UNILAG TELEHEALTH SYSTEM REQUIREMENTS GATHERING DOCUMENT

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Project: Telehealth System for University of Lagos and its College of Medicine

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1. INTRODUCTION

This Requirements Gathering Document provides a structured record of all methods, findings, stakeholder inputs, and outputs generated during the requirements elicitation phase of the Telehealth System Project. It outlines how requirements were gathered, from whom, using which techniques, and the consolidated business, functional, and non-functional requirements derived from the process.

2. OBJECTIVES OF REQUIREMENTS GATHERING

1. To understand the existing (AS-IS) healthcare service structure at UNILAG & CMUL.
2. To capture stakeholder expectations, pain points, and constraints.
3. To define the required capabilities for the new Telehealth System.
4. To ensure that all technical, operational, and regulatory requirements are fully documented.
5. To ensure alignment between student needs, administrative capacities, and healthcare workflows.

3. REQUIREMENTS GATHERING TECHNIQUES USED

Technique	Purpose	Key Outputs
Document Analysis	Review clinic processes, forms, policies.	Identified workflow gaps & compliance needs.
Surveys / Questionnaires (n=150)	Capture student awareness, usage, needs.	Data-driven insights → Low awareness; high willingness.
Interviews (1-on-1)	Deep-dive with medical directors, nurses, ICT.	Identified operational challenges and technical constraints.
Focus Group Sessions	Gather perspectives from students & staff in groups.	Identified common frustrations & expectations.
Observation / Job Shadowing	Observe how clinicians handle records, queues.	Provided AS-IS workflow mapping.

Technique	Purpose	Key Outputs
Process Mapping	Map AS-IS & TO-BE healthcare journeys.	Generated BPMN diagrams & process pain points.
Requirements Workshops	Collaborative session with decision-makers.	Finalised business & functional requirements.
Benchmarking	Compare with global telehealth models.	Identified standard features and best practices.

4. STAKEHOLDERS CONSULTED

Stakeholder Group	Role	Interests / Inputs
Medical Centre Staff	Doctors, nurses, admin	Better patient flow, EMR access
ICT Department	System integration	Authentication, hosting, security
Students	End-users	Awareness, accessibility, remote consultation
CMUL Specialists	Referral recipients	Seamless referral & patient history
University Management	Decision-makers	Compliance, cost efficiency, digital innovation
Telemedicine Vendors	Technical experts	Feasibility of advanced tools

5. SUMMARY OF INFORMATION GATHERED

5.1 Current Pain Points Identified

- Long queues at the clinic
- Manual paper-based records
- No follow-up or automated reminders
- Low awareness of telehealth services
- No digital scheduling or triage
- Limited access to specialists
- Poor patient experience
- No reporting/analytics capability
- Overworked staff due to manual operations

5.2 Key User Needs Identified

- Easy, visible access to telehealth
- Ability to book and track appointments
- Remote video/audio consultations
- Faster triage and emergency redirection

- Access to digital prescriptions and records
- Improved communication and notifications
- A modern and reliable system

5.3 Operational Needs Identified

- Central medical database
- Role-based access control
- Admin portal for managing availability & content
- Digitised referral process
- Compliance with NDPR and data privacy laws

5.4 Technical Needs Identified

- Secure Single Sign-On (SSO)
- Scalable telehealth platform
- Integration with student portal
- Stable hosting infrastructure

6. ELICITED BUSINESS REQUIREMENTS (BRs)

BR ID	Business Requirement	Description
BR1	Improve Accessibility	Students must easily access telehealth via portal/app.
BR2	Reduce Clinic Congestion	Digital triage and booking must reduce physical queues.
BR3	Improve Quality of Care	Digital records must support continuity of care.
BR4	Enhance Patient Experience	Faster, more responsive consultations.
BR5	Reduce Operational Inefficiencies	Automate manual processes for staff.
BR6	Enable Data-driven Decision Making	Dashboards and analytics needed.
BR7	Ensure Compliance & Security	System must meet regulatory standards.

7. FUNCTIONAL REQUIREMENTS (FRs)

Categories:

1. User Authentication & Identity Management
2. Appointment Booking System
3. Digital Triage System
4. Teleconsultation (Video/Audio/Chat)

5. Electronic Medical Records (EMR-lite)

6. Notifications & Alerts

7. Reporting & Analytics

8. Digital Referrals

9. Help Desk / Support

10. Knowledge Base & FAQ

11. Admin System Management

(All functional requirements captured in detail in a separate document)

8. NON-FUNCTIONAL REQUIREMENTS (NFRs)

Category	NFR Description
Security	NDPR compliance, HTTPS, encryption
Performance	Platform must support 10,000+ students
Usability	Intuitive UI for both staff and students
Availability	99% uptime, especially during exam periods
Scalability	Expandable for postgraduate & staff use
Reliability	Stable video call system
Supportability	Easy troubleshooting & maintenance

9. GAPS IDENTIFIED DURING GATHERING

Gap	Importance
No digital record system	Critical
Weak infrastructure	High
Low student awareness	High
No triage process	Critical
No digital referral	Medium
Lack of staff training	Medium

10. ASSUMPTIONS

- Students have access to smartphones and internet.
- UNILAG ICT will support SSO and hosting.
- Medical staff are willing to adopt digital workflows.

- Funding will be available for system procurement.
- Data privacy approval will be mandatory.

11. CONSTRAINTS
- Limited ICT bandwidth in some parts of campus.
- Budget constraints for large-scale deployment.
- Staff resistance to technology changes.
- NDPR and medical ethics restrictions.
- Limited number of medical personnel available.

12. RISKS IDENTIFIED
Includes risks such as:
- Low adoption
- System downtime
- Data breaches
- Insufficient training
- Poor funding

(View detailed risk register)

13. ELICITATION OUTPUT SUMMARY
Deliverables Produced
- AS-IS Process Map
- TO-BE Process Map
- BPMN Flowcharts
- Survey Analysis
- Gap Analysis
- Functional Requirements Document
- Non-functional Requirements Document
- Stakeholder Register
- Use Cases
- Traceability Matrix

14. SIGN-OFF CRITERIA
Requirements will be considered complete when:
1. All stakeholders approve documented requirements.
2. All functional and non-functional requirements are mapped to business needs.

3. Traceability matrix shows full linkage from BR → FR → NFR.

4. Requirements are validated through walkthrough sessions.

15. NEXT STEPS

- Final validation session with medical centre & ICT.
- Develop System Requirements Specification (SRS).
- Prepare for vendor engagement or internal development.
- Implementation roadmap creation.