

GeoDASH and Bangladesh NSDI

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SUPPORT FROM:



GFDRR

Global Facility for Disaster Reduction and Recovery

IMPLEMENTED BY:



ICT DIVISION

OVERVIEW

GEODASH.GOV.BD



A GEOSPATIAL DATA SHARING PLATFORM FOR BANGLADESH

“The Bangladesh Geospatial Data Sharing Platform (GeoDASH) is a web-based spatial data infrastructure and GIS that empowers government, academia, private enterprise and the public to securely host, manage, share, visualize and analyze geospatial data”



TIMELINE OF KEY DEVELOPMENTS

- **February 2014:** GeoDASH roadmap published as an output of the GFDRR-supported Bangladesh Urban Earthquake Resilience Project
- **May 2014:** Platform beta launched and data sharing working group established of 11 key government agencies involved in the disaster risk management of Greater Dhaka
- **December 2015:** Handover of GeoDASH from GFDRR to the Bangladesh Computer Council (BCC), ICT Division, Government of Bangladesh
- **September 2016:** GeoDASH highlighted in “Digital World” Bangladesh, largest ICT event in Bangladesh
- **March 2018:** MoU signed between BCC and Survey of Bangladesh (SoB) under Ministry of Defence to build NSDI Portal based on GeoDASH



PLATFORM CAPABILITIES

GEODASH.GOV.BD



OPERATIONAL DESIGN:



GeoDASH

LAYERS ▾

MAPS ▾

DOCUMENTS ▾

ORGANIZATIONS ▾

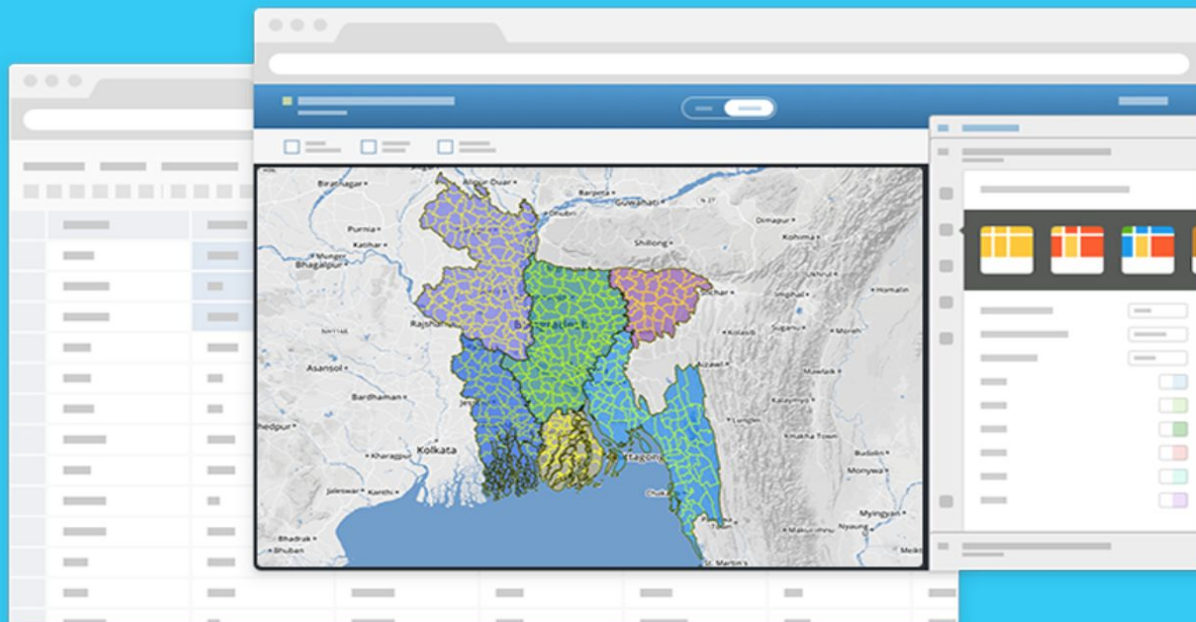
NEWS



Search layer/map/doc



বাংলা



GEODASH.GOV.BD

A MAPPING PLATFORM TO CREATE
CUSTOM AND STYLISH MAPS

[Learn more](#)

352
Layers

17
Maps

47
Organizations

586
Users



Key Features Added to GeoDASH: Admin Workspace

Admin Workspace

Layers Maps Documents User List Create User

User Approval Request **Approved** User Drafts Denied Layers

Serial No	Layer Title	Organization	Who Requested	Who Approved	Approve Date	Layer Edit
1	Administrative/ Political Boundary of Bangladesh	The World Bank	ariel	hamid	Nov 01 2016 18:50:33	Edit
2	Fiber Optics Line Nodes of Dhaka City	BCC (Bangladesh Computer Council)	hamid	hamid	Nov 01 2016 18:51:38	Edit
3	Boundary Data of DMA Zone 504, Banani, Dhaka	The World Bank	ariel	ahasan	Nov 01 2016 18:52:15	Edit
4	Fiber Optics Line Network of Dhaka City	BCC (Bangladesh Computer Council)	hamid	hamid	Nov 01 2016 18:54:03	Edit
5	BTCL-Fiber Optic Network Connected Unions	BCC (Bangladesh Computer Council)	hamid	hamid	Nov 01 2016 18:54:42	Edit
6	Fiber Optics Backbone Path by Summit Communications Ltd.	BCC (Bangladesh Computer Council)	hamid	hamid	Nov 01 2016 18:55:07	Edit



hamid

- [Upload Layers](#)
- [Profile](#)
- [Member-Workspace](#)
- [Admin-Workspace](#)
- [Create User](#)
- [Recent Activity](#)
- [Invite User](#)
- [Help](#)
- [Log out](#)

Key Features: Organizational Profile



Department Of Disaster Management (DDM)

- Organization Profile Layers List User List Activity Question/Answer

< page 1 of 1 >



Status of Educa.....

Not provided

Education data was the part of analysis of Multi-Hazard Risk and Vulnerability Assessment, Modeling and Mapping (MRVAM) Assessment which was a subcomponent =project initiated under Emergency 2007 Cyclone Recovery and Res.....

Md.Bodruddoza
 144 0 0



Status of Educa.....

Not provided

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programmer.ddm
 81 0 0



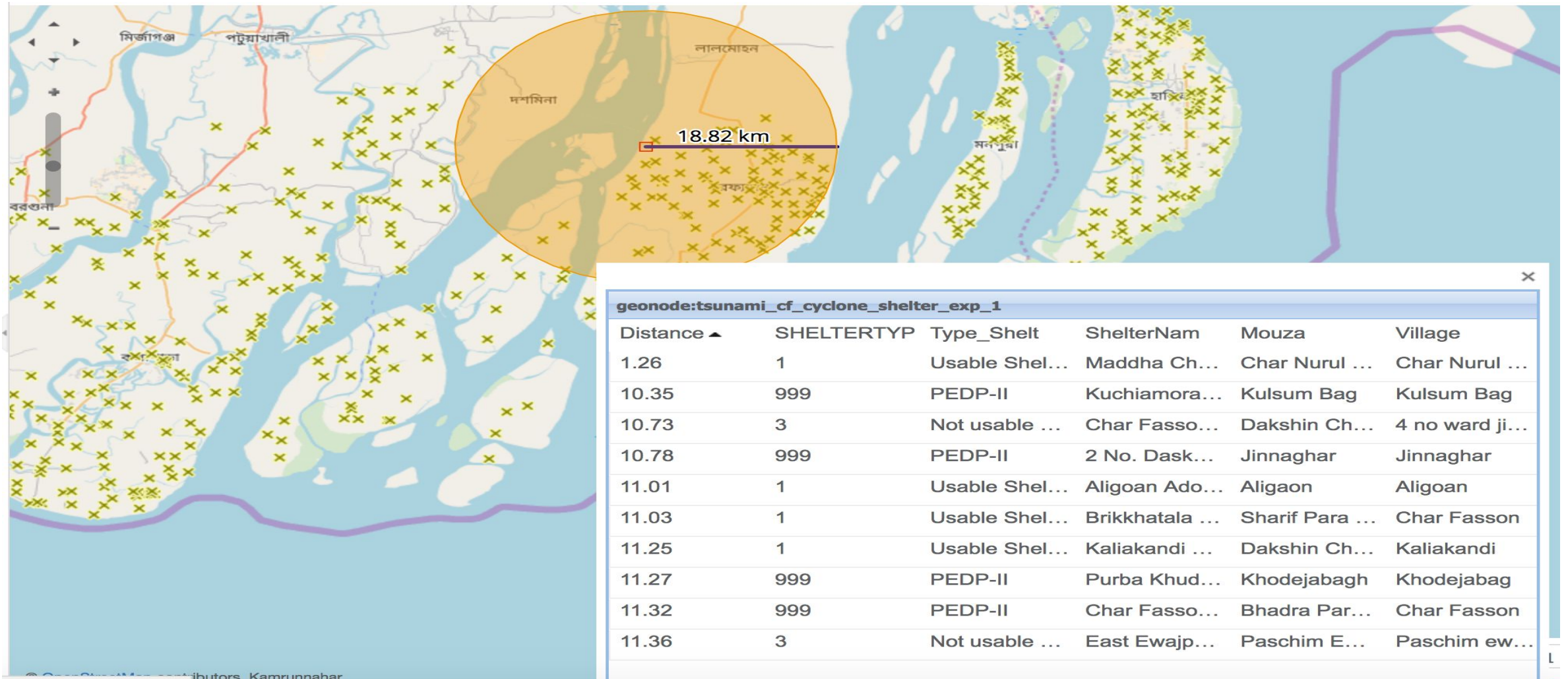
Storm Surge Inu.....

Not provided

Cyclone induced storm surge inundation depth map has been developed under Multi Hazard Risk and Vulnerability Assessment, Modeling and Mapping (MRVA) component by Department of Disaster Management (DDM) of project Emerge.....

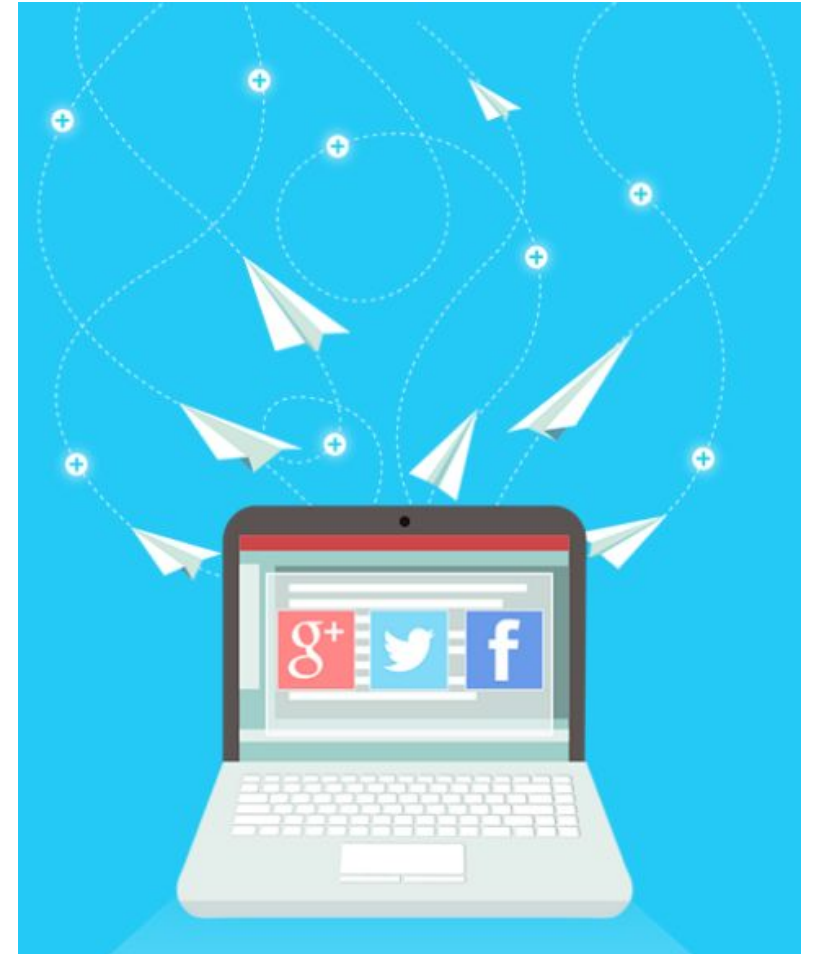
netai
 867 0 4

Key Features: Radius Search



Key Features

- User friendly UI
- CSV file format upload
- Upload Zipped file
- Standard, Facebook, Google+ login
- Send/Receive message for users
- User Dashboard for Docking favorite layers, maps, documents and organizations
- Wiki documentation and full user guide (geodash.gov.bd/wiki)



Major Changes in the Next Release April 2018

GEODASH.GOV.BD



Styling Simplified

Exposure & Risk
Data_Flood_Population_district

Download Layer

Edit Layer

Layer Styles: Exposure & Risk
Data_Flood_Population_district

Choose style: exposure_risk_dat

Rules

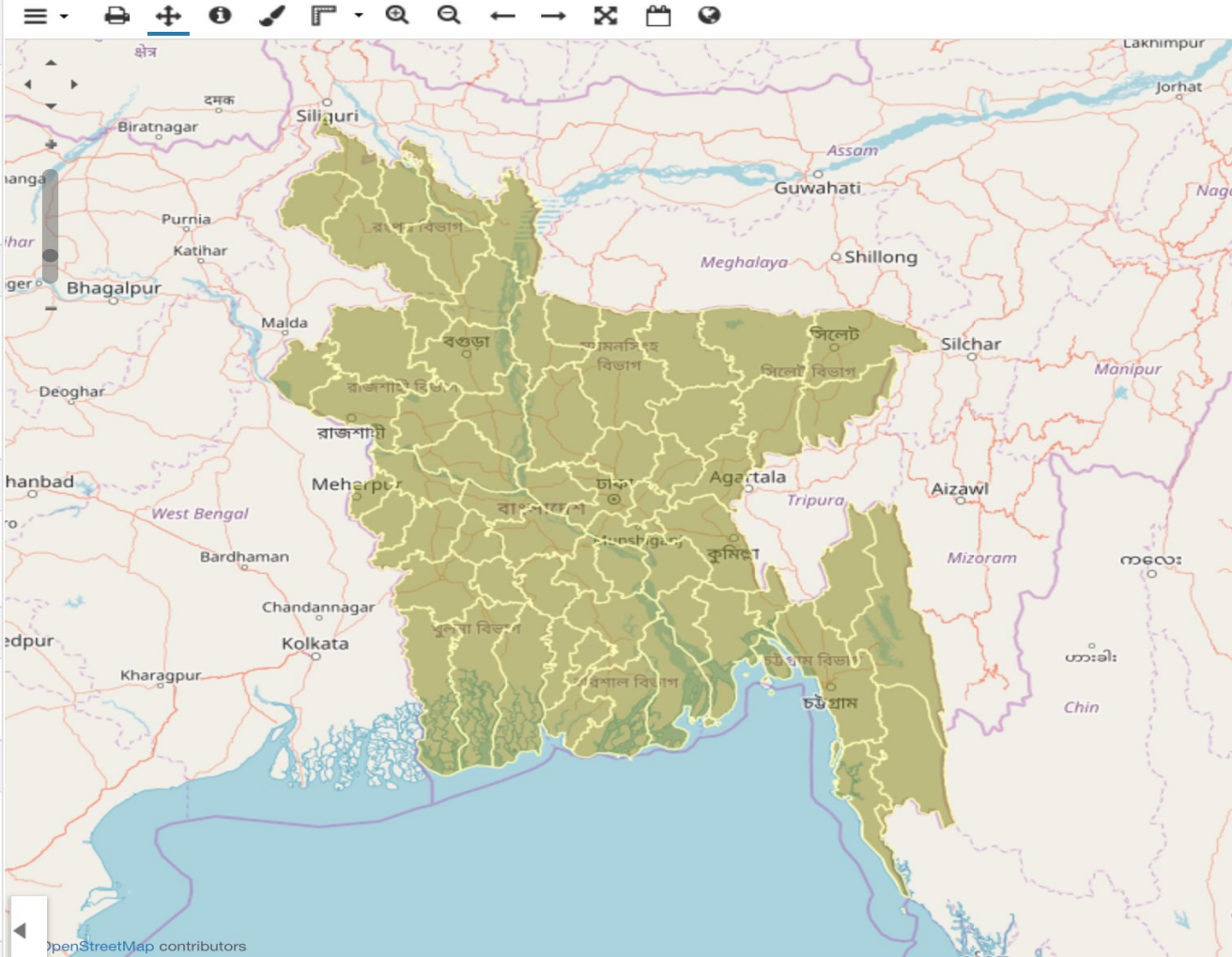
Untitled 1

This layer is not currently used in any maps.

Create a map using this layer

Click the button below to generate a new map based on this layer.

Create a Map



rs/geonode:exposure_risk_data_flood_population_district#

OpenStreetMap contributors



Styling Simplified

The image shows a QGIS interface with a styling dialog box open. The dialog is titled "geonode:administrative_boundary_of_bangladesh_upazila_level_1 Properties". It has a "New" button and a "Select Style" dropdown. The "Display style" tab is active, showing a "Style Name" input field and a "Type" dropdown set to "polygon". "Save" and "Cancel" buttons are at the bottom right.

geonode:administrative_boundary_of_bangladesh_upazila_level_1 Properties

-- Select Style -- **New**

General **Display style** Classifier Labeling Visualization

Style Name :

Type : polygon

Save Cancel

Data layers

Working Map: Untitled

Layers

- geonode:administrative_bo...

Query

Query by current map extent

select condition **+ Add Condition**

Attribute Grid

	ID 0	Iso	NAM	ID 1	NAM	ID 2	NAM	ID 3	NAM	ID 4	NAM	VAR	TYP	ENG
✓ r 19	BGD	Bangla...	1	Barisal	1	Barisal	1	Barisal	1	Agailjh...		Upazil...	Sub-di...	
✓ r 19	BGD	Bangla...	1	Barisal	1	Barisal	1	Barisal	2	Babug...		Upazil...	Sub-di...	
✓ r 19	BGD	Bangla...	1	Barisal	1	Barisal	1	Barisal	3	Baker...		Upazil...	Sub-di...	
✓ r 19	BGD	Bangla...	1	Barisal	1	Barisal	1	Barisal	4	Banari...		Upazil...	Sub-di...	
✓ r 19	BGD	Bangla...	1	Barisal	1	Barisal	1	Barisal	5	Barisal...		Upazil...	Sub-di...	

Styling Simplified

geonode:administrative_boundary_of_bangladesh_upazila_level_1 Properties ✕

-- Select Style --

New


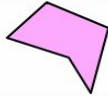






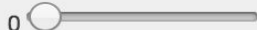
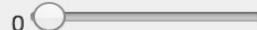
General

Display style

Classifier

Labeling

Visualization

	Default Style	Selection Style
		
Fill Pattern	default	default
Fill Color	#ffffff 	#ff00ff 
Fill Transparency	25 	60 
Line Color	#000000 	#000000 
Line Width	1 	1 
Line Dash Type	solid	solid

Save

Cancel

Styling Simplified

geonode:administrative_boundary_of_bangladesh_upazila_level_1 Properties ✕

-- Select Style --

New

General

Display style

Classifier

Labeling

Visualization

By Unique

By Range

Select Attribute

-- No Item Selected --

Color Ramp



Remove All

Color

Alias

Value

No classifier available

Select All

No item

ADD

Save

Cancel

Styling Simplified

geonode:administrative_boundary_of_bangladesh_upazila_level_1 Properties ✕

-- Select Style --

New

General

Display style

Classifier

Labeling

Visualization

Label From

--No Attribute S

Label Styles

Font	Times
Font Style	Normal
Font Weight	Normal
Color	<input type="checkbox"/>
Border Color	<input type="checkbox"/> <input checked="" type="checkbox"/>
Size	10

Label Placement

Alignment	Left
Offset left	0
Offset bottom	0
Rotation(degree)	0
<input type="checkbox"/> Wrap Words	

Save

Cancel

Styling Simplified

geonode:administrative_boundary_of_bangladesh_upazila_level_1 Properties ✕

25c610cf-63a7-4041-9148-c3075653c781

New

General

Display style

Classifier

Labeling

Visualization

Visualization

Chart

Chart Type:

Bar Chart

✓ Horizontal Bar Chart

Stack Bar Chart

Pie Chart

Chart Size Attribute:

Select All

ID_0

#B448DB



ID_1

#8F053C



ID_2

#B7A8CA



ID_3

#0F2C34



Save

Cancel

Data Cleaning

Please update layer metadata, missing some informations

Map

Attribute

Attributes

administrative_boundary_of_banglad

Download Layer

Edit Layer

Permissions

Click the button below to change the permissions of this layer.

Change Layer Permissions

Legend



Maps using this layer

List of maps using this layer:

[Bangladesh Upailla Boundary](#)

	NAME_1	ID_2	NAME_2	ID_3	NAME_3	ID_4	NAME_4	VARNAME_4	TYPE_4	ENGTYP_4	fid
1	Barisal	1	Barisal	1	Barisal	1	Agailjhara		Upazila Tha...	Sub-district	1
1	Barisal	1	Barisal	1	Barisal	2	Babuganj		Upazila Tha...	Sub-district	2
1	Barisal	1	Barisal	1	Barisal	3	Bakerganj		Upazila Tha...	Sub-district	3
1	Barisal	1	Barisal	1	Barisal	4	Banaripara		Upazila Tha...	Sub-district	4
1	Barisal	1	Barisal	1	Barisal	5	Barisal S.		Upazila Tha...	Sub-district	5
1	Barisal	1	Barisal	1	Barisal	6	Gaurnadi		Upazila Tha...	Sub-district	6
1	Barisal	1	Barisal	1	Barisal	7	Hizla		Upazila Tha...	Sub-district	7
1	Barisal	1	Barisal	1	Barisal	8	Mehendiganj		Upazila Tha...	Sub-district	8
1	Barisal	1	Barisal	1	Barisal	10	Wazirpur		Upazila Tha...	Sub-district	9
1	Barisal	1	Barisal	2	Jhalakati	11	Jhalakati S.		Upazila Tha...	Sub-district	10
4	Khulna	16	Khulna	41	Khulna	279	Kotwali	Khulna	Upazila Tha...	Sub-district	11
1	Barisal	1	Barisal	1	Barisal	9	Muladi		Upazila Tha...	Sub-district	12
1	Barisal	1	Barisal	2	Jhalakati	12	Kathalia		Upazila Tha...	Sub-district	13
1	Barisal	1	Barisal	2	Jhalakati	14	Rajapur		Upazila Tha...	Sub-district	14
1	Barisal	1	Barisal	2	Jhalakati	14	Rajapur		Upazila Tha...	Sub-district	14
1	Khulna	16	Khulna	41	Khulna	280	Koyra		Upazila Tha...	Sub-district	25

items per page 1 of 463 items

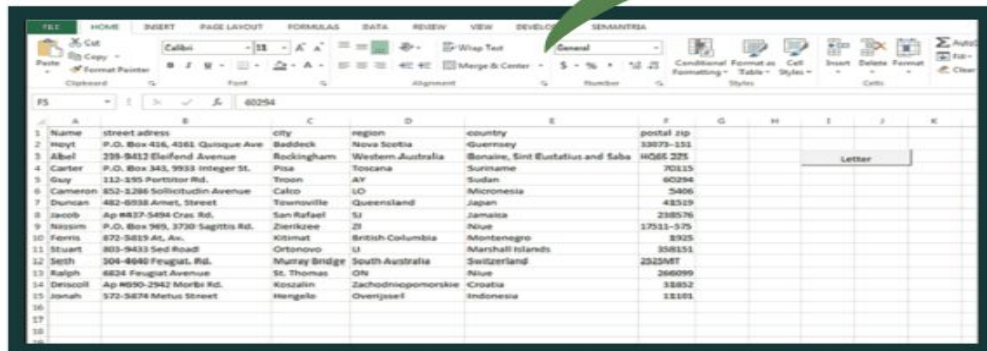
Upload CSV to update information

Choose File

No file chosen

Upload

Reverse Geocoding



The screenshot shows an Excel spreadsheet with the following data:

Name	street address	city	region	country	postal zip
Mayt	P.O. Box 416, 4161, Quisque Ave	Bahdeek	Nova Scotia	Guernsey	13073-131
Albat	239-9412 Stanford Avenue	Rockingham	Western Australia	Bonaria, Sint Eustatius and Saba	91068 225
Carter	P.O. Box 343, 5933 Integer St.	Pisa	Toscana	Suriname	70113
Gay	112-395 Portitor Rd.	Troon	AY	Sudan	60294
Cameron	852-2286 Sollicitudin Avenue	Calro	LO	Micronesia	3406
Dumas	482-6938 Amer. Street	Townsville	Queensland	Japan	42129
Jacob	Ap #837-5494 Cras Rd.	San Rafael	SI	Jamaica	238576
Nassim	P.O. Box 969, 3730 Sagitta Rd.	Zierikzee	ZI	Niue	17511-975
Ferris	872-5619 Al. Av.	Kissimot	British Columbia	Montenegro	8925
Stewart	801-9433 Sed Road	Ortenowp	SI	Marshall Islands	318153
Seth	304-4640 Feugiat. Rd.	Murray Bridge	South Australia	Switzerland	2922MT
Ralph	8824 Feugiat Avenue	St. Thomas	OH	Niue	366099
Denise	Ap #090-2942 Morbi Rd.	Kozulin	Zachodnopomorskie	Croatia	31802
Janah	372-5678 Matus Street	Hergelo	Ovontjees	Indonesia	12103

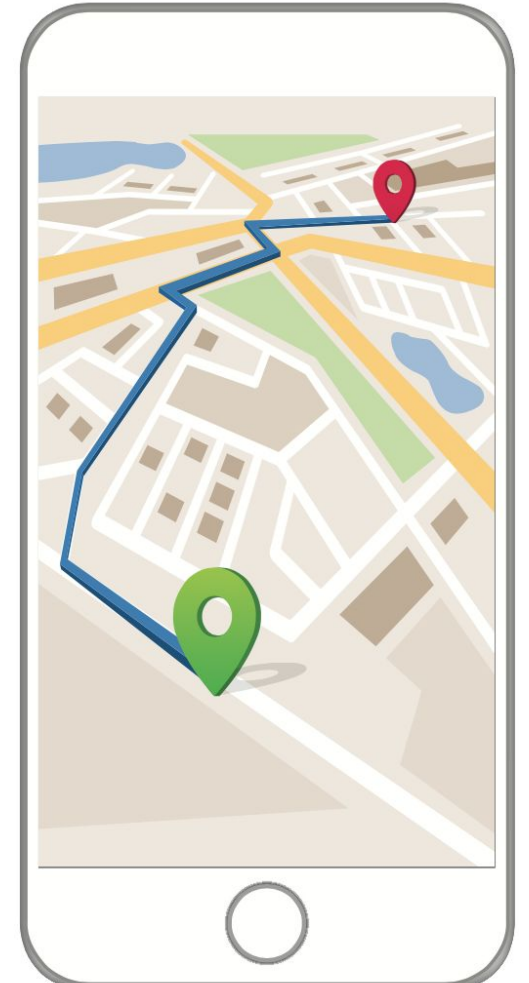
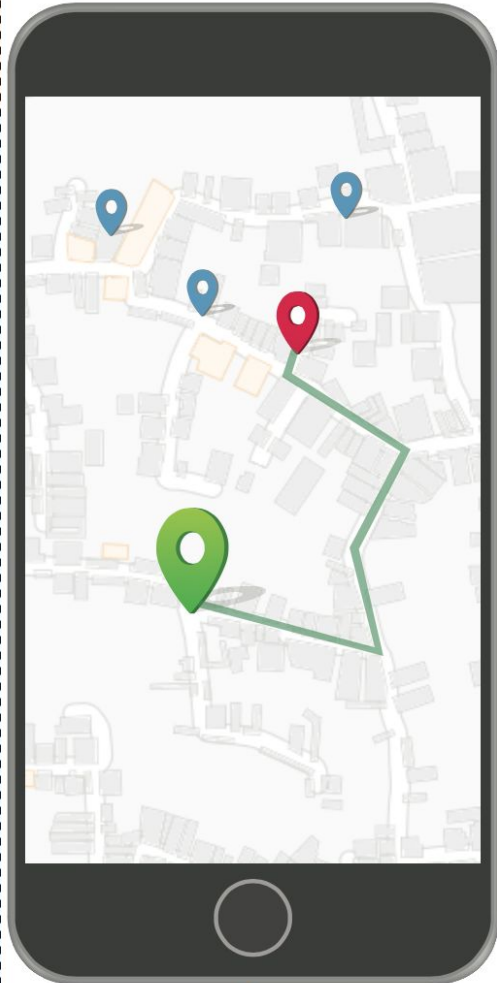


Mobile App

Nearest Point search

Point to point route

Nearest destination Route

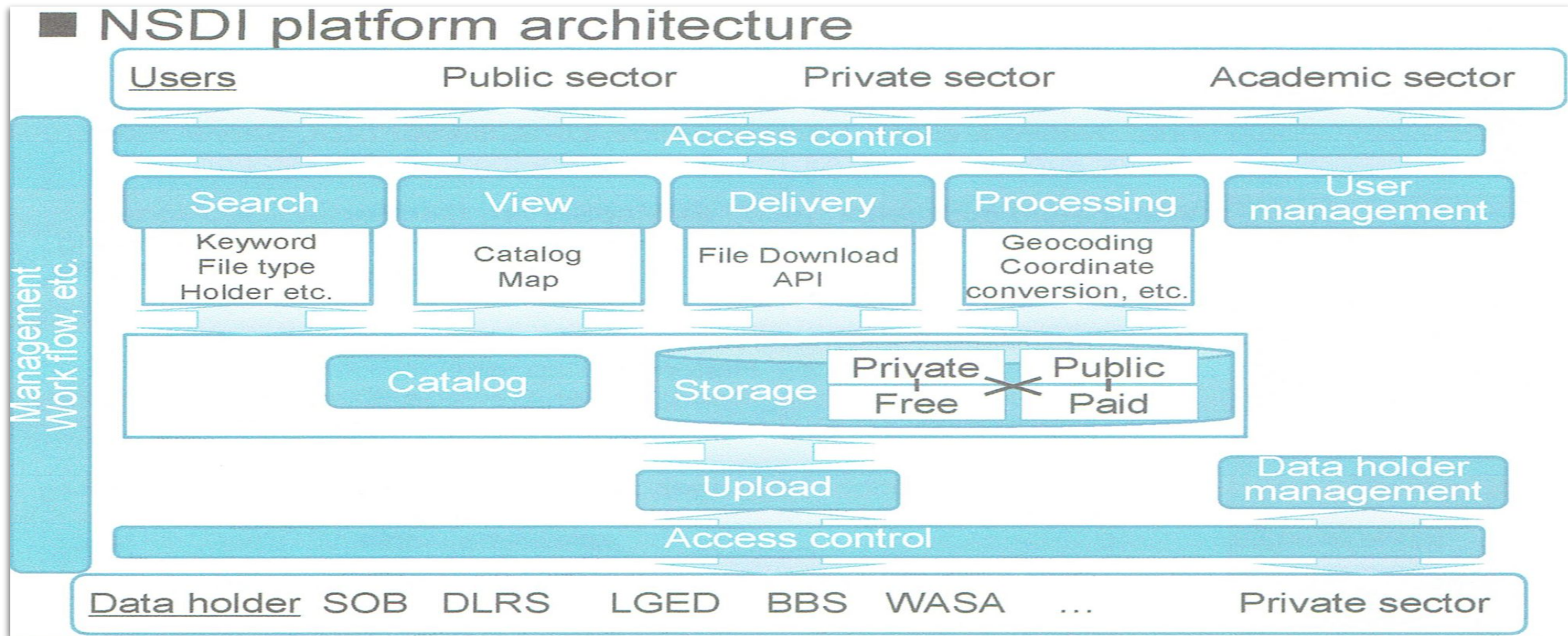




Bangladesh NSDI: Pilot Project



NSDI Architecture



Sources:



Project for Strengthen the Capacity on Advanced Mapping of SOB for Building Digital Bangladesh
Contributors Meeting #2 : Overview of NSDI Pilot Project

August 2017



Why GeoDASH Chosen for NSDI

- Basic design – NSDI powered by GeoDash
- The reasons for utilizing GeoDash are:
 - To well-designed geo-portal system established with support from WB,
 - To have operational experience to handle and publish various maps and made by public organizations,
 - To be effective in constructing NSDI prototype system.

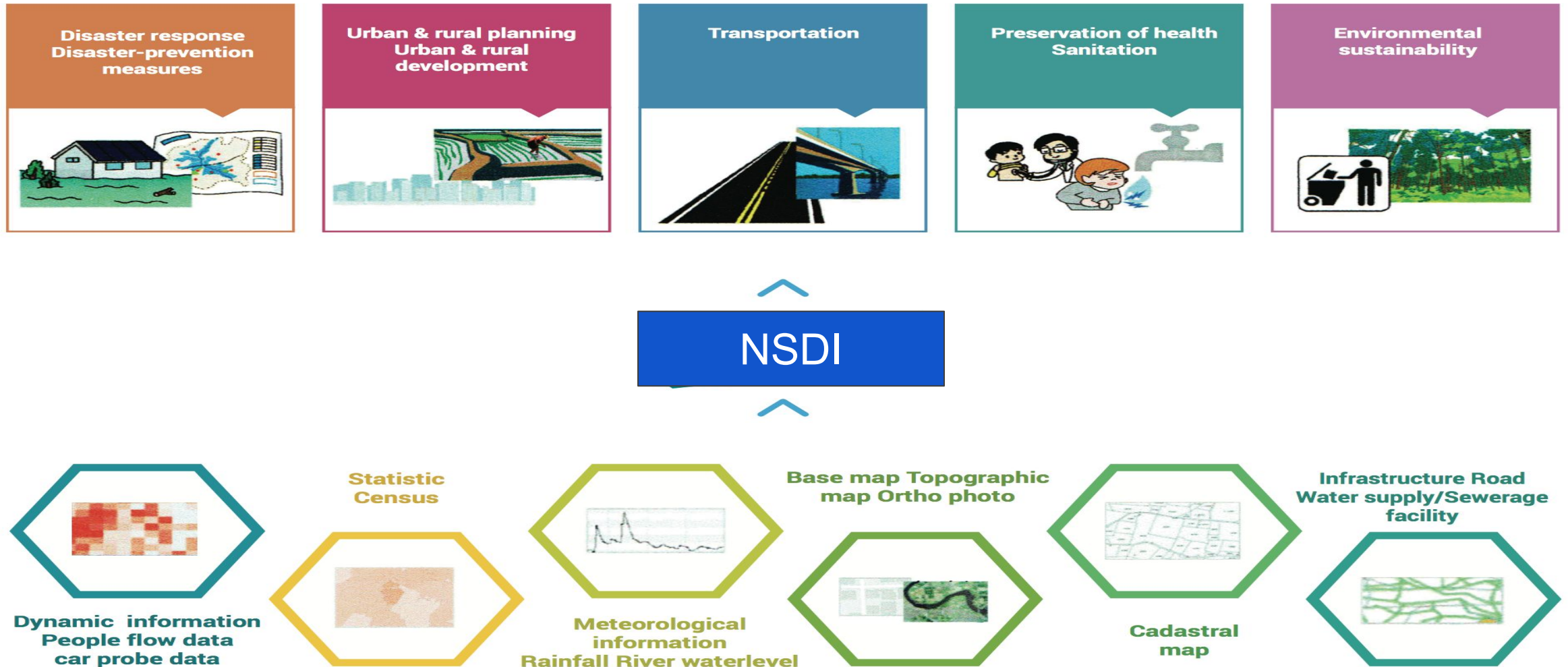
Sources:



Project for Strengthen the Capacity on Advanced Mapping of SOB for Building Digital Bangladesh
Contributors Meeting #2 : Overview of NSDI Pilot Project

August 2017

Objective of NSDI



NEXT STEPS

GEODASH.GOV.BD



Future PPlan for GeoDASH

1-year plan:

- Continue to improve the platform's utility and user-friendliness based off of feedback from key government stakeholders and working group members
- Provide technical guidance to our key stakeholders (3-5) web portal Spatial Data friendly with backend support from GeoDASH
- Conduct GeoNode developer workshop to train at least 15 programmer
- Total 1000 layer, 100 organizations and 1000 users

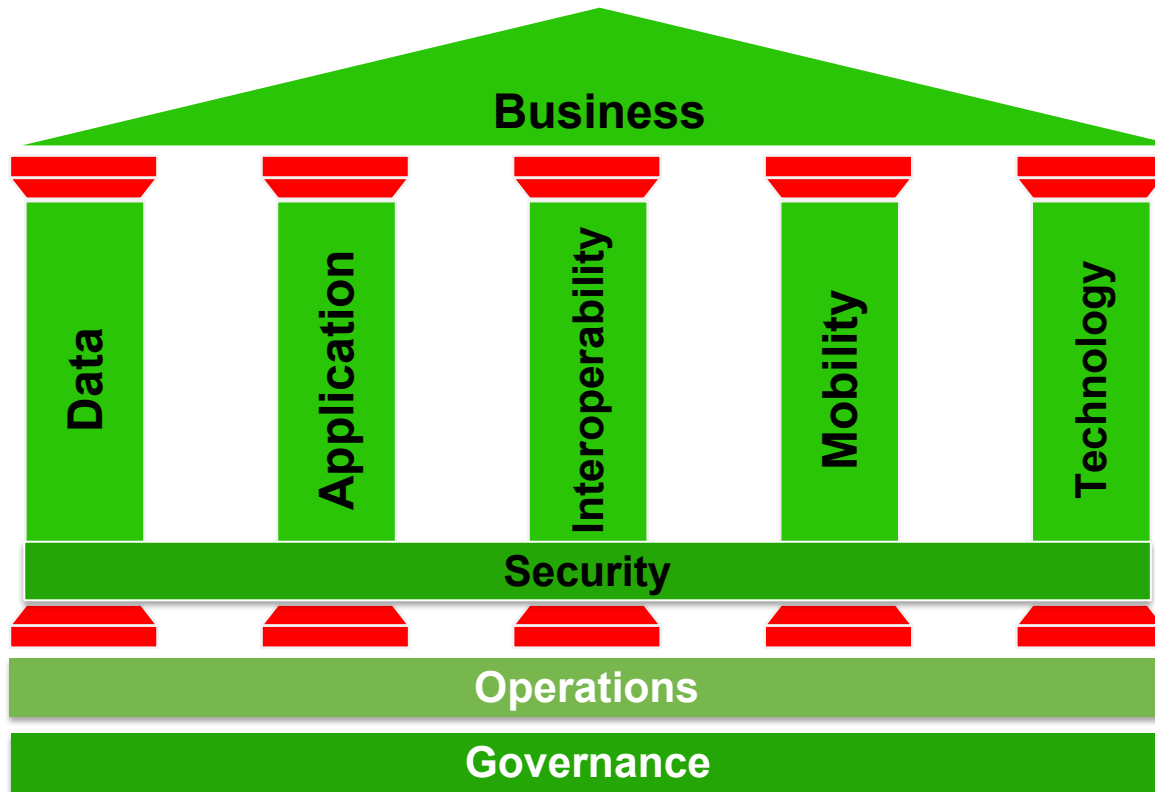
5-year plan:

- Institutionalize GeoDASH in all relevant Government of Bangladesh agencies
- Encourage greater openness of non-sensitive data to all and support broader open data policy reform
- Total of 5,000 layers, 200 organizations and 4,000 users

Bangladesh National Enterprise Architecture (BNEA) and GeoDASH Platform

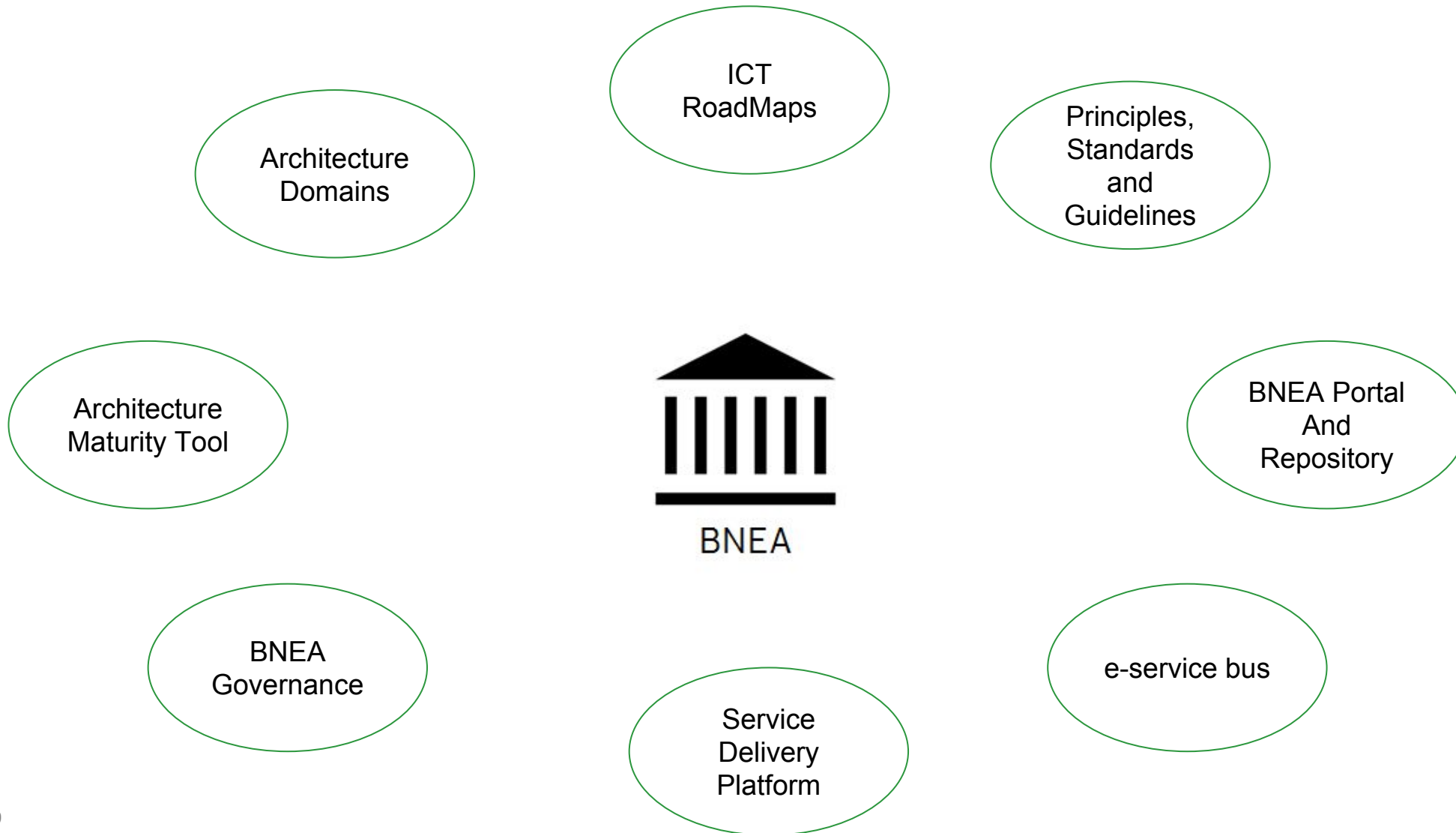


Bangladesh National Enterprise Architecture



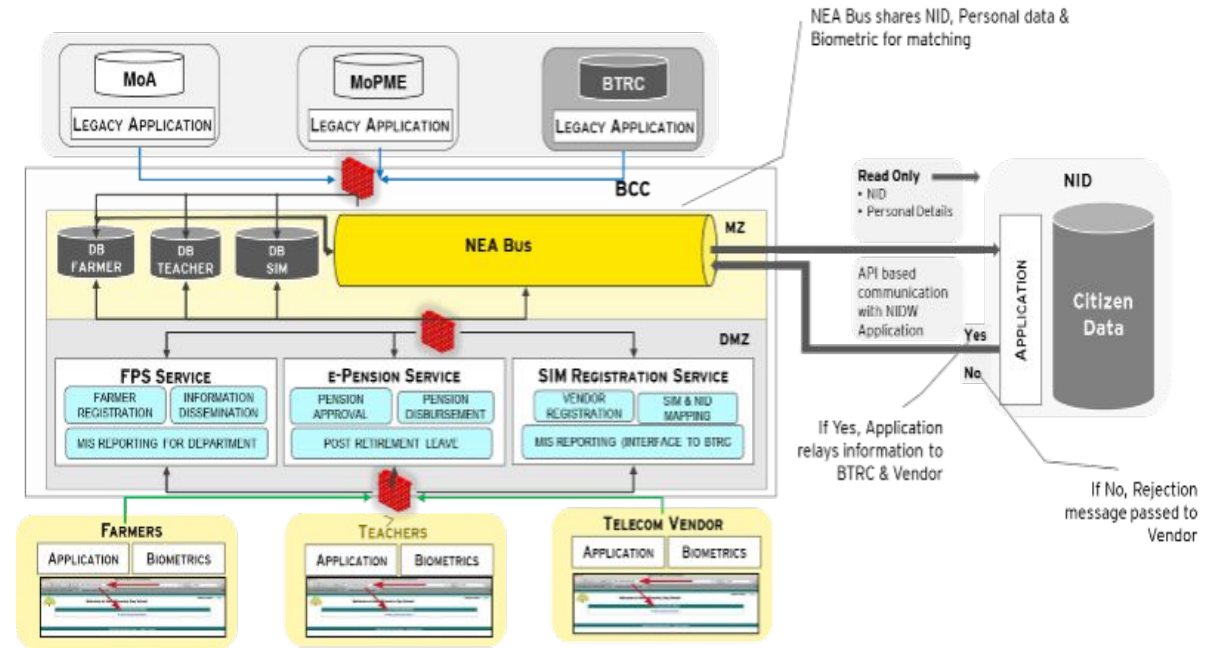
- ❖ A holistic approach for citizen e-services
- ❖ A framework for improved e-Governance
- ❖ National e-service bus for Better Coordination and collaboration
- ❖ Standardization of e-services
- ❖ Re-usage of Shared e-services
- ❖ Cost optimization for Citizen service delivery

BNEA Framework

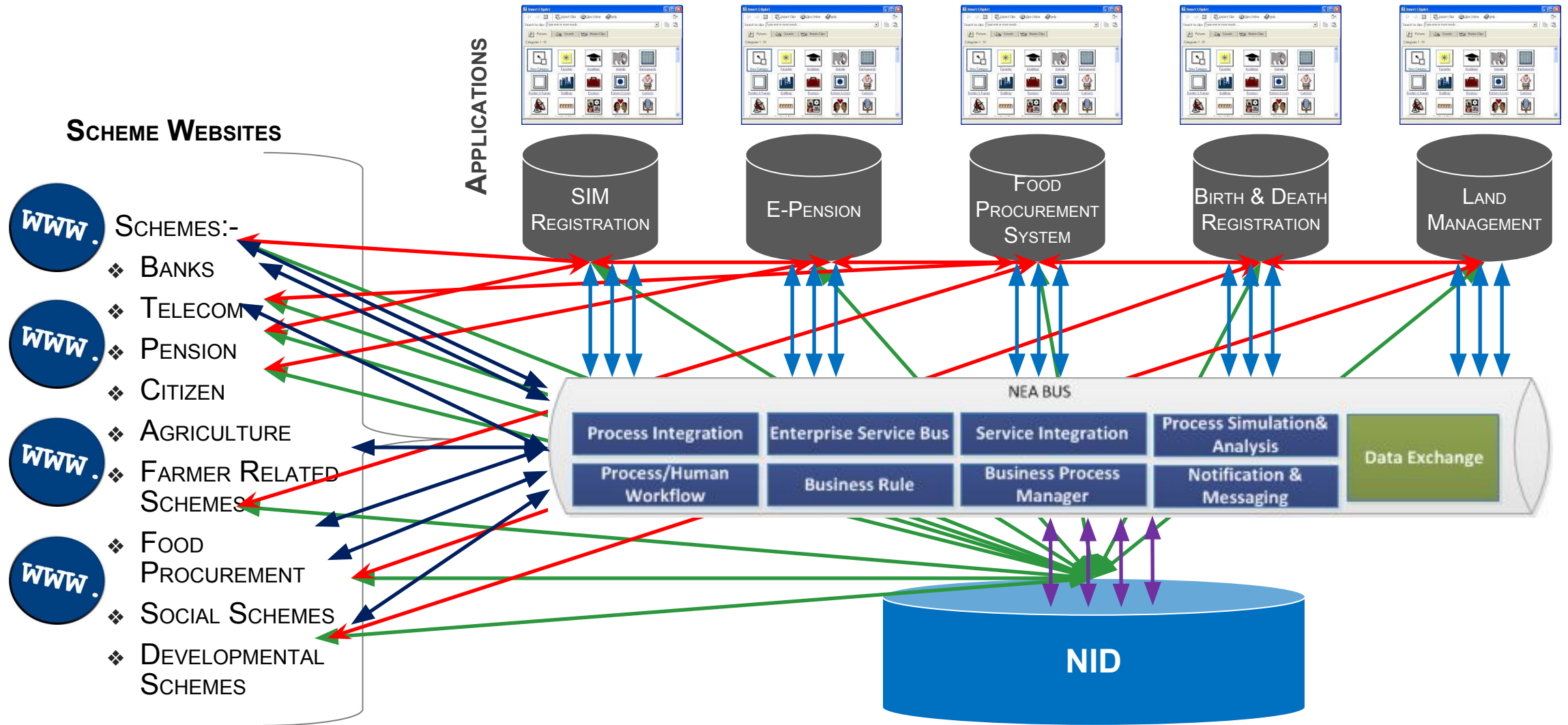


e-Service Bus is a critical component and key to ensure interoperability, availability and reusability of government online services

- ▶ A middleware platform to ensure seamless integration and exchange of information
- ▶ 6+ services are connected as of now
 - ▶ Pay fixation System
 - ▶ GeoDASH Platform
 - ▶ Alapon messenger app
 - ▶ Citizen authentication service
 - ▶ e-Recruitment System
 - ▶ e-pension service for primary school teacher
 - ▶ Food procurement from miller/farmer
- ▶ more services are in pipeline...

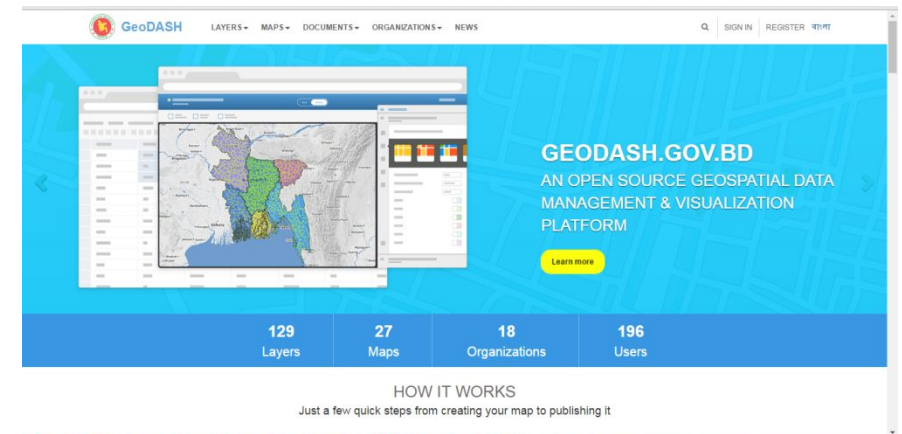


Process Simplification using NEA Service Bus



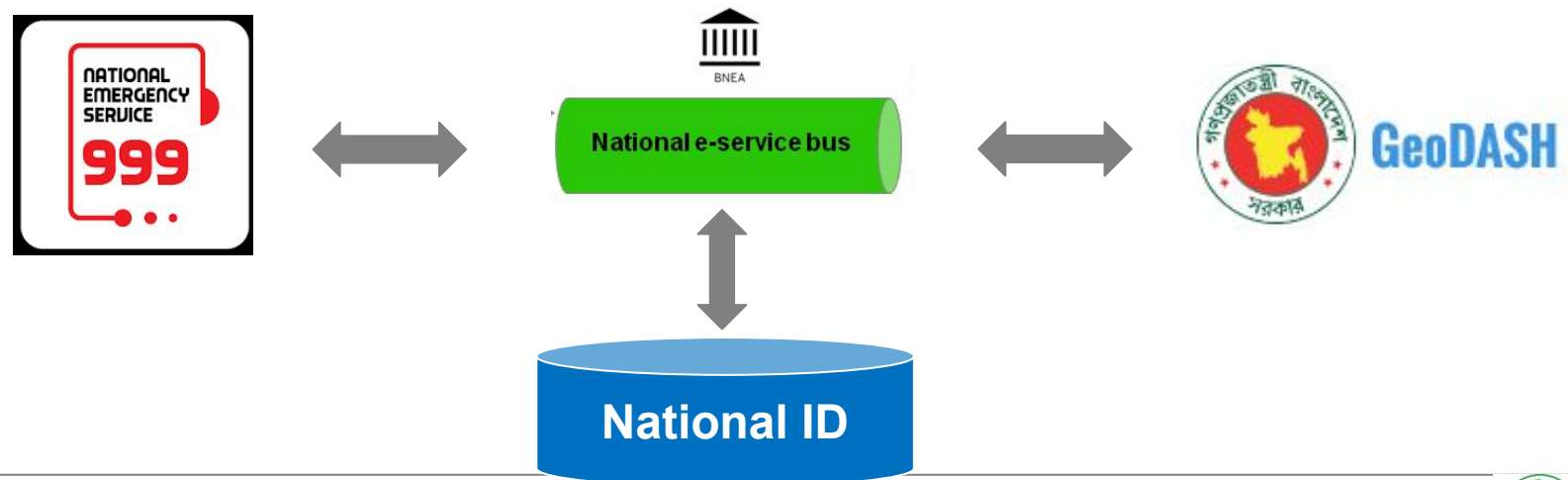
GeoDASH Platform Integration

- ❖ A unique Govt. Platform to share and collaborate geospatial data
 - ❖ Owned by BCC, developed by WB
 - ❖ Geospatial data management and visualization
 - ❖ Multiple layers of geospatial data and mixing of layers
 - ❖ GIS map publishing, point-to-point distance
- ❖ 2 options to interact –
 - ❖ GUI (Graphical User Interface) and
 - ❖ API (Application Programming Interface)
- ❖ GeoDASH API is integrated with National e-service bus!
 - ❖ GeoDASH consumer can utilize API to interact programmatically



Extension of GeoSpatial Data service

- ▶ Integration with National Emergency Service (999)
 - ▶ A Complex use case of National e-service bus, NID service, GeoDASH platform and 999 service
 - ▶ Victim's identity will be verified via e-service bus
 - ▶ Utilizing GeoDASH platform's plug-in/web control to embed map/layer in 3rd party web portal
 - ▶ Victim's GeoLocation will be displayed at agent's interface



Thank You