

PLAN OF OPERATIONS
INDIVIDUAL PROJECT OF THE FACILITY RG-O1676
LINE OF ACTIVITY FOR INNOVATION PROTOTYPES
“TC PROTOTYPES”

DELEGATION OF AUTHORITY TO COUNTRY OFFICES¹

TRINIDAD AND TOBAGO
TT-T1101

I. GENERAL INFORMATION

Title	medl delivers		
Executing Agency:	EIKM Holdings Ltd, trading as medl (medl)		
Focus Area:	Knowledge Economy and Inclusive Cities		
Project Beneficiaries:	Persons in urban areas requiring prescribed medication to manage health and wellness. In the context of COVID 19 pandemic the targeted beneficiaries in the initial stages of the pilot will include persons over 65 and those that suffer from conditions that compromise immunity, such as Non-Communicable Diseases and who are dependent on medication to maintain health.		
Financing:	IDB Lab Cooperation:	US\$ 150,000	27%
	Counterpart:	US\$ 410,169	73%
	TOTAL PROJECT BUDGET:	US\$ 560,169	100%
Execution and Disbursement Period:	9 months of execution 12 months of disbursement.		
Objective:	The project objective is to accelerate the Technology Uptake pilot of medl’s solution so as to increase health and wellness reduce costs and limit exposure of medication dependent persons particularly of vulnerable populations in the context of the COVID 19 pandemic		
Environmental and Social Impact Review	This operation was screened and classified as required by the IDB’s safeguard policy (OP-703) on April 13, 2010. Given the limited impacts and risks, the proposed category for the project is C.		
Project Team	Vashtie Dookiesingh DIS/CTT, Team Leader, Ian Ho a Shu SCL/SPH, Denesh Baboolal DIS/CTT, George Rogers FML/LAB, Alexandra Hambrook FML/LAB, and Josette Hernandez Soto DIS/CRR		
Unit responsible for disbursements	Country Office in Trinidad and Tobago		

¹ Delegation of authority for approval of TC Prototype operations up to US\$150,000 is established under MIF-GN-123

II. BACKGROUND AND JUSTIFICATION

A. Problem Description

- 2.1. The COVID 19 Pandemic has placed the importance of accessible health care management to the frontier of national priorities. Based on what we know, the elderly population and persons that have compromised immune systems, most prevalent being persons afflicted with Non-Communicable Diseases (NCDs), are the highest risk group. Many older persons and persons with NCDs are dependent on prescription medication to manage symptoms and health which is critical to maintaining wellness. However, research by the Mayo Clinic² has shown that, on average, one in two prescriptions are not filled due to the following factors: (i) Medication is confusing and difficult to manage; (ii) Time to fill a prescription and mobility issues of elderly and physically challenged patients; and (iii) Cost of medication: in Trinidad and Tobago markups on medication are as high as 45%
- 2.2. Failure to manage medication can further complicate and exacerbate health risks and patients' physicians are not able to effectively monitor the use of prescribed medication. These issues are exacerbated in the context of the COVID 19 pandemic, given the social distancing and other restrictive measures in place, such as reduced access to transport, reduced hours for pharmacies, restricted appointments for non-emergency consultations at medical facilities (public and private) and most importantly, increased exposure risk for elderly and persons that have compromised immunity due to NCDs and other medical conditions. In Trinidad and Tobago, a small island economy, the over-60 population represents 14% of the population, but more worrying is the high incidence of NCDs and the premature deaths from NCDs which rose by an average rate of 25% between 2007 and 2017. In 2017, according to the Ministry of Health in Trinidad and Tobago, NCDs requiring recurrent medication account for 61% of deaths while treatment accounted for 21% of health care expenditure. Of these deaths, 70% were adjudged to be premature (occurring before age 70), and 4 out of 10 were deemed preventable. Even in the public sector where patients afflicted with a range of chronic conditions are eligible for free medication dispensed by pharmacies in partnership with the Ministry of Health, 49.5-69.2% of prescriptions were partially filled and up to 21.4% were not filled at all³.
- 2.3. Failure to manage medication is one of the significant contributors to chronic disease complications, which in Trinidad and Tobago account for 1 in 2 deaths and accounts for US\$1.28B in annual costs in Trinidad and Tobago⁴. This phenomenon is mirrored in larger more developed economies, for example in the US causes approximately 125,000 deaths, 10 % of hospitalizations and costs up to US\$289 billion per year⁵. Clearly access to and monitoring of medication use in populations deemed as vulnerable due to age and persistent medical conditions such as NCDs, is a broad health care problem that has even more serious consequences in the current pandemic, as this demographic is considered high risk for COVID 19. The problem is difficult to monitor and manage in the current operational model where patients receive paper

² Medication Adherence: WHO Cares? By Marie T. Brown, MD and Jennifer K. Bussell, MD. Mayo Clinic, 2011

³ Ministry of Health, Trinidad and Tobago, 2017

⁴ RTI International, 2017

⁵ Viswanathan et al, 2012

prescriptions, fulfill or fail to fulfill at decentralized and mainly private pharmacies, and are not monitored in terms of compliance and/or usage.

- 2.4. Poor populations are disproportionately affected in their ability to comply with lifesaving prescribed medications due to the following factors: (i) limited mobility in terms of transport and flexibility in terms of time to visit pharmacies to fill prescriptions as they tend to be employed in jobs that provide limited time off; (ii) increased likelihood of being unable to afford cost of healthier food and having limited time and access for exercise to prevent NCDs; (iii) limited access to on demand professional advice and guidance on medicine usage, as well as easy to understand information on underlying conditions; (iv) the phenomenon of “cognitive toll”⁶ which can impair decision making on tradeoffs in expenditure causing poor persons to focus on expenditure that is immediate; (v) often facing a poverty premium as they are constrained to purchase medication from local pharmacies and have less flexibility to shop around and may pay higher prices; and (vi) costs of ill health in a household disproportionately affect incomes of poor populations who may not benefit from paid sick leave. These challenges can be magnified for women, particularly in female headed households combining low paid or intermittent work with childcare responsibilities, as well as differently abled persons afflicted with intellectual and/or physical disabilities.
- 2.5. In the context of COVID 19, vulnerable high risk groups face the challenges of exposure in filling essential prescriptions as this may entail accessing (now limited) public transport, waiting in line to enter pharmacies that may or may not have the required medication in stock, in addition to the broader exposure risk in leaving home. These groups include older persons, caregivers of persons who are bedridden, critically ill or disabled, and even ambulatory persons afflicted with medical conditions that compromise immunity, and who depend on medication to maintain health.

III. THE INNOVATION PROPOSAL

A. Description of the Solution being Tested

- 3.1. The TC Prototype’s objective is to **accelerate the Technology Uptake Pilot of medl’s solution**, so as to increase health and wellness by empowering decision making, increasing access, reducing costs and limiting exposure of medication dependent persons particularly of vulnerable populations in the context of the COVID 19 pandemic.
- 3.2. medl is a technology enabled service for patients and caregivers who find medication confusing, time-consuming, inaccessible, and expensive. In this regard, medl has developed an innovative model to disrupt current practice, reduce costs to patients, facilitate ease of access and provide monitoring and support to patients and to prescribing physicians. This solution addresses the key barriers to medication compliance that have been identified and will provide real time important data to inform physicians and health information systems, while significantly enhancing patient experience and compliance.

⁶ In a 2013 study published in *Science*, researchers from the University of Warwick, Harvard, Princeton, and the University of British Columbia find that for poor individuals, working through a difficult financial problem produces a cognitive strain that’s equivalent to a 13-point deficit in IQ or a full night’s sleep lost. Similar cognitive deficits were observed in people who were under real-life financial stress. There is one of multiple studies suggesting that poverty can harm cognition resulting in sub optimal decision making and tradeoffs from a longer-term perspective. This research suggests that the reality of poverty actually makes it harder to execute fundamental life skills. Being poor means, as the authors write, “coping with not just a shortfall of money, but also with a concurrent shortfall of cognitive resources”.

- 3.3. medl was not developed as a specific response to the COVID 19 pandemic and has been in development for approximately 12 months, however **the solution is highly relevant in the context of COVID 19**, as a measure to support health and reduce exposure of high-risk groups in particular.
- 3.4 The solution is anchored by a proprietary e-prescription platform owned by medl, which allows doctors to e-prescribe medications, and the patient or designated caregiver receives a text on their mobile inviting them to create an account which allows the user to select medication (branded or generics), date and address for delivery. The medl team dispenses selected prescribed medication from its in-house inventory, delivers to the patient or designated caregiver, who can pay via a debit or credit card on receipt, or online. medl manages fulfillment of repeat prescriptions, prompting the patient or caregiver, and facilitates access to useful and easy to understand instructions on usage and side effects of prescribed medication via online resources or via phone whereby users access live pharmacist support. The medl platform creates a useful data base for doctors to monitor patient fulfillment of and compliance with prescription medication, which can in turn, inform the health epidemiology profile of the country or local region.
- 3.5 **medl's B2B2C model disrupts the traditional, transactional pharmacy model and transforms the patient experience** by reducing prescription-filling waiting time, increasing access to support, information and medication at a reduced cost to patients, and has high potential to improve medication compliance and by extension, healthcare outcomes. Within the context of COVID 19, the medl solution reduces exposure and supports health preservation and monitoring of the most vulnerable groups in particular those who are highly dependent on prescription medication.
- 3.6 medl's Revenue Model: medl's software, system and service are free to doctors and patients. The patient only pays for medication. medl will have competitive mark-ups (at least 10% lower) compared to existing pharmacies. This is supported by lower overheads from a centralized delivery model without bricks and mortar model costs carried by traditional retail pharmacies.
- 3.7 Measuring Health Impact: medl will be able to measure the percentage of patients that fill prescriptions compared to current measures, and will provide prescribing doctors with useful information to track prescription fulfillment (as a good proxy for medicinal compliance) making follow up more efficient.

B. Description of the Beneficiaries

- 3.8 The beneficiaries and corresponding benefits of medl's solution can be summarized as follows:
- 3.9 **For patients and designated caregivers**, medl saves time, reduces exposure, facilitates easy access to medication and provides useful support by way of reminders as well as information and resources on their underlying ailment, medication usage, side effects and availability of generics, while offering a lower price of medication all at no additional cost to patients. For vulnerable populations in particular, medl supports greater inclusion, promotes health and wellbeing, reduces transaction and direct costs of medication and empowers patients. In addition, medl is pursuing a partnership with a health insurance broker to introduce automatic filing and payment of insurance claims that will further reduce direct cost of medication for persons covered by insurance. **In the context of COVID 19 the high risk group, specifically older persons, persons afflicted**

with chronic diseases, disabilities or who are convalescents and their care givers will benefit from access to required medications at a lower cost with significantly less exposure to infection, as medication will be delivered at their convenience to their place of shelter. Moreover, these persons will be prompted to ensure that medication prescriptions are refilled on a timely basis and their prescribing doctors will be able to track fulfillment of prescribed drugs which is an important factor in helping to protect and preserve the health of this vulnerable segment of the population, particularly as many doctors have significantly reduced or halted in person consultations during the pandemic.

- 3.10 **For insurance providers and health plan administrators**, medl offers greater efficiency in the processing and settlement of claims and lower transaction costs, particularly for repeat prescriptions, while reducing the potential of fraud, and supporting greater levels of safety and wellness for insured persons via medication compliance, which reduces administrative and potentially lowers long term health coverage costs.
- 3.11 **For doctors**, the e-prescription platform allows for automatic reconciliation of medication records, ensures patients have access to drug interaction warnings and provides a medication database that allows doctors to track and monitor patient behaviour, as well as set reminders for follow up consultations at no additional cost. **In the context of COVID 19, doctors will be able to track medication compliance of high-risk patients** and be alerted to any problems with usage or non-fulfillment of medication that is critical to health preservation without having to conduct in patient visits. Given the fact that many private doctors have suspended in person consultation due to the risks posed as a result of the COVID 19 pandemic, the medl solution allows physicians to continue to prescribe required medications to high risk groups in particular, and to monitor fulfillment without in person visits.
- 3.12 Additionally, medl's solution **enhances patient safety and prevents abuse** as the system's end-to-end digital tracking helps prevent drug abuse and antibiotic resistance and allows for more accurate dispensing.
- 3.13 In terms of **privacy and security of patient information**, medl's data security and standards are HIPAA (US Health Insurance Portability and Accountability Act) compliant.
- 3.14 medl's solution is differentiated from current solutions as follows: (i) Unlike competitors who connect to pharmacy networks offering fee based delivery on a limited basis, medl will manage its own pharmacy in order to reduce costs of medication to patients; (ii) medl will connect directly to clinicians to provide them with medication adherence data and a free e-prescription platform unlike some online pharmacies; (iii) Different from other emerging market competitors, medl's e-prescription model is more secure and compliant with regulatory best practices; and (iv) Unlike niche players, medl will have a broad stock of medication to have the largest impact on the targeted patient pool.
- 3.15 medl will launch its model in Trinidad and Tobago within 8 weeks of approval of the TC Prototype operation, working with an initial 350 private doctors and developing an interface with an insurance brokerage firm which administers health insurance coverage for approximately 150,000 persons in the country, which is a significant pool as the country's two largest local health insurance providers report over 300,000 persons are covered for health insurance in Trinidad and Tobago. Given the serious health risks posed by the COVID 19 crisis, medl will seek to specifically target elderly patients and patients with NCDs,

disabilities and other factors that place them in the most elevated risk group to the virus, and for whom limited exposure, extreme social distancing and ongoing health care, particularly medication compliance, are critical. It is estimated that medl can process approximately 16,000 prescriptions per month during this pilot phase. The pilot will be focused geographically in the capital city Port of Spain and environs, (where approximately 20% of the national population reside or work), extending to other dense urban areas in the country over the 12-month pilot.

- 3.16 **IDB Lab financing will allow this innovative start up to embark on an accelerated technology uptake pilot at a time when health care of the most vulnerable groups, the elderly and persons with compromised immunity due to NCDs and other chronic diseases, are at high risk due to the COVID 19 pandemic.** As noted, although medl's model was not developed exclusively as a response to COVID 19, it has high relevance and delivers the benefits of ensuring higher risk groups in particular, remain healthy through medication compliance and limited exposure, while clinicians are able to monitor their patients remotely. **medl disrupts the current model of prescription medication fulfillment, but beyond COVID 19, medl will provide ongoing and high value-added service to patients, clinicians, insurers and employers by reducing time, supporting medication compliance, delivering accessible information and cost savings.**

IV. THE PROTOTYPE EXECUTION STAGES

A. Definition Stage:

- 4.1. medl has completed the Definition Stage. Over the past 12 months medl's founders with support of a prominent clinician and researcher in NCDs, have conducted extensive research on the global and local challenges of medicinal compliance, as well as solutions that have been developed. The integrated B2B2C platform was developed with extensive consultations with local doctors, and associations representing targeted patient groupings, such as retired populations, and persons afflicted with a range of NCDs such as cancer, diabetes and heart diseases, as well as associations representing a cross section of the differently abled population.
- 4.2. The technology solution is proprietary to medl and was developed in partnership with the software development firm, Dev Technosys Pvt. which has completed work for Pfizer, Nike and other multinationals, supported by an Engineering Scope Consultant (formerly at Google), a User Interface (UI) Design Consultant (also a Google contractor) and a Code Auditor Consultant. Dev. Technosys Pvt was contracted based on medl's conduct of a competitive procurement process that resulted in presentation of proposals by five firms. The UI Design Consultant and Code Auditor Consultant were also selected on a competitive basis and the Engineering Scope Consultant was contracted based on specific technical experience, availability in the local market, and recommendations/reference of a local industry association.
- 4.3. The user interfaces and process flow of the three core user facing panels (Doctor, Patient and Pharmacist) have been designed with simulations and direct input from the end users, including several pharmacists and more than 55 doctors. **medl is in the final stages of testing the solution and an accelerated and expanded launch of medl, supported by IDB Lab Financing can facilitate a rapid roll-**

out and adjustments that may be required in pilot implementation, within the urgent timeframe required by the Covid-19 pandemic.

- 4.4. medl's business model is compliant with all laws and regulations of Trinidad and Tobago. This is supported by a legal opinion from the established local law firm Johnson, Camacho & Singh contracted by medl. medl has also obtained all relevant regulatory approvals to operate, including its Pharmacy License and Controlled Drugs License.

B. Implementation Stage:

- 4.5. The goal of the implementation stage is to **accelerate the Technology Uptake Pilot of medl's solution** in the capital city of Port of Spain in Trinidad and Tobago. The key activities include onboarding of doctors, targeted outreach to associations representing high risk groups, and social media outreach, final cybersecurity resilience testing, integration with a large insurance broker and continued discussions with a telehealth provider on potential partnership arrangements.
- 4.6. medl will initially launch its operations serving private doctors and their patients in the capital city of Port of Spain and its environs, primarily focusing on the North Western communities of the country. This area comprises a wide cross section of communities including both affluent and middle-income neighborhoods, as well as low income communities, and communities with a high concentration of elderly residents/retirees. The capital city is the commercial hub of the country with a high concentration of businesses and public agencies as well as residential areas. Approximately 20% of the population live/work in the capital city⁷.
- 4.7. The technology platform, as well as medl's integrated business operations are ready to launch in 8 weeks from approval. The technology platform has been in development and testing for 8 months. Additionally, the medl team has acquired and obtained all regulatory clearances and licenses, onboarded key staff, established a centralized location and engaged key pharmaceutical distributors, clinicians, and stakeholder organizations representing target patient groups, particularly the elderly, persons with Non-Communicable Diseases and persons with disabilities.
- 4.8. In the launch mobilization, medl's team will focus on formal on boarding of doctors to initiate activity on the e-prescription platform, with a focus on prescribing essential medications for persons in their respective clinics that are at higher risk in the context of COVID 19, and whose wellness is significantly dependent on compliance with prescribed medication regimes. medl's Outreach Manager, a former pharmaceutical drug representative with existing professional relationships with a large number of doctors in the targeted launch area of Port of Spain, will lead these efforts, supported by the executive team that will participate in online forums for doctors organized by arrange of partner stakeholder organizations⁸, and associations of persons with NCDs other chronic illnesses, the older population and persons with disabilities. A launch in May during conditions where many medical practices have significantly scaled back or are closed, and doctors are

⁷ Central Statistical Office

⁸ For example, in April 2020, medl presented its solution to a virtual conference on telehealth organized by the Trinidad and Tobago Medical Association

seeking ways to digitize services to support social distancing and reduce exposure is opportune.

- 4.9. In parallel, medl's Head of Outreach will finalize a campaign and launch outreach to target potential patient beneficiaries and stakeholder groups through a combination of paid and unpaid content and interviews via traditional and social media channels. The focus of outreach will be on the value proposition of the solution both in the context of COVID 19, and for broader wellness outcomes, as well as the convenience, security and support provided at no cost to patients, other than the direct cost of the medication purchased.
- 4.10. Additionally, in the launch mobilization period, medl will finalize logistics plans to manage deliveries and acquire an initial inventory of key prescription medications.
- 4.11. In the Technology Uptake pilot, the medl team is expanding ICT support for systems management and cyber security via two new contracts. As business operations commence medl will actively monitor and report on key metrics including doctors onboarded, doctors prescribing on the platform, demographics of users, prescription fulfillment rates, comparator costs of medication in traditional pharmacies within the launch area, and the number of prescriptions filled for medication relating to key NCDs, specifically respiratory disease, cardiac disease, diabetes, cancers, lupus and other chronic illnesses which can be measured by flagging sale of medications prescribed for these conditions. medl will also monitor use of online and phone support services offered to patients and will conduct surveys and interviews with groups of patients and doctors to assess satisfaction, identify and resolve technical and operational issues.
- 4.12. Once operations have commenced, medl will intensify its outreach to doctors and patient groups to accelerate build out of the user base, including positioning of medl as a specific solution to reducing exposure and supporting wellness of high risk segments of the population and their caregivers in the context of COVID 19, and attendant limitations on mobility and social contact. medl will also engage human resource executives of larger firms on the value proposition of medl to workers and enhanced efficiency and transparency of medication costs covered by group plans as part of their "pull" strategy.
- 4.13. medl at this stage will also advance a partnership dialogue with M&M Insurance, a local insurance brokerage firm that manages health insurance for 150,000 insured persons covered under various group policies, including a large proportion of public servants, teachers, police and trade union members. Integration of health insurance processing capabilities will be the primary focus of further software development led by medl and the software development firm, Dev Technosys Pvt.
- 4.14. In addition, in order to further enhance medl's value proposition, the executive team will advance preliminary discussions on partnership with a local telehealth provider.
- 4.15. medl's co-founders and Head of Outreach will take the lead role in monitoring onboarding, usage, client satisfaction, operating costs, logistics management and technology development during the implementation phase, to be able to keep on track with targets and to identify and address operational, outreach and financial challenges as they arise. Key metrics will be extracted from the medl platform, financial reporting systems and analytics of social media and online outreach, as well as responses to ongoing interviews and surveys of key users/stakeholder groups. Changes required to address challenges and improve outcomes will be assessed in real time and implemented quickly, which is feasible given the

relatively small size of the company, and the robust and scalable attributes of the technology platform.

- 4.16. In the implementation phase, medl is expected to onboard, 200 doctors serving approximately 7,700 patients accessing prescription medication with an estimated 25% of such prescriptions associated with treatment of NCDs. In terms of medicinal compliance, a 70% rate of prescription fulfillment by patients served is targeted. The full list and explanation of targeted results are included in Annex I.

C. Evaluation and Knowledge Dissemination Stage:

- 4.17. The TC prototype results as presented in the accompanying Results Framework (Annex I), will be monitored and reported on by medl.
- 4.18. The data required to evaluate performance of the TC Prototype can be extracted from medl's technology platform and financial management system, and will cover operational indicators, indicators of the medicinal compliance of patients using the system, cost savings to patients, number of patients served that access drugs for NCDs and other chronic conditions that indicate they are part of the at risk group, age demographics, patients accessing phone and online support etc. This data will be supplemented by results of surveys and interviews with patient focus groups and doctors as well as analytics to assess reach of marketing efforts using social media. medl's co-founders Kiran Mohammed and Edward Inglefield will assume responsibility for monitoring / evaluation and dissemination of results.
- 4.19. The results of the prototype will be disseminated to key stakeholder groups as the operation progresses at 3 month intervals, and will be structured to support scaling efforts via onboarding of doctors and patients, engagement of other key medical insurance providers, Human Resource managers and Health Plan administrators in large corporate and public sector organizations, the Ministry of Health, regional health authorities and the wider population. Covid 19 presents many challenges to countries across the globe but also presents an opportunity, particularly in countries that have lagged in digital development to adopt and scale solutions such as medl. In this regard medl's results will be shared with local and regional communities supporting technology driven innovation, as well as with IDB Lab, for dissemination of key lessons learned.

V. EXECUTION AGENCY AND ARRANGEMENTS FOR EXECUTION:

A. Executing Agency

- 5.1. The TC Prototype will be executed by medl. medl is a health tech start up and was established and legally incorporated as EIKM Limited in 2018 by Kiran Mohammed and Edward Inglefield two young entrepreneurs, in response to observations and research on high levels of non-fulfillment, partial fulfillment and difficulties associated with prescription medication, particularly for older and disabled segments of the population. Kiran is a former investment banker, economics researcher and writer, Edward has a mixed background in computer science, advertising and as a culinary entrepreneur. Both Kiran and Edward have been engaged in medl on a full-time basis for over 12 months. Kiran and Edward are the founders and shareholders and have received independent advisory support from a recognized clinician and medical researcher Professor Teelucksingh.
- 5.2. This Health Tech startup has to date sourced initial funding from family members of approximately US\$110,000 to develop and test its software platform, obtain legal advice, establish a central operations facility and onboard key staff, notably

in outreach, clinician onboarding and support as well as a resident pharmacist. To date counterpart resources of approximately US\$78,000 has been invested in software development, capital expenditure to establish pharmacy and operations, outreach and administrative costs.

- 5.3. **The business is compliant with local law governing pharmaceutical distribution and electronic transactions, which is supported by an independent legal opinion from a well-established local law firm. The model is also compliant with international data protection standards.**
- 5.4. **medl has onboarded via a competitive process, key personnel including a Head of Outreach, an Outreach lead for onboarding doctors and a Licensed Pharmacist.** medl interviewed multiple candidates for these roles and spent considerable time finding those that would be the right fit with the company's vision and scaling strategy. A brief profile of these key team members is provided as follows:
- 5.5. **Licensed Pharmacist:** Nisha Khan Roopnarine, a qualified pharmacist, has 14 years of experience in Trinidad and Tobago as well as in Canada, including managing one of the larger pharmacy chains in Trinidad and Tobago for a main conglomerate, the Massy Group, and an integrated doctors clinic delivering medication to insurance companies. She also worked in pharmaceutical distribution and has an MBA from the University of the West Indies.
- 5.6. **Outreach Head:** David McCartney has strong experience in events management and social media marketing in the Caribbean, having previously co-founded two events companies, and consulted for the largest events company in Trinidad and Tobago. His background is in psychology and project management.
- 5.7. **Outreach Manager:** Vanessa Farfan has strong experience in pharmaceuticals and brings a strong portfolio of doctor relationships from ten years' experience locally as an AstraZeneca and Merck pharmaceutical representative, amongst other sales roles.
- 5.8. In developing the technology solution and business model over the past 12 months, medl reviewed comparable solutions across the design phase, and will continue to review other models and operations, particularly in the Global South, to determine whether there are replicable features that can enhance its differentiated and fully integrated platform model.
- 5.9. medl has already engaged physicians and has secured commitment of an initial 45 and has also engaged pharmaceutical distributors. In addition, on the patient side, medl has partnered with key stakeholder organizations in Trinidad and Tobago including the Trinidad and Tobago Association for Retired Persons, and the Centre for People with Disabilities, and has initiated relationships with the Trinidad and Tobago Medical Association, the Family Medicine Association, the Ophthalmological Society, the Cancer Society and the Caribbean Cardiac Society.
- 5.10. medl estimates that it **can roll out commercial operations in an estimated timeframe of eight weeks from approval of IDB Lab financing.**

B. Implementation Mechanism

- 5.11. medl's co-founders Kiran Mohammed and Edward Inglefield will co-ordinate the operations of the TC Prototype, directing activities and assessing progress on a daily basis. Both co-founders have been working on the development and

mobilization of medl on a full-time basis for the past 12 months and will continue to dedicate their time on a full-time basis during the implementation and evaluation and knowledge dissemination phases of the operation. The co-founders will manage all purchasing, contractual management, logistics and administrative activities, as well as partnership development as part of their core roles. Leading doctor on boarding will be medl's outreach manager, while medl's head of outreach will finalize and deliver its social media and on line event campaigns to sensitize and engage end users, as well as key stakeholder groups, and pharmacy dispensing and support will be led by medl's pharmacist with assistance from a client service representative. Further software development will be undertaken by medl's technology provider Dev Technosys Pvt, with cyber security support and IT management provided by two new contractors to be hired for the implementation phase, for which Terms of Reference are appended in Annex V. As outlined in previous sections, medl will pursue integration of insurance processing in partnership with M&M Insurance brokers and will advance plans to integrate telehealth service capability for doctors, to support acceleration and scaling.

- 5.12. The prototype will finance two new service providers in the implementation phase. One of these service providers is a cybersecurity consultant who will stress test and advise on additional security features that can be incorporated, with a contract duration of up to 8 months at an estimated cost of US\$10,000. Additionally, an IT Manager will be contracted for system administration and management. The TC Prototype will finance this contract for 8 months at a cost of approximately US\$8,000. At the conclusion of this period, these costs will be borne by medl.
- 5.13. Additional costs of existing contracts that will be financed by the TC Prototype include: software development costs for 6 months for Dev Technosys Pvt under the current contract, at an estimated cost of US\$35,000, outreach costs estimated at US\$22,000 and direct contract costs of the pharmacist and outreach manager responsible for onboarding doctors for 8 and 5 months respectively, at corresponding costs of US\$20,000 and US\$10,000. An additional sum of US\$45,000 will be used for initial stocking costs over a 2-month period.
- 5.14. medl will finance on going inventory costs, administrative costs, costs of all contracts beyond the proposed period of financing by IDB Lab, management, financial and technical reporting costs, and is committing an additional US\$367,250 in counterpart cash over the 12 month period, in addition to US\$32,919 already invested in software development and other capex costs during the design phase.
- 5.15. **Specific Criteria for Digital Technology Prototypes only:** The medl solution has been assessed against the Principles for Digital Development endorsed by the IDB Group and is found to broadly comply with these principles as outlined in Annex VII.

VI. ALIGNMENT WITH IDB GROUP, SCALABILITY, AND RISKS

A. Alignment with IDB Group

- 6.1. In the context of the IDB Lab's call for Covid 19 responses in the area of Health Tech in particular, projects are required to demonstrate alignment with both the Country Strategy as well as Health Sector priorities in the country.
- 6.2. The medl solution is aligned with the IDB's current Country Strategy for Trinidad and Tobago (2016-2020), and specifically the pillar of fostering human development which identifies the management of Non-Communicable Diseases

(NCDs), as a key area of intervention. In this regard, the Country Strategy includes a specific objective to reduce NCD morbidity and mortality.

- 6.3. In terms of alignment with IDB Group and Government Priorities for the Health Sector, the Government of Trinidad and Tobago with support from an IDB Loan TT-L1039 Health Sector Support Program (HSSP), is focused on the management and control of NCDs as a key priority. In particular, the program includes a comprehensive behavioral change component, which encourages digital-led innovative solutions and targets specific vulnerable groups, including the poor and the elderly. Project results are expected to contribute to inter alia, a 10% mortality rate reduction in six common NCDs. By supporting medication compliance of patients afflicted with NCDs, medl provides a very useful and innovative private sector led complement to the public health prioritization and programming to prevent and control NCDs and associated premature morbidities and mortalities in Trinidad and Tobago. The project is further aligned with Government COVID 19 Health Sector Response in that the Government of Trinidad and Tobago, with support from the IDB, has identified US\$14.5 million from the HSSP (TT-L1039) to respond to urgent public health emergency needs within the context of COVID 19. To date, resources have been utilized to increase personnel and acquire additional ICT and medical equipment and supplies, as well as to undertake a public awareness campaign. **To date, this campaign and additional measures such as educational, recreational and non-essential business closures coupled with stringent public and private transportation restrictions, have focused heavily on the urgent need for social distancing as a critical measure to flatten the curve of COVID 19 infections which poses additional health access constraints to especially the poor and elderly population.** In addition, the medl solution is squarely aligned with the priority actions set out in the SPH Health and Nutrition Sector Framework Document (GN-2735-7) which are aimed at improving population health by supporting countries' efforts to strengthen their preparation and response capacity to address public health emergencies through fostering greater efficiency in the mobilization, pooling, and use of resources and strengthening key sector management capacities, health intelligence, and intersectoral coordination. The medl solution provides direct support for government's prioritization of social distancing and particular protection of vulnerable groups, by providing a model to reduce exposure and improve medication compliance as key mechanisms to maintaining health and wellness of high-risk groups.
- 6.4. The solution is also aligned with IDB Lab's thematic focus on solutions for inclusive cities and development of the knowledge economy, specifically the support of technology startups in Health Tech that feature innovation and inclusion. The operation will also directly contribute to the IDB Lab's specific targets for programming in Small and Island countries and deployment of an operation alongside an aligned IDB Group operation⁹.
- 6.5. The TC Prototype once scaled, is aligned with the Sustainable Development Goal # 3 Good Health and Wellbeing.
- 6.6. The project will be supported by the IDB Group's SPH division via the participation of Ian Ho A Shu, Trinidad and Tobago's SPH specialist in the project team. Ian has over 20 years' experience working on health sector and social inclusion solutions in Trinidad and Tobago and the wider Caribbean and is a certified change

⁹ In this case, the Health Sector Support Program TT-L1039

management practitioner. The sourcing and design of the TC Prototype was directly supported by Ian Ho A Shu.

B. Scalability / Replicability

- 6.7. The accelerated launch of this health tech startup, will provide a strong demonstration effect of the company's key value drivers, greater convenience, lower direct and transaction costs, professional support for medicinal compliance/behavioural change, data on patient fulfillment of prescribed drugs to support clinician monitoring, data security and privacy, at no cost to users. In the context of the Covid 19 pandemic where social distancing, limited exposure and medication compliance is critical to maintaining health of vulnerable groups and is likely to remain in place for such groups in the foreseeable future, until a proven vaccine is available, medl will demonstrate a technology driven integrated solution to improve compliance and support those most at risk. Demonstration of medl's benefits and commercial viability will support scaling to other dense urban areas locally and can create avenues for piloting a model to support public health agencies, improving transparency and reducing fraud in dispensing medication to outpatients of the public system. Additionally, demonstration of the medl model can support on boarding of additional health insurance providers and integration of telehealth services via a partnership with a local telehealth start up. Finally, medl can scale horizontally in the Caribbean region and beyond, through a range of modalities such as joint ventures, licensing and franchising.

C. Risks

- 6.8. The following risks have been identified: (i) Uptake of medl's service by doctors; to date 45 doctors have indicated readiness to utilize the system, however the conversion of articulated interest to action and the ability of medl to on board the targeted group of 200 clinicians poses a critical risk. At this point, the COVID 19 pandemic has resulted in many doctors working on a reduced schedule or attending only emergency consultations, medl will provide doctors with a solution to support and monitor wellness of persons using prescribed medication which presents an opportunity to mitigate this risk. Additionally, medl's outreach manager as a former pharmaceutical representative, brings to the organization professional relationships and trust of a large number of private doctors which will be leveraged to support onboarding. (ii) Technology challenges experienced by users: If users distrust or have difficulty in accessing the system and support services, utilization will not reach desired targets. Again, the challenges of COVID 19, particularly to vulnerable groups is expected to encourage usage and medl's user interface has been designed for simplicity and positive customer experience. Access to medl's phone support and customer service representative supported by its social media outreach campaign, will encourage users and help resolve issues in a prompt manner. Given the high level of smartphone penetration and Wi-Fi access on the island¹⁰, access should not pose an issue. (iii) Financial viability of the model: The ability of medl to finance inventory and operational costs can be undermined if the uptake of services by both doctors and patients is below levels targeted in medl's business plan and accompanying cash flow projections. IDB Lab financing of IT and software development costs, initial stocking costs and outreach costs in the first few months of operation will support the acceleration of business mobilization and provides a high level of additionality while mitigating the risk that medl, like many innovation driven startups, will not have financing to pursue an accelerated

¹⁰ In 2019 Mobile phone penetration in Trinidad and Tobago as a percentage of the population was 135% and % of these mobile phones with broadband service (3G/4G) was 58% according to the 2019 Digital Global Overview Report

launch strategy. The risks identified can be classified as high risks, as these risks can directly threaten the viability of the TC Prototype. In this regard, project milestones have been structured to provide timely alerts during several stages of implementation to prompt corrective action, or in a worst-case scenario cessation of financing from IDB Lab.

D. Special Conditions and Exceptions

- 6.9. IDB Lab financing will cover the cost of two new procurements and will contribute to costs of 4 existing contracts over 8 months of the implementation phase. The proposed injection of funding is designed to accelerate medl's launch and operations in the context of COVID 19, to support both a positive impact and value to users, particularly vulnerable groups that are dependent on prescription medication to preserve wellness. IDB Lab financing is providing high additionality at a time when the Covid 19 pandemic and its economic impact has severely constrained sources of start-up liquidity.

VII. SUMMARY BUDGET

- 7.1. The project has a total cost of US\$560,169 of which US\$150,000 (27%)] will be provided by IDB Lab, and US\$410,169 (73%) in counterpart financing from medl.
- 7.2. The instrument to be used is a non-reimbursable technical cooperation given the objective to accelerate the launch and Technology Uptake pilot of medl as a response to safeguarding wellness of high-risk groups in the context of the COVID 19 pandemic.
- 7.3. Retroactive Recognition of Counterpart Funds. Counterpart funds of US\$32,919 already invested by medl up to 12 months prior to project approval, in the design and development of its technology solution as well as securing regulatory clearances will be retroactively recognized.

Project Categories	IDB Lab	Counterpart	Total
1. Definition	0	32,919	32,919
2. Implementation	150,000	367,250	517,250
3. Evaluation & Knowledge Dissemination	0	10,000	10,000
Grand Total	150,000	410,169	560,169
% of Financing	27%	73%	100%

VIII. COMPLIANCE WITH MILESTONES, FIDUCIARY AND REPORTING ARRANGEMENTS

- 8.1 **Disbursement by Results.** The Executing Agency (EA) will adhere to the standard IDB Lab disbursement by results as established in the "Operational Guidelines for Management of Milestones and Financial Supervision for IDB Lab and PES Technical Cooperation Projects" (updated in 2019). Monitoring will be undertaken in accordance with the performance and risk management policies (fulfilment of milestones) established in these Operational Guidelines. Project disbursements will be contingent upon verification of the achievement of milestones. These milestones will be verified using their means of verification, which will be agreed upon between the EA and the IDB Lab. Achievement of

milestones does not exempt the EA from the responsibility of reaching the results framework indicators and the project objectives.

- 8.2 **Project Supervision.** The project will be funded under and associated with the Line of Activity RG-O1676 in Bank systems. It will be supervised by the IDB Lab Specialist based in the Trinidad and Tobago IDB Country Office and executed in coordination with the Project Team for RG-O1676.
- 8.3 **Procurement.** The Executing Agency shall have a procurement policy in place to ensure that project related procurement is done at competitive market prices. It shall also prepare a procurement plan (the "Procurement Plan") acceptable to the Inter-American Development Bank (IDB), that describes the contracts for goods and services required to carry out the project, including the estimated cost of each contract, and the proposed methods for acquisition of its goods and services, including consultants' services. The IDB may request annual reports on execution of the Procurement Plan by the Executing Agency. Implementation of the procurement policies, terms of reference, and contracts for the acquisition of goods and services, as well as the Procurement Plan and fulfillment thereof, may be subject to ex ante review or ex post supervision by the IDB, at its discretion.
- 8.4 **Financial Management:** Disbursements will be made in accordance with the Financial Management Guidelines for IDB-Financed Projects (OP-273-12) July 2, 2019 or future updates. The Executing Agency shall maintain *financial data and internal accounting and administrative control systems acceptable to the IDB* so as to provide the necessary documentation to permit verification by the IDB of the procurement and expenditures for the project and facilitate the timely preparation of financial statements, budgets, and reports. The IDB reserves the right to audit all financial statements, internal controls, procurement, or other aspects of the project.
- 8.5 **Financial Statements.** The Executing Agency shall prepare and make available for the IDB, its annual financial statements, which must be certified by an external auditor acceptable to the IDB and include a note on the use of the Contribution and Counterpart Resources for the Project. The financial statements must be submitted to the Bank within 90 calendar days of the close of each fiscal year. Together with its annual financial statements, the Executing Agency must submit to the Bank a certification of integrity, transparency and use of funds in the format to be outlined in the Technical Cooperation Agreement for this project.
- 8.6 **Project Status Reports (PSR):** The Executing Agency is responsible for presenting a PSR to the IDB Lab within 30 days following the end of each semester or more frequently, if required by IDB Lab. The PSR must include information on the implementation of the project, results obtained and contribution to reaching the project objective as presented in the Result Matrix (Annex I) and other planning instruments. Additionally, the PSR must include information on challenges encountered during the implementation period and possible paths to address these challenges. Within 90 days of finishing the execution period, the Executing Agency will present to IDB Lab a final PSR giving priority to reporting on key results achieved, a sustainability plan, scaling up strategy and lessons learned.
- 8.7 **Project Coordinator:** The Executing Agency will appoint a Project Coordinator either from its existing staff or at its own cost. Expenses relating to project coordination and/or administration costs are not eligible under the IDB Lab contribution, rather such expenses must be financed by the counterpart contribution. The Project Coordinator shall have overall responsibility for the

management of the project, including submission of PSRs, tracking milestones and results and coordination with IDB Lab.

APPROVAL

This Technical Cooperation Prototype is recommended and approved for funding under IDB Lab's Line of Activity for Innovation Prototypes MIF/GN-123 (project number RG-O1676, document number MIF/AT-1565, and resolution number MIF/DE-8/19).

Recommended by: Vashtie Dookiesingh DIS/IDB Lab