

# Road Towards Bangladesh 2030: Readiness and Priorities for Digital Transformation












## Bangladesh Miracle Series Webinar

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# Comparison with Neighbouring

	Bangladesh		India	
	2014	2021	2014	2021
GDP	172 billion	310 billion (growth 104% or more)	2.04 trillion	2.8 trillion (growth 37%)
Literacy	61%	75% (growth of 23% )	74%	77%
Unemployment	4.39%	5.3%	5.60%	6.9%

		 Bangladesh	 Pakistan
Per Capita Income		2064 \$	1130 \$
GDP Growth During the Pandemic		5.2	0.4
Reserve		42 billion	20.8 billion
Average Lifetime		72 Years	67 Years
Child Mortality Rate Under 5 Years		25 per thousand	59 per thousand
Primary Education		98%	72%
Private Bank		44	22

# Moving from 'Business as Usual' to 'Leapfrogging Mindset' Facilitated by Vision 2021 Digital Bangladesh Agenda

	2008	2021
Poverty, income	40%, \$650	21%, ~\$2,227
Electricity	27%	95+%
Internet	<1%	65% (100+ times)
Mobile	20 mil	174+ mil (8 times)
Digital Services	< 10	1,000+
One-stop Centres	2	7,000+
Govt. websites	100	1
CIO	56 e-Gov Focal Points	1,000 Chief Innovation Officers leading Innovation Teams

# Impact Measured in TCV Reduction Mandated by Annual Performance Agreement

## SAVED BY CITIZENS

DAYS **1.92**  
BILLION  
SAVED

USD **8.14**  
BILLION  
SAVED

**1.004**  
BILLION  
VISITS

**85%**  
Time

**63%**  
Cost

**63%**  
Visits



**Environment  
Protection**



**Modern  
Agriculture**



**Energy  
Security**



**Better  
Healthcare**



**MY VILLAGE  
MY TOWN**



**Technology in  
Industry &  
Commerce**

**Internet  
for All**



**Developed  
Transport  
System**





OSS Portal Digital Services  
OSS/NSW

2,000+



Rule of Law



Paperless Office



Accountable Administration



GOOD GOVERNANCE



Single ID



Integrity & Grivence Redress

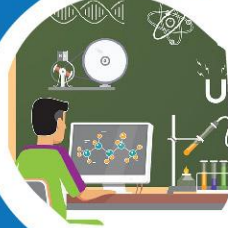


Participatory Government





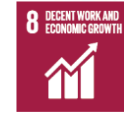
**Innovative  
Research**



**Demand-Driven  
Human Resource  
Development**



**Employment  
& Entrepreneurship**



**Eradication of  
Terrorism  
& Drugs**



**POWER OF  
YOUTH**



**Encouraging  
Culture &  
Sports**



**Safe  
Migration**



**Spirit of  
Liberation  
War & Social  
Values**



# STRATEGIC DIRECTIONS IN THE 8FYP

1

Leveraging Line Ministry Centric Digital Economy Opportunities

2

Adopting the Five Helix Approach

3

**Establishing cooperation between Industry, Academia, and Government**

4

**Intellectual Asset and Local and Global Market Centric Start-up Success Creation and Youth Empowerment while leveraging on local opportunities**

5

Leveraging of Redesign Capability for Creating Success in High-tech Devices and Innovation

6

Turning high-tech Parks into Nucleus of Digital, Knowledge and Innovation Economy

7

**4IR Productive Knowledge Acquisition**



# STRATEGIC DIRECTIONS FOR DIGITAL ECONOMY IN THE 8FYP

Digital Economy for Leveraging Fourth Industrial Revolution

ICT for Greater Transparency, Good Governance, and Service Delivery

Ensuring Equitable and Fair Share of Bangladesh in Global Digital Value Chain

Leveraging Digital Economy for Attaining Sustainable Development Goals

Intensifying Effectiveness and Efficiency, and Encouraging Private Investment

Developing the Culture and National Innovation System for Leveraging Knowledge Economy

Harnessing the power of ICT for revival from the effect of COVID 19 and for adaptability to shocks arising from health crisis, natural disaster, climate change, or global shift in competitive landscape

# Broadband has become a **LIFELINE** for all citizens during the hike of **COVID-19**



- **65%** of secondary and **80%** of primary level students **DO NOT** have **affordable and reliable access to internet**
- **43M Students** and **1M Teachers** need internet access for online or remote learning
- COVID-19 has accelerated the use of **telehealth services up to 300%**
- The e-commerce market is currently worth **\$2bn** with **2000** e-commerce sites
- Bangladesh has more than **650,000 IT freelancers**, the **2<sup>nd</sup>** largest freelancing community (**~16%**) in the world, making more than **\$200m** annually
- There are **32.3m** active MFS accounts and average daily transactions of **\$2.1bn.** (GSMA)

*To ensure equity in accessing education, healthcare, commerce, finance and government services broadband equity is a must*

# Ensuring digital access: Service at Citizens' Doorsteps

## Digital Centre: Bridging the Gap Between Digital Services and Analogue Citizens

Reducing  
TCV

Establishing  
Gender Parity

7,600



Digital Centres

567.57M+



Services  
provided

270+



Type of services

15,200

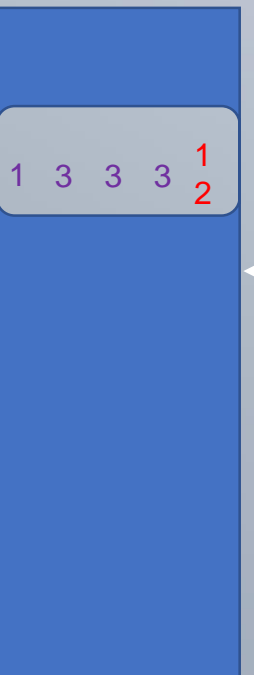


Entrepreneurs



# Repurposing National Call Center 333

## Phone-based Services to Mitigate Digital Gap



0 get government information and services and remedy social problems;

1 get medical advice, post-vaccine services and information on health;

2 get online information and government land service;

3 get relief and other services to meet COVID crisis;

4 lodge a complaint to the appropriate authority for redress of grievances about citizens service;

5 buy medicine or daily necessities;

Total Calls  
**36 M+**





# Policy legos

## Accessibility by Citizens

- Direct access
  - Mobile-first strategy
  - Internet
- Assistive access
  - Digital Centres
  - 333
- Disability-friendly
- Massive communication campaign



## Capacity of Service Providers

- Citizen-centric thinking and design
- Institutionalization of e-Services with the Innovation Teams in every Ministry/Directorate
- Civil Service 2041 leadership development

## Digitization Tools and Techniques

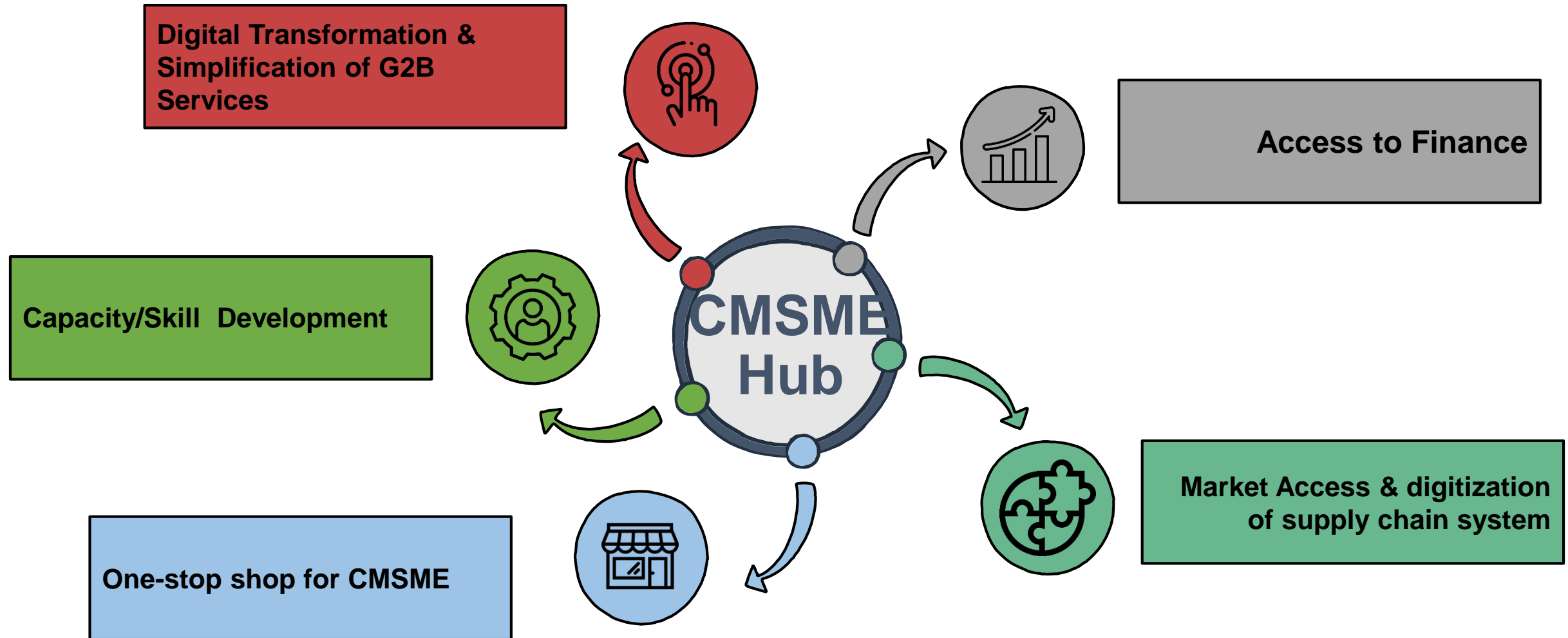
- Rapid Digitization (50 services/month)
- Custom Digitization (50 services/year)
- Artificial Intelligence
- Blockchain

## Foundation Lego Blocks

- Citizen's Profile with digital ID
- Workflow & consent
- MyLocker
- FinTech
- Data sharing and privacy
- Digital registries
- e-Marketplaces
- e-Learning

# Leaving no Business Behind

## CMSME Hub for Digital Acceleration



# Top 10 4IR Technologies for the Earth

Name of The Technology	Details	Relevance in Bangladesh
Advanced Materials	Materials with significantly improved functionality, including lighter- weight, stronger, more conductive materials, e.g. nano-materials	Advanced materials extend the natural life of structures, with enhanced protections, while reducing material waste. Can be used in constructing bridges, clothes, etc.
Cloud Technology including big data	Enables the delivery of computer applications and services over the internet reducing storage and computer power needs.	Complete digitalization of the paperwork can be done through cloud computing and big data. All digital systems will move to cloud. All decisions will use big data. Most companies use only 12% of their data.
Autonomous Vehicles including drones	Enabled by robots, these are vehicles that can operate and navigate with little or no human control.	Road mishaps can be reduced and emergency medical supplies can be transported in remote areas through drones.
Synthetic Biology	Inter disciplinary branch of biology applying engineering principles to biological systems.	Unprecedented opportunities for impact is really in agricultural and health sectors. The ability to make proteins and fatty acids - the basic components of food products - is really powerful. New organs can be synthesized.
Virtual and Augmented Reality	Computer generated simulation of a three dimensional image overlaid to physical world.	AR and VR can be used in entertainment industry, education, military, medical sector, construction Industry etc.

# Top 10 4IR Technologies for the Earth

Name of The Technology	Details	Impact in BD
Artificial Intelligence	Software Algorithms that are capable of performing tasks that normally require human intelligence.	Some specific sectors, such as services, transportation, education, agriculture, health, and environment, can be benefitted through the effective implementation of AI in Bangladesh. Bangladesh now has a National AI Strategy.
Robots	Electro mechanical machines that automate, augment or assist human activities by a state of instructions.	Robots can reduce human involvement including child labour in industries and emergency situations which are biologically harmful for human. Robots will increase productivity in lesser time.
Blockchain	Distributed electronic ledger that uses software algorithm to record and confirm transactions with reliability and anonymity.	Blockchains can be used in the banking system of Bangladesh to prohibit money laundering. All documents such as land records, education certificates can use blockchain to prevent tampering.
3D Printing	Additive manufacturing techniques used to create three dimensional objects based on 'printing' successive layers of materials.	3D printing can be used for educational purpose, safe construction purpose and for medical services in Bangladesh.
Internet of Things	Network of objects embedded with sensors, software, network connectivity that can collect and exchange data over the internet and enable smart solutions.	Internet of Things can be used in agriculture, tourism and hospitality sector, traffic monitoring, health sector etc.



# A Study by a2i on 4<sup>th</sup> Industrial Revolution



5 Major Industry Sectors	Jobs at risk By 2040	Emerging Jobs
RMG & Textiles	60% (27 lakh)	<ul style="list-style-type: none"> <li>✓ 3D printer operator</li> <li>✓ Workers with skills on automation and robotics control</li> <li>✓ experts on modeling and simulation</li> </ul>
Furniture	60% (15 lakh)	<ul style="list-style-type: none"> <li>✓ Ready-to-Assemble (RTA) designer</li> <li>✓ Industrial robotics control</li> </ul>
Agro-Food	40% (6 lakh)	<ul style="list-style-type: none"> <li>✓ Food technologists</li> <li>✓ Machinery Maintenance</li> <li>✓ Automate packaging operator</li> <li>✓ Industrial robotics control</li> </ul>
Leather	35% (1 lakh)	<ul style="list-style-type: none"> <li>✓ Footwear design simulation</li> <li>✓ CAD CAM Training</li> <li>✓ Pattern Making</li> </ul>
Tourism & Hospitality	20% (6 lakh)	<ul style="list-style-type: none"> <li>✓ Digital marketing</li> <li>✓ Data analytics</li> <li>✓ Cyber security</li> </ul>
<b>Total</b>	<b>55 lakh</b>	

# National Intelligence for Skills, Education, Employment and Entrepreneurship (NISE<sup>3</sup>)



## Incorporating new organizations

- 20+ Ministries
- 40+ Industry Association

# Challenges

## Skills Mismatch

Emphasizing research and entrepreneurship in tertiary level

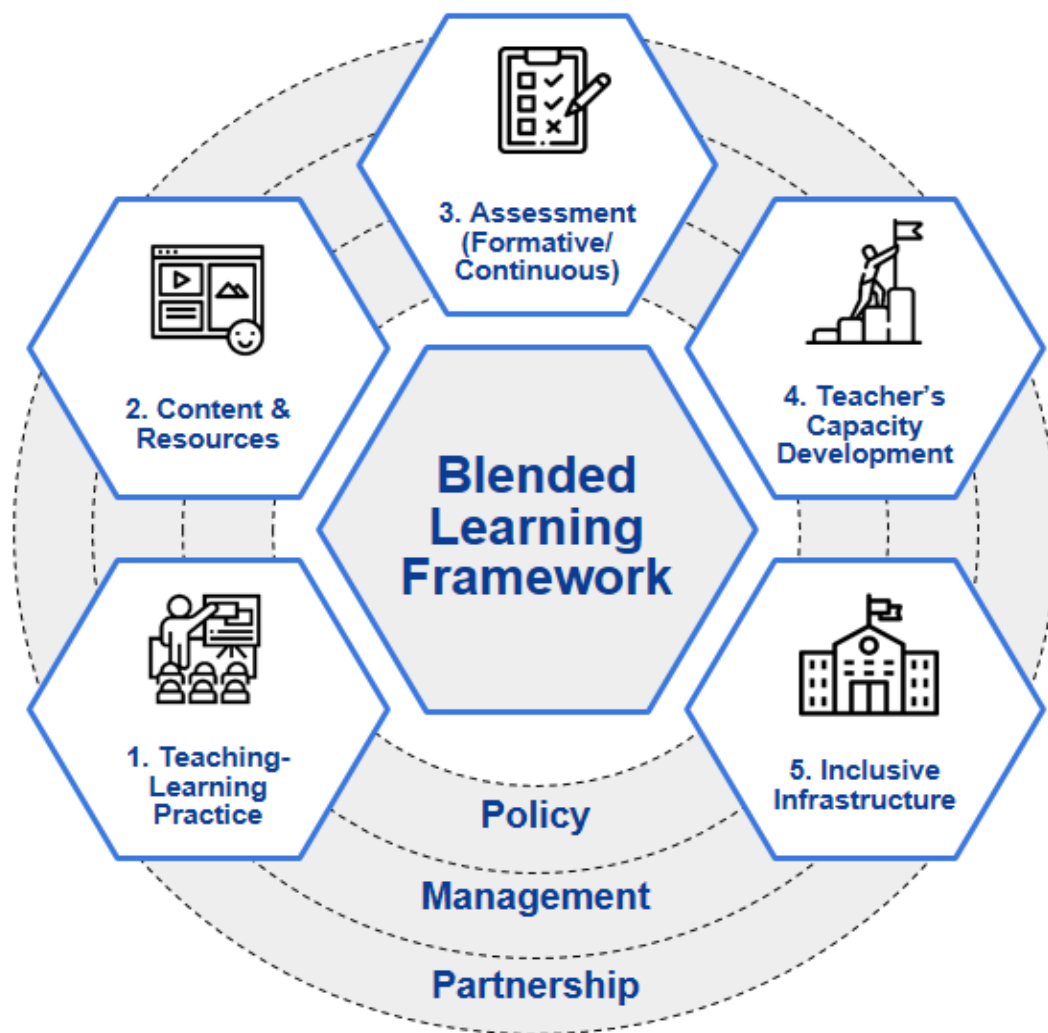
Promoting STEM education in tertiary level

Strengthening Vocational training based education

# Solutions

- Develop matchmaking platform connecting Youth, Skills Providers, Entrepreneurs
- Introduce change in policy to emphasize research, entrepreneurship in tertiary level
- Conduct behavior change campaigns to change perspective towards Vocational Education

# Blended Learning Framework



## KEY ELEMENTS:

### 1. Teaching-Learning Practice

- Prepare learners for the future with 21<sup>st</sup> century problem-solving skills through synchronous and asynchronous interactions

### 2. Content & Resources

- Accessible, affordable, reusable, interactive, and personalized educational contents and resources for all.

### 3. Assessment (Formative/Continuous)

- Real-time, performance based formative assessment through use of AI-driven tools

### 4. Teacher's Capacity Development

- Blended & personalized Continuous Professional Development opportunities to prepare for Education 4.0

### 5. Inclusive Infrastructure:

- Digital Friendly Physical Environments:
- Open, inclusive and accessible learning Spaces for all

## ENABLING FACTORS

### Policy

- Comprehensive and practitioner-driven policy

### Management

- Real-time and data driven monitoring and mentoring

### Partnership

- Public-private-people partnership



# *Evidence-based Policymaking*

- Collective-19 Collective Intelligence System
- SDG Tracker
- My Constituency
- Open Government Data

# COVID-19 Collective Intelligence System

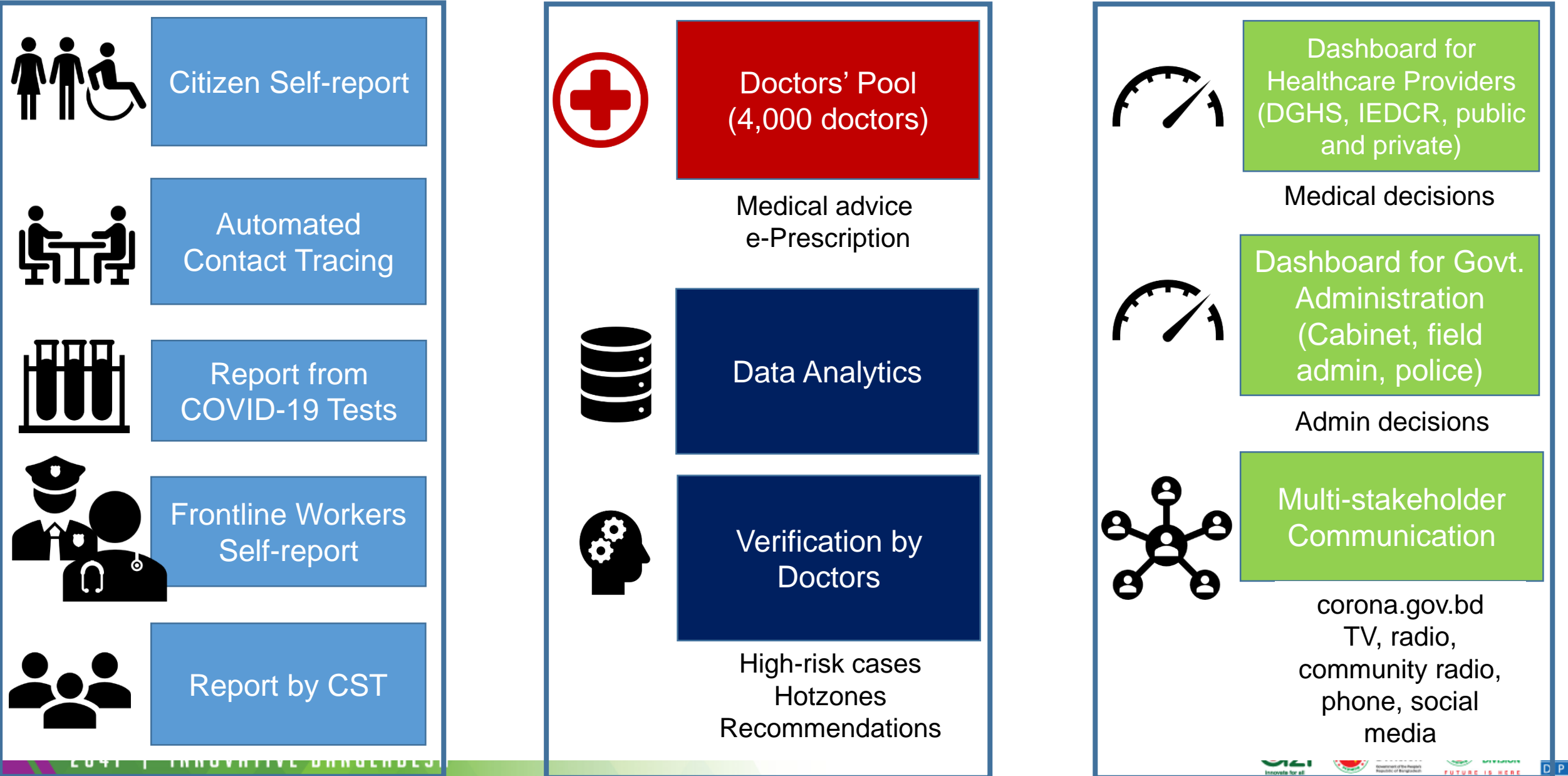
Data collection



Data analysis



Decision making



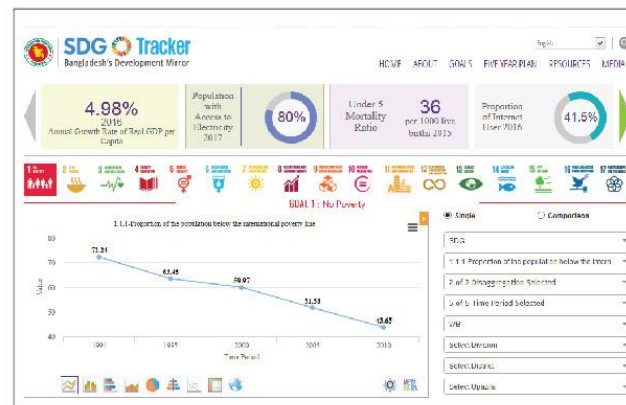
# Data-driven Decision Making



## OPEN GOVERNMENT

### DATA

Integration of agency silos to create a universally accessible data platform for citizens, researchers, private and public agencies and policy makers.



## SDG TRACKER

Track Bangladesh's indicator-wise SDG achievement progress through an integrated data platform and advanced analytics.



## MY CONSTITUENCY

Accelerate the progress of **Global Development Agenda** constituency-wise by evidence-based development planning and decision making.

# COVID-19 Socio-economic Recovery Tracker

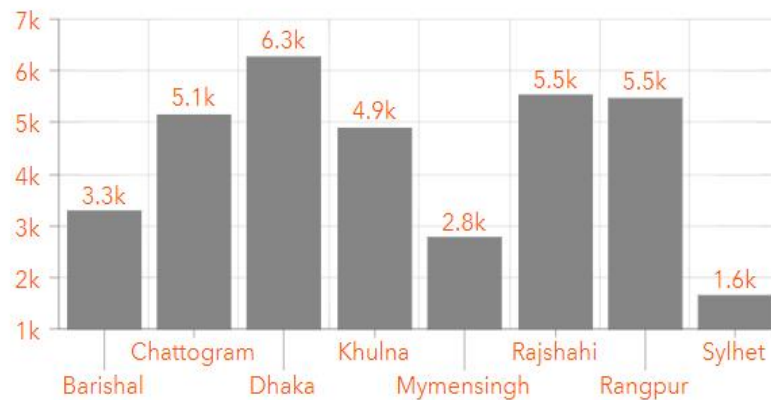
## Impact of Covid-19 on Education

**35,000**  
Institutions

**20,873,064**  
Students

**621,158**  
Teachers

Division wise Closed Educational Institution



Division wise Affected Students



Affected Students

Affected Teachers

### District wise Affected Institution

**Chattogram District**  
Edu. Institution: **1,283**  
Student: **1,184,298**  
Teacher: **25,102**

**Dhaka District**  
Edu. Institution: **1,218**  
Student: **1,685,775**  
Teacher: **49,371**

**Coxs Bazar District**  
Edu. Institution: **1,183**  
Student: **808,952**  
Teacher: **20,229**

**Mymensingh District**  
Edu. Institution: **1,183**  
Student: **673,847**  
Teacher: **18,649**

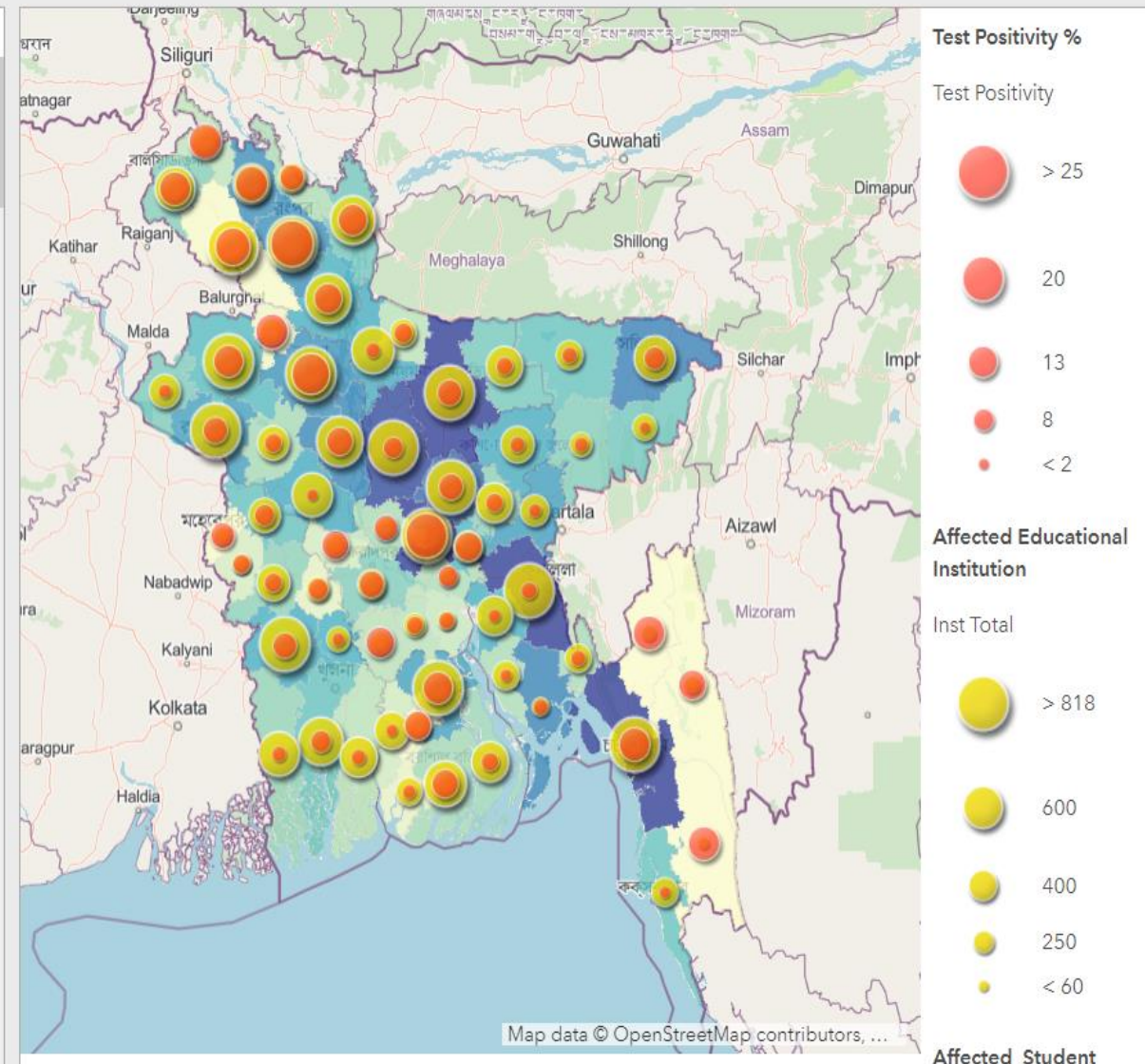
**Dinajpur District**  
Edu. Institution: **1,156**  
Student: **490,278**  
Teacher: **19,150**

**Rajshahi District**  
Edu. Institution: **1,071**  
Student: **470,147**  
Teacher: **21,496**

**Jashore District**  
Edu. Institution: **997**  
Student: **428,768**  
Teacher: **18,329**

**Bogura District**  
Edu. Institution: **957**  
Student: **523,127**  
Teacher: **17,795**

**Tangail District**  
Edu. Institution: **888**  
Student: **522,907**  
Teacher: **14,757**



Source: BANBEIS and Data of higher secondary to tertiary education

Affected Institution

Literacy Rate



# Challenges

# Solutions

**Data availability**

**Data sharing hesitancy**

**Data anomaly and  
biased algorithm**

**Build  
National Data  
repository**

**Data  
Sharing  
Policy**

**Regular  
Testing of  
the Process**

## South-South Network for Public Service Innovation (SSN4PSI)

- On the sidelines of the 71st session of the [United Nations General Assembly](#) in September 2016, establishment of a collaborative South-South Network for Public Service Innovation (SSN4PSI) was proposed by Government of Bangladesh, and UNDP administrator.
- SSN4PSI was launched at Global South-South Development Expo in Antalya, Turkey in November 2017 jointly by United Nations Office for South –South Cooperation (UNOSSC) and Government of Bangladesh.





Public Service Innovation

## Achievements of the Network

15 webinars

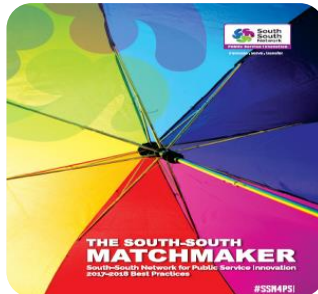
15 Match-making workshops

16 Field Visits

3 Knowledge Products

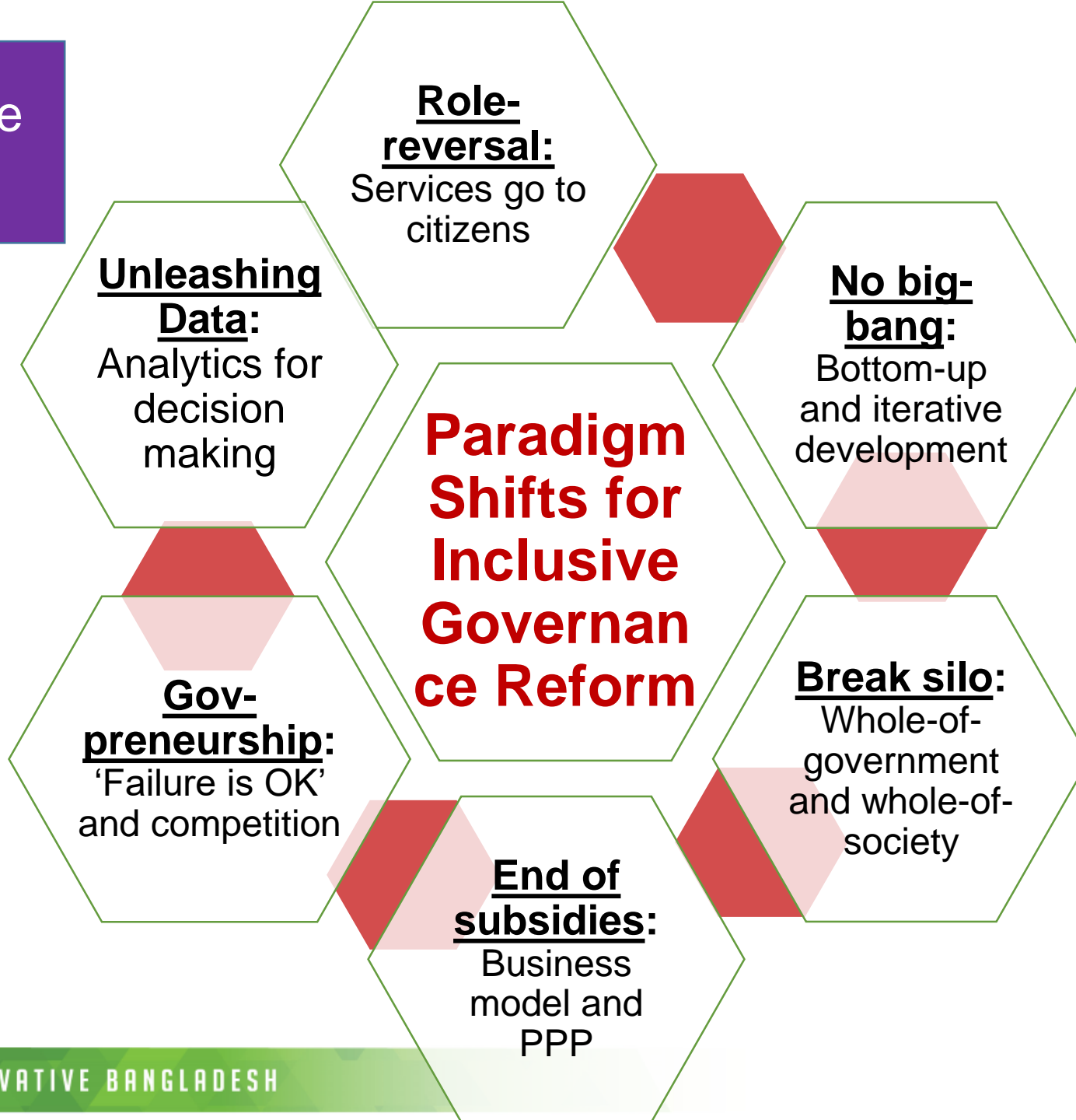
17 Initiatives Replicated

39 Countries





## Hacking the Mindset



“Culture eats strategy for breakfast.”

# Thank you