



United Nations
Group of Experts
on Geographical Names



Agenda Item 3

World Geographical Names Database







Mr. Mark Iliffe

Global Geospatial Information Management Section
Statistics Division / Department of Economic and Social Affairs



Overall vision of UNGEGN World Geographic Names (WGN) Database

Why are we doing this?

-  UNGEGN is mandated by the Economic and Social Council as one of its nine Subsidiary Bodies – this is implementing UNGEGN Decision 2/2019/2
-  Position UNGEGN as the ‘go to’ for authoritative, comparable, and high-quality geographic names/toponyms – aligned with its Strategic Plan
-  Provide a dramatically improved platform for managing toponymic data
-  Enhance visibility and use of toponymic data, irrespective of language, from across the UN system and globally
-  Focus on data to support evidence-based action
-  Increase visibility of UNGEGN, its intergovernmental role and its work



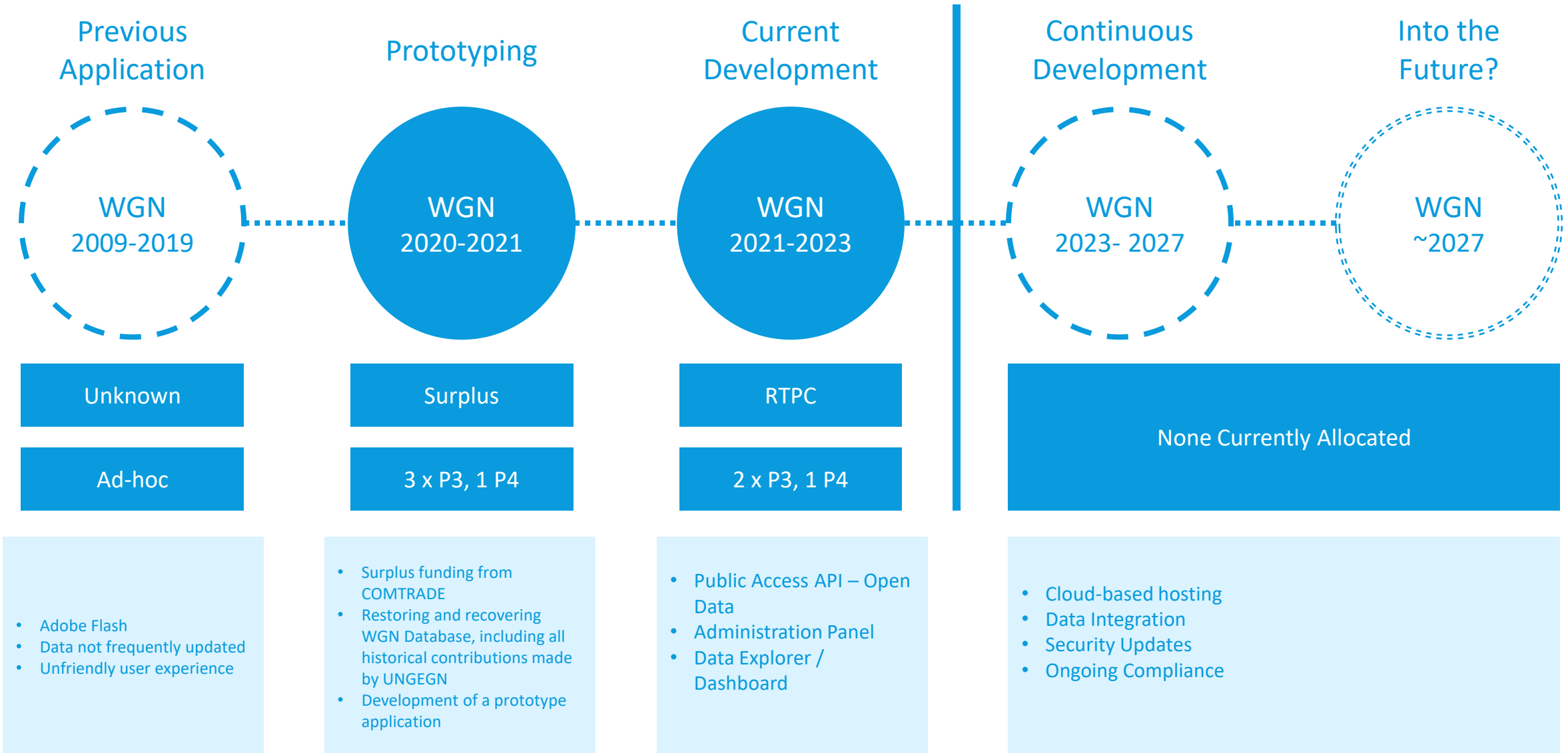
Basic Data Model / Geographic Extent

Authoritative, multi-lingual information on:

- All Countries
- All cities with a population of 100k or higher

	Data Header	Arabic	Chinese	English	French	Russian	Spanish	Endonyms		
Region	<ul style="list-style-type: none"> • M49: 22 • ISO3 • Geography (Bounding Box / Coordinates) 	شرق أفريقيا	东非	East Africa	Afrique de l'Est	Восточная Африка	África Oriental			
Country	<ul style="list-style-type: none"> • M49:450 • SKOS • ISO3: MDG • Bounding Box / Coordinates • SKOS MOS 	مدغشقر	马达加斯加	Madagascar		Мадагаскар	Madagascar	Malagasy	Madagasikara	Repoblikan'i Madagasikara
City		انتاناناريفو	塔那纳利佛	Antananarivo	Antananarivo	Антананариву	Antananarivo	Antananarivo	Antananarivo	

Technical Development



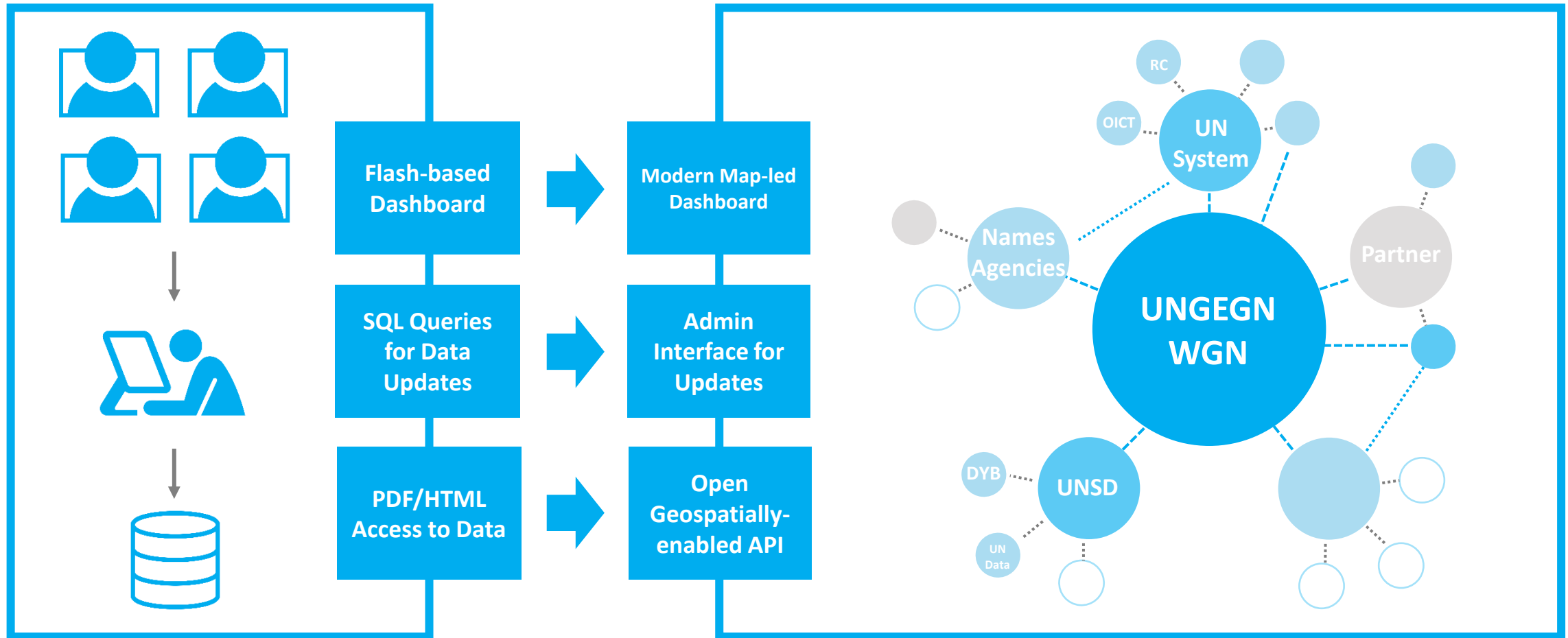
WGN System Components

Position the UNGEGN as a global leader in authoritative geographical names

- 1 WGN Dashboard - Publicly Accessible Dashboard
- 2 WGN API - Publicly Accessible, read-only geoJSON, API
- 3 WGN Administration System – User Interface for UNGEGN Secretariat



Previous World Geographic Names Database vs the modernized WGN



WGN 2009

Web 1.0 Technology

WGN 2023

Automated processes and high capacity



UNEGN World Geographical Names

Preferences | Toponym: Endonyms | Interface Languages: English

Search City, Country, Geography

- Capital city
- Cities over 100,000 inhabitants.
- No names available

mapbox

The Basemap is provided by OICT from their “UN Clear Map” product. Provided for UNGEGN the basemap is provided without labels. In showing UNGEGN’s Authoritative labels the map remains in compliance with ST/AI/189

UNEGN World Geographical Names

Preferences Endonyms Interface Languages English

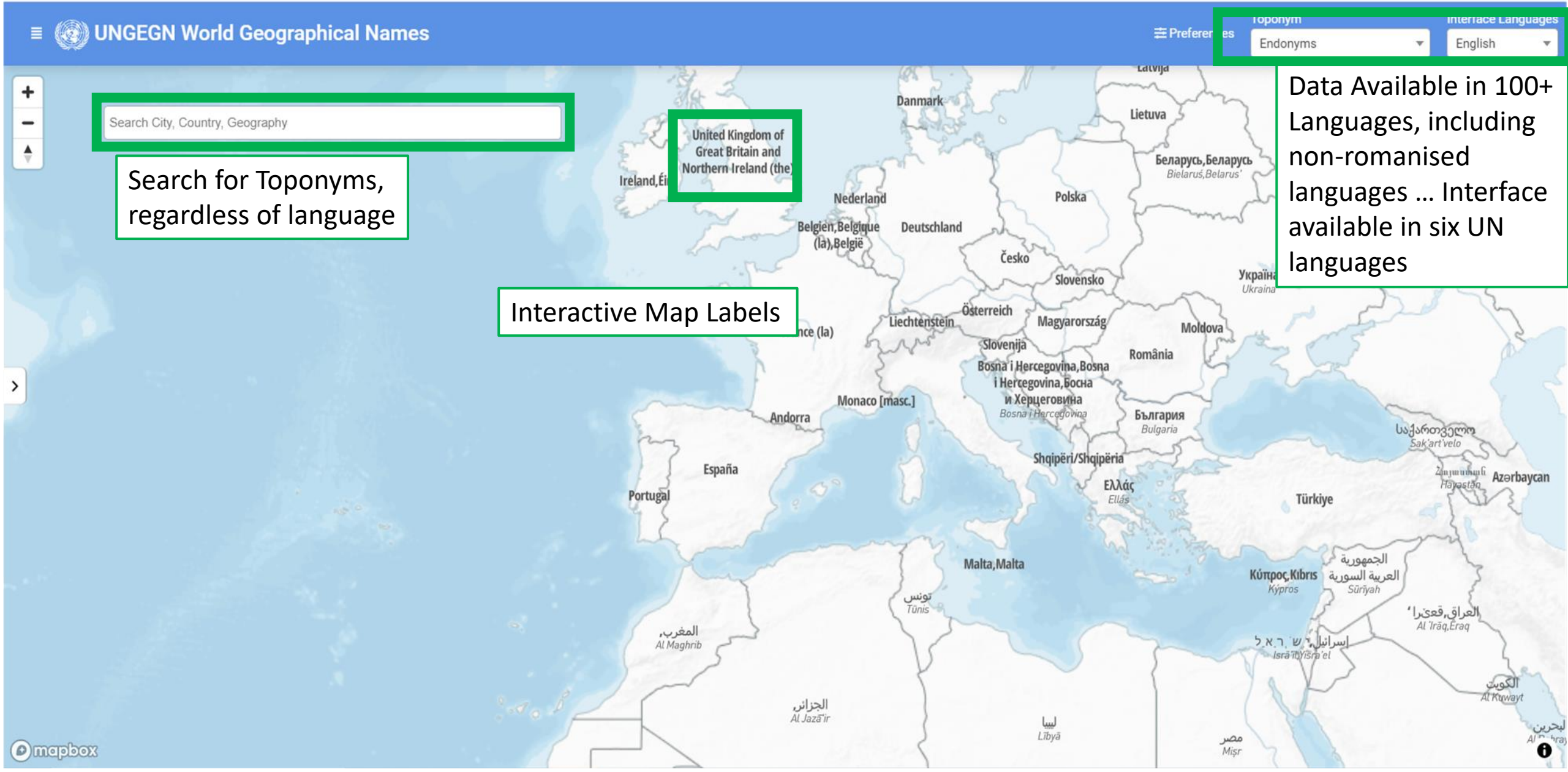
Search City, Country, Geography

Legend:
● Capital city
● Cities over 100,000 inhabitants.
● No names available

Map labels include: Danmark, Lietuva, Беларусь, Беларусь (Belarus, Belarus'), Polska, Deutschland, Česko, Slovensko, Україна (Ukraine), France (la), Liechtenstein, Österreich, Magyarország, Moldova, România, Bosna i Hercegovina, Bosna i Hercegovina, Босна и Херцеговина (Bosna i Hercegovina), Българія (Bulgaria), Шqipëri/Shqipëria, Ελλάδα (Ellás), Türkiye, Kúπpos, Kibris (Kýpros), الجمهورية العربية السورية (Sūriyah), العراق, 'عراق (Al 'Irāq, 'Iraq), إسرائيل, 'ש, ר, א, ל (Isrā'īl, Yisra'el), المغرب (Al Maghrib), تونس (Tūnis), الجزائر (Al Jazā'ir), ليبيا (Libyā), مصر (Misr), الكويت (Al Kuwayt), Azərbaycan, Հայաստան (Hayastan), საქართველო (Sak'art'velo).

mapbox

WGN Public Dashboard



Search City, Country, Geography

Search for Toponyms, regardless of language

United Kingdom of Great Britain and Northern Ireland (the)

Interactive Map Labels

Data Available in 100+ Languages, including non-romanised languages ... Interface available in six UN languages

1

WGN Public Dashboard

United Kingdom of Great Britain and Northern Ireland (the)

Search City, Country, Geography

● Capital city
● Cities over 100,000 inhabitants.
● No names available

Endonyms

Language	Short Name	Formal Name	Info
English	United Kingdom of Great Britain and Northern Ireland (the)	the United Kingdom of Great Britain and Northern Ireland	Info

United Nations Languages

Language	Short Name	Formal Name	Info
Arabic	المملكة المتحدة لبريطانيا العظمى وأيرلندا الشمالية	المملكة المتحدة لبريطانيا العظمى وأيرلندا الشمالية	Info
Chinese	大不列颠及北爱尔兰联合王国	大不列颠及北爱尔兰联合王国	Info
French	Royaume-Uni de Grande-Bretagne et d'Irlande du Nord (le)	le Royaume-Uni (de Grande-Bretagne et d'Irlande du Nord)	Info
Russian	Соединенное Королевство Великобритании и Северной Ирландии	Соединенное Королевство Великобритании и Северной Ирландии	Info
Spanish	Reino Unido de Gran Bretaña e Irlanda del Norte (el)	el Reino Unido (de Gran Bretaña e Irlanda del Norte)	Info

Cities

✓ London (Capital City)	Lat: 51.5842514368 Long: -0.13075498882
✓	Lat: 49.4696464615 Long: -2.55097197725
✓	Lat: 49.1890449298 Long: -2.11032098454
✓ Aberdeen	Lat: 57.13333333 Long: -2.1
✓ Belfast	Lat: 54.58333333 Long: -5.93333333
✓ Birmingham	Lat: 52.46666667 Long: -1.91666667

Toponyms captured for all countries and capital cities in the six UN official languages

City data provided by Member States and other authoritative sources covering 100+ Languages, including non-romanised languages

2

WGN API

The WGN API:

1. **An open access, RESTful API**, provides read-only access to the WGN database, through several API endpoints (Cities – via WGN Unique City ID, Countries – via M49 code, Languages, Romanisation Systems, and other endpoints)
2. **Documented via Swagger's** Interface Description Language
3. **Provides Standardised GeoJSON**. Can be downloaded as a standalone file or be consumed into Excel or other GIS applications
4. Meets the highest requirements of the **SG's Data Strategy**, as data is available as Open Access, publicly, without restriction in machine readable formats.

Cities

GET /API/GetAllCities

Parameters

No parameters

Execute Clear

Responses

Curl

```
curl -X GET "https://usddb.southeastasia.cloudapp.azure.com:800/geonames/API/API/GetAllCities" -H "accept: */*"
```

Request URL

```
https://usddb.southeastasia.cloudapp.azure.com:800/geonames/API/API/GetAllCities
```

Server response

Code	Details
200	<p>Response body</p> <pre>{ "type": "FeatureCollection", "features": [{ "type": "Feature", "geometry": { "type": "Point", "coordinates": [15.2841339528, -4.2447319779] }, "properties": { "toponym": { "nameShort": "Brazzaville", "nameRomanised": null, "nameLang": null, "language": "French", "isCapital": true, "isRomanised": true, "cityID": 28, "toponymType": "Endonym" } } }] }</pre> <p>Response headers</p> <pre>content-length: 1256485 content-type: application/geo+json date: Tue 08 Mar 2022 01:13:11 GMT server: Microsoft-IIS/8.5 x-powered-by: ASP.NET</pre>

Response

Code	Description	Links
200	Success	No links



WGN Administration System

Cities

[+ Add City](#)
 Search by [Back to Full List](#)

Country Name	City Name - [Romanized Name]	Is Captial?	Coordinates Source	Actions
Ukraine	Kyiv	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Belarus	Minsk	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Republic of Moldova (the)	Chisinau	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Romania	Bucharest	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Finland	Heisinki	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Latvia	Riga	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Lithuania	Viinius	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
North Macedonia	Skopje	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Bulgaria	Sofia	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Serbia	Belgrade	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Poland	Warsaw	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Ireland	Dublin	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Germany	Berlin	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Denmark	Copenhagen	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Albania	Tirana	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Italy	Rome	<input checked="" type="checkbox"/>	UNEGN	edit view delete
Andorra	Andorra la Vella	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Bosnia and Herzegovina	Sarajevo	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Monaco	Monaco	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Croatia	Zagreb	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
San Marino	San Marino	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Switzerland	Berne	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Hungary	Budapest	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Slovenia	Ljubljana	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete
Austria	Vienna	<input checked="" type="checkbox"/>	United Nations Cartographic Section	edit view delete

3

WGN Administration System

Cities

Search Across all relevant data

Search by City

Country Name	City Name - [Romanized Name]	Is Capital?		Actions
Ukraine	Kyiv	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Belarus	Minsk	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Republic of Moldova (the)	Chisinau	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Romania	Bucharest	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Finland	Helsinki	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Latvia	Riga	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Lithuania	Vilnius	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
North Macedonia	Skopje	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Bulgaria	Sofia	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Serbia	Belgrade	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Poland	Warsaw	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Ireland	Dublin	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Germany	Berlin	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Denmark	Copenhagen	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Albania	Tirana	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Italy	Rome	<input checked="" type="checkbox"/>	UNGEEN	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Andorra	Andorra la Vella	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Bosnia and Herzegovina	Sarajevo	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Monaco	Monaco	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Croatia	Zagreb	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
San Marino	San Marino	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Switzerland	Berne	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Hungary	Budapest	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Slovenia	Ljubljana	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>
Austria	Vienna	<input checked="" type="checkbox"/>	United Nations Cartographic Section	<input type="button" value="edit"/> <input type="button" value="view"/> <input type="button" value="delete"/>

Pagination across all data

Country Details- Bosnia and Herzegovina

M49 Code	Continent
70	5 - Europe
ISO2	Region
BA	16 - Southern Europe
ISO3	First Official Language
BIH	SKOS URI
ISO Standard	Visualization Order
ISO 3166-1 alpha-3	
Display	
UN Member	



Map location
15.7364,42.564522,19.619699,45.276901

Historical Progression

Event D890 : State Succeeded From	D...	Federal People's Republic of Yugoslavia	Socialist Federal Republic of Yugoslavia			
Event D70 : State Succeeded To			Republic of Bosnia and Herzegovina	Bosnia and Herzegovina		

FootNotes

Toponyms (Since 23-Nov-2021 - 08-Mar-2022)

Endonyms

Language	Short Name	Formal Name	Source
Bosnian	Bosna i Hercegovina	Bosna i Hercegovina	UNEGN Technical reference manual for the standardization of geographical names
Croatian	Bosna i Hercegovina	Bosna i Hercegovina	UNEGN Technical reference manual for the standardization of geographical names
Serbian	Босна и Херцеговина Bosna i Hercegovina	Босна и Херцеговина Bosna i Hercegovina	UNEGN Technical reference manual for the standardization of geographical names

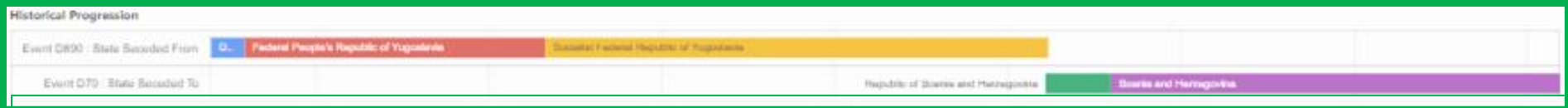
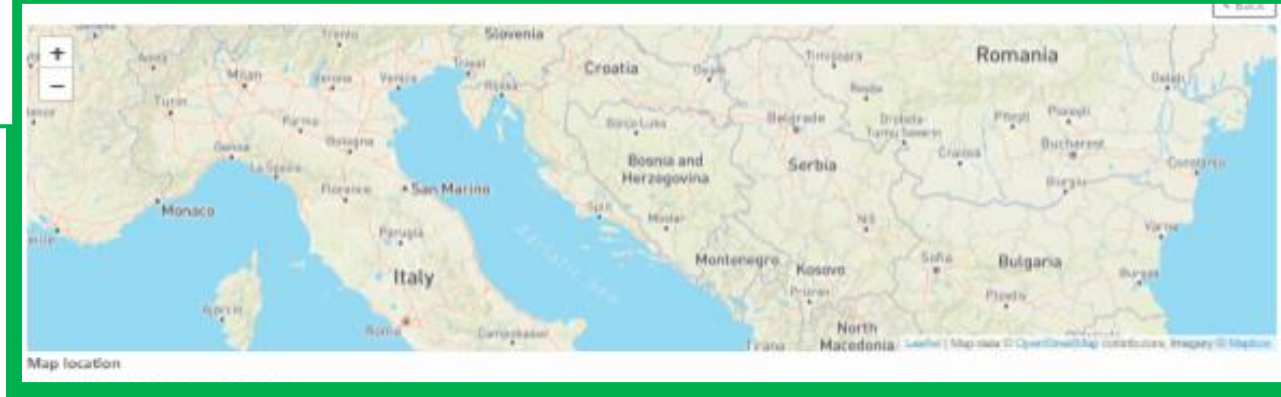
United Nations Languages

Language	Short Name	Formal Name	Source
Arabic	البوسنة والهرسك	البوسنة والهرسك	UN terms
Chinese	波斯尼亚和黑塞哥维那	波斯尼亚和黑塞哥维那	UN terms
English	Bosnia and Herzegovina	Bosnia and Herzegovina	UN terms
French	Bosnie-Herzégovine (la)	la Bosnie-Herzégovine	UN terms
Russian	Босния и Герцеговина	Босния и Герцеговина	UN terms
Spanish	Bosnia y Herzegovina	Bosnia y Herzegovina	UN terms

Country Details- Bosnia and Herzegovina

M49 Code 70	Continent 5 Europe
ISO2 BA	Region 16 Southern Europe
ISO3 BIH	First Official Language
ISO Standard ISO 3166-1 alpha 3	SKOS URI
Display	Visualization Order
UN Member	

To greater zoom levels



Ability to capture historical name changes

Toponyms (Since 23-Nov-2021 - 08-Mar-2022)

Endonyms

Language	Short Name	Formal Name	Source
Bosnian	Bosna i Hercegovina	Bosna i Hercegovina	UNEGN Technical reference manual for the standardization of geographical names
Croatian	Bosna i Hercegovina	Bosna i Hercegovina	UNEGN Technical reference manual for the standardization of geographical names
Serbian	Босна и Херцеговина Bosna i Hercegovina	Босна и Херцеговина Bosna i Hercegovina	UNEGN Technical reference manual for the standardization of geographical names

Toponyms provided by National Name Authorities

Data in Six Official UN Languages provided by Authoritative Sources

Language	Short Name	Formal Name	Source
Arabic	البوسنة والهرسك	البوسنة والهرسك	UN terms
Chinese	波斯尼亚和黑塞哥维那	波斯尼亚和黑塞哥维那	UN terms
English	Bosnia and Herzegovina	Bosnia and Herzegovina	UN terms
French	Bosnie-Herzégovine (la)	la Bosnie-Herzégovine	UN terms
Russian	Босния и Герцеговина	Босния и Герцеговина	UN terms
Spanish	Bosnia y Herzegovina	Bosnia y Herzegovina	UN terms

WGN Implementation: A Future Roadmap of three parts

1

WGN Database Launch:

Finalise UN mandated technical compliance procedures, following the third session

2

Data Integration

Ensuring full geographic completeness of all countries and cities

3

Data Governance, Feature Improvement and Future Development

What do we do next?





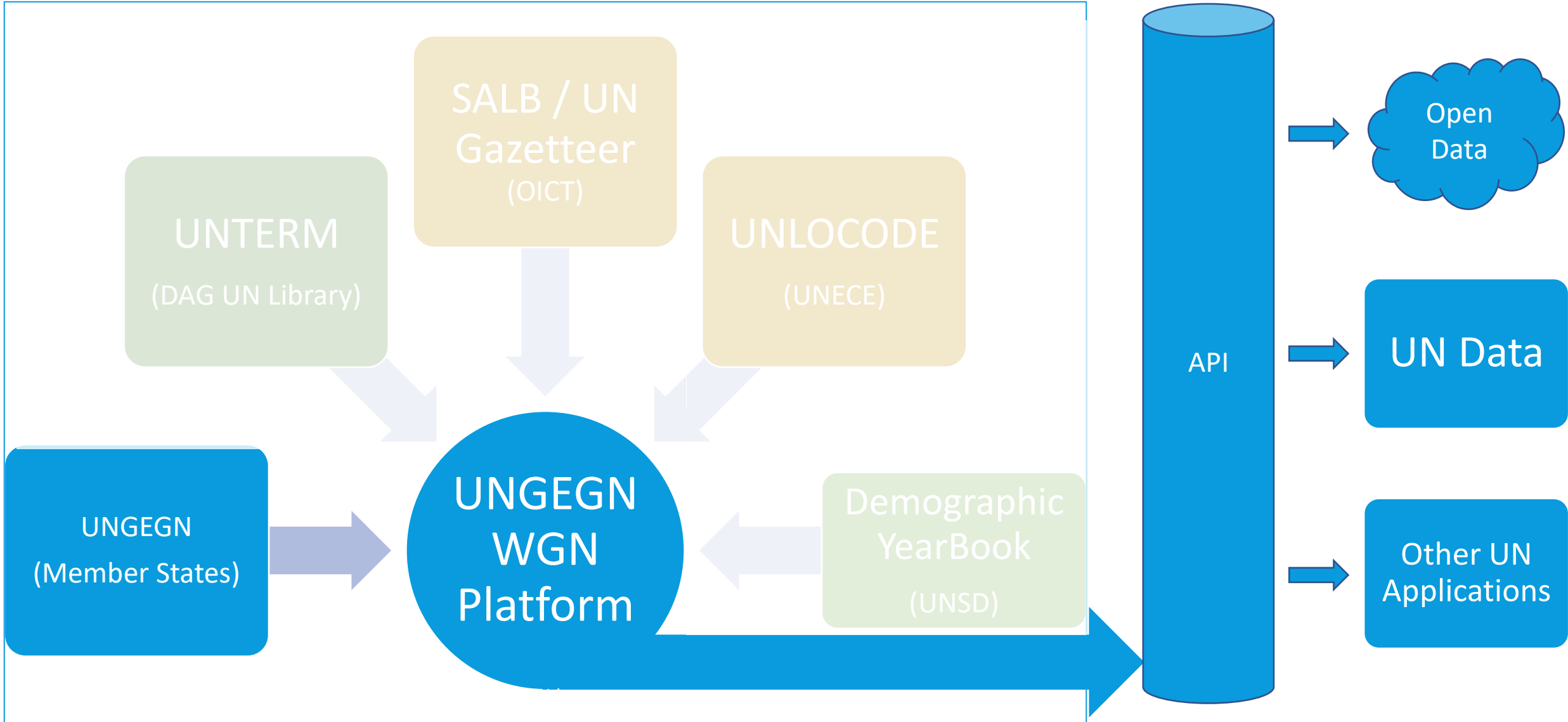
The Dashboard

<https://tinyurl.com/un-wgn>

**The Secretariat will inform UNGEGN
when a permanent URL is available**

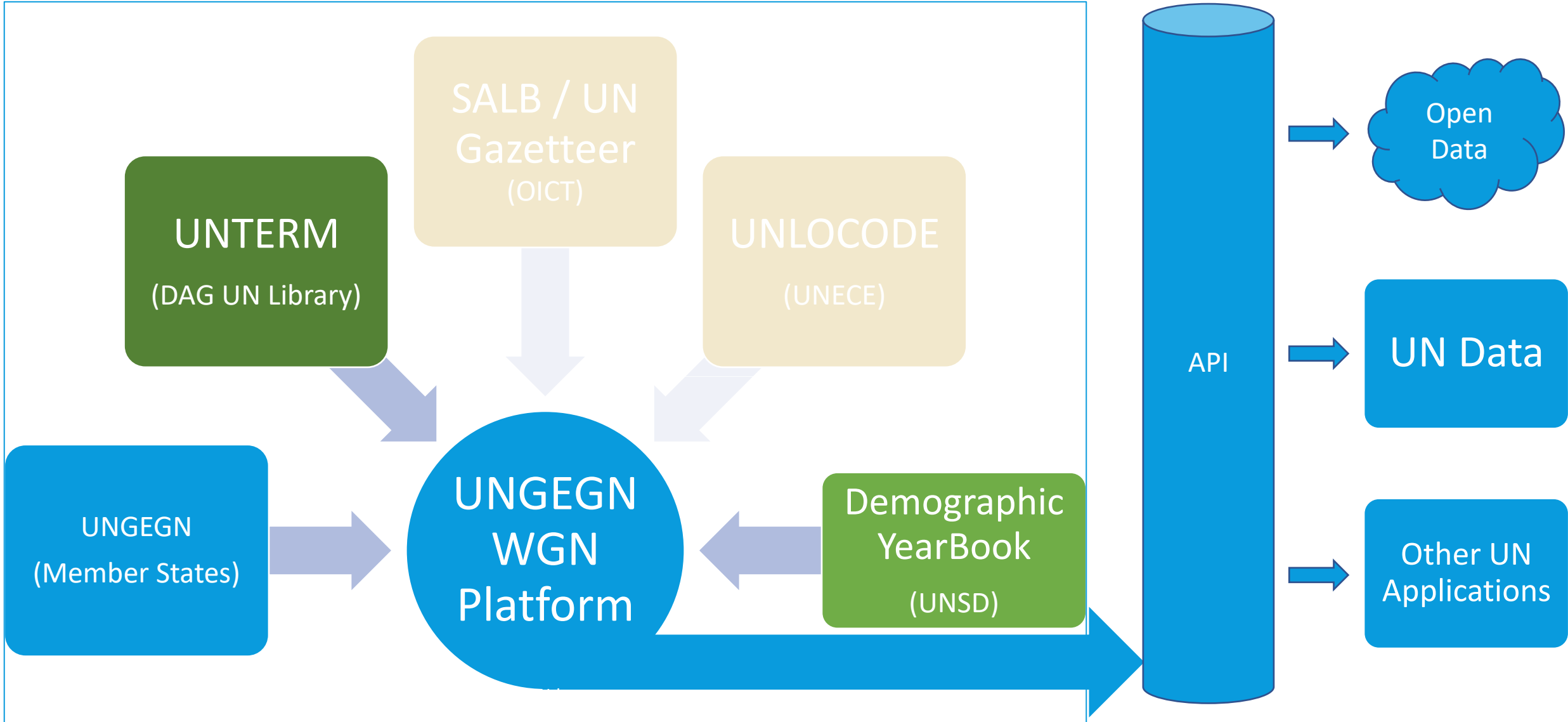
2

Data Integration



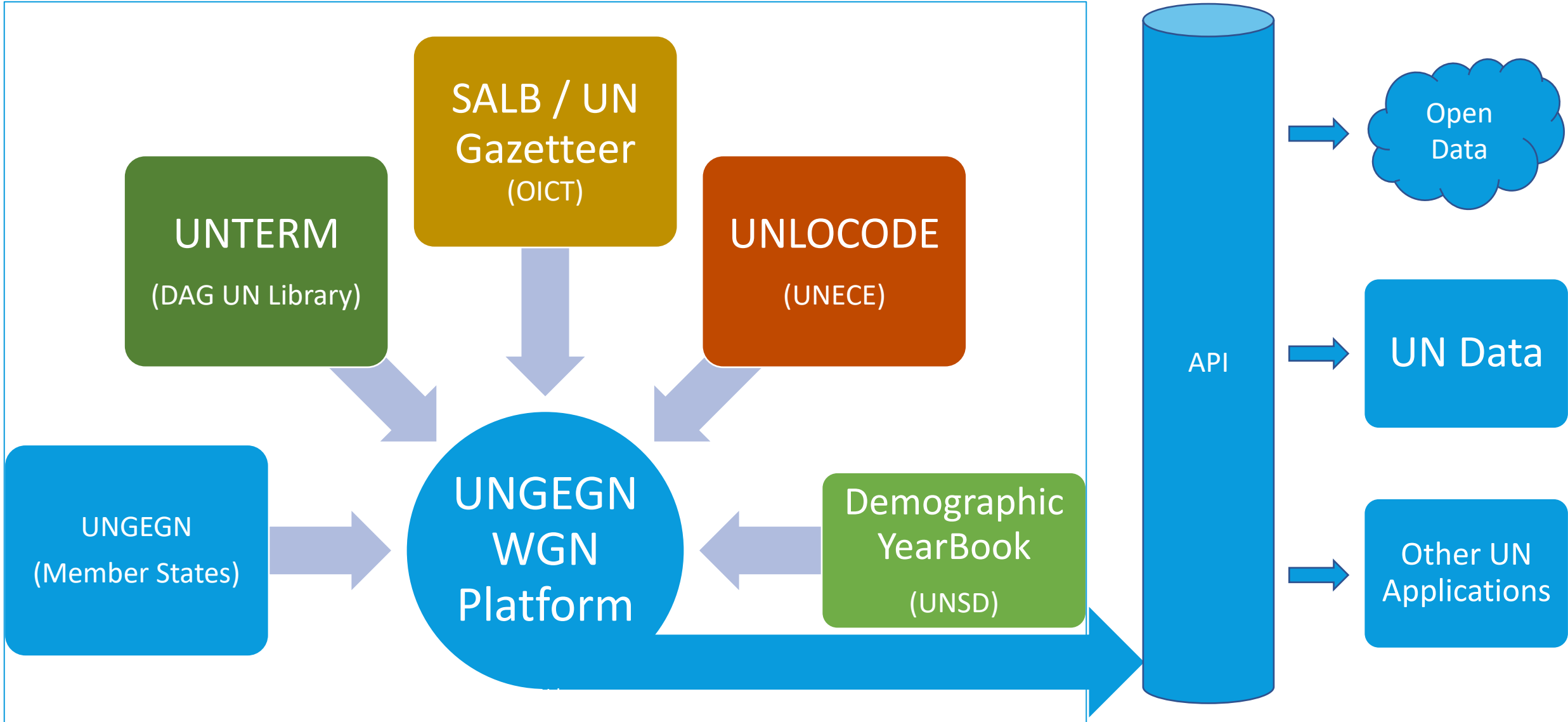
2

Data Integration



2

Data Integration



2

UNGEGN Data Integration Flow

Defining engagement with Member States to collect/update geographical names

– what are the potential process(es)?

1. Member States

- i. Request review of existing geographic names held within the WGN database
- ii. Request input (in defined format) of new geographical names
- iii. Interlinkages with national geographical names authorities and identify national focal point(s)
- iv. ...?

2. Authoritative Data from the UN System

Short Term

- i. UN Demographic Yearbook – Authoritative Member State provided statistical data
- ii. UNTERM

Long Term

- iii. UN Gazetteer

3

Data Governance

Today:

- The Secretariat has the means to input into the revived WGN Database all cities provided to it by UNGEGN in its previous iteration, integrating this data with the complement of data from the UN Demographic Yearbook – in both cases this data is provided by a Member State national authority/institution to the United Nations. This will add 2,735 cities to the WGN Database – 6,097 cities globally will be managed within the database.
- The Secretariat will work towards endonymic ‘completeness’ of this data across the six official UN languages (Arabic, Chinese, English, French, Russian, and Spanish), integrating authoritative linguistic data from the Demographic Yearbook and the UNTERM database. The positional accuracy of geographic coordinates will be assessed in cooperation with the UN Geospatial Information Section of the UN Office of Information and Communications Technology (OICT)
- The Working Group on Geographical Names Data Management (see report GEGN.2/2023/73/CRP.73), as part of its work plan Action Item 1-i-5 – “Promote and support the establishment of an authoritative international database/gazetteer of geographical names to be disseminated to the public through UNGEGN” notes that the WGN Database will now be monitored by the Working Group.

3

Data Governance

Some questions to guide future discussion of the WGN Database:

- How should UNGEGN promote the WGN Database to collect and manage data outside the six official UN languages?
- How should the WGN Database be promoted and communicated to the broader geographical names, geospatial, and linguistic communities?
- What is the quality of the current data within the WGN Database?
- What are the future opportunities that can explore other geographies – Building on Country and City data to include data on Indigenous and Cultural Heritage... and beyond.

The WGN Database is a tool for managing toponymic data for cities and countries. It can be extended to manage toponymic data pertaining to culture, heritage and identity, including indigenous, minority and regional languages – but requires the ownership of relevant bodies to define appropriate data workflows and other cartographic concerns.

3

Potential Future Feature Improvement and Development

Feature Improvement

1. A unique identifier for cities
2. Improved cartography
3. Other features to be defined (resources permitting)

Data Development

1. Addition of unique identifiers Geographic Features to enable Linked Data and other forms of integration – potentially with other gazetteers
2. Potential collaboration with other institutions providing authoritative geographical names
3. Collaboration with the UN Library, SALB and other sources of geographic data where geographic names are important
4. Discussion(s) on how to develop the application further – whether by open-source development or through direct provision of resources by UNGEGN, Secretariat or other means etc.
5. Audio files for pronunciation of toponyms
6. ...



Points for Discussion

38. **The Group of Experts is invited to:**

- (a) Take note of the present report and express its views on the redevelopment and future direction of the World Geographic Names Database;**
- (b) Welcome and invite Member States and their National Names Authorities to submit and update toponymic data to the secretariat;**
- (c) Consider and provide further guidance regarding:**
 - i. The development of a unique identifier for cities;**
 - ii. An appropriate governance mechanism for the World Geographic Names Database, inclusive of guidance on the Database's promotion and communication;**
- (d) Express its views on how Linked Data and the semantic web can be integrated into the World Geographic Names Database**



The Dashboard

<https://tinyurl.com/un-wgn>

**The Secretariat will inform UNGEGN
when a permanent URL is available**