



# Digital Health in Developing Economies

## Webinar

1<sup>st</sup> December 2020

15:00 CET

Davide Coppola, Arnaud Runge (ESA)

Aly Shalaby (AXA OneHealth)

Rajesh R. Singh, Arish Syed (WISH Foundation)

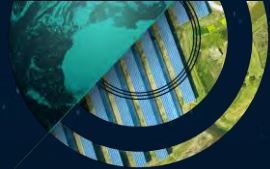
ESA UNCLASSIFIED



European Space Agency



Davide Coppola



## WELCOME TO THE WEBINAR!

### Before we start...

- Due to the number of attendees, please **keep your microphones muted** at all times and switch off the webcam function
- You can use the **conversation function** anytime to submit your questions. They will be addressed during the Q&A at the end of the webinar





## AGENDA

- **ESA introduction**
- **“Digital Health for developing economies” Invitation To Tender**
  - Objectives
  - Areas of interest
  - Value of Space
- **Guest speakers**
  - Aly Shalaby (AXA OneHeath)
  - Rajesh R. Singh & Arish Syed (WISH Foundation)
- **How to apply: funding and tender information**
- **Open Questions & Answers session**





## THE EUROPEAN SPACE AGENCY

### Purpose of ESA

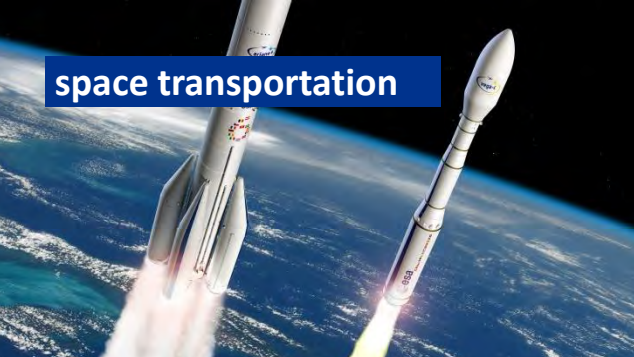
To provide for and promote, for exclusively peaceful purposes, cooperation among European states in space research and technology and their space applications.

### Facts and figures

- Over 50 years of experience
- 22 Member States
- 8 sites across Europe and a spaceport in French Guiana
- Over 80 satellites designed, tested and operated in flight



space transportation



science



human spaceflight



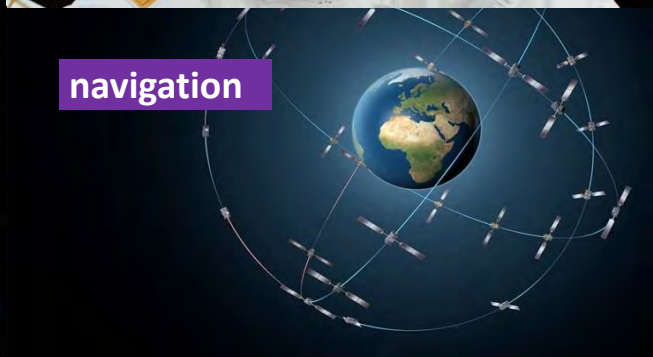
earth observation



telecommunications  
and applications



navigation



exploration



operations



technology



## → ESA SPACE SOLUTIONS

### The largest space innovation network in the world

- The go-to place for great business involving space to improve everyday life.
- Supporting European start-ups and SMEs to develop businesses using space technology and data.
- Offering funding, business and technical support to help to generate successful business and create jobs.





## → ESA SPACE SOLUTIONS OFFERS



Zero-equity funding (from €50k to €2M+ per activity)



A personalised ESA consultant



Technical support and commercial guidance



Tailored project management support



Access to our international network of ESA and partners



Access to our network of investors



Credibility of the ESA brand

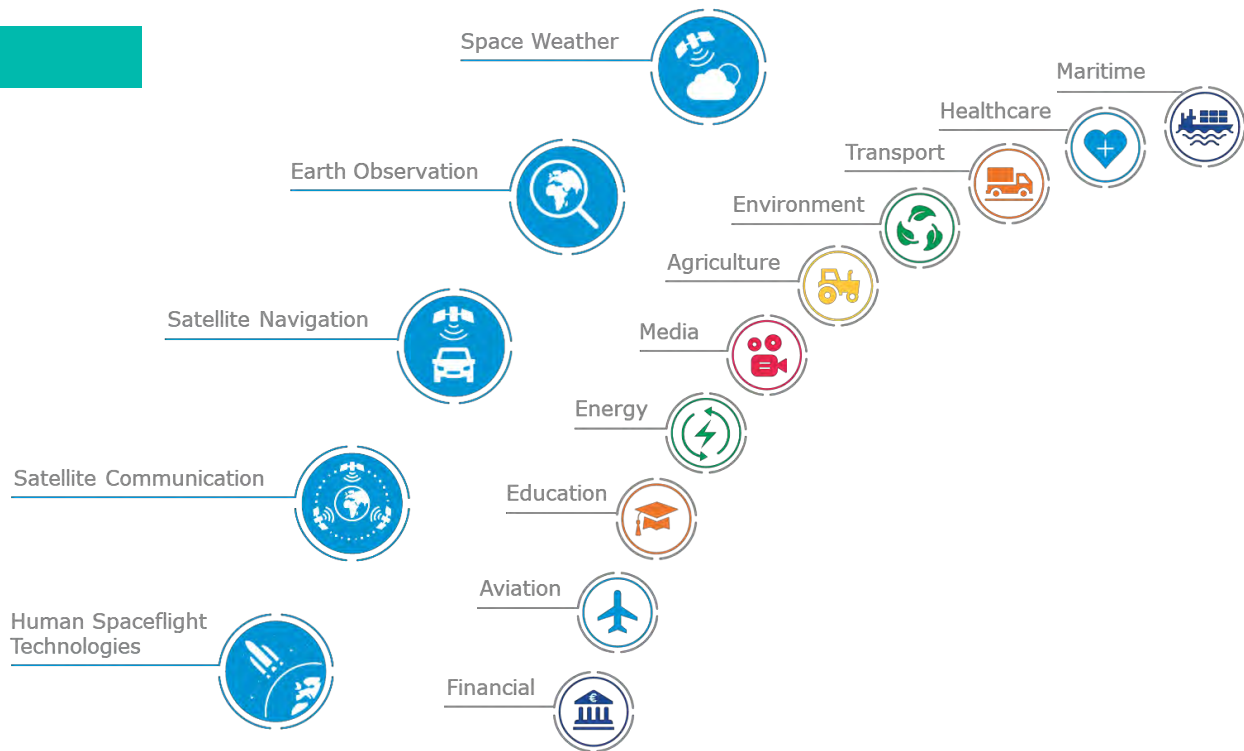






# ESA SPACE SOLUTIONS

Could you be leveraging Space technology and data for the benefit of life on Earth?





# OneHealth



A hand on the left side of the frame points towards a central network of glowing icons. The icons are connected by dotted lines and include symbols for a first aid kit, a globe, a stethoscope, a laboratory flask, a water drop, a building, a person with a stethoscope, a clipboard, a heart, a syringe, a hospital bed, a heart, a pill, an eye, a hospital van, a heart with a cross, and a virus. The background is dark blue with a blurred image of a person in a white lab coat.

# Digital Health for developing economies

Planned ESA's funded invitation to tender



## Digital health

- Health care systems in developing economies and health ecosystems continue to face considerable challenges in providing high quality and affordable care.
- These challenges are also acknowledged in the sustainable development goals (SDGs) whose Target of 3.8 on universal health coverage (UHC) emphasizes the importance of all people and communities having access to quality health services without risking financial hardship.
- ESA has established cooperation with AXA One Health and Wish Foundation to accelerate sustainable innovation through space data and technology and advance the provision of seamless and sustainable healthcare in developing economies.
- As a first step of this cooperation, ESA is launching a new Invitation to Tender for feasibility studies to assess the technical feasibility and commercial viability of space-based services and solutions in the area of digital health for developing health ecosystems. The aim is to reduce the technical and commercial risks for their implementation and operation.





## Planned ESA-funded invitation to tender on Digital Health for developing economies

The main objectives of the Feasibility Study are to:

- assess the technical feasibility and commercial viability of services and solutions in the area of digital health for developing health ecosystems
- address technical and non-technical (e.g.: commercial, regulatory, privacy) risks and constraints for services implementation and operation
- provide recommendations for the implementation of such service(s) on the targeted market
- prepare a potential roadmap for a follow-on demonstration project.

Invitation to tender planned to be issued by Dec 2020

Funding up to € 200K per activity (100% ESA funded)

Duration 12 months



## AREAS OF INTEREST

- **Health information digitalisation.**  
The purpose is to systematise data collection, organisation or analysis across the various sectors of health care, catering for: better serviceability of patients, systematized digital data collection and disease early warning systems, vulnerability assessment to map the gaps in health service infrastructure.
- **Improving diagnosis and treatment.**  
The purpose is to improve allow health workers to improve clinical performance through real-time assistance with clinical decision-making and diagnosis and diagnosis for appropriate treatment.
- **Last mile healthcare service delivery and enabling technologies.**  
The purpose is to support healthcare service delivery to elderly population and unserved rural communities, as well as supporting shift of medical treatment from primary care to home based care and including tele-medicine solutions.





Arnaud Runge (ESA)

# Stayin' Alive - AMAZON



- Physiological monitoring (e.g. ECG, temperature, blood pressure), Imaging (e.g. laryngoscopy, ultrasound), Defibrillator
- Interoperability/integration with other systems (e.g. digital X-Ray), data sharing with 3rd party digital patient records



## Amazon Tempus-IC

- Deployed on aircraft of several companies



- Tested in field with International SOS
- Prove device works in real-life situations, under rugged conditions, in Algeria and Nigeria, but also in the UK with Air Ambulance services

## Tempus Pro

- Pre-hospital emergency care market
- Remote and challenging locations



## Target customers

- Professional medical personnel (including military medics),
- Governmental & private Emergency Medical Services entities
- Organisations involved in managing commercial healthcare in remote locations e.g. iSOS or their customers

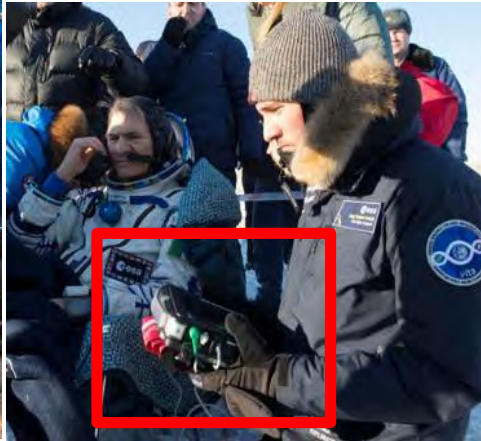


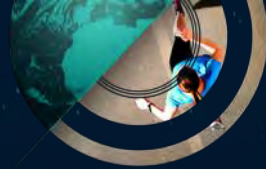


# Stayin' Alive - AMAZON



- Use by ESAMedical Operations team for ESAstronaut landings
- Use in analogue environments
- Technological Demonstrator to fly on ISS
- 2 units owned ESAon loan to medical centres in Spain to fight CV19





# KEY FOCUS AREA HEALTHCARE - Examples of Application

the Guardian

Search jobs

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International edition

# The Guardian

Free for all, funded by readers

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Opinion

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Culture

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Technology Media Society Law **Scotland** Wales Northern Ireland

Scotland

## NHS expands drone transport of samples from Scottish islands

Winter testing of drone flights to mainland raises hope of fast medical deliveries



## Drone deliveries soar in rural Scotland during coronavirus outbreak

Isle of Mull among areas trialling use of unmanned aircrafts to distribute supplies

Coronavirus - latest updates

See all our coronavirus coverage



▲ A Skyports worker with a delivery drone on the Isle of Mull. The aircraft can provide NHS workers with PPE and other supplies. Photograph: Skyports

Ten weeks on from the peak of the coronavirus pandemic there are still acute

## SEDDCR Project

Delivery of medical supplies and samples by drones enabled by space-based technology.

Drone solution piloted remotely from the Operations Centre, and flies automatically, navigating through pre-set GNSS waypoints.

Satcom connectivity between the Ground Control Station (GCS) and the drone is an essential part of the solution as it provides 100% communications coverage over the entire route – a crucial safety enabler to scalable drone delivery

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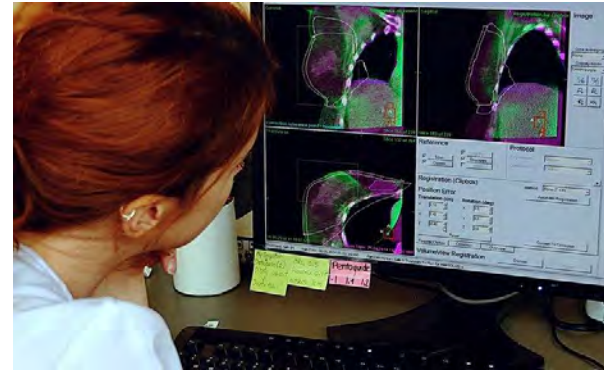


# Tele-Ultrasound Technology

- Technology development funded across different ESA programme lines to support scientific experiments & medical operations on ISS
- Technology exploited by French company Adecotech for many years
- Used in the context of CV19 to ensure care provision continuity to non CV19 patients while preserving medical staff.
- [https://www.esa.int/Applications/Telecommunications\\_Integrated\\_Applications/Ultrasound\\_for\\_space\\_offers\\_remote\\_diagnosis\\_to\\_patients\\_on\\_Earth](https://www.esa.int/Applications/Telecommunications_Integrated_Applications/Ultrasound_for_space_offers_remote_diagnosis_to_patients_on_Earth)



# MERCURY: ending the isolation of BS Units



- Development of a reliable and sustainable service to transfer via satellite mammographic X-Rays from breast screening units to a reference hospital
- Project led by a UK SME
- Aimed at:
  - Increasing women screening throughput
  - Reducing cost of screening per woman with the same resources
  - Reducing risk patient data loss
  - Implementing a paperless approach
- Demonstration phase involving 10 pilot sites over the whole UK

## During the Pilot Phase

- 200 000 medical images transferred without any loss
- 10 pilot sites out of which 9 were interested to potentially place a contract
- 4 did before the conclusion of the project

## Since the end of the contract

- Commercial interest picking-up
- 500 000 x-rays already transferred without a single loss
- Increased throughput of screened women
- 25-30 contracts have been signed
- MERCURY service is a game changer for the National Health Service of the UK by implementing paperless / electronic-based medical procedures
- 3 jobs created





OneHealth



Aly Shalaby (AXA OneHealth)



**Digital Health in Developing Economies:**

**AXA OneHealth**

**Egypt**

Dr. Aly Shalaby  
Chief Digital Health  
Officer



# Digital Health in Emerging Markets: Africa



# DIGITISING HEALTH IN AFRICA

# 200+

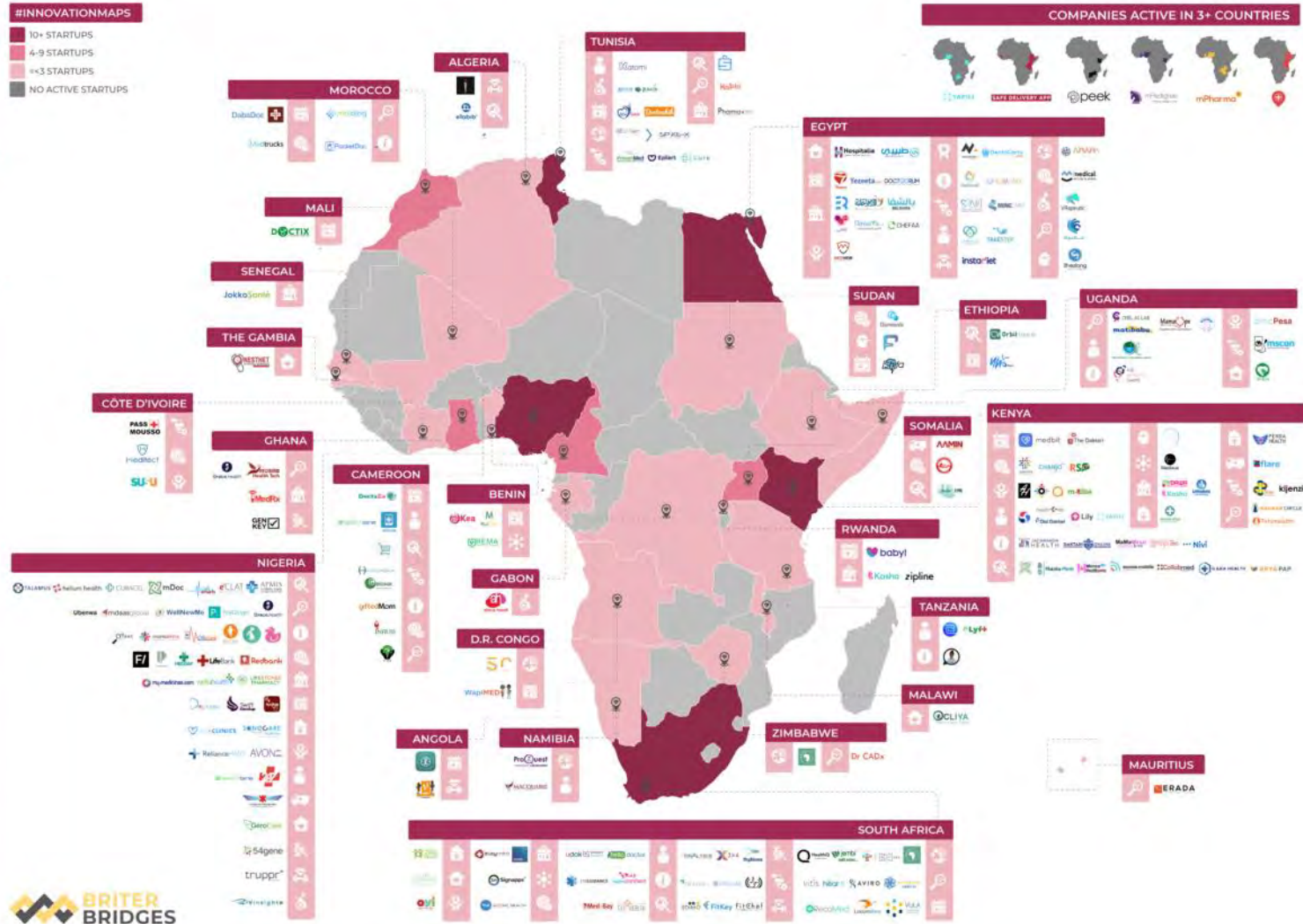
HEALTH-TECH STARTUPS

## SERVICES PROVIDED

- TELEHEALTH**  
Platforms that offer telemedicine services and patient care through video, audio, chat, text, and other digital communication tools.
- HEALTH MANAGEMENT**  
Software, apps and platforms that help healthcare providers manage their patients, monitor, bring, appointments and referrals, and manage multiple health care teams.
- APPOINTMENTS AND BOOKINGS**  
Applications that connect healthcare providers and patients through desktop and digital appointment tools.
- HEALTH INFORMATION**  
Systems that provide information on key health topics, issues and concerns for both patients and medical professionals.
- MEDICAL EQUIPMENT**  
Companies that design, manufacture and distribute medical equipment and devices to both healthcare providers and patients.
- E-PHARMACY AND MARKETPLACES**  
Platforms that offer pharmaceutical and medical of various products directly to patients online, allowing people to order prescription medications, and other health products online.
- MEDICAL SUPPLY CHAIN**  
Platforms that facilitate the logistics of the health supply chain, including managed distribution, local distribution services, as well as medical devices.
- MENTAL HEALTH**  
Platforms that offer services in the realm of mental health, including chatbots, applications for mental diagnosis and other online tools for digital and self-help.
- DIAGNOSTICS & MONITORING**  
Applications that offer services in identifying diseases and other health-related risks, as well as tools related to monitoring the health status of an individual.
- ASSISTIVE TECHNOLOGY**  
Applications that provide digital tools and medical equipment to assist those living with disabilities, impairments or old age.
- BIOTECH**  
Organizations that deal with the production of products that have been derived from genetic engineering, and related to pharmaceuticals, gene and cell therapy, and diagnostics.
- AUXILIARY SERVICES**  
Organizations that provide health insurance or financing plans to protect against the financial costs of medical treatment.
- LIFESTYLE**  
Companies that offer services related to nutrition, wellbeing and fitness.
- EMERGENCY SERVICES**  
Organizations that are providing medical response services via mobile or digital emergency services, disaster response services, disaster response services, fire, triage, and.
- HEALTH NETWORK**  
Platforms and communities for patients or healthcare providers to communicate, manage and share resources.
- ANALYTICS, BIG DATA, SOFTWARE AND RESEARCH**  
Platforms that collect data and information on health-related issues for analysis and use and developing technology to improve patient health-related outcomes.
- DENTAL HEALTH**  
Platforms that offer services related to dental care and services.
- HEALTHCARE AT HOME**  
Platforms that enable patients to receive contact with caregivers and health-related services that are available directly in their own homes.
- MEDICAL CLINICS**  
Organizations that offer physical appointments, exams, clinics and procedures.

**#INNOVATIONMAPS**

- 10+ STARTUPS
- 4-9 STARTUPS
- 1-3 STARTUPS
- NO ACTIVE STARTUPS





# Digital Health in Egypt

# Topline healthcare statistics for Egypt

→ The Egyptian government has allocated EGP 93.5bn to the healthcare sector in the fiscal year (FY) 2020/21 budget (28% increase).

→ Egypt's total healthcare spending will post a compound annual growth rate (CAGR) of 8.4% through to 2023 to reach US\$12.6 billion.

→ Egypt's health challenges disproportionately affect the rural poor and have the potential to impact the country's economic prosperity more broadly over the long-term.



**100,388,073**  
Population, persons



**US\$ 3,020**  
GDP per capita



**303.2**  
GDP, billion current US\$



**17.2**  
Diabetes prevalence



**5.3% (2017)**  
Health expenditure  
as a share of GDP



**0.5 per 1,000**  
population (2018)  
Density of physicians



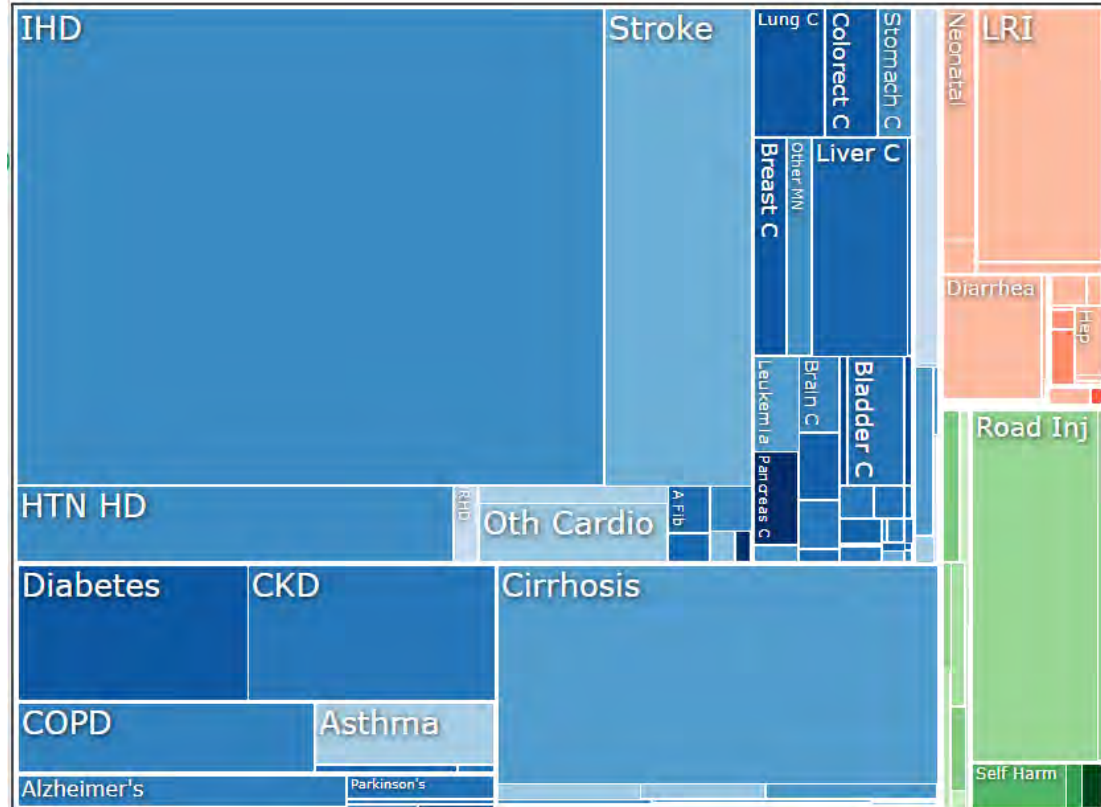
**20.3 deaths per**  
1000 lives births (2019)  
Under-5 mortality rate

Source: Knoema

# Top 10 Causes of Death in Egypt

CDC, 2019, All Ages

- Ischemic heart disease 32%
- Cirrhosis 11.6%
- Cancer 11%
- Stroke 8.6%
- Road Injuries 5.24%
- Chronic Kidney Disease 4%
- Lower Respiratory Infections 3.8%
- Hypertensive Heart Disease 3.8%
- Diabetes 3.65%
- Chronic Obstructive Pulmonary Disease 2.5%



# Digital Transformation in Healthcare in Egypt

- Egypt is making several key investments in the area of health technology to reduce costs and provide efficient care to its people. COVID-19 has further accelerated digital transformation in the country with the increased use of remote monitoring, telehealth platforms and Artificial Intelligence (AI)-enabled apps and devices
- The Egyptian government is driving digitization across sectors and has been pushing for universal healthcare (NHS-style universal healthcare for every citizen in Egypt) and cross-industry collaborations.
- A national AI strategy has been developed to integrate artificial intelligence in healthcare sector among others.
- Egypt aims to have 7.7 per cent of its GDP derived through AI by 2030.



# Digital Healthcare Startups in Egypt

## Digital Health Systems

**Vezeeta.com**

**ROLOGY**

**dkimia**

الدكاترة



NABDA CARE

**Bypa**

**tamen.Net**

**Infomed**

## Telemedicine

**Vezeeta.com**

**altibbi**  
الطبي

**Shezlong**  
You Talk.. We Help

**Dr. 7alan**

**EMBER**

**Pashakeem**

**CARESQUARE**

## Homecare

**Vezeeta.com**

**Hospitalia**  
EXPERTS YOU CAN TRUST 24/7

**7keema**

**TABIBI**  
Clinics and Home Visits

**YA DOCTORY**  
YOUR HOME HEALTHCARE PROVIDER

## Digital Pharmacy

**Vezeeta.com**

**Yodawy**  
Pharmacy Benefits Platform

علاجي

**chefaa**

## Devices

**VRapeutic**

**MOGASSAM**

**BIONICLIMBS**



# **AXA OneHealth**

## **Focus on Digital Healthcare**

# About AXA OneHealth

A one-stop-shop for medical services to simplify the healthcare journey of our customers

## Our Numbers



6  
Medical Centers



22  
Specialties



105  
Medical team

## Our Partners & Affiliates



al mokhtabar  
Lab Partner



ada

AI Symptom  
Checker



Yodawy  
Medication Delivery  
Partner



ata  
Teleconsultation  
Affiliation

## Our Footprint



North Coast

Sheikh Zayed  
(opening soon)

Downtown

Heliopolis  
(opening soon)

Nasr City  
(opening soon)

New Cairo  
**OneHealth**





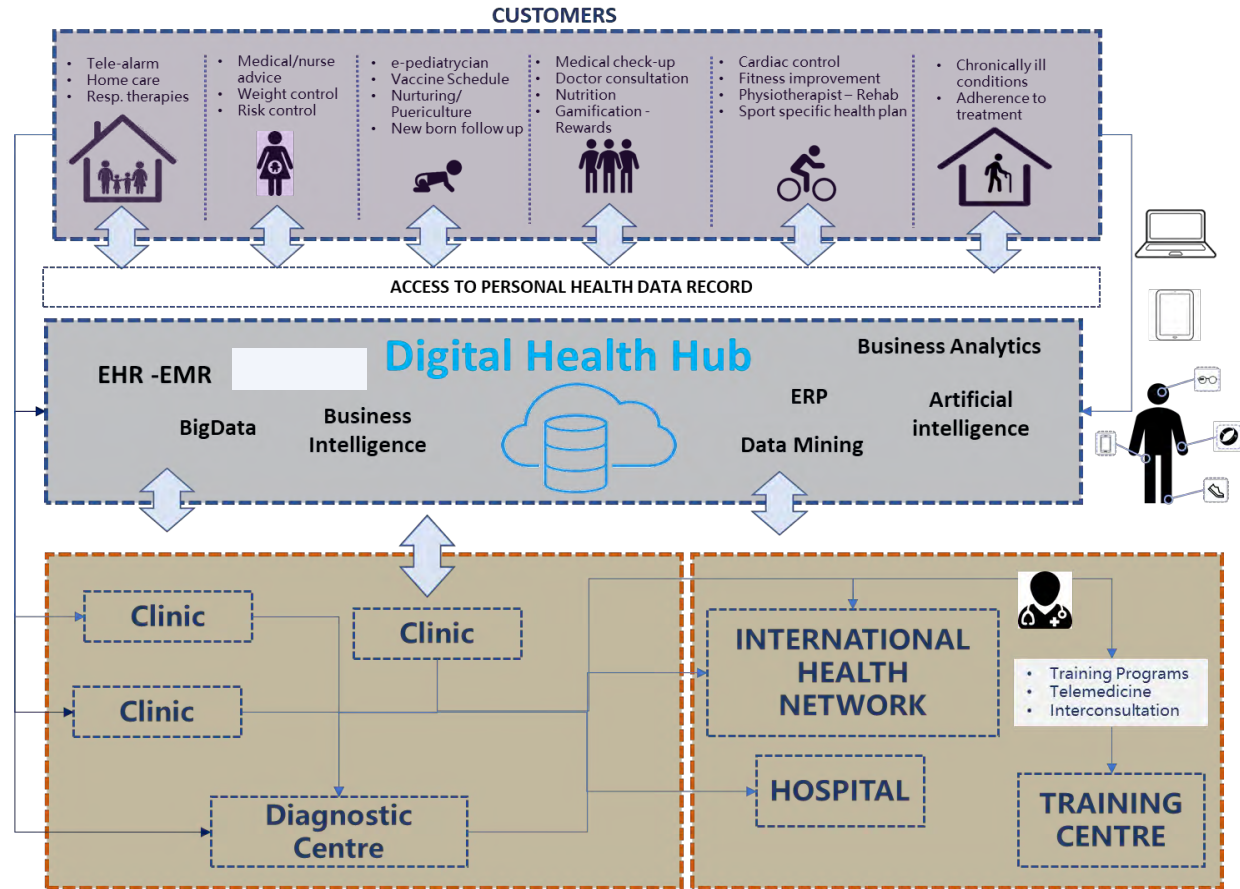
# AXA OneHealth Portfolio of Services

AOH Services range from physical on-site services to digital virtual services



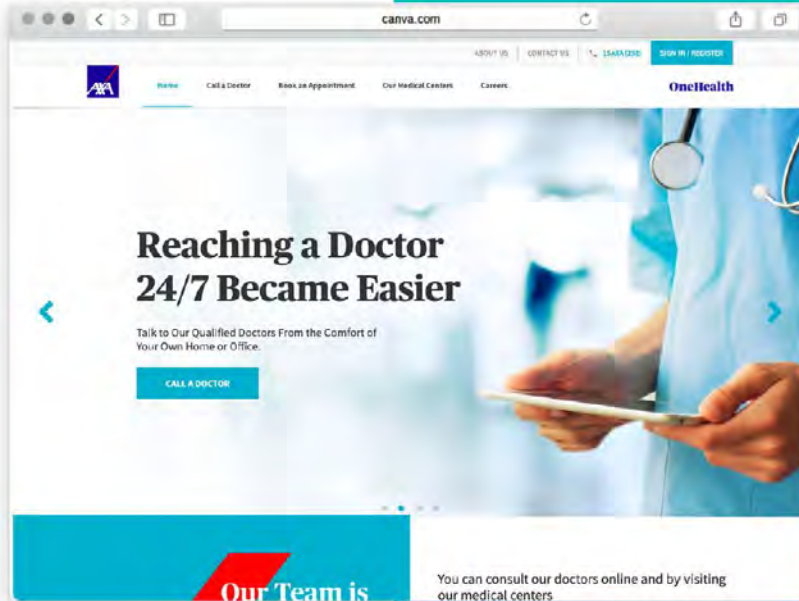
# AXA OneHealth Digital Health Hub

- ➔ **Client-facing:**
  - ➔ Customer-centric
  - ➔ Increase engagement
  - ➔ Empowerment
- ➔ **Core:**
  - ➔ Nerve-center
  - ➔ Data lake
  - ➔ Cognitive analytics
- ➔ **Doctor-facing:**
  - ➔ Seamless connection
  - ➔ CDSS
  - ➔ Referrals



# Digital Tools

## Website

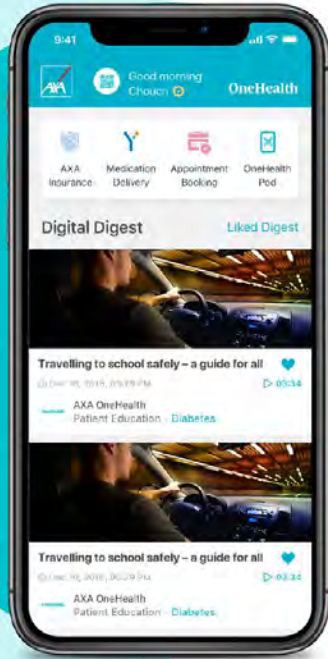


## AXA OneHealth Website

- Appointment Booking
- Access to Electronic Medical Record
- Teleconsultation

# Digital Tools

## Mobile App



- ➔ Appointment Booking
- ➔ Access to Electronic Medical Record
- ➔ Teleconsultation
- ➔ Medication Delivery
- ➔ Medication/Appointment Reminders
- ➔ Articles

# Digital Tools

## Virtual Pod



## Virtual Clinic/Pod

- ➔ Video consultation
- ➔ Electronic Medical Record
- ➔ BMI
- ➔ Weight measurements
- ➔ Blood pressure tests
- ➔ Pulse oximeter
- ➔ Dermascopy

# Digital Tools

## Check-in Kiosk



## Check-in Kiosk

- ➔ Self-service for
  - ➔ Registration
  - ➔ Booking
  - ➔ Check-in

# General Teleconsultation

Have 24/7 access to Family Medicine Specialists, who are highly trained to treat all cases and deal with all age groups. Accessible by mobile app or by calling AOH hotline number 15292.



**24x7**  
Availability



**Evidence based practice**  
based on guidelines of NICE and the American Teleconsultation Association



**Multi-lingual**  
Arabic & English



**Accessible**  
Phone or Mobile app



**Full-time Highly trained** family medicine doctors



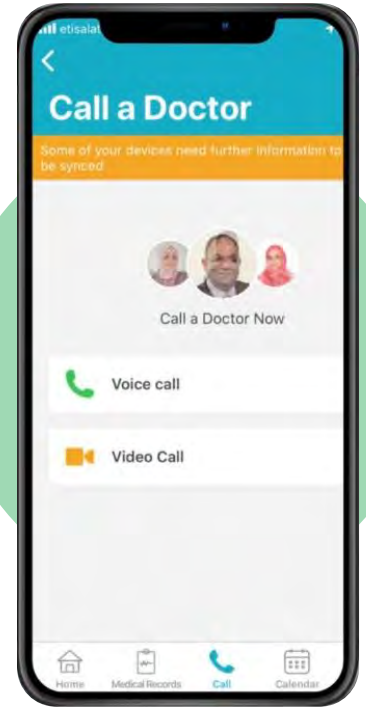
**ZERO**  
Malpractice Claims



**Electronic Medical Record** to record patient history



**Personalized**  
selection of the doctor's gender



# Specialist Teleconsultation

Access specialized doctors from 15 different specialties via a safe platform. Appointments are pre-booked in advance via AOH hotline (15292) or the mobile app.



Family Medicine



Dental



Dermatology



Chest



Pediatric



Ear, Nose &  
Throat



Neurology



Obstetrics  
and  
Gynecology



Gastro-  
enterology



Ophthalmology



Orthopedic



General Surgery



Cardiology



Nephrology



Urology



Rheumatology



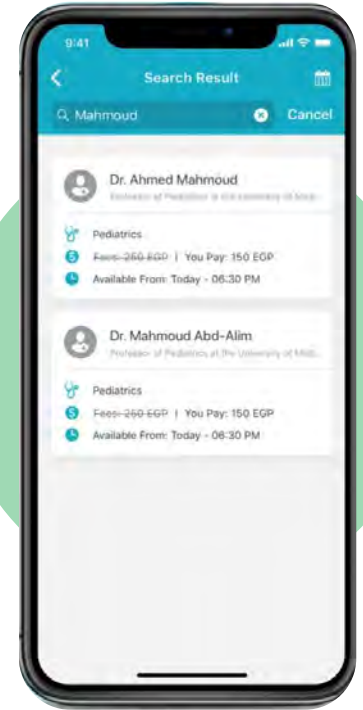
Vascular Surgery



Psychiatry



Endocrinology







# Future of Digital Healthcare

# Future of Digital Healthcare



Digital apps will be used to support medical care and treatment



Technology will enhance specialist medical care



Internet of Medical Things will allow healthcare and nutrition plans will be personalized for the individual



Interventional and rehabilitative robotics & AI will support doctors in better diagnosing & treating patients



Implants and chips will allow better collection and analysis of data and genomes, that could be shared with app or medical network.



3D Printing can change healthcare and medicine making it more personalized, accessible, and affordable.



**Thank you**



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European Space Agency

A close-up photograph showing a person's hands holding a smartphone to scan a white wristband on a patient's arm. The patient is lying down, and their back is to the camera. The background is slightly blurred, showing other people in a clinical or community setting. The overall scene is brightly lit, suggesting an outdoor or well-lit indoor environment.

**TRANSFORMING PRIMARY HEALTHCARE**  
through **INNOVATION**

The logo for WISH, featuring a stylized graphic of three leaves in yellow and orange above the word "WISH" in a black serif font. The logo is set against a white circular background that is partially overlaid by an orange curved shape at the bottom.

**WISH**

# WADHWANI INITIATIVE FOR SUSTAINABLE HEALTHCARE



A NOT FOR  
PROFIT



## VISION

QUALITY HEALTH CARE FOR ALL

## MISSION

TO IMPROVE PRIMARY HEALTH CARE SYSTEMS THROUGH INNOVATIONS

## GOAL 2027

TO FACILITATE ACCESS TO AFFORDABLE & HIGH QUALITY HEALTH CARE FOR 100 MILLION PERSONS IN THE DEVELOPING WORLD BY 2027

### OUTREACH



140+ million  
Population Covered  
Across 5 States in  
India



650+ Primary  
Health Clinics



400+ Staff



21.2 Million

### GROWTH TRANSITION

#### Direct Implementation

Deliver primary healthcare services through innovation driven models, in multiple geographies.

#### Strategic Advisory Services

Provide strategic advice and technical support to Govt. agencies towards our mission.

#### Platform for Primary Health Care Solutions

Offer a suite of Primary Healthcare Solutions that stem from our experiences & can be scaled by partners.

#### Thought Leadership

Be a national & international voice, spearheading ideas that shape the contours of primary health care.

### DIGITAL HEALTH FOCUS

#### National Portability & Interoperability

- Facility/ Hospital Mgt. Process Digitization
- Application Integration & Interoperability
- Compliance to National & Global Standards
- UHID/ Registries / Consent Manager / Anonymizers etc.

#### Telemedicine

- Teleconsultation Hub & Spoke Scale up
- Decision support system
- Targeted Client Communication
- Personal Health Record

#### Meaningful Use Of Data

- Data Security , Mgt. & Legal Adherence
- Comprehensive PHC Performance Measurement System
- Predictive Analytics & AI for Policy Action

#### Innovations

- Med-tech POCDs for advanced diagnostics with AI/ML capacities
- M-Health Applications/Solutions
- Digital Market Access Program through National Innovations Unit
- E-Learning: WISH2LEARN

# Area of Interest: Health Information Digitalization

The purpose is to systematize data collection, organization and analysis leading to meaningful use of data across dimensions within healthcare.

## Problem Statement

“

The diverse systems / applications that are being used for collecting health information across tiers and structures / domains are disintegrated and are not interoperable, thereby leading to multiple dashboard platforms. This further inhibits an integrated understanding through meaningful use of data by policy decision makers for futuristic planning as well as for promoting better governance of the health system. The opportunity post integration and ensuring data fidelity across structures opens up the GIS based equitable need based understanding through usage of AI / ML supported tools / systems leveraging resources as well as impacting the health financing of the country through informed policy actions.

## User Needs

There are **two broad components** envisaged as part of the user needs for a solution in health information digitalization, that would advance the benefits of systematic data aggregation and analysis to the stakeholders present across the ecosystem.

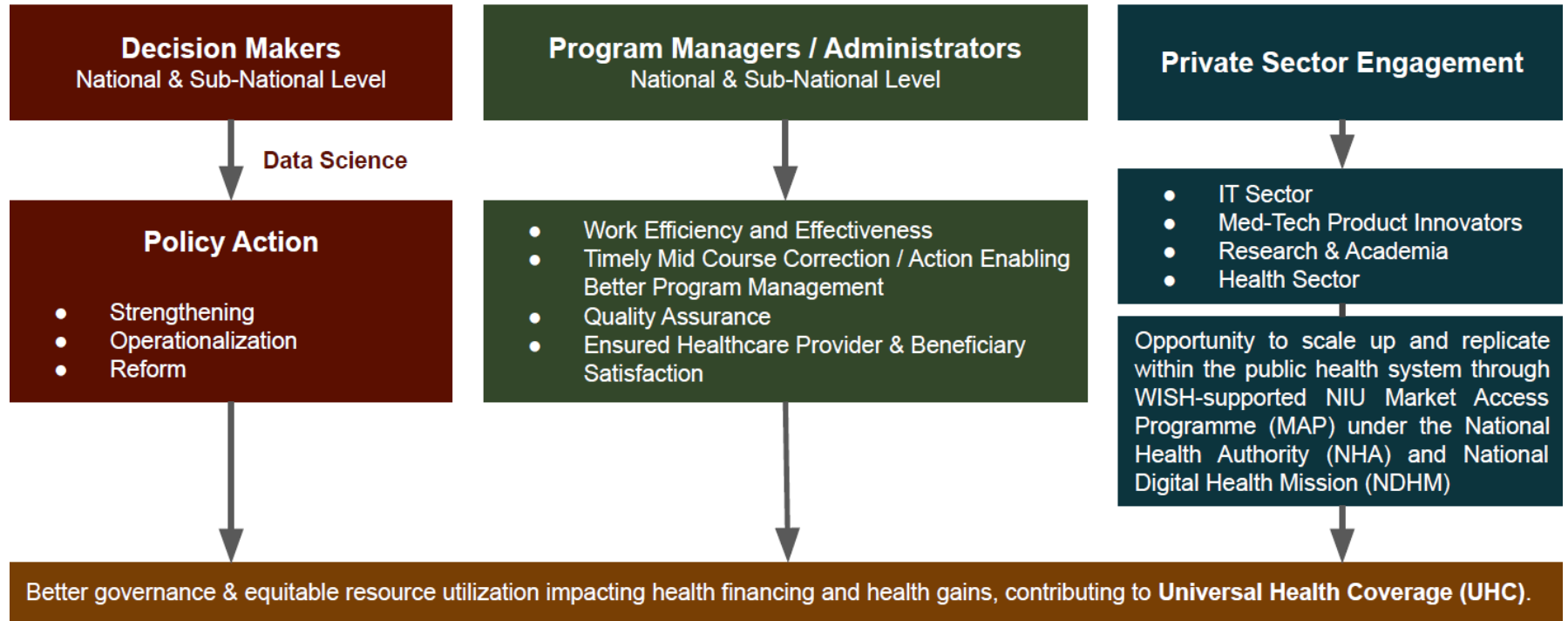
**Decision-Making System:** Where information collected is disaggregated to demography with temporal and spatial variation analyzed for trends and patterns, and an understanding of financial planning is obtained with respect to equity and resource allocation.

**Predictive Analytics Tool:** Where information aggregated is used to forecast key metrics by virtue of current trends, using Machine Learning & AI algorithms, and likely future trends are analyzed to prepare targeted interventions accordingly.

# Area of Interest: Health Information Digitalization

The purpose is to systematize data collection, organization and analysis leading to meaningful use of data across dimensions within healthcare.

## User Needs: Stakeholder Mapping





# Area of Interest: Community & Home-Based Care

Extending health service access to poor and unserved (rural) communities, including solutions to shift medical treatment from primary care to home care.

## Problem Statement

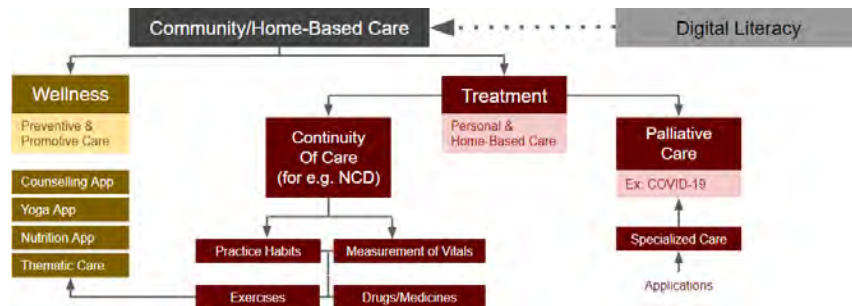
“

Building a **resilient Home Based Care (HBC) system** for quality primary healthcare service delivery, thereby:

1. **Reducing the Burden** on Primary Healthcare Facilities;
2. **Reducing the Out of Pocket Expenditure**; and
3. **Reducing the Infection Exposure** to Health Care Providers (HCPs) and Beneficiaries

hence impacting health gains in the communities.

## Use Cases: Overall Framework



## User Needs: Salient Features

### 1. Community Healthcare Applications

Beneficiary-to-Provider (B2P) Teleconsultation

### 2. Personal Care

PHR, Continuity of Care & Targeted Client Communication

### 3. Emergency / Pandemic Response Driven Home Based Care

Containment Strategy incl. Symptoms & Direct Contact

# Area of Interest: Improving Treatment & Diagnosis

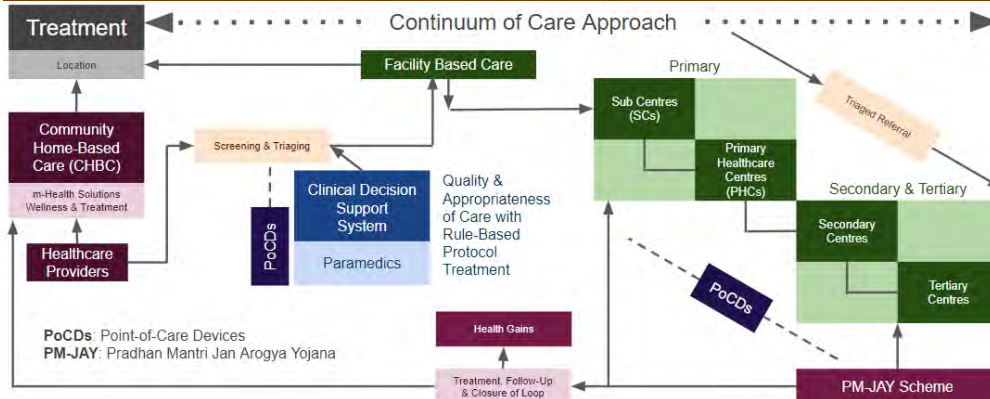
The purpose is to allow health workers to improve clinical performance through real-time assistance with clinical decision-making and diagnosis for appropriate treatment & triaged referral under PMJAY.

## Problem Statement

“

**Introducing tools**, applications or products as well as interlinkage and portability of PHR across facilities with PMJAY as envisaged under NDHM thereby supporting or enabling **informed decision making for paramedics / healthcare providers, for appropriate care or triaged referral** (hence **closing the loop for continuum of care**), thereby **delivering the twelve services mandated by the Ayushman Bharat PM-JAY scheme** within the Indian primary healthcare system.

## Use Cases: Overall Framework



## User Needs: Salient Features

- 1.Point of Care Devices (PoCDs)**  
Provision of all twelve AB services
- 2.CDSS for Paramedics & Frontline Workers**  
Rule-based protocol treatments
- 3.Interlinkage of NHM PHC with PM-JAY**  
Triaged referral to PM-JAY, Data Interoperability between all data capturing systems in pathway

THANK  
YOU



WISH

Transforming Healthcare Through Innovation



A hand on the left side of the frame points towards a central network of white icons on a dark blue background. The icons are connected by dotted lines and include symbols for a first aid kit, a globe, a stethoscope, a laboratory flask, a building, a telephone with a cross, a person with a stethoscope, a clipboard, a heart, a syringe, a bed with a cross, a heart, pills, an eye, a ambulance, and a virus. A teal banner with white text is positioned in the center of the network.

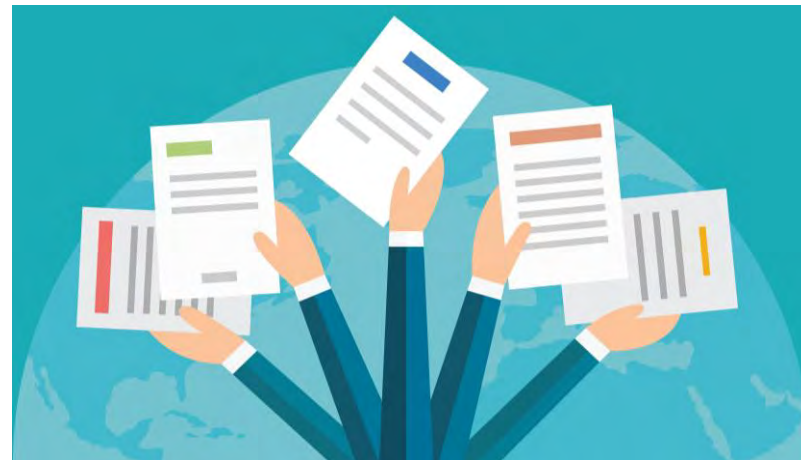
**How to apply:  
Funding and Tender Information**



## ESA TENDER INFORMATION

Funded participation to ESA Space Solutions is open to any company and/or organisation, be it as group of users, public body or non-governmental organisation, residing in the following Member States:

**Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland and the United Kingdom**





## HOW TO APPLY

1. **Register** (minimum 'light registration') by completing online questionnaire on ESA-STAR Registration ([esastar-emr.sso.esa.int](https://esastar-emr.sso.esa.int))
2. **Download** the official tender **documentation** (Invitation to Tender), which will be available as soon as the ITT is open via EMITS ([emits.esa.int](https://emits.esa.int))
3. Create 'Bidder Restricted Area' in ESA-STAR
4. **Write your Proposal** using the template provided in the Tender documentation and obtain **Letter of Authorization** from your National Delegation ([business.esa.int/national-delegations](https://business.esa.int/national-delegations))
5. **Submit** your proposal via 'Bidder Restricted Area' in ESA-STAR Tendering ([esastar.sso.esa.int](https://esastar.sso.esa.int))

More info can be found here:

[esa.int/About\\_Us/Business\\_with\\_ESA/How\\_to\\_do/esa-star\\_Registration\\_Process](https://esa.int/About_Us/Business_with_ESA/How_to_do/esa-star_Registration_Process)





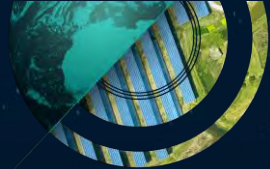
## BASIC PRINCIPLES - ESA-STAR

Registration (minimum 'light registration') on [ESA-STAR Registration](https://esastar-emr.sso.esa.int) (<https://esastar-emr.sso.esa.int>)

Please note that esa-star allows two levels of entity registration: "Light" and "Full". This allows new users wishing to do business with ESA to carry out their registration in two steps. A "Light" registration will grant access to all esa-star services up to and including proposal submission. The award of ESA contracts requires "Full" registration.

The screenshot shows the ESA-STAR registration portal. At the top left is the ESA logo and the text 'esa-star registration'. Below this is a navigation bar with the date '16 Apr 2020' and links for 'ESA Home Page', 'EMITS', 'ESA Industry Portal', 'Contact Us', and 'Help'. A left-hand menu contains 'Home', 'New Registration', 'Maintain Entity Information', and 'ESA Entities Directory'. The main content area is titled 'NEW REGISTRATION' and contains a question: 'Please select one of the two options:\*'. Below this are two radio button options: 'A. I am an Entity that has the capacity as "legal entity"' and 'B. I am a Business Unit acting on behalf of a "legal entity", without being entitled to commit on contracts on my own'.

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## BASIC PRINCIPLES - EMITS

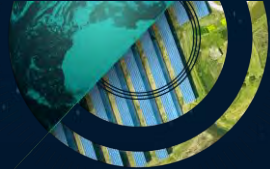
Tender documentation: on [emits.esa.int](https://emits.esa.int)

- Announced under “Intended Invitations to Tender (IITT)”
- Published under “Open Invitations to Tender (ITT)”

The screenshot shows the emits website interface. At the top left is the ESA logo and the text 'emits'. To the right is a navigation menu with links: ENTITIES, LOGIN, ESA Home Page, Industry Information, Entity Registration, Service Desk, and Help. Below the navigation, the user is identified as 'User: Guest'. On the left is a sidebar menu with the following items: News, COVID-19 measures and instructions, Procurement Review Board Announcements, Open Invitations to Tender, Intended Invitations to Tender, Reference Documentation, ECOS Resources, and How to do Business with ESA. The main content area features the 'emits' logo and a large blue banner that reads '→ INVITATIONS TO TENDER PUBLISHED'. Below the banner, it states 'Hosted by ESA' and 'Rel. 7.9.0.0'.

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## BASIC PRINCIPLES - EMITS

Registration on esa-star is required to access [tender documents in Emits](#)



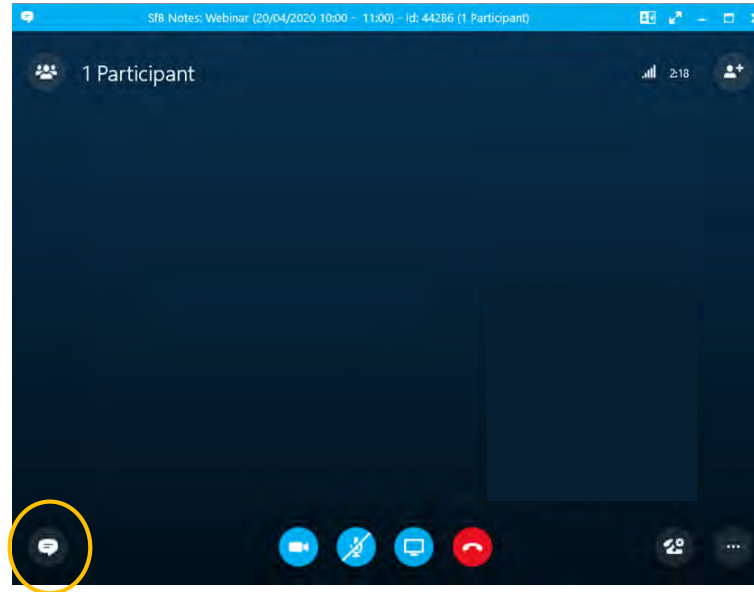
- [Letter of Invitation](#), 105055 Bytes
- [Statement of Work](#), 1053145 Bytes
- [Contract Conditions](#), 359891 Bytes
- [Tender conditions](#), 450220 Bytes
- [Clarification-e 1](#), 42650 Bytes

**Transfer** selected documents as

[Current Expression of Interest](#)



## OPEN QUESTIONS & ANSWERS SESSION



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→ THANK YOU!

[business.esa.int](http://business.esa.int)

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