Speech to Text Project

The National Kidney Foundation

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Introduction/Background

The Speech to Text Project by the NKF team in partnership with vendor Kilsa, is a quality improvement initiative aimed at enhancing productivity and digitalization within the social work setting. The project is funded by AIC Productivity and Digitalisation Grant (PDG) for the start-up cost of $86,700.

The Speech to Text Project is a quality initiative by NKF that leverages AI to automate and streamline social work documentation, reducing manual note taking by at 30%. The solution transcribes and categories patient interviews into key domains for comprehensive analysis, support multiple languages including dialects and Singlish, and is accessible via mobile app.

ROI calculation and Cost Benefits Index:

Goal/Objectives

- To enhance social work productivity and clinical effectiveness by leveraging AI-powered transcription and analysis to streamline case documentation, reduce administrative burden, and enable more patient-centred engagement, ultimately improving service quality, supervision and overall patient outcomes.
- The target indicator set by the project team is to achieve 30% man-hours saving through Time Motion Study.

Problem Analysis

> ### Design Thinking Approach:
> Empathy interviews and co-creation sessions with social workers were conducted to understand their lived challenges. Ideation and rapid prototyping with Kilsa (the Tech vendor) ensured that the solution was not only technically robust but also user-friendly. Features such as multilingual transcription (including Singlish), speaker diarisation and genogram generation were a direct result of this user-centric design process.

> ### Problem Statement:
> NKF social workers face mounting challenges due to the rising number of dialysis patients, resulting in increased caseloads and limited time for self care. The emotionally intense nature of their sessions demands full attention and empathetic support, yet they are simultaneously expected to take detailed and accurate notes. This dual responsibility exacerbates stress and diverts focus from their core duties of patient engagement and emotional support. Relying on memory or manual note taking methods not only increases the risk of documentation errors but also adds to the administrative workload, leading to fatigue and reduced effectiveness. These inefficiencies can compromise the quality of patient care and contribute to burnout among social workers.

Implementation Plan (Time Period: August 2024 – April 2025)

Project Deliverables Milestone achieved by the Project Team:

In Aug24	Securing of project grant under AIC PDG
In Sep24	Pre-implementation Time Motion Study, users briefing and hands-on practice.
In Oct24	Setup all users accounts, whitelisting and deploy "Go-Live" in production site with the deployment of the following by Kilsa:

- Customisation/Development of Text Analysis Engine
- Situational Analysis
- Summative AI for Case Session notes
- Curated prompts for NKF users' context

In Mar25   Post-Implementation Time Motion Study
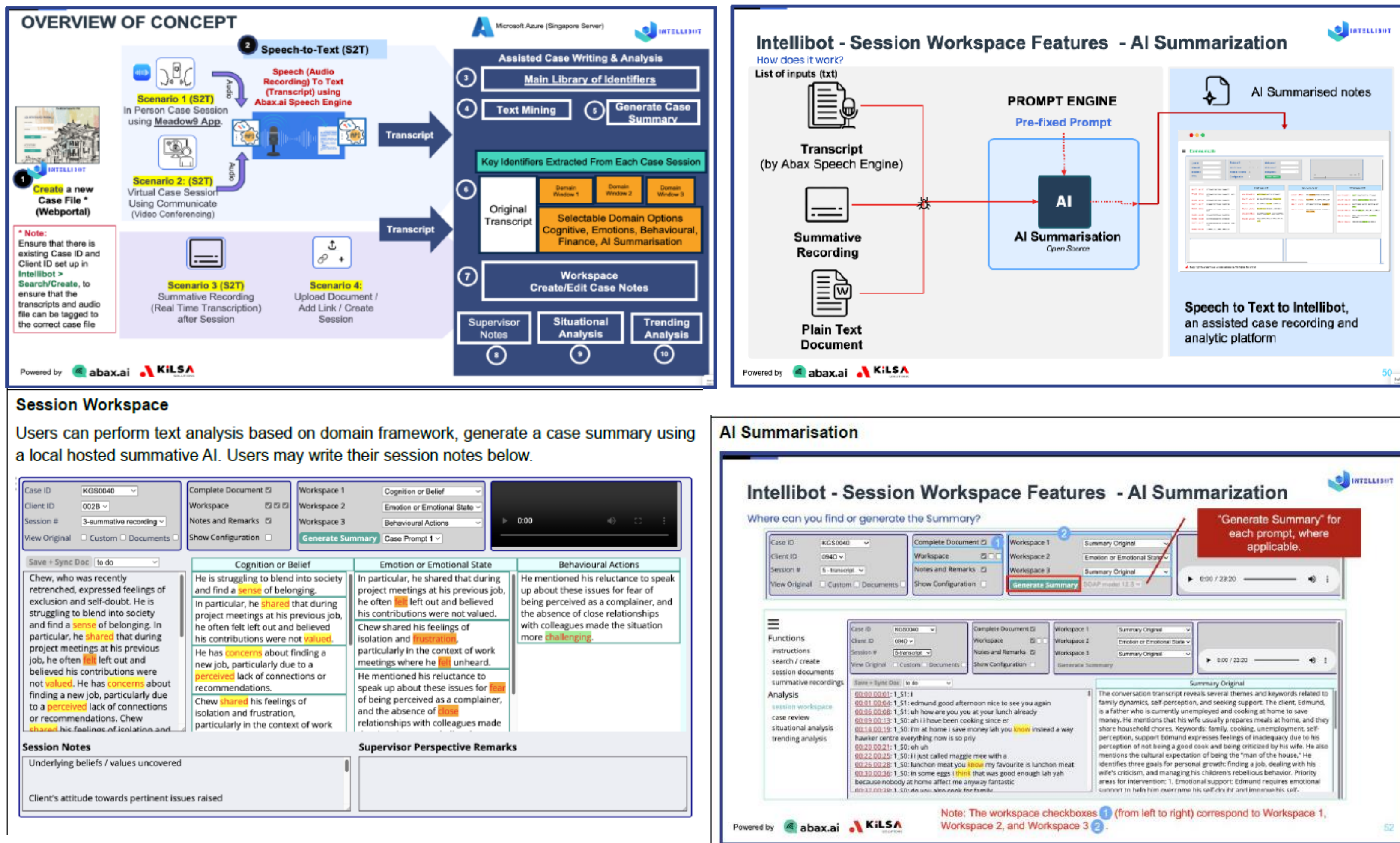
Benefits/Results

1. Streamlines Documentation: Reduces the time spent by social workers on case note-taking and uploading into the CRM system by at least 30%.
2. AI-Driven Insights: Transcribes and categories patient interview into four key domains- cognitive, emotional, behavioural and financial for comprehensive situational analysis.
3. Multilingual Capabilities: Support transcription in English, Mandarin, Malay, dialects and Singlish to serve a logistically diverse patient population.
4. Mobile Integration: Allows social workers to document cases on-the-go via a mobile application.
5. Risk Identification and Genogram Features: Helps flag potential issues early and visualize family dynamic and support systems.
6. Improves Supervision: Enables supervisors and Principal Social Workers to remotely review multiple patient sessions per day without the need for travel, boosting both efficiency and oversight.
7. Impact: Achieved approximately $170,000 in cost savings and enhanced patient care, clinical outcomes and job satisfaction.

Sustainability & Reflections

The project team will integrates it into social work routine workflows, support continuous feedback and system refinement, and aligns it with structured clinical supervision and onboarding training. Performance is regularly monitored through KPIs, with leadership backing and budget allocation ensuring long term support. The solution also enables cross learning through group supervision and is scalable to meet evolving needs –collectively fostering sustained improvements in documentation accuracy, productivity and patient care.