# EXECUTIVE SUMMARY

As the 4th largest populated country in the world, Indonesia ranks 80th in the health index based on the Legatum Prosperity Index report 2021. In April 2021, 82.3% of Indonesia's population registered as health care and social security agency (BPJS Kesehatan) members under JKN-KIS membership. Based on the Ombudsman 2020 report, the top three concerns raised by members are poor administrative service (34.62%), poor medical service and support (28.85%), and poor non-medical support (25.96%).

Based on the team's survey in 2021 to JKN-KIS members for inpatient cases, 59% experienced long waiting times (days) for medical treatment and inpatient confirmation. 43.6% require multiple visits to healthcare facilities in order to follow up on medical treatment schedules and inpatient confirmation. 33% experienced incorrect referrals where the destination healthcare facility did not have the needed capability and/or the inpatient room was not available. 79.5% of the surveyed participants desire improvement in these areas.

Indonesia has 2 categories of healthcare facility. First, the first-level primary health care facilities (FKTP) which act as the gatekeepers for promotive and preventive activities, also the curative and rehabilitative services. The main issues at FKTP are uneven capabilities and resources in handling health cases, high administrative work which hinder the service quality, and communication network at remote areas (Ministry of National Development Planning/ Bappenas 2019). Second, the advance health care (inpatient) facilities (FKTL/FKRTL) which mainly handling more complex health cases. The main issues at FKTL/FKRTL are lack of information on other healthcare facilities capacities which cause incorrect referral, and bed occupancy rate management (Ministry of National Development Planning/ Bappenas 2019).

The Intelligent Referral Reservation System (INRESS) is an integrated online application that offers a real-time solution for inpatient reservations, outpatient reservations, and medical treatment reservations for healthcare facilities. All the registered FKTP and FKTL inpatient rooms, doctor schedules, and healthcare capabilities are integrated on a real-time basis in the application for healthcare referral reservation purposes. INRESS also offers a patient review feature for every

patient who received treatment through the application. In the fourth year, INRESS targets expanding its offering for dentist reservations and pharmacy.

INRESS is primarily targeted for FKTP and FKTL in the BPJS network where the load of inpatient and outpatient transactions is high but not limited to non-BPJS healthcare providers. INRESS market penetration is developed in stages, starting from pilot tests at several West Java's FKTP and FKTL, and commercialization is initiated at DKI Jakarta for the first year, until finally expanded to Papua by the sixth year. The projected healthcare affiliate is 8400 total FKTP and FKTL nationally, which consists of 15 million inpatient transactions and 194 million outpatient transactions in the tenth year of INRESS operation.

The INRESS application is built on cloud technology, which allows flexibility in resource and cost management. With this approach, the projected *human capital* requirement is 100 personnel by the third year of operation. The initial investment for the infrastructure and integration stage was IDR 3.5 billion and totalled IDR 90.6 billion over the course of five-year business expansion.

INRESS establishes two revenue streams, which are the connection (subscription) fee and the service fee (applicable for every successful reservation transaction). According to the market penetration roadmap, revenue is expected to be IDR 3.2 billion in the first year and IDR 435 billion by the tenth year.

Business feasibility study uses ten-year financial projection. Based on the most-likely scenario, (i) INRESS has an expected NPV positive IDR 236.2 billion, (ii) the projected IRR is 47.04%. IRR performance is higher than WACC 15%, (iv) Payback Period is 5 years and 6 months. Based on investment risk evaluation using standard deviation and coefficient of variance method, INRESS provides a variance of 44.39% which classified as medium risk investment. Based on the loss risk evaluation using value at risk method, INRESS provides 1.21% risk which classified as low chance of loss risk. Financial projection and risk analysis show that INRESS business is feasible and able to sustain in the long run.