search tools must retrieve logs by filter.
- **Integrations (Nafis/Wassel, ZATCA):** Outbound message triggers and tax-compliant invoice generation must be validated with test accounts.

4.3. UAT Process Overview:

- Prepare UAT Test Plan per module
- Assign internal testers from Agdar team per user role
- Execute test scenarios in staging using real-life data patterns
- Log outcomes in centralized UAT tracking sheet
- Flag any failed test cases for revision and retesting
- Final sign-off from Agdar General Manager and Clinical Coordinator

4.4. Final Acceptance Protocol:

- No module will be considered complete without full UAT sign-off
- Post-UAT, a final review will be conducted during Phase 5
- If bugs or missing logic are found post-signoff, resolution must be logged and implemented within 5 working days
- A launch-readiness checklist will accompany the final go-live approval

Section 5: Project Governance & Communication Protocols

Objective:

To define the communication, oversight, and escalation mechanisms that will govern the HIS project and ensure continuous alignment between Agdar and Galaxy Group throughout implementation and post-deployment.

5.1. Governance Structure:

- **Project Sponsor:** Agdar General Management
- **Vendor Lead:** Galaxy Group Project Manager
- **Internal Project Manager:** Agdar Clinical Coordinator

- **Clinical Leads:** Heads of each therapy department
- **Finance Oversight:** Agdar Financial Manager
- **IT Support Lead:** Galaxy Technical Representative

5.2. Weekly Review Meetings:

- Held every Tuesday, led by Agdar's Internal PM and Galaxy PM
- Tracks progress on milestones, testing status, and technical challenges
- Attendance required from both sides' PMs and technical leads
- Minutes documented and shared within 48 hours

5.3. Issue Escalation Protocol:

- Tier 1: Logged by Agdar internal team via tracking sheet
- Tier 2: Raised during weekly meeting if unresolved within 48h
- Tier 3: Direct escalation to Agdar sponsor and Galaxy management if unresolved >5 working days

5.4. Documentation Flow:

- All technical changes, testing scripts, and user feedback logged in central project tracker
- Version control enforced on all module documentation
- Shared Google Drive with permissions granted based on role

5.5. Post-Go-Live Support Governance:

- Dedicated support rep from Galaxy for 4 weeks post-launch
- Support tickets logged through centralized system
- Weekly support reviews until full sign-off

- Transition to monthly check-ins after stabilization

5.6. Governance Enhancements:

- A Responsibility Assignment Matrix (RACI) should be developed to clarify task ownership.
- Introduce Service Level Agreements (SLAs):
    - Critical issues: Response within 4 hours, resolution in 24 hours
    - Non-critical bugs: Acknowledgment in 1 business day, fix within 5 working days
    - Minor improvements: Evaluated in 10 days with timeline provided
- Post-Go-Live Handover Package must include:
    - Admin guide, backup policy summary, user credentials (if hosted externally)
    - Licensing terms and configuration documentation
- Monthly Post-Go-Live Performance Review for 3 months using Section 8 KPIs

Section 6: Support & Maintenance Agreement

Objective:

To define the scope, responsibilities, and timeframes for technical support and ongoing system maintenance after Go-Live to ensure sustainable operation and continued system reliability.

6.1. Post-Go-Live Support Period:

- **Duration:** 4 weeks (starting immediately after Go-Live)
- **Scope:**
    - Bug fixes and critical error resolution
    - Response time within 4 hours for Critical Issues and resolution within 24 hours

    - Weekly sync meetings with dedicated support agent
    - Email/WhatsApp ticketing system to log all issues

6.2. Extended Support Agreement:

- **Duration:** 3 months renewable (paid extension)
- **Scope:**
    - Minor updates and feature adjustments
    - Technical assistance and usage optimization
    - System monitoring for performance and stability
    - Monitoring includes downtime alerts and usage trends

6.3. Maintenance Deliverables:

- Monthly health check reports (usage logs, performance, issue trends)
- Database backups: Weekly automated backups + on-demand export upon request
- Error resolution logs shared monthly
- Security patches (if needed) and performance optimizations
- Monthly report must include issue classification (bug, improvement, enhancement)

6.4. Support Team Responsibilities:

- Maintain staging/testing environment for bug validation
- Provide documentation for all system updates or patches
- Share changelog for each version pushed to production
- Communicate timeline estimates for any patch exceeding 2 days to deploy

6.5. Client Responsibilities:

- Report bugs with clear reproduction steps and screenshots/videos
- Ensure designated internal contact for support communication
- Follow protocol for logging issues through the assigned system
- Ensure staging environment access is maintained for vendor testing
- Coordinate internal UAT before reporting deployment-related issues

Section 7: Risk Management & Contingency Planning

Objective:

To identify, evaluate, and mitigate potential risks that may impact the stability, security, and success of the HIS system, and to establish preemptive procedures for critical events to ensure business continuity and patient safety.

7.1. Risk Register & Classification

RISK	DESCRIPTION	IMPACT	LIKELIHOOD	MITIGATION PLAN
SCOPE CREEP	Unplanned or undocumented change requests	High	Medium	Use formal change request process and appendices with stakeholder sign-off
UAT MISALIGNMENT	Partial flows accepted without	High	High	Enforce full scenario-

	testing real-life cases			based UAT with sign-off by clinic heads
DATA LOSS OR SYSTEM DOWNTIME	Loss of critical records or system outages	Critical	Low	Implement multi-layer backups, failover recovery protocols
REGRESSION BUGS	Code changes affecting previously stable modules	High	Medium	Enforce staging environment testing and version control
TRAINING GAPS	Staff unfamiliarity with system functionalities	Medium	Medium	Provide role-based onboarding and periodic refresher training
INTEGRATION FAILURE	ZATCA/Nafis/Wassel sync failures leading to data inconsistency	High	Medium	Establish monitoring and alert mechanisms; document retry/resync protocols
COMPLIANCE GAPS	Failure to meet MoH, ZATCA, or legal documentation standards	High	Low	Legal and medical reviews before

				feature finalization
ACCESS MISMANAGEMENT	Inappropriate access to confidential patient data	Critical	Low	Implement RBAC (Role-Based Access Control) and audit logs

7.2. Contingency Protocols

- **System Downtime Protocol:**
  - Initiate manual session and invoice tracking logs (print-ready backup forms).
  - IT to deploy backup instance if downtime > 60 minutes.
- **Critical Bug Response:**
  - Reported via WhatsApp and system ticket immediately.
  - Resolution must begin within 4 business hours, patch within 24 hours.
- **Data Backup & Recovery:**
  - Backups to be stored encrypted on Synology with 2-week retention.
  - Restoration simulation performed quarterly.
- **Delayed Feature Release:**
  - Postpone rollout to staging without affecting live system.
  - Notification to Agdar at least 3 working days before original deployment date.
- **Staff Training Refresh:**
  - Triggered upon new module rollout or recurring misuse issues.
  - Delivered online and recorded for future use.

7.3. Monitoring & Escalation

- All risks logged in a shared Risk Register (Google Sheet or internal system).
- Reviewed monthly in governance meetings.
- Escalation Matrix to follow Section 5: Tier 1 to Tier 3 structure.

Section 8: Recommendations & Additional Considerations

8.1. Data Migration Requirements (if applicable)

- Identify any legacy data to be migrated from Excel/manual records
- Ensure data types are categorized (patients, consents, appointment history, payments)
- Clarify vendor responsibility for cleaning, mapping, and importing data
- Testing and approval of migrated data should follow agreed criteria

8.2. Performance KPIs Post-Go-Live

- Appointment success rate (scheduled vs. completed)
- Session documentation completion rate within 48 hours
- Report co-signing turnaround by Seniors
- Billing accuracy and invoice matching rate
- Therapist engagement metrics (e.g., session entry rate)

8.3. Mobile/Tablet Compatibility

- UI responsiveness on tablet for therapist session entry
- Reception use on mobile for appointment confirmation if needed
- Confirm cross-browser functionality and mobile responsiveness

8.4. Contingency Access & Backup Mode

- PDF export of daily therapist and appointment logs
- Secure offline schedule access (if network fails)
- Weekly data export for operational continuity

8.5. Appendix & Document Versioning

- Appendices can be added for:
  - Forms templates per clinic
  - Consent formats
  - Patient communication message templates
  - Staff onboarding SOP for HIS use
- Ensure version history tracking of this document

8.6. Consent Form Signature via Electronic Devices

- All patient consents (General and Package) must support digital signature via touch-enabled devices (e.g., tablets).
- Signature must be directly recorded on screen with timestamp and linked user session ID.
- Final signed document is auto-converted into secured PDF and stored in consent repository.

- Consent form display must allow multilingual text input (Arabic/English) and accommodate left/right signature placement as needed.