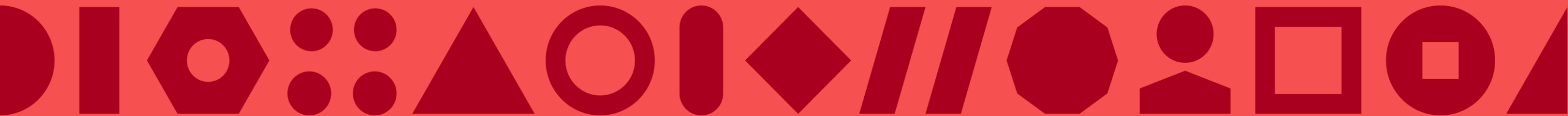
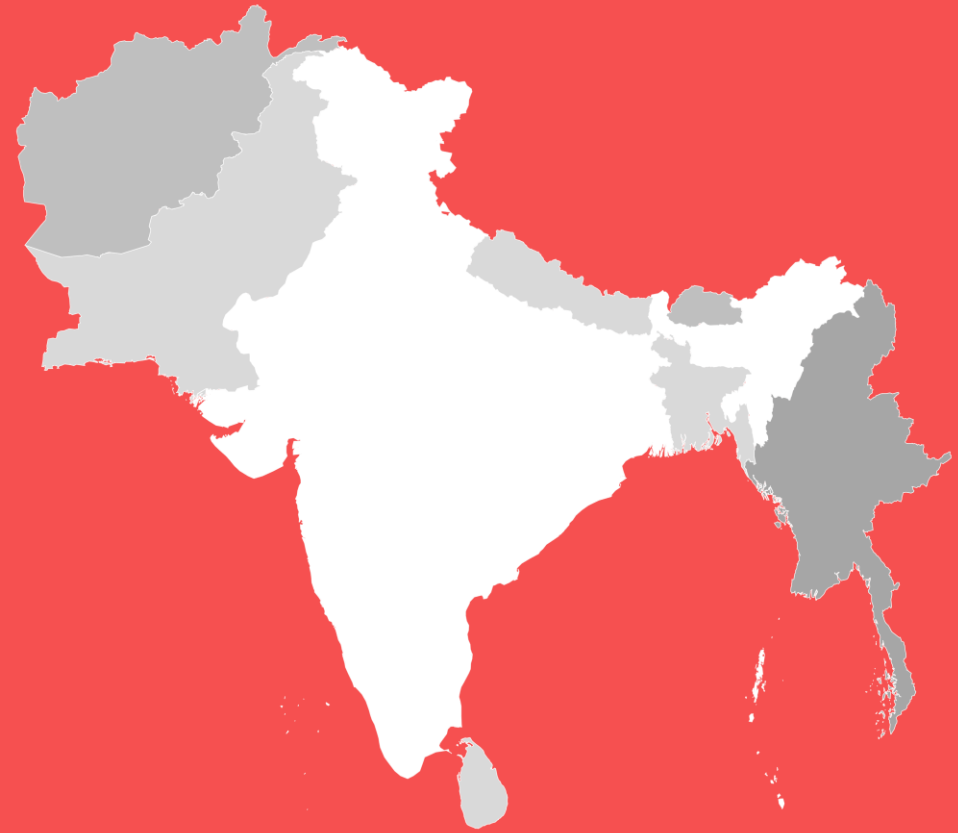


# Private Sector Engagement in Digital Healthcare across LMICs in South Asia using the Digital health maturity scale



# Background

## Increasing Health Inequities in LMICs

- The South Asian Region consists of several countries who are not only poor but also shoulder a significant proportion of the global disease burden.
- In LMICs, poor individuals suffer from illness due to inadequate access to necessities like food, water, and sanitation, which exacerbates exposure to infectious agents and limits medical care. Noncommunicable diseases also disproportionately impact this vulnerable population.

## Moving towards Sustainable healthcare

- These countries in South Asia are advancing their healthcare systems and fostering growth in Pharmaceutical sector, eHealth Innovations, Rural medical workforce supply, and Primary Health Care (PHC) Systems
- In the dynamic landscape of South Asia, LMICs are making significant strides towards sustainable healthcare. Their efforts center around two critical pillars: Universal Health Coverage (UHC) and the attainment of SDGs.

## Digital Revolution in Healthcare

- The healthcare sector is undergoing a profound transformation driven by digital technologies. Some key aspects of this revolution includes EHR, Telemedicine and Remote Consultations, Wearable devices, Health Information Exchange, Bigdata, AI, and Blockchain.
- Leveraging these technologies, healthcare systems in South Asian LMICs are expanding rapidly, resulting in an unprecedented volume of health-related data. This valuable data plays a pivotal role in clinical decision-making, empowering healthcare professionals to make informed choices

## Why Private sector involvement has become a necessity?

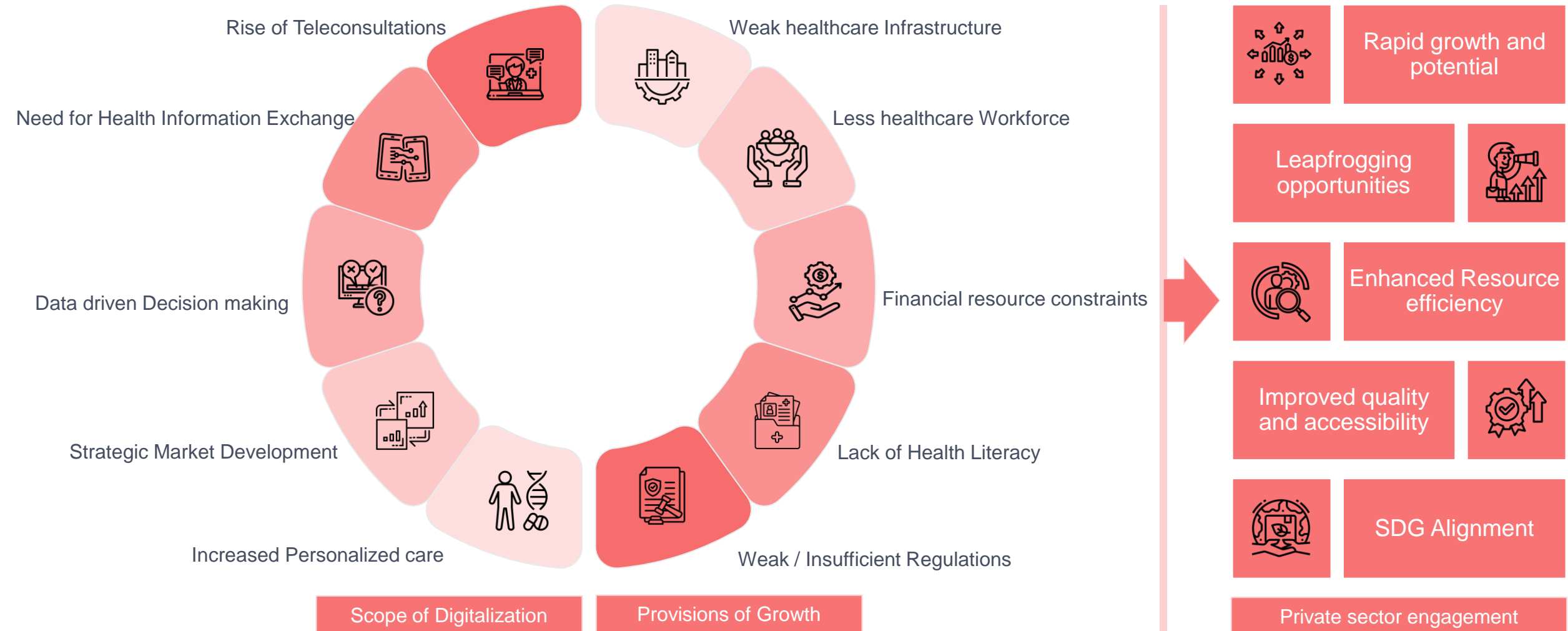
- Private sector organizations help to accelerate the digital transformation of health in a variety of ways, including encouraging innovation, enhancing efficiency, and scaling up successful solutions.
- The heavy investments of private sector in digital healthcare technologies in LMICs of South Asia.

## Significant Contributions of the Private Sector to Digital Health in LMICs

- Comparison of various aspects like Connectivity, Digital health Rules and Regulations, Digital public Infrastructure of Health, Digital Identification of People, Digital health strategies, and private players engagement.
- Status of these aspects are taken into consideration along with relevant examples of Public Private partnership and how these partnerships have enhanced the situation.

# Rationale

To explore diverse opportunities for Private Sector Engagement in Digital Healthcare across LMICs in South Asia

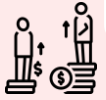


# Review of Literature



## Private sector engagement in Public Health systems – World Bank group

- The Literature review aims to highlight the impact of creating autonomous health superintendence would help improve the performance of the private sector: overseeing and supervising the service delivery of private providers and ensuring a strong regulatory environment within countries with high levels of out-of-pocket payments.



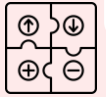
## Health systems in the BIMSTEC and other South Asian countries – Observer Research Foundation

- This research paper talks about the growing health disparity in these countries and the need for Digitization of these public health systems for the greater good.



## Private sector engagement policy - USAID

- This paper reveals the true definition of Private sector engagement and deals with its different operating models.



## Engaging the Private sector to eliminate Malaria in Asia Pacific – Asia Pacific Malaria elimination network

- This paper talks about several stages of involved and the strengths and considerations in the operating models of Private sector engagement.



## Understanding the Digital Health marketplace – Digital Square

- Lit. review on this page reveals the Digital Health Maturity model and how it is being used in mapping various the Digital health market maturity.



## Health Information systems strengthening resource centre – Monitor evaluation

- This page talks about various HIS strengthening models as well as their assessment tools.



## Assessment of national health information systems, rules and regulations related to them, and their status of Digitalization of various South Asian countries

- They provide a broader perspective on the current health trends and the digitalization of their National HIS systems.

# Objectives



To investigate the implementation of private sector engagements in digital healthcare in LMICs.



To identify the challenges faced by the private sector in engaging in digital healthcare in LMICs of South Asia.



To explore the opportunities of private sector engagements in digital healthcare in LMICs of South Asia.

# Methodology

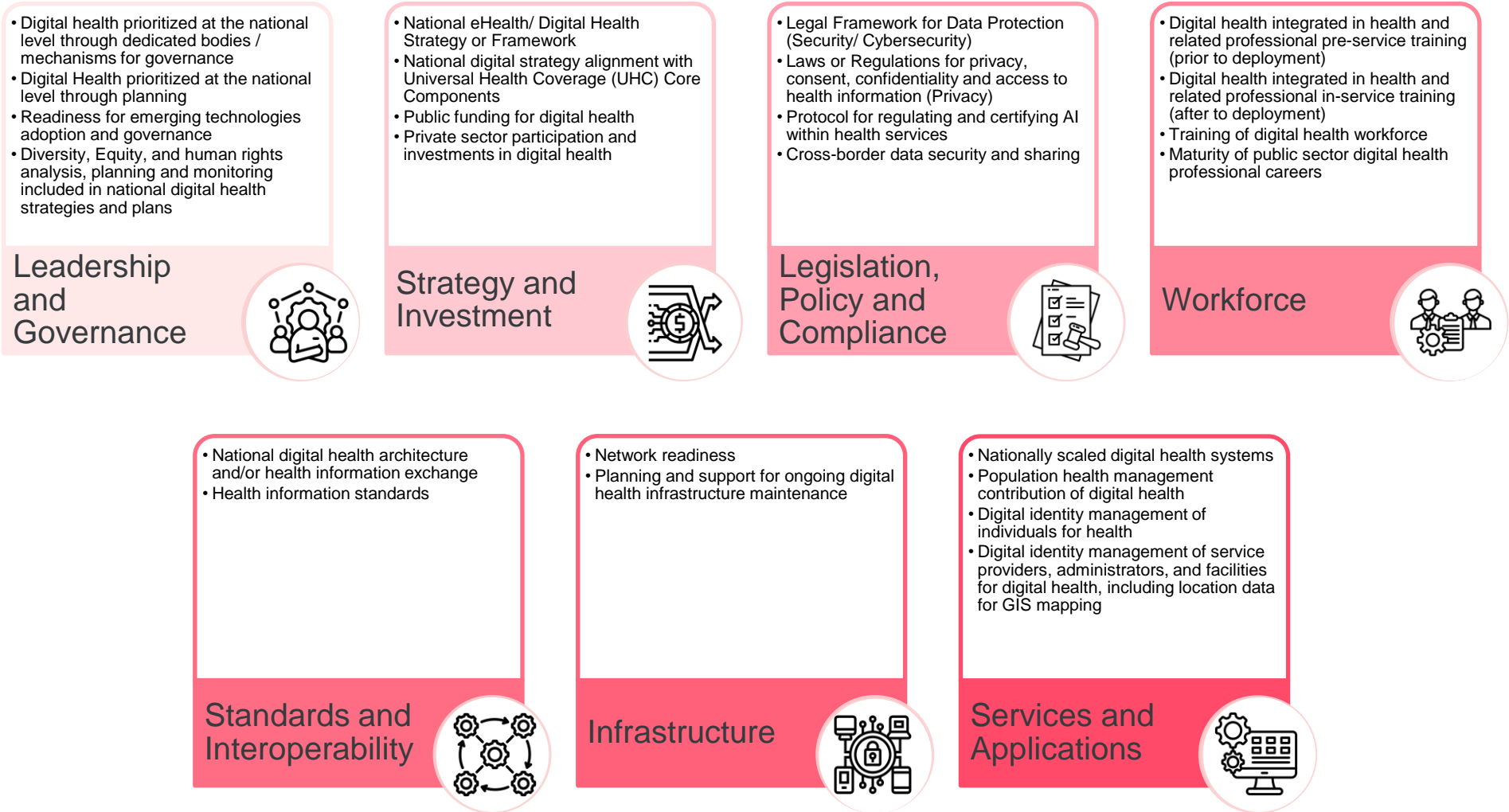
## The Digital Health Maturity Scoring Tool

A set of quantitative indicators including basic sociodemographic information, Information & Communication Technologies coverage, type of digital health interventions and quantitative information on exposure of digital health within workforce, which is divided into 7 main Thematic areas those including Leadership and Governance, Strategy and Investment, Legislation, Policy and Compliance, Workforce, Standards and Interoperability, Infrastructure, and Services and Applications.



# Methodology

These 7 Thematic indicators namely Leadership and Governance, Strategy and Investment, Legislation, Policy and Compliance, Workforce, Standards and Interoperability, Infrastructure, and Services and Applications. divided into 24 Sub-questions to access the whole scenario of the given Thematic area.



# Methodology

These Sub-questions were given ratings of 5 starting from 1 (very low performer) to 5 (highest performer). The Ratings from these Sub-questions are used to calculate the overall country average. This Country average is used to access a Scale from 1-5, which is called as the Digital Health Maturity Scale and the whole index used in the process is called as Digital Health Maturity Index.

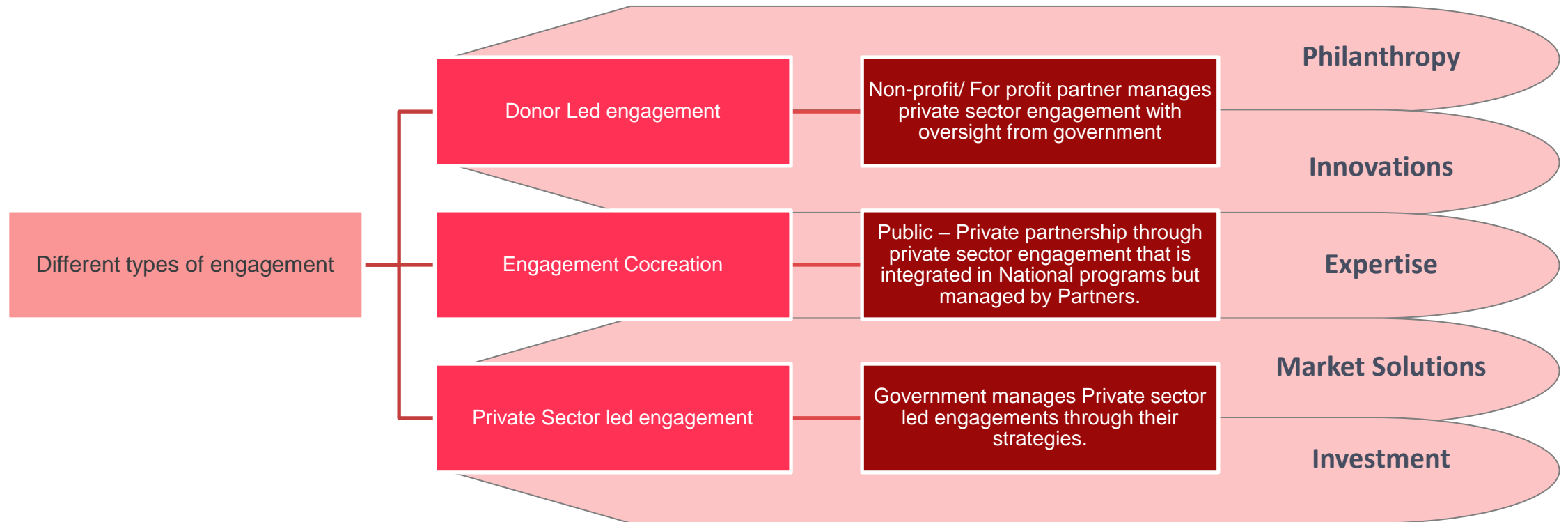
## Ratings across these 7 Sub-questions

- 1 – Nonexistent
- 2 – First Initial steps taken
- 3 – Existing but not in working order
- 4 – Existing, In working order but not implemented
- 5 – Fully developed and implemented



# What is Private Sector Engagement

Private sector engagement refers to the strategic collaboration between government entities and private companies to achieve common goals, particularly in areas like health, education, and infrastructure. The private sector is large and diverse and encompasses the part of the economy run by individuals and companies for profit and is not state-controlled. PSE spans a spectrum of different types of relationships, in which the private sector has an increasingly important role to play. This spectrum runs from public- or donor funded activities to activities in which private-sector entities take the lead, or primary role, in addressing challenges.

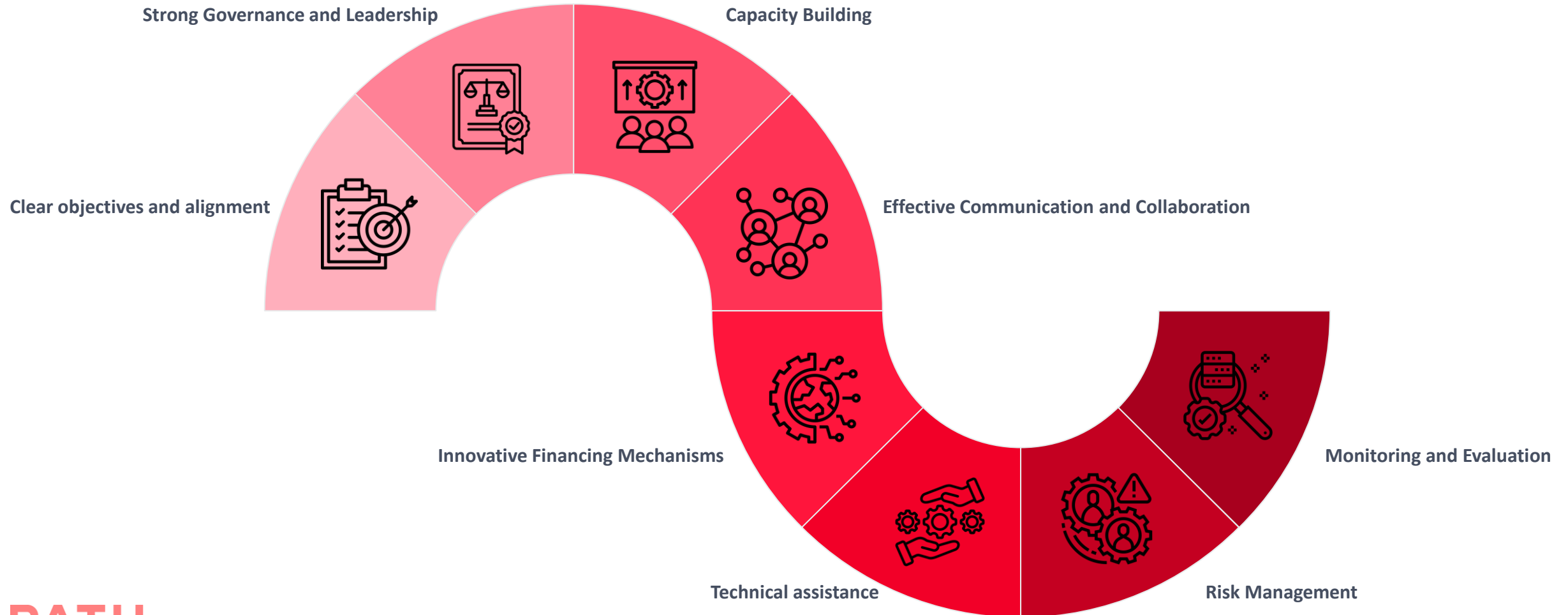


# Strengths and Considerations

Types	Workflow	Strengths	Considerations
Donor led engagement	Donor support for private sector engagement through non-profit or for-profit partners with relevant experience and capacity	<ul style="list-style-type: none"> <li>• Leverages donor procurement &amp; management expertise for optimal value</li> <li>• Leverages implementer expertise for optimal private sector coverage and results</li> <li>• Quality, equity &amp; impact potential high if resourced properly and done well</li> <li>• Does not divert government attention/resources</li> </ul>	<ul style="list-style-type: none"> <li>• High cost</li> <li>• Risk of independent programming – insufficient coordination with other players or government ownership.</li> <li>• Less likely to be sustained without continued external funding</li> <li>• Limited scale &amp; scalability</li> </ul>
Engagement Co-creation	Government supports private sector engagement through non-profit or for-profit partners with relevant experience and capacity i.e., public-private partnerships (with or without external financial support)	<ul style="list-style-type: none"> <li>• Optimal for integration with national programming and coordination</li> <li>• Scalable</li> <li>• Leverages implementer expertise for optimal private sector coverage and results, while not diverting government efforts</li> </ul>	<ul style="list-style-type: none"> <li>• High cost</li> <li>• Procurement &amp; sub-award management support may be needed to ensure transparent selection and oversight of qualified partners</li> <li>• Moderately likely to be sustained without continued external funding.</li> </ul>
Private sector led engagement	Government independently manages private sector engagement strategies	<ul style="list-style-type: none"> <li>• Lowest cost</li> <li>• Optimal for integration with national programming</li> <li>• Strengthen partnership between public and private health providers for malaria and beyond</li> <li>• Most likely to be sustained without external funding</li> </ul>	<ul style="list-style-type: none"> <li>• Risk of limited quality, equity, coverage, and impact given the limited experience governments have managing vs stewarding private sector engagement</li> <li>• Risk of diverting limited government personnel and resources away from other priorities</li> </ul>

# Building Blocks for Private sector engagement

Building blocks are the essential components that facilitate effective collaboration between the public and private sectors. These building blocks ensure that partnerships are strategic, sustainable, and impactful.



# Landscape profile of Afghanistan



## Socio-Demographic

- Total Area - 652,230 sq. km
- Total Population – 40.12 million (Male – 20.3 million, Female – 19.82 million)
- Urban Population – 7.6 million
- Literacy rate, adult total (% of people ages 15 and above) - 92.49%
- Age Dependency Ratio (% working age group) – 52.27%
- Total unemployment (% of total labor force) - 4.528%

## Health finance

- GDP - 14502158192.0904 USD
- GDP Growth (annual %) - -2.29%
- Current health expenditure (% of GDP) – 4.07%
- Domestic private health expenditure per capita (current US\$) – 62.9 USD
- Domestic general government health expenditure per capita (current US\$) – 2.68 USD
- External health expenditure per capita (current US\$) – 15.73 USD
- Out-of-pocket expenditure per capita (current US\$) – 62.79 USD

## Information, Communication and Technology

- Mobile cellular subscriptions – 31.2 million
- Individuals using the Internet (% of population) – 44.45%

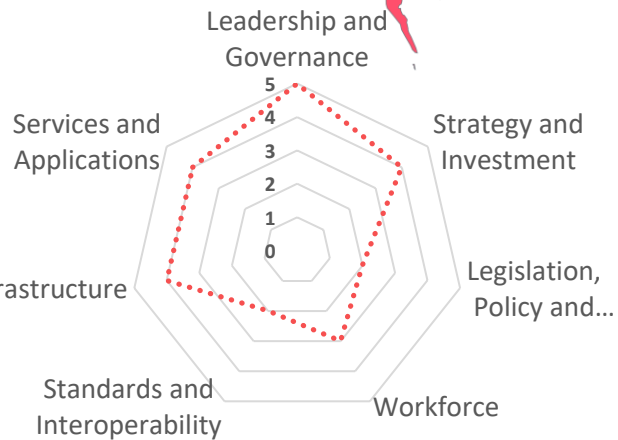
## Universal Health coverage

- UHC service coverage index - 67

## Ratings



# Landscape profile of Bangladesh



## Socio-Demographic

- Total Area - 148,460 sq. km
- Total Population – 168.6 million (Male – 82.70 million, Female – 85.98 million)
- Urban Population – 68.2 million
- Literacy rate, adult total (% of people ages 15 and above) – 76.36%
- Age Dependency Ratio (% working age group) – 46.61%
- Total unemployment (% of total labor force) - 5.27%

## Health finance

- GDP - 437415331040.994 USD
- GDP Growth (annual %) – 5.77%
- Current health expenditure (% of GDP) – 2.36%
- Domestic private health expenditure per capita (current US\$) – 43.73 USD
- Domestic general government health expenditure per capita (current US\$) – 9.7 USD
- External health expenditure per capita (current US\$) – 4.42 USD
- Out-of-pocket expenditure per capita (current US\$) – 42.28 USD

## Information, Communication and Technology

- Mobile cellular subscriptions – 1801 million
- Individuals using the Internet (% of population) – 38.91%

## Universal Health coverage

- UHC service coverage index – 52

## Ratings

# Landscape profile of Bhutan



## Socio-Demographic

- Total Area - 38,394 sq. km
- Total Population – 884,546 (Male – 457,665 , Female – 426,881)
- Urban Population – 392,297
- Literacy rate, adult total (% of people ages 15 and above) – 72.1%
- Age Dependency Ratio (% working age group) – 38.72%
- Total unemployment (% of total labor force) - 3.126%

## Health finance

- GDP - 2898227713.2 USD
- GDP Growth (annual %) – 5.21%
- Current health expenditure (% of GDP) – 3.84%
- Domestic private health expenditure per capita (current US\$) – 24.71 USD
- Domestic general government health expenditure per capita (current US\$) – 69.16 USD
- External health expenditure per capita (current US\$) – 26.55 USD
- Out-of-pocket expenditure per capita (current US\$) – 22.63 USD

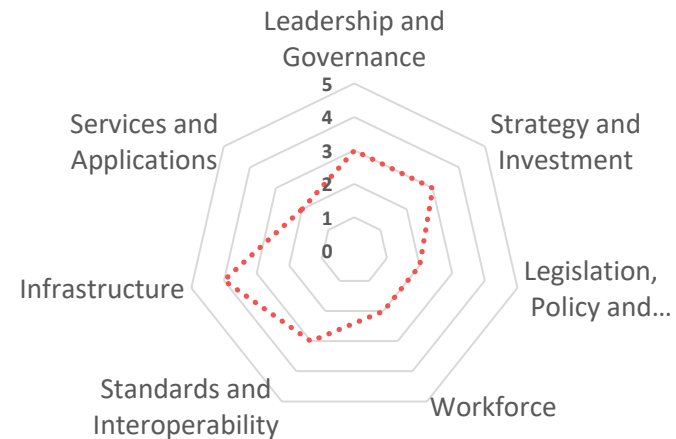
## Information, Communication and Technology

- Mobile cellular subscriptions – 742,493
- Individuals using the Internet (% of population) – 85.6%

## Universal Health coverage

- UHC service coverage index – 60

## Ratings



# Landscape profile of India



## Socio-Demographic

- Total Area - 3,287,263 sq. km
- Total Population – 1,409,128,296 (Male – 725,784,825, Female – 683,343,471)
- Urban Population – 570,316,495
- Literacy rate, adult total (% of people ages 15 and above) – 76.36%
- Age Dependency Ratio (% working age group) – 46.61%
- Total unemployment (% of total labor force) - 5.248%

## Health finance

- GDP - 437415331040.9 USD
- GDP Growth (annual %) – 5.77%
- Current health expenditure (% of GDP) – 2.36%
- Domestic private health expenditure per capita (current US\$) – 43.73 USD
- Domestic general government health expenditure per capita (current US\$) – 9.78 USD
- External health expenditure per capita (current US\$) – 4.42 USD
- Out-of-pocket expenditure per capita (current US\$) – 42.28 USD

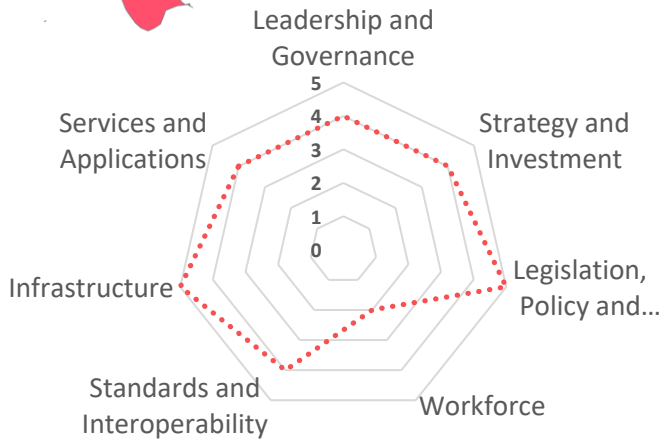
## Information, Communication and Technology

- Mobile cellular subscriptions – 180198049
- Individuals using the Internet (% of population) – 38.91%

## Universal Health coverage

- UHC service coverage index – 52

## Ratings



# Landscape profile of Maldives



## Socio-Demographic

- Total Area - 298 sq. km
- Total Population – 388,858 (Male – 197,739, Female – 191,119)
- Urban Population – 163,203.7
- Literacy rate, adult total (% of people ages 15 and above) – 97.86%
- Age Dependency Ratio (% working age group) – 36.65%
- Total unemployment (% of total labor force) - 2.31%

## Health finance

- GDP - 6600000000 USD
- GDP Growth (annual %) – 3.97 %
- Current health expenditure (% of GDP) – 10.03%
- Domestic private health expenditure per capita (current US\$) – 161 USD
- Domestic general government health expenditure per capita (current US\$) – 744 USD
- External health expenditure per capita (current US\$) – 134 USD
- Out-of-pocket expenditure per capita (current US\$) – 149 USD

## Information, Communication and Technology

- Mobile cellular subscriptions – 715,188
- Individuals using the Internet (% of population) – 85.76%

## Universal Health coverage

- UHC service coverage index – 61

## Ratings





# Landscape profile of Myanmar



## Socio-Demographic

- Total Area - 652,230 sq. km
- Total Population – 40.12 million (Male – 20.3 million, Female – 19.82 million)
- Urban Population – 7.6 million
- Literacy rate, adult total (% of people ages 15 and above) - 92.49%
- Age Dependency Ratio (% working age group) – 52.27%
- Total unemployment (% of total labor force) - 4.528%

## Health finance

- GDP - 84356860421.13 USD
- GDP Growth (annual %) - -2.29%
- Current health expenditure (% of GDP) – 4.07%
- Domestic private health expenditure per capita (current US\$) – 82 USD
- Domestic general government health expenditure per capita (current US\$) – 77 USD
- External health expenditure per capita (current US\$) – 7 USD
- Out-of-pocket expenditure per capita (current US\$) – 73 USD

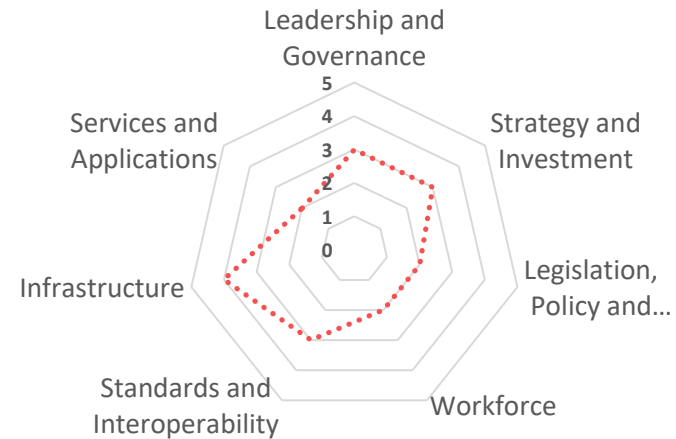
## Information, Communication and Technology

- Mobile cellular subscriptions – 31.2 million
- Individuals using the Internet (% of population) – 44.45%

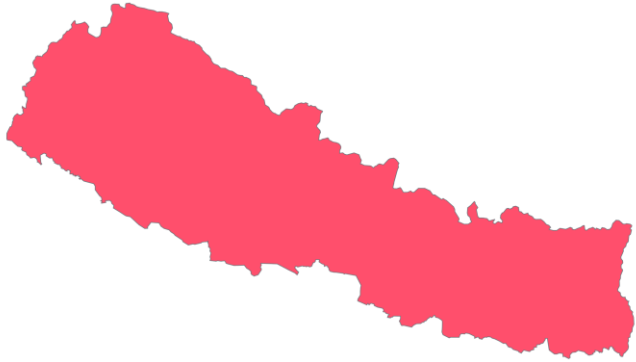
## Universal Health coverage

- UHC service coverage index – 67

## Ratings



# Landscape profile of Nepal



## Socio-Demographic

- Total Area - 147,181 sq. km
- Total Population – 31,122,387 (Male – 15,240,643, Female – 15,881,744)
- Urban Population – 6818915
- Literacy rate, adult total (% of people ages 15 and above) – 71.15%
- Age Dependency Ratio (% working age group) – 53.87%
- Total unemployment (% of total labor force) - 5.38%

## Health finance

- GDP - 40908073366.8 USD
- GDP Growth (annual %) – 1.95%
- Current health expenditure (% of GDP) – 5.42%
- Domestic private health expenditure per capita (current US\$) – 35 USD
- Domestic general government health expenditure per capita (current US\$) – 22 USD
- External health expenditure per capita (current US\$) – 8 USD
- Out-of-pocket expenditure per capita (current US\$) – 33 USD

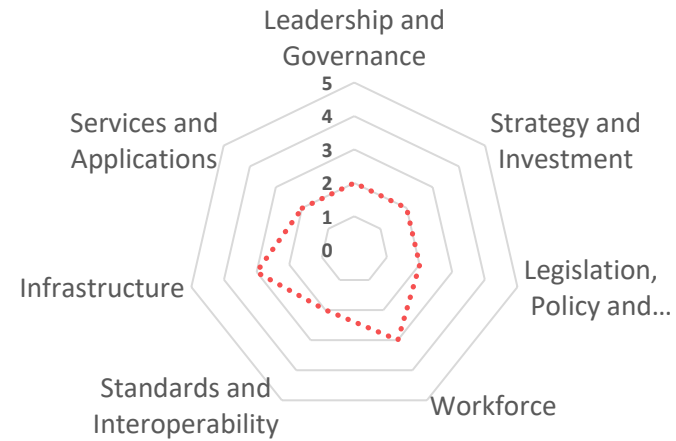
## Information, Communication and Technology

- Mobile cellular subscriptions – 38213000
- Individuals using the Internet (% of population) – 51.63%

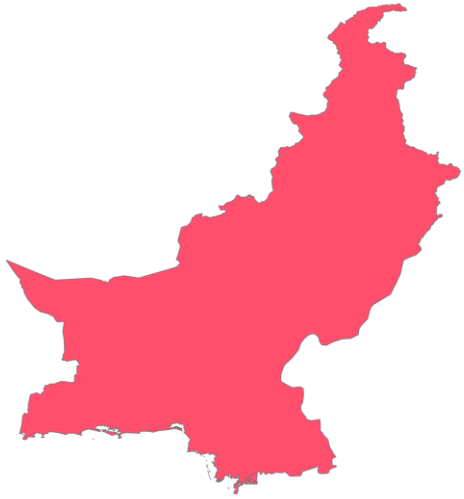
## Universal Health coverage

- UHC service coverage index – 54

## Ratings



# Landscape profile of Pakistan



## Socio-Demographic

- Total Area - 796,095 sq. km
- Total Population – 252,363,571 (Male – 128,387,797, Female – 123,975,774)
- Urban Population – 95,999,102.5
- Literacy rate, adult total (% of people ages 15 and above) - 92.49%
- Age Dependency Ratio (% working age group) – 68.2%
- Total unemployment (% of total labor force) - 4.528%

## Health finance

- GDP - 338368455317.8 USD
- GDP Growth (annual %) - -0.0045%
- Current health expenditure (% of GDP) – 2.91%
- Domestic private health expenditure per capita (current US\$) – 26.13 USD
- Domestic general government health expenditure per capita (current US\$) – 12.50 USD
- External health expenditure per capita (current US\$) – 4.45 USD
- Out-of-pocket expenditure per capita (current US\$) – 24.77 USD

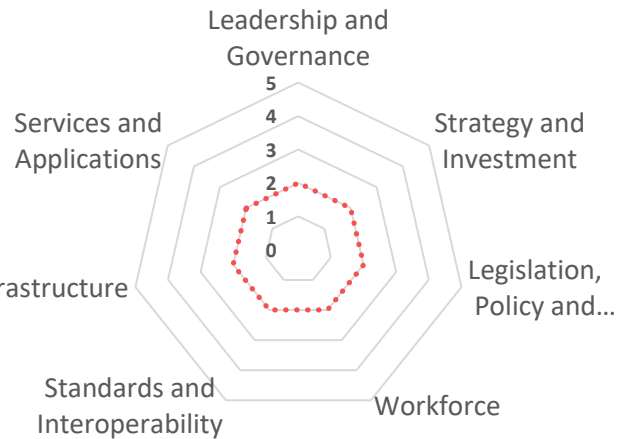
## Information, Communication and Technology

- Mobile cellular subscriptions – 192,779,544
- Individuals using the Internet (% of population) – 21.03%

## Universal Health coverage

- UHC service coverage index – 45

## Ratings



# Landscape profile of Sri Lanka



## Socio-Demographic

- Total Area - 65,610 sq. km
- Total Population – 21,982,608 (Male – 10,642,043, Female – 11,340,565)
- Urban Population – 4223078.8
- Literacy rate, adult total (% of people ages 15 and above) - 92.49%
- Age Dependency Ratio (% working age group) – 52.27%
- Total unemployment (% of total labor force) - 4.528%

## Health finance

- GDP - 84356860421.13 USD
- GDP Growth (annual %) - -2.29%
- Current health expenditure (% of GDP) – 4.07%
- Domestic private health expenditure per capita (current US\$) – 82 USD
- Domestic general government health expenditure per capita (current US\$) – 77 USD
- External health expenditure per capita (current US\$) – 7 USD
- Out-of-pocket expenditure per capita (current US\$) – 73 USD

## Information, Communication and Technology

- Mobile cellular subscriptions – 31237303
- Individuals using the Internet (% of population) – 44.45%

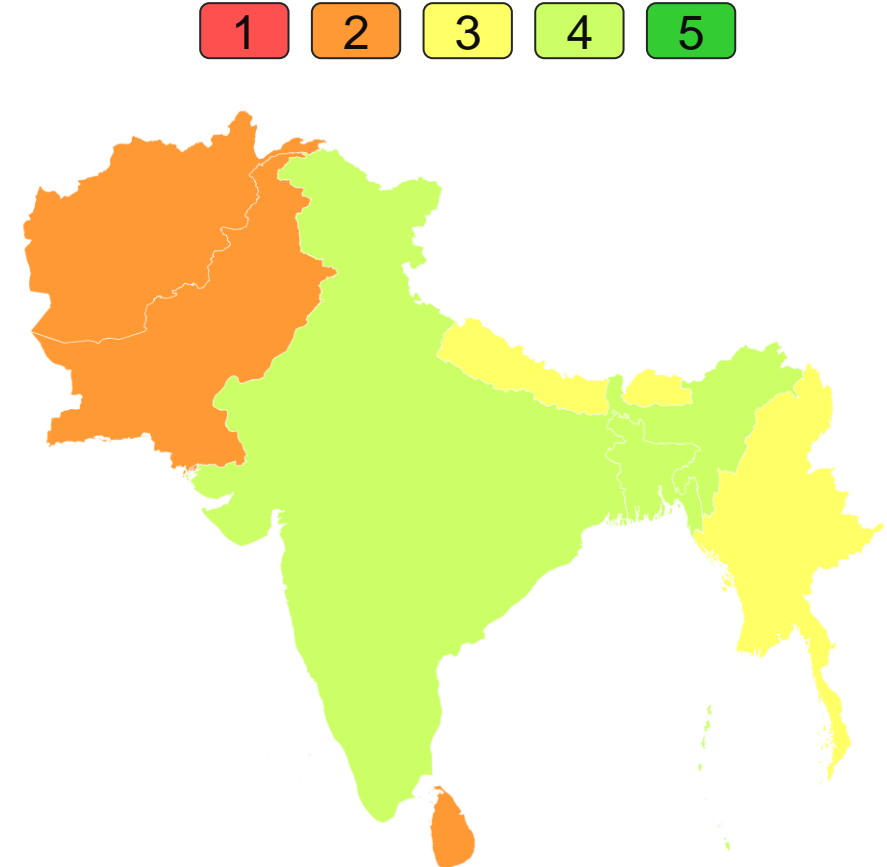
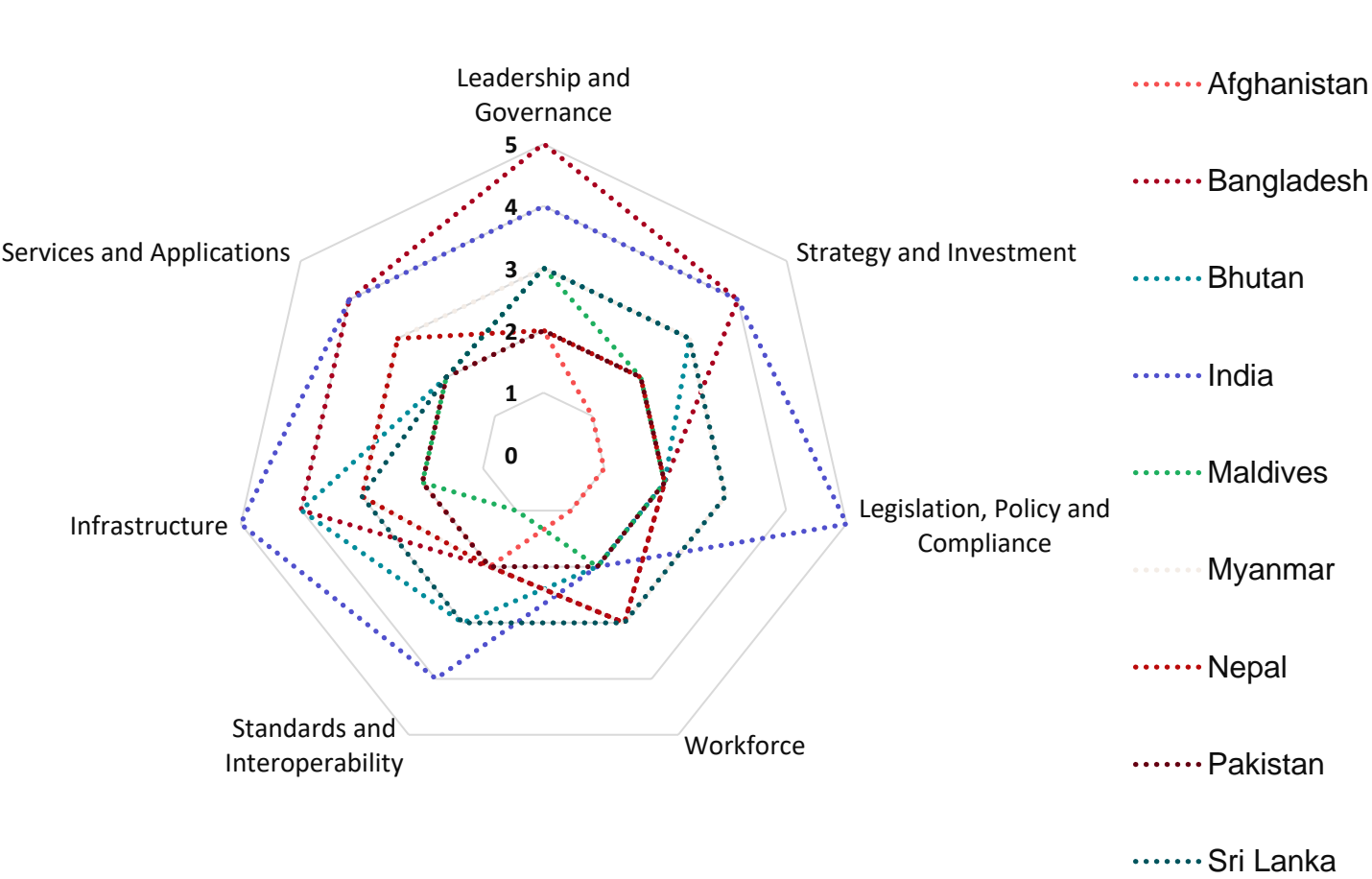
## Universal Health coverage

- UHC service coverage index – 67

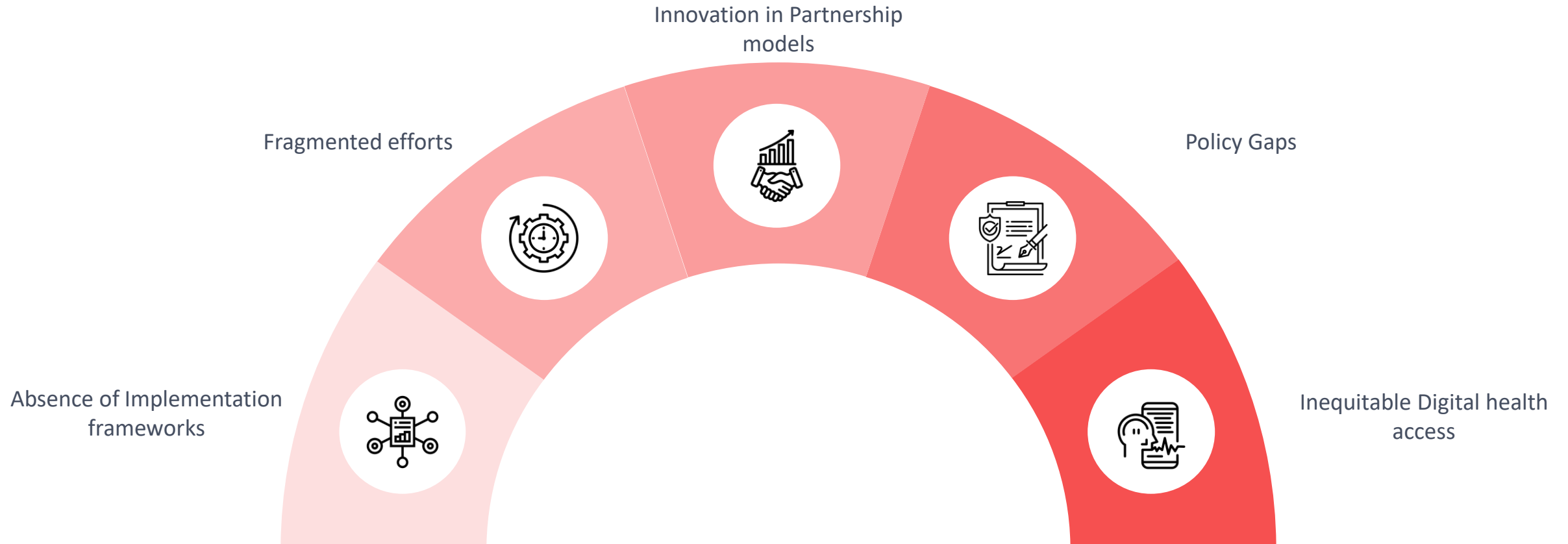
## Ratings



# Analysis



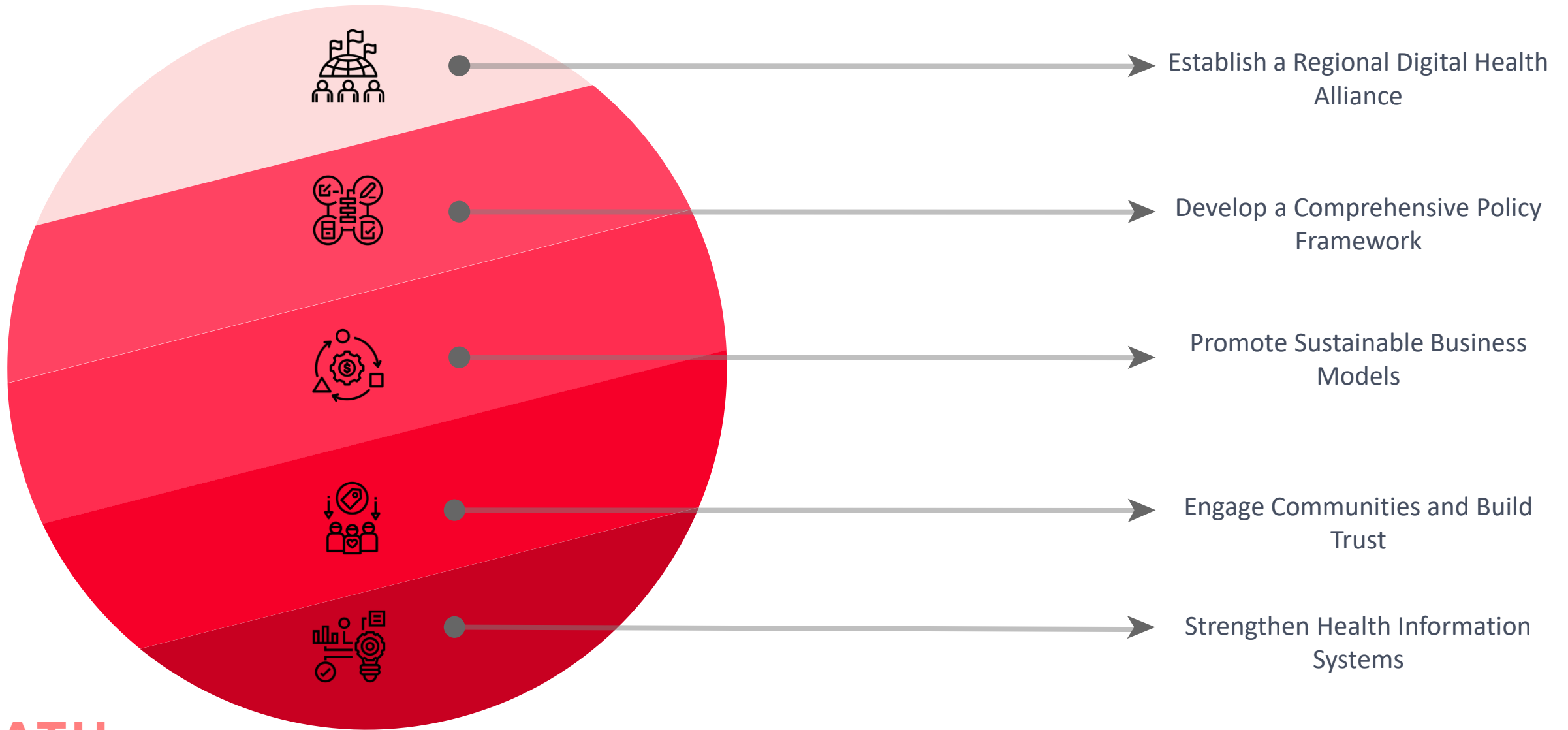
# Gap Identification



# Interventions and Recommendations



# Way Forward!





# Successful examples from over the world

Countries	Examples
Thailand	HealthAtHome, a digital health startup offering home healthcare services, has collaborated with the National Health Security Office (NHSO) to provide remote care for elderly and chronically ill patients.
India	PATH, an NGO aiding in Public health domain , has collaborated with MoHFW of India for ABDM, Microsite
Sri Lanka	The Ministry of Health partnered with REDtone MEX, a subsidiary of Berjaya Corporation, Malaysia, and Hinacom Software and Technology, China, to introduce cutting-edge AI-based technology in 20 main government hospitals.
Bangladesh	Grameenphone, the largest telecommunications provider in Bangladesh, has partnered with the Directorate General of Health Services (DGHS) to launch various digital health initiatives.
Malaysia	Pharmaniaga, a leading pharmaceutical company, has partnered with the Ministry of Health (MOH) to implement the Integrated Hospital Information System (IHIS).
Indonesia	The Health Policy Plus (HP+) project, funded by USAID and implemented by Palladium, has partnered with the Ministry of Health to build the foundation for PPPs in the health sector.
Japan	Shionogi, a Japanese pharmaceutical company, partnered with Akili Interactive, a US-based digital therapeutics company, to develop and commercialize digital therapeutics for cognitive disorders.
Vietnam	PATH collaborated with Vietnam's National Expanded Program on Immunization, the Ministry of Health, and Viettel (one of the largest telecommunications groups in Vietnam) to create the National Immunization Information System.
Africa	PATH partnered with the World Health Organization (WHO) and the Serum Institute of India to develop and introduce the MenAfriVac vaccine in Africa's meningitis belt.
Ireland	eHealth Ireland collaborated with IBM Watson Health to develop a national electronic health record (EHR) system.
Germany	The German Federal Ministry of Health has worked with Siemens Healthineers on various digital health initiatives, including the development of digital diagnostic tools and telemedicine platforms.

# Global Presence and Impact of PATH

A global nonprofit improving public health

27 offices in 24 countries



**70+ countries**  
where PATH is improving health



**7 million lives saved**  
through PATH-pioneered malaria control



**900 million people**  
reached with fortified rice



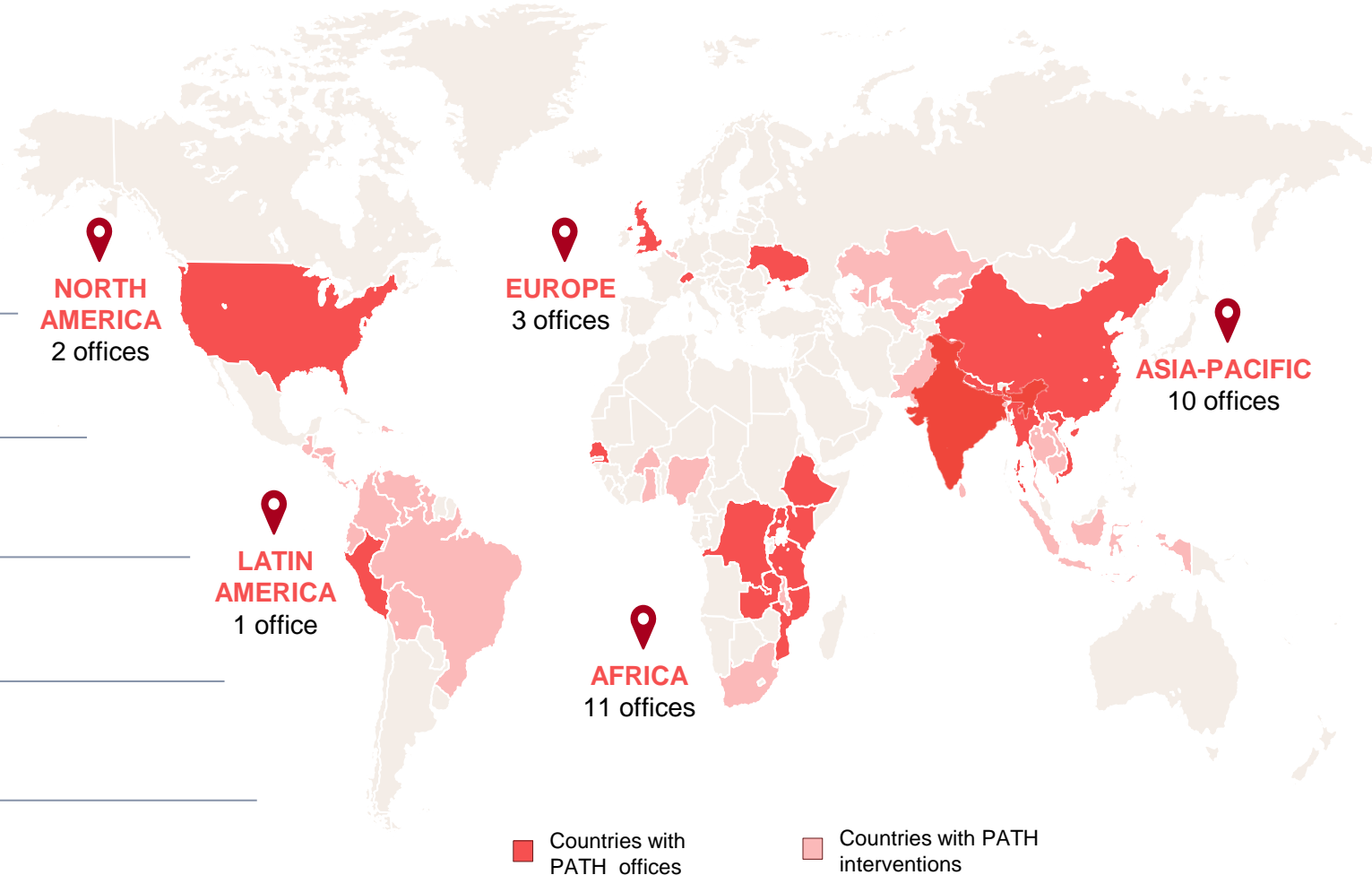
**7 billion**  
vaccine vial monitors



**3200 public health professionals**  
globally across 70+ countries



**World's first freeze-preventive cold box**  
evaluation underway in Nepal



# PATH Partners

