IKDAR-MMIL Pilot Project

Draft for Discussion (December 2, 2017)

EXECUTIVE SUMMARY

IKDAR (Imran Khan Development Applied Research), at www.ikdar.org, is partnering with NGE Solutions (www.ngesolutions.com) to launch about 4 Smart Hubs under the general umbrella of the UN ICT4SIDS Partnership (www.ict4sids.com). The focus of this Pilot Project is on IKDAR MMIL (Medical Medicine Imaging Laboratory), described in detail elsewhere (www.ikdarmmil.org). This document serves as the main information resource for the Pilot Project and gives an overview of the Pilot Project, the computer aided methodology used and the results produced in different phases of the Pilot Project.

1. PILOT PROJECT OVERIEW

This report contains information about a Free Pilot Project that concentrates on Smart Hubs for rapid implementation of MMILs in Pakistan. This 3-4 months Project is based on the following phases shown in Figure1.

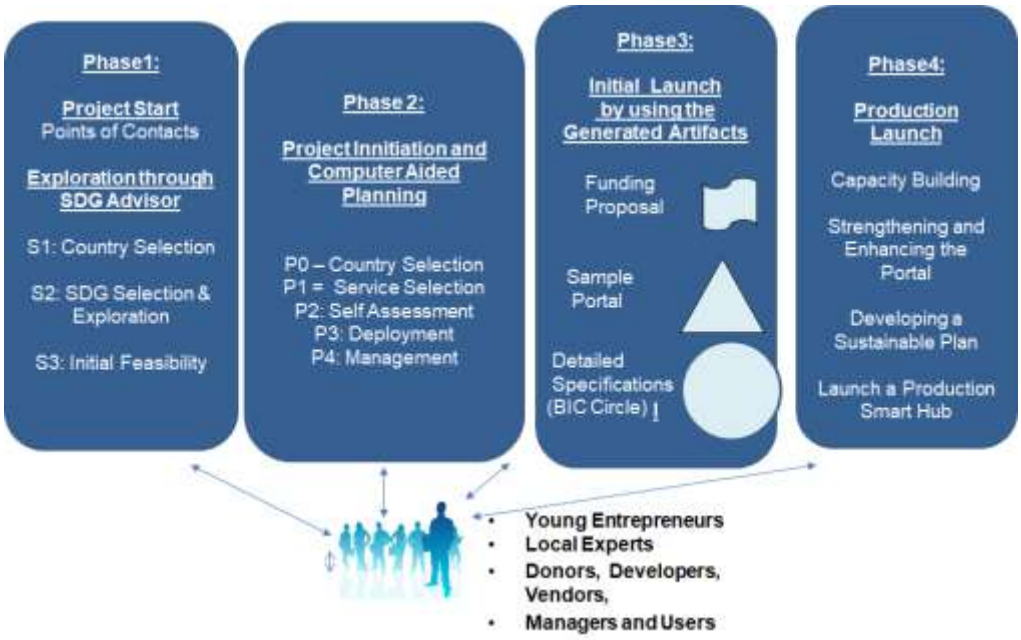

Figure1: Pilot Project Methodology

PHASE1: Computer Aided Feasibility Study (Conducted by using the SDG Advisor)

A Pilot Project is initiated by a User (e.g., SIDS, LDC or any other) by sending an email to Dr Umar at umar@amjadumar.com (Subject: Smart Hub Pilot Project), explaining the main objective of the Pilot Project.

- The pilot project is limited to a maximum of 3 hubs, duration is up to 6 months at no cost (no money exchanges hands).
- Points of Contact (POC) are appointed for the Project from the User as well as ICT4SIDS side after some email exchanges and possibly a phone/skype chat to clarify the goals and expectations.

- We request that you visit the ICT4SIDS Partnership site at www.ict4sids.com site and familiarize yourself with the basic capabilities, especially the SDG Advisor, of the site by viewing video clips and reviewing the basic documents posted on the learning corner.
- We will initiate the pilot project by sending the User POC a rough plan of action and Free Login ID-PW so that the User can start using the SDG Advisor.

Phase 1 of our methodology conducts a quick feasibility study by using the SDG Advisor and then helps a user to select and launch low cost but high impact pilot projects. The SDG Advisor guides the users to answer the following questions:

- What is the status of my country/region (good/bad) for SDGs of interest
- What type of services could improve the needed status
- What are the costs versus benefits of launching a service and which services are low cost but high benefit within the local context

Phase1 typically concludes in 1-2 weeks. The POCs (SIDS and ICT4SIDS) fill out the information shown in Table1 (about 12 questions) and sign this form to launch agreed upon Smart Hubs for the Pilot Project.

PHASE2 (Computer Aided Planning and Hub Generation)

- The Computer Aided Planning, initially conducted by the ICT4SIDS staff, can be completed within a day and produces an executive summary, a funding proposal and a working prototype of the selected Hub(s) as shown in Figure 1
- After the first Planning run, the User POC is given extensive training so that the User POC may use the SPACE Planning Toolkit to generate own hubs.

PHASE 3 and 4:

- **Familiarization:** The Customer POC reviews the outputs produced by SPACE. The POCs, and other invited individuals, conduct a detailed walkthrough of the outputs produced by SPACE and determine what can be used quickly
- **Initial Portal Launch**: The Demo Portal is modified to provide initial services that can be offered to the users ((e.g., training materials, mobile apps, basic advisory services, etc).
- **Extensions and Use:** The Demo Portal is converted into an operational portal through several refinements and extensions based on the user feedback.
- **Project Conclusion (3-6 months after Project Start):**
  - Identification of funding and partnership opportunities
  - Development of a detailed plan for future deployments and expansions

2. PHASE1 RESULTS - TEAM FORMATION AND GETTING STARTED

ICT4SIDS Team:

- Amjad Umar (ICT4SIDS POC): email= umar@amjadumar.com, Phone = 717-901-5141
- Customer Support (Arslan Dawood), email: advong@gmail.com
- Technical Support (Hannan Dawood): email: Hannan@ngesolution.com
- SDG Advisor Expert (Kamran Khalid): email: Kamran@ngesolutions.com

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User Team for Island or Country: ____IKDAR.org, Pakistan _____

- Main POC (Name, email, Phone): Ash Malik, email: ash.malik@ikdar.org
- Additional Members, if any (Name, email, Phone): Dabbir Tirmzy, email: dabbir.tirmzy@ikdar.org

The Main Idea:

Based on a Skype Discussion Session on December 1, 2017, the main idea is that the Pilot Project will help IKDAR launch the following Telemedicine Portals in Pakistan to support the MMIL hubs:

- MMIL1-Mobile health clinic
- MMIL2-Clinic for hypertension
- MMIL3-Small town MMIL (Community Center)
- MMIL4- MMIL Regional Center (with Business Intelligence and Administrative Capabilities)

Table1 captures the main information about these Portals (Please note that this information is based on best guesses) and Section 2 describes the Phase2 Plan to move forward.

Table1: KEY QUESTIONS TO GET STARTED

P0 (Country/Region Specification): What is the region/country involved – Pakistan, south _East Asia__

Service Specification	MMIL1	MMIL2	MMIL3	MMIL4
• What is the SDG Goal number (e.g., 1, 2, 3,,,17) and/or name of a sector your Hubs will focus on (e.g., health, education, public safety, public welfare, etc).	SDG 3 (Health)	SDG 3 (Health)	SDG 3 (Health)	SDG 3 (Health) Plus BI, Admin, etc
• What are the names of the 3-4 service you are interested in (e.g., telemedicine, educating school teachers, disaster management, etc) – Please select From Exhibit1	Mobile Health Clinic	Telemedicine Clinic (Hypertension Service only)	Telemedicine Community Center (2-3 Services)	MMIL Regional Center with BI, Admin, etc
• Is this Hub virtual (website), physical or both	Virtual (Portal only)	Both (Physical site + Portal)	Both (Physical site + Portal)	Both (Physical site + Portal)
• Is this Hub for Urban or Rural areas	Rural	Rural	Urban	Both (Rural + Urban)
• How many users will be served (typically 5000-10,000) .	5000	10,000	20,000	Around 50,000
• Will it operate at a Local, State (Regional) or National level.	Local	Local	Regional	National

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• Will the service be mainly information dissemination (e.g., guidance, advice) or transactional (e.g., online purchasing)	Information dissemination	Information & Transactional (e.g., provide medication)	Information & Transactional, Real-time	Information & Transactional, Real-time, & Composite
Self Assessment:				
• What are the major benefits (e.g., public service).	Public Service	Public Service plus Economic Impact	Public Service plus Economic and Social Impact	Public Service plus Economic and Social Impact
• What are the major costs (rough, between 5K to100K USD).	$5K	$10K	$20K	$50K
• Do the users need to be trained for maximum benefits.	Nurse as a Hub Master s	Nurse as a Hub Master s	Physician as a Hub Master	Physician, Nurse and an Adninistrator as a Hub Master
• Do you need trained staff to manage this Hub	No	No	Yes	Yes
• What are possible sources of funding.	TBD	TBD	TBD	TBD

Signed and Dated (ICT4SIDS POC):

Signed and Dated (User Point of Contact):

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Table 2: Sample SPACE Services

SPACE supports almost 100 services in sectors such as economic development, education, healthcare and others (see the table below). In addition, the ICT infrastructure is a horizontal sector that supports all vertical sectors. These services can also be combined into "Service Bundles" that represent inter and intra enterprise composites such as villages, communities, cities and B2B marketplaces. This is a very powerful capability that can be used to build models of a large number of configurations in public and private sectors.

Economic Development	**Education**	**Healthcare**	**Law Enforcement & Safety**	**Transportation & Agriculture**	**Public Welfare & Environment Services**	**Common Services**
Entrepreneurship Micro-Entrepreneurship Micro-Financing Information Systems e-Employment e-Tourism e-Library (public)	Educating Primary School Teachers e-learning for the handicapped e-Learning Support System e-Library (school)	Mobile Health Clinic Electronic Health Records Emergency Medical Service m-Health (General) Hospital Information System Patient Information System Decision Support for Health Telemedicine e-Behaviourial Health	Police & Fire Services Police Crime Investigation Services Social Network Services for Governments Additional Law and Order Services Weather Alert and Travel Warning Food Quality and Drinking Water Purity Disaster Management and Recovery	Optimal Route Planner Alert Systems Automobile Licensing e-Agriculture 2.0 E-Agriculture Phone2SMS Eservices for Food Safety Precision Agriculture eServices for Agriculture	Social Services Citizen Welfare Services Public Healthcare Service eLearning for Needy Children Assisted Living eCare for Aging Populations Entrepreneurship Welfare Programs Clean Air Environmental Monitoring Environmental Analytics	Corporate Management Services Customer Services Marketing Services Sales Services e-Payment EFT – Electronic Fund Transfer Credit Card Detection System e-Banking System
ICT Infrastructure Services (Horizontal) - Broadband Access, Network Management, Social Networking (*e-Participation, e-Voting), Cloud Computing						
Enterprise-Wide Service Composite (Service Bundles that Combine Many Individual Services) - Offices, Departments, Initiatives (e.g., MDG, Mobility, Telemedicine, Aging Population) Services, Firms, Business Units, eCities, eCommunities, Government Specific Initiatives **Inter-Enterprise Service Composites (Service Bundles for B2B and G2G Integrations)** - G2G Services (Interagency Exchanges), Supply Chain for Food Distribution, Health informational Networks, Educational Networks, Entrepreneurial Networks, B2G Services						

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PHASE2: Computer Aided Planning and Hub Generation (December 2017)

Figur2 shows a conceptual view of the proposed plan for launching the following IKDAR MMILs:

- MMIL1-Mobile health clinic
- MMIL2-Clinic for hypertension
- MMIL3-Small town MMIL (Community Center)
- MMIL4- MMIL Regional Center (with Business Intelligence and Administrative Capabilities)

All smart hubs must be supported by a dedicated Portal (a website) that is generated by the SPACE Computer Aided Planning Platform. SPACE produces an executive summary, a funding proposal and a working portal of the selected Hub(s) shown in Figure 2. After the first Planning run, the User POC is given extensive training on the SPACE Planning Toolkit.

A hub may be virtual (just a portal) or a physical site (e.g., a small office) supported by a portal that is located in the office or at a remote site (e.g., in a cloud). As shown in Figure2:

- The highly specialized MMILs will operate in different locations in PK
- All MMIL Hubs support UN SDG3 and are connected to other IKDAR Mills
- All MMIL Hubs are supported by Smart Portals that can Detect, Adjust and Learn based on usage.
- The MMIL are distributed to different sites and collaborative with each other through message exchanges
- The IKDAR MMIL Network may be optionally connected to the ICT4SIDS Network (see Figure2)

In December 2017, we will generate initial test versions of MMIL1 and MMIL2 portals and review the outputs produced for potential use.

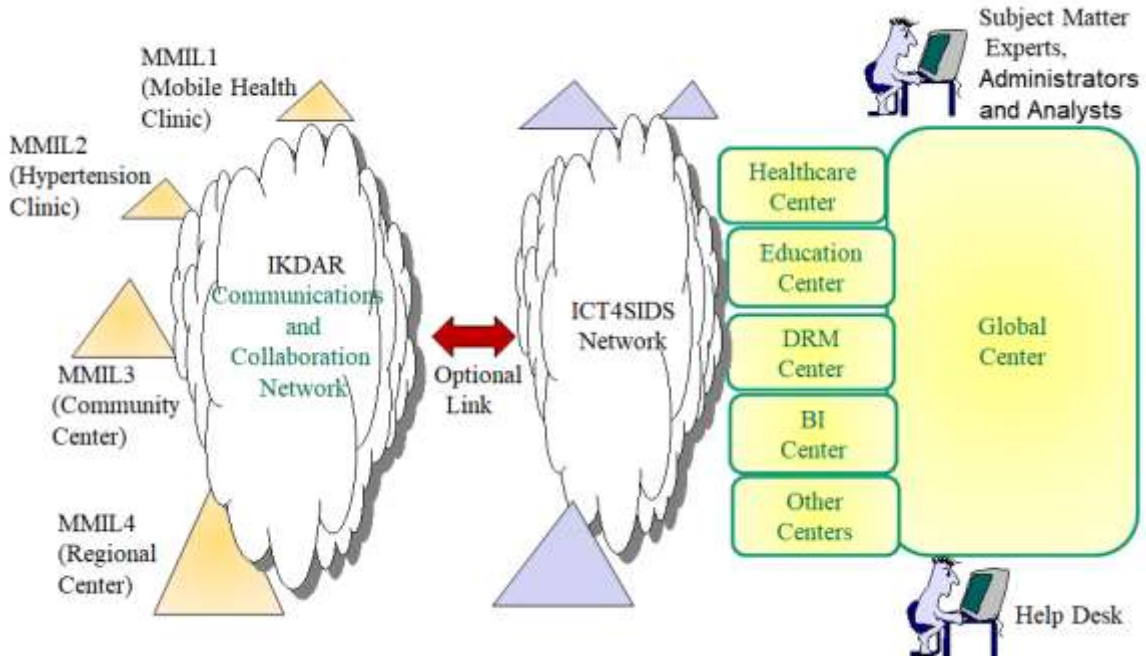

Figure2: Conceptual View of the Proposed IKDAR MMILs Pilot Project Plan

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PHASE 3 and 4 (Dec 2018)

Our overall game plan for Phase3 and 4 is the following (this is a very rough Plan):

- January 2017: Generate final versions of MMIL1 and MMIL2 portals, refine them and use them for simple Tasks. Attempt to generate MMIL3 and MMIL4 portals, refine them and use them for simple Tasks.
- February 2018: Use and refine the generated portals extensively. Also connect the generated portals with each other for collaboration. These portals may be optionally connected to the HU Telemedicine Center to exchange sample electronic health records.
- March 2018: Develop, refine and explore different collaboration scenarios by using the Collaboration Matrix. The IKDAR MMILs may optionally collaborate with other Hubs in the ICT4SIDS Network as shown in Figure2.
- April 2018: The Pilot Project concludes, preferably in Week1 of April. Future plans for UN or other presentations are developed, funding and partnership opportunities are explored, and future plans for collaboration are explored.

The following activities will be performed repeatedly in this phase:

- **Familiarization:** The Customer POC reviews the outputs produced by SPACE. The POCs, and other invited individuals, conduct detailed walkthroughs of the outputs produced by SPACE and determine what can be used quickly. We may use the Stanford/IBM "Design Thinking" methodology to understand and explore how these portals can be highly productive.
- **Initial Portal Launch**: The Demo Portals are modified to provide initial services that can be offered to the users (e.g., training materials, mobile apps, basic advisory services, etc).
- **Extensions and Use:** The Demo Portals are converted into operational portals through several refinements and extensions based on the user feedback.

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