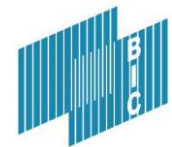


# Bureau International des Containers

**35<sup>th</sup> UN/CEFACT Virtual Forum  
Facility Code API Implementation**

The challenge:

- Make the BIC Facility Codes available via **API** to support industry digitalisation
- Provide a simple way to register new Container facilities with an **immediate code**
- Use **vocabulary** known to industry
- Enhance the code list to provide GPS and maintain **data quality**



# Data Model – MMT RDM as a foundation



Vocabulary well known to the transport and logistics domain



Rich data model contained majority of terms needed to meet requirements



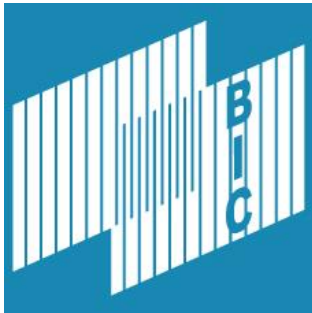
Actively maintained by an engaged community



Stable data model

# Collaboration BIC and SMDG

- BIC and SMDG are both **Child Codes of UNLOCODE**
- **Overlap of data elements** being provided
- Huge **benefit to the industry** to provide the codes via the same API but continue to **manage them independently** of each other



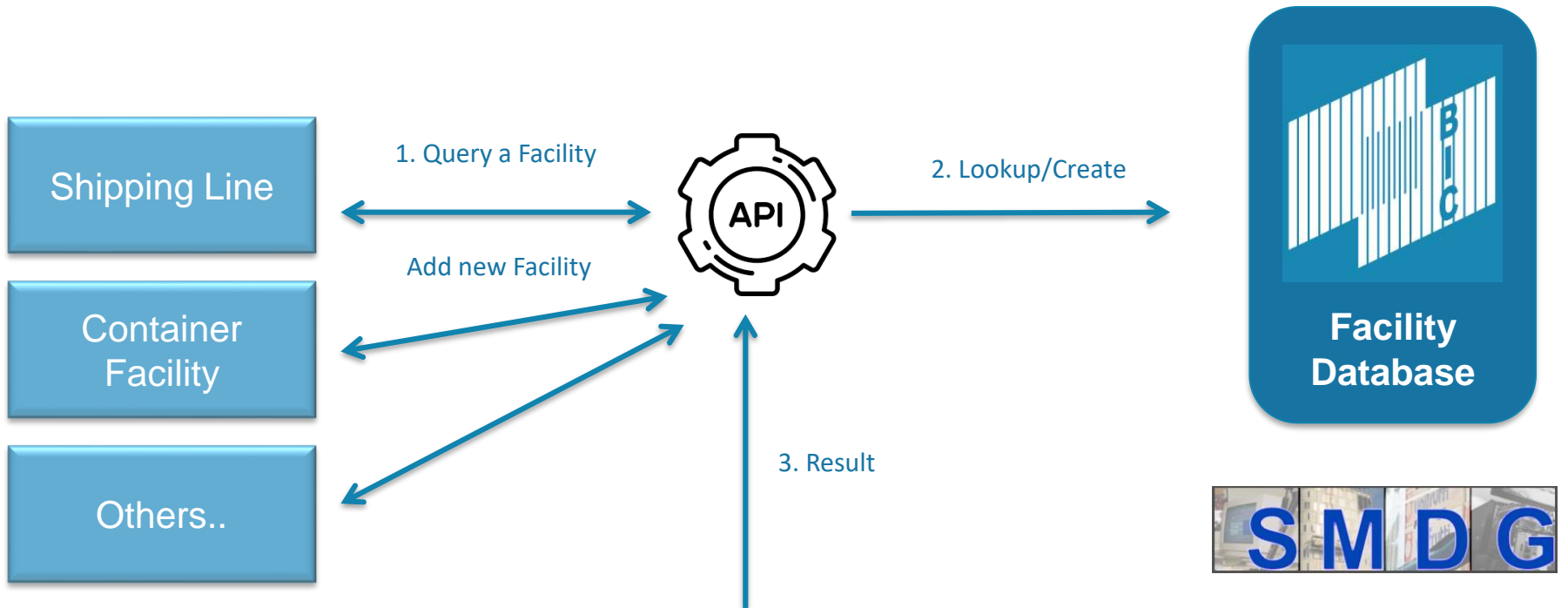
Container Facility Codes



Sea Port Terminal Facilities



# Facility Code List – API Flow



Code	Code Provider	Facility	Address	Co-ordinates
DEHAMRMTD	<b>BIC</b>	Remain Container-Depot Hamburg	Dradenauer Deichweg 1, Hamburg, 21129, Germany	53.5117948, 9.9046834
DEHAMCTA	<b>SMDG</b>	HHLA CONTAINER TERMINAL ALTENWERDER (CTA)	Am Ballinkai 1, 21129 Hamburg, Germany	53.50083, 9.93639

# OpenAPI Specification

Facility-Codes - 1.0.4-oas3 -

Export -

```
1 openapi: 3.0.1
2 info:
3   title: Facility Codes
4   description: >
5     A common API to provide the details of a facility used in International
6     trade comprising of the BIC Container Facilities and SMDG Terminal Codes,
7     these codes are managed under the ownership of each organisation
8     independently but provided under a single API to industry. Bureau
9     International des Containers (BIC) are responsible for providing the inland
10    container facilities within a country, or location, SMDG are responsible for
11    providing the terminals that container vessels call at within a country or
12    location. Both codes are an extension of the UN/LOCODE designed to give
13    granularity of facilities contained within the area identified by the
14    UN/LOCODE.
15    version: "1.0.4-oas3"
16  servers:
17    - url: 'https://oac81ninq5.execute-api.eu-west-1.amazonaws.com/{basePath}'
18    variables:
19      basePath:
20        default: BETA
21  paths:
22    /facilities/byCountry/{countryCode}/{codeProvider}:
23      get:
24        parameters:
25          - name: countryCode
26            in: path
27            required: true
28            schema:
29              type: string
30          - name: codeProvider
31            in: path
32            required: true
33            schema:
34              type: string
35        responses:
36          '200':
37            description: 200 response
38            content: {}
39        security:
40          - api_key: []
41    /facilities/ByName/{countryCode}:
42      get:
43        parameters:
44          - name: countryCode
45            in: path
46            required: true
47            schema:
48              type: string
49          - name: name
50            in: query
51            required: true
52            schema:
53              type: string
54          - name: codeProvider
55            in: query
56            schema:
57              type: string
58        responses:
```

Last Saved: 1:20:01 pm - Sep 11, 2020

VALID

GET /facilities/byCountry/{countryCode}/{codeProvider}

GET /facilities/ByName/{countryCode}

POST /facilities

GET /facilities/byLocation/{unLocode}/{codeProvider}

GET /facilities/{code}

### Schemas

Facility Schema

- code**
  - string
  - title: Facility Code
  - minLength: 9
  - maxLength: 9

The unique code used for identifying the specific facility determined by the code list provider, this is the code which is used as a unique identifier in messages and should adhere to the ISO XXXX standard.
- codeProvider\***
  - string
  - title: Code List Provider

The organization managing the code list, either BIC or SMDG.

Enum:

  - > Array [ 2 ]
- codeListProviderCode**
  - string
  - title: Code List Provider Code

The code provided for the Facility by the code list provider. This code may not need be unique on its own, you should ALWAYS use the code as the unique identifier for a facility.
- unLocode\***
  - string
  - title: UN/LOCODE
  - maxLength: 5
  - minLength: 5

The UN Location Code identifies a location in the sense of a city/a town/a village, being the smaller administrative area existing as defined by the competent national authority in each country.
- countryCode\***
  - ISO3166\_Code string

Country codes, defines codes for the names of countries, dependent territories, and special areas of geographical interest.

Enum:

  - > Array [ 249 ]
- facility\***
  - Facility Detail
    - name\***
      - string
      - minLength: 1
      - maxLength: 70

The name of the facility.
    - address\***
      - Address
        - street\***
          - string
          - minLength: 1
          - maxLength: 70



# BIC Facility Code – Machine and Human View

GET /facilities/{code}

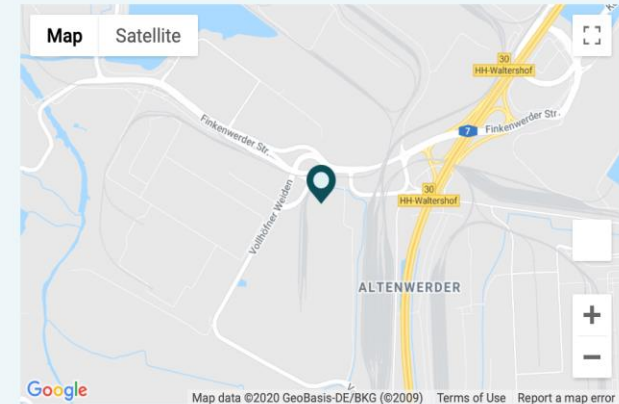
```
{
  "code": "DEHAMRMTD",
  "codeProvider": "BIC",
  "unLocode": "DEHAM",
  "countryCode": "DE",
  "facility": {
    "name": "Remain Container-Depot Hamburg",
    "address": {
      "street": "Dradenauer Deichweg 1",
      "city": "Hamburg",
      "state": "",
      "postcode": "21129",
      "country": "Germany"
    },
    "formattedAddress": "Dradenauer Deichweg 1, Hamburg, 21129, Germany",
    "geographicalCoordinate": {
      "latitude": "53.5117948",
      "longitude": "9.9046834"
    }
  },
  "operator": {
    "name": "Eurogate GmbH & Co. KG"
  }
}
```

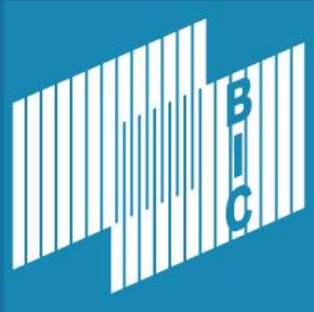
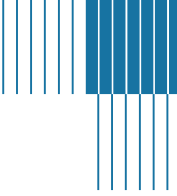
## REGISTERED LOCODE: DEHAMRMTD

Facility:  
Remain Container-Depot Hamburg

Address:  
Dradenauer Deichweg 1  
Hamburg  
21129  
Germany

Operator:  
Eurogate GmbH & Co. KG





# Future of Facility Codes – Geographical Features

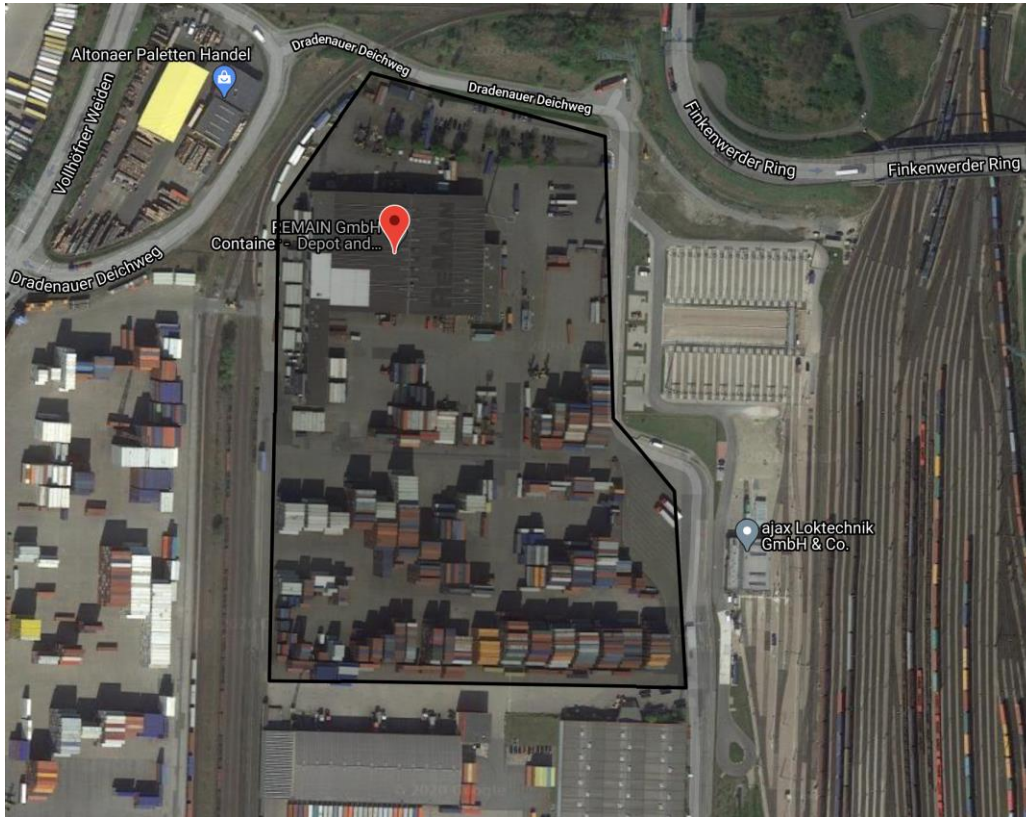


# Geographical Features

- Lat/Long
- Circles
- Polygons

Potential to **crowdsource** and overlay collectively to support smart assets and **automation.**

[Example Mapping](#)



# To Find Out More

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