

TELEHEALTH SYSTEM REQUIREMENTS TRACEABILITY MATRIX (RTM)

Legend

- **BN** = Business Need / Objective
- **FR** = Functional Requirement
- **NFR** = Non-Functional Requirement
- **UC** = Use Case
- **KPI** = Key Performance Indicator
- **RISK** = Linked Risk ID
- **TC** = Test Case (to be added during QA phase)

TRACEABILITY TABLE

Req ID	Requirement Description	Business Need (BN)	Use Case (UC)	NFR Link	KPI Link	Risk Link	Test Case (TC)
FR1	User authentication via UNILAG student SSO credentials	BN1: Secure access & identity verification	UC1.01, UC1.02	NFR1 (Security), NFR2 (Access Control)	KPI: Data Security, Login Success Rate	R4 (Cybersecurity), R13 (Compliance)	TC-FR1
FR2	Appointment booking for remote/physical consultations	BN2: Improve access & scheduling efficiency	UC2.01, UC2.02	NFR3 (Performance), NFR4 (Usability)	KPI: Wait Time, Booking Completion, Adoption Rate	R1, R7, R11	TC-FR2
FR3	Digital triage form + AI symptom checker	BN3: Reduce congestion, faster pre-diagnosis	UC3.01	NFR5 (Accuracy), NFR3 (Performance)	KPI: Emergency Accuracy, Triage Completion	R5, R17	TC-FR3

Req ID	Requirement Description	Business Need (BN)	Use Case (UC)	NFR Link	KPI Link	Risk Link	Test Case (TC)
FR4	Remote consultation via video, audio & chat	BN4: Provide remote care options	UC4.01, UC4.02	NFR1 (Security), NFR6 (Scalability), NFR4 (Usability)	KPI: Consultation Success Rate, Abandonment Rate	R1, R2, R15	TC-FR4
FR5	Electronic Medical Records (EMR-lite)	BN5: Improve record accuracy & accessibility	UC5.01	NFR1 (Security), NFR5 (Accuracy)	KPI: Data Accuracy, Follow-up Compliance	R9, R17, R13	TC-FR5
FR6	Notification & alerts (SMS/email/push)	BN6: Ensure timely communication	UC6.01	NFR3 (Performance), NFR4 (Usability)	KPI: Appointment Compliance, Medication Adherence	R16	TC-FR6
FR7	Reporting & Analytics Dashboard	BN7: Support monitoring & decision-making	UC7.01	NFR5 (Accuracy), NFR6 (Scalability)	KPI: Analytics Usage, Dashboard Accuracy	R18	TC-FR7
FR8	Referral System to CMUL specialists	BN8: Improve continuity of care	UC8.01	NFR1 (Security)	KPI: Referral Completion Rate	R14	TC-FR8
FR9	Help desk & support system	BN9: Improve issue resolution	UC9.01, UC9.02	NFR4 (Usability), NFR3 (Performance)	KPI: Support Resolution Time	R7	TC-FR9
FR10.1	In-app support ticketing	BN9	UC10.01	NFR4	KPI: Support Ticket Resolution	R7, R11	TC-FR10.1
FR10.2	Knowledge base (FAQ)	BN9	UC10.02	NFR4	KPI: Self-Service Rate	R7, R15	TC-FR10.2
FR10.3	Live support chat	BN9	UC10.03	NFR3, NFR4	KPI: Live Chat Resolution	R7	TC-FR10.3

Req ID	Requirement Description	Business Need (BN)	Use Case (UC)	NFR Link	KPI Link	Risk Link	Test Case (TC)
FR11.1	User & role management	BN10: System governance	UC11.01	NFR2 (Access Control), NFR1	KPI: Access Control Accuracy	R4, R20	TC-FR11.1
FR11.2	Admin scheduling (clinic hours, doctor availability)	BN11: Operational flexibility	UC11.02	NFR4, NFR3	KPI: Schedule Accuracy, Booking Success	R11	TC-FR11.2
FR11.3	Upload/update health education content	BN12: Improve health literacy	UC11.03	NFR4	KPI: Content Engagement	R19	TC-FR11.3

NON-FUNCTIONAL REQUIREMENTS TRACEABILITY

NFR ID	Requirement Description	Supports FR	KPI Link	Risk Link
NFR1	Security: encryption, data protection, secure login	FR1, FR4, FR5, FR8, FR11	Data Security, Compliance Score	R4, R13
NFR2	Role-Based Access Control (RBAC)	FR1, FR11	Access Control Accuracy	R4, R20
NFR3	Performance & Speed	FR2, FR4, FR6, FR10	Consultation Success Rate, System Uptime	R1
NFR4	Usability & User Experience	FR2, FR4, FR6, FR9, FR10, FR11.3	NPS, Satisfaction Score	R15
NFR5	Data Accuracy	FR3, FR5, FR7	Data Accuracy Rate	R9, R17
NFR6	Scalability	FR4, FR7	System Uptime, Load Capacity	R1

BUSINESS OBJECTIVE TRACEABILITY

Business Need ID	Business Need / Objective	Mapped Requirements (FR + NFR)	KPIs
BN1	Secure access for students and staff	FR1, NFR1, NFR2	Login Success Rate, Zero Breaches
BN2	Reduce wait times and improve access	FR2, FR4, FR3, NFR3	Wait Time Reduction
BN3	Proper triage and emergency handling	FR3, NFR5	Triage Accuracy
BN4	Enable remote care delivery	FR4, FR8, FR6	Consultation Completion Rate
BN5	Improve accuracy of medical records	FR5, NFR1, NFR5	Data Accuracy
BN6	Improve communication and reminders	FR6	Follow-up Compliance
BN7	Enable data-driven decision-making	FR7	Analytics Dashboard Usage
BN8	Ensure seamless referrals	FR8	Referral Completion Rate
BN9	Provide support and reduce downtime	FR9, FR10	Support Resolution Time
BN10	Manage users and system access	FR11.1, NFR2	Access Control Accuracy
BN11	Flexible clinic operations	FR11.2	Booking Completion Rate
BN12	Improve student health literacy	FR11.3	Content Engagement

RISK TRACEABILITY (linking risks to requirements)

Risk ID	Linked Requirement(s)	Why Related
R1	FR4, FR2, NFR3, NFR6	System performance affects consultations
R2	FR4	Internet availability affects video/audio calls
R3	FR1, FR5, NFR2	Integration failure affects identity & records
R4	FR1, FR5, FR11.1, NFR1	Security/compliance risks
R5	FR3	Inaccurate triage outcomes
R7	FR9, FR10	Support staffing gaps
R9	FR5	Incorrect EMR entries
R11	FR2, FR10, FR11.2	Approval delays affect rollout
R12	All FRs relying on vendor platforms	Vendor performance
R13	FR1, FR5	GDPR non-compliance
R15	FR4, FR9, FR10	Poor usability issues
R17	FR3, FR5	Data quality issues