

DIE ÖSTERREICHISCHE BIBLIOTHEKENVERBUND  
UND SERVICE GMBH

obv sg

# GND IN PRIMO THREE USE CASES

IGELU 2023 DEVELOPER DAY, LEUVEN

ULRICH LEODOLTER & PRIMO-TEAM AT OBVSG

# GEMEINSAME NORMDATEI

Integrated (German) Authority File

- **About the OBVSG**
- **About the GND**
- **GND in our Data (Alma and Primo)**
- **Use case 1: Wikipedia Abstracts in Primo**
- **Use case 2: Advanced Search based on GND IDs**
- **Use case 3: Additional Identifiers from GND**

## ABOUT THE OBVSG

### THE AUSTRIAN LIBRARY NETWORK AND SERVICE LTD

- The Austrian Library Network and Service Ltd (OBVSG) is providing a broad variety of services and IT solutions for library and information management.
- The Austrian Library Network (OBV) is the largest network of scientific and administrative libraries in Austria with 70 participants, representing more than 90 individual institutions - including the Austrian National Library, the university libraries and the colleges of education; individual ministries, numerous technical colleges and other important collections.
- All participants share the same online cataloging network based on Alma Network Zone.
- 60 Primo institutions hosted by OBVSG.
- More information on our homepage [www.obvsg.at](http://www.obvsg.at)

## ABOUT THE GND

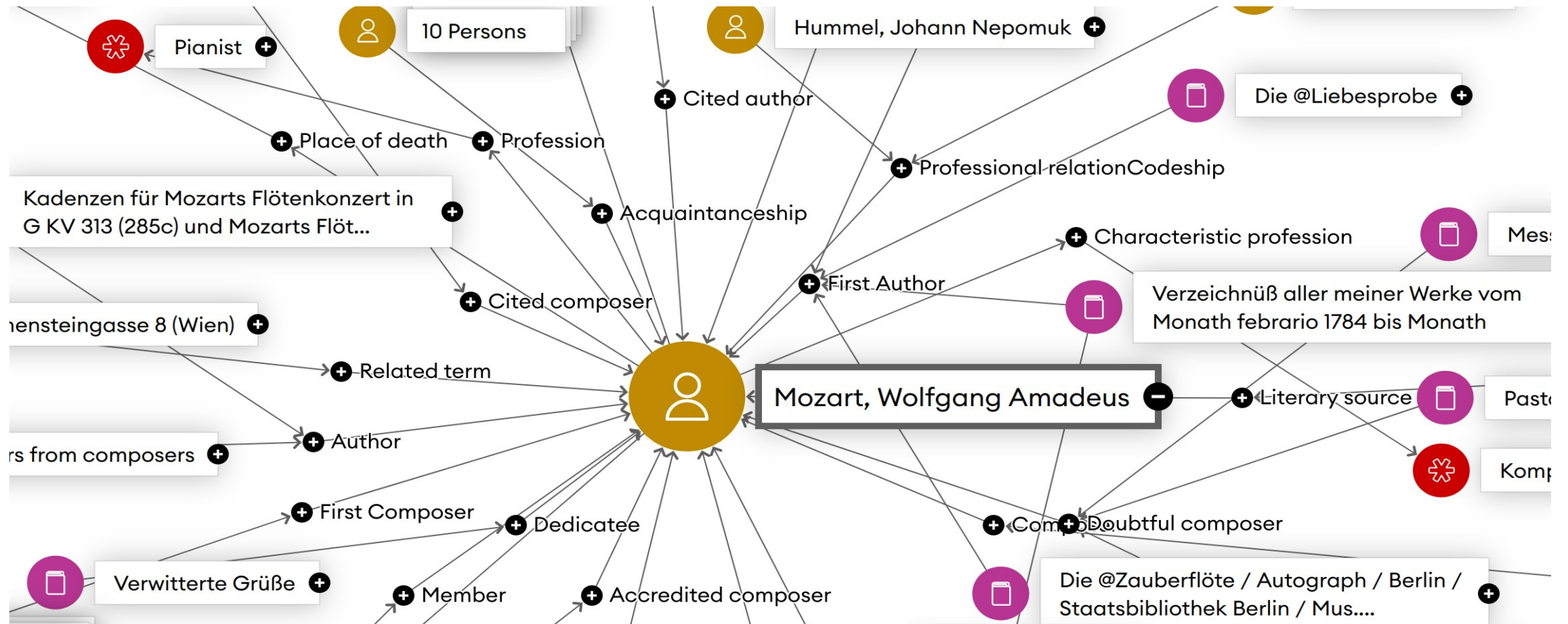
### GEMEINSAME\_NORMDATEI

- The **Integrated Authority File (GND)** is a service facilitating the collaborative use and administration of authority data. These authority data represent and describe entities, i.e. persons, corporate bodies, conferences and events, geographic entities, topics and works relating to cultural and academic collections.
- Every entity in the GND features a unique and stable identifier (GND ID).
- About 9 million entities
- OPAC search: <https://portal.dnb.de/opac.htm>
- LOD interface: <https://lobid.org/gnd>
- GND explorer: <https://explore.gnd.network>

# ABOUT THE GND

## GND EXPLORER – MOZART, WOLFGANG AMADEUS

- <https://explore.gnd.network/gnd/118584596/relations>



# GND IN OUR DATA

## ALMA MARC21 RECORD

### < Record View

001	99146601723603331
005	20220316110757.0
007	qu
008	220316s2018    nn   eng c
009	AC16468375
020	__  a 9781860961953
028	22  a AB 2767
035	__  a (AT-OBV)AC16468375
035	__  a (DE-599)OBVAC16468375
040	__  a AT-MOZ  b ger  d AT-MOZ  e rda
041	__  a eng
044	__  c XA-GB
100	1_  a Mozart, Wolfgang Amadeus  d 1756-1791  0 (DE-588)118584596  4 cmp
240	10  a Musik für Klavier  0 (DE-588)300583311  k Auswahl
245	10  a Mature piano pieces  c Mozart ; edited and annotated by Richard Jones



# GND IN OUR DATA

## PRIMO SOURCE RECORD

```
001 990123527670203331
005 20230217204648.0
007 cr#|||||
007 qu
008 151015|1815 |||uu| ger c
009 AC12655806
024 7#$aurn:nbn:at:at-moz:2-66479$2urn
028 22$a2263
035 ##$(AT-OBV)AC12655806
035 ##$(DE-599)OBVAC12655806
035 ##$(VLID)2864390
040 ##$aISM$bger$cVL-RETRO$dAT-MOZ$erakwb
041 ##$ager$aaita$aafre
044 ##$cXA-DXDE
100 1#$aMozart, Wolfgang Amadeus$d1756-1791$(DE-588)118584596$4cmp$eKomponistIn$2GND$G(wikidata)Q254$9Y
100 1#$aMozart, Wolfgang Amadé$d1756-1791$2GND$9N
100 1#$aMozart, Wolfgang Amadè$d1756-1791$2GND$9N
100 1#$aMozart, Wolfgang Amadée$d1756-1791$2GND$9N
100 1#$aMocart, Volfgang Amadeus$d1756-1791$2GND$9N
100 1#$aMoc'arti, Wolp'gang Amadei$d1756-1791$2GND$9N
100 1#$aMozart, Wolffgango$d1756-1791$2GND$9N
100 1#$aMozart, Wolfg. Amadeus$d1756-1791$2GND$9N
100 1#$aMocart, V. A.$d1756-1791$2GND$9N
100 1#$aMocart, V.$d1756-1791$2GND$9N
100 1#$aMozart, Wolfgang-Amadeus$d1756-1791$2GND$9N
100 1#$aMozart, A. W.$d1756-1791$2GND$9N
100 1#$aMozart, W. Am.$d1756-1791$2GND$9N
```



# WIKIPEDIA ABSTRACT IN PRIMO

## USE CASE 1

- **About**

- Show Wikipedia Abstract in Primo for creators having a GND ID and Wikipedia page
- Based on Beacon file [https://persondata.toolforge.org/beacon/dewiki\\_list.txt](https://persondata.toolforge.org/beacon/dewiki_list.txt)
- Beacon file contains all german Wikipedia pages of persons having a GND ID

- **History**

- First version implemented on Primo Version 3 in 2012 (jQuery javascript)
- Abstracts extracted from DBpedia dumps using shell scripts and perl
- Backend service base on perl cgi and mysql database

- **Problems**

- Keep cached database up to date
- DBpedia dumps changed formats and scripts no longer worked
- DBpedia sparql endpoints too slow for frontend integration
- German DBpedia <https://de.dbpedia.org> outdated since October 2016

# DBPEDIA ABSTRACT IN PRIMO

## USE CASE 1

- **Status Today**

- Primo NUI component managed in CENTRAL\_PACKAGE
- Backend container service based on NodeJS, ExpressJS and SQLite
- SQLite database update almost automated by using beacon file and simple sparql queries
- 510278 German and 218133 English database entries

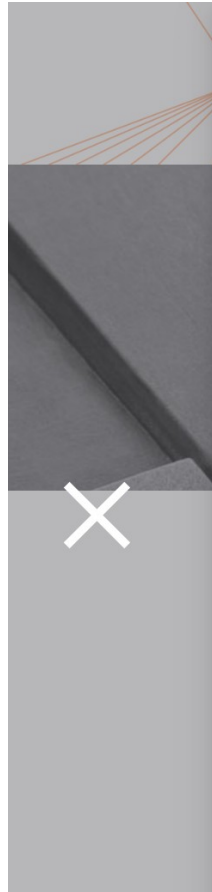
- **Backend Example**

- <https://services.obvsg.at/primo/wikipedia?pnd=118584596&lang=de>
- <https://services.obvsg.at/primo/wikipedia?pnd=118584596&lang=en>

# WIKIPEDIA ABSTRACT IN PRIMO

## USE CASE 1

- Primo Example <https://permalink.obvsg.at/AC09116991>



	Details	
NACH OBEN	Titel	[Eberl, Anton:] KV Anh.287. XII Variations pour Clavecin ou Piano-Forte par. W. A. Mozart. [Wolfgang Amadeus Mozart zugeschrieben.]
SENDEN AN	Person/Institution	Mozart, Wolfgang Amadeus, 1756-1791 [KomponistIn] Eberl, Anton, 1765-1807 [VerfasserIn]
STANDORTE	Schlagwörter	Instrumentalmusik → Solo, Musik →
DETAILS	Art/Umfang/Format	7 S.
	Beschreibung	Druckplattennummer: 176
LINKS	Ort/Verlag	Vienne : Magazin de Musique
	Jahr/Datierung	(1794)
WIKIPEDIA	Verbund-ID-Nr.	AC09116991
	Link zum Datensatz	<a href="https://permalink.obvsg.at/AC09116991">https://permalink.obvsg.at/AC09116991</a>
NORMDATEN-...		

### Links

[Link zur Ressource \(Zettel\)](#)

### Wikipedia

#### Wolfgang Amadeus Mozart

Wolfgang Amadeus Mozart (\* 27. Jänner 1756 in Salzburg, Erzstift Salzburg; † 5. Dezember 1791 in Wien), der überwiegend mit Wolfgang Amadé Mozart unterschrieb, war ein Salzburger Musiker und Komponist der Wiener Klassik. Sein umfangreiches Werk genießt weltweite Popularität und gehört zum Bedeutendsten im Repertoire klassischer Musik. ... [Wikipedia](#)

#### Anton Eberl

Anton Eberl, vollständiger Name: Anton de Paula Franz de Paula Josef Vincenz Ferrerius Eberl (\* 13. Juni 1765 in Rossau (Wien); † 11. März 1807 in Wien) war ein österreichischer Pianist, Komponist und Kapellmeister. ... [Wikipedia](#)

## WIKIPEDIA ABSTRACT IN PRIMO

### USE CASE 1

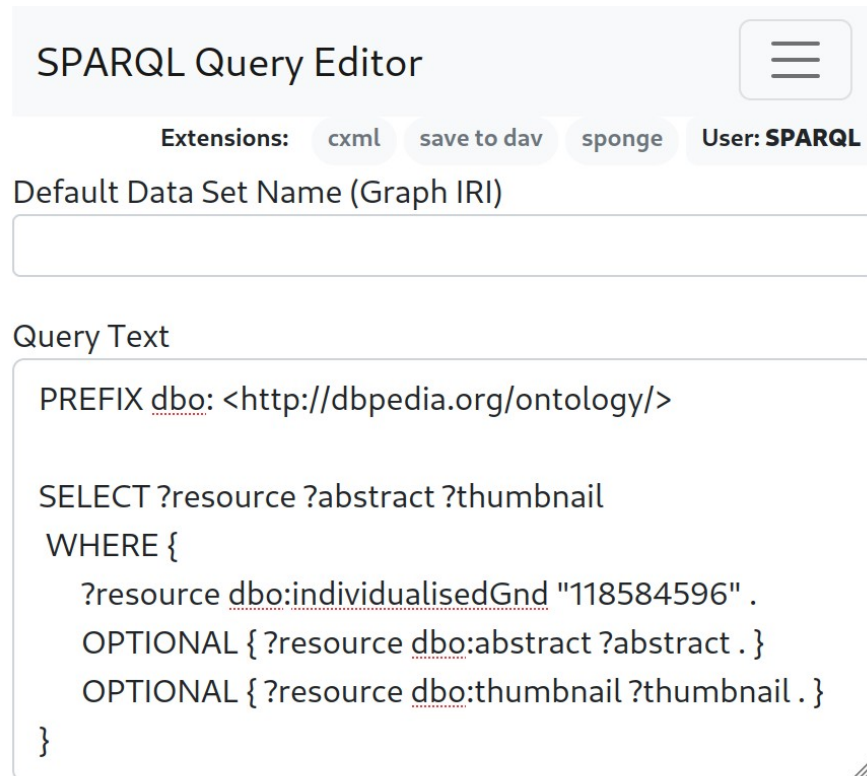
- **Status of German DBpedia**
  - [de.dbpedia.org/sparql](http://de.dbpedia.org/sparql) still outdated
  - No timeline for updates (limited resources of maintainers)
- **Why not setup my own DBpedia ?**
  - <http://wikidata.dbpedia.org/develop/getting-started>
  - Setup extraction framework to process monthly DBpedia releases, German language only (de)
  - Running the extraction takes time (about 24 hours) and resources (128 GB ram, minimum 20GB disk)
  - Results of extraction are RDF files in Turtle format (ttl.bz2)
  - Install Virtuoso graph database (<https://hub.docker.com/r/openlink/virtuoso-opensource-7>)
  - Import extracted files using <https://vos.openlinksw.com/owiki/wiki/VOS/VirtBulkRDFLoader>
  - Query <http://dbpedia.obvsg.at:8890/sparql> (not public)

# WIKIPEDIA ABSTRACT IN PRIMO

## USE CASE 1

Slightly different queries needed for German and English DBpedia.

- **German:** <http://dbpedia.obvsg.at:8890/sparql>



SPARQL Query Editor

Extensions: [cxml](#) [save to dav](#) [sponge](#) User: **SPARQL**

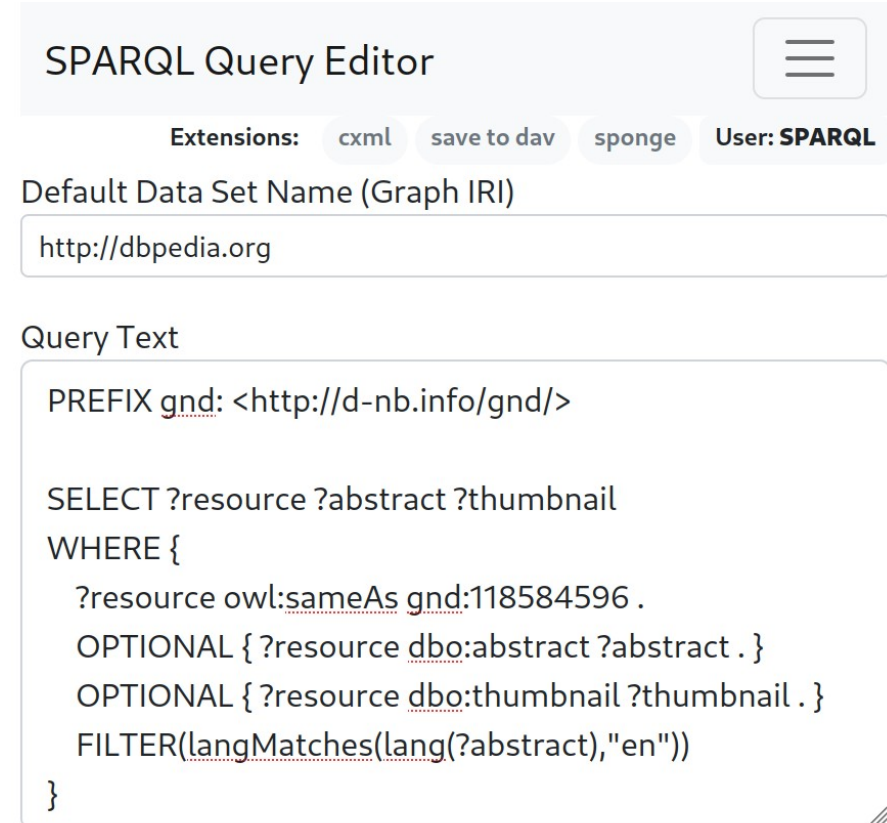
Default Data Set Name (Graph IRI)

Query Text

```
PREFIX dbo: <http://dbpedia.org/ontology/>

SELECT ?resource ?abstract ?thumbnail
WHERE {
  ?resource dbo:individualisedGnd "118584596" .
  OPTIONAL { ?resource dbo:abstract ?abstract . }
  OPTIONAL { ?resource dbo:thumbnail ?thumbnail . }
}
```

- **English:** <https://dbpedia.org/sparql>



SPARQL Query Editor

Extensions: [cxml](#) [save to dav](#) [sponge](#) User: **SPARQL**

Default Data Set Name (Graph IRI)

Query Text

```
PREFIX gnd: <http://d-nb.info/gnd/>

SELECT ?resource ?abstract ?thumbnail
WHERE {
  ?resource owl:sameAs gnd:118584596 .
  OPTIONAL { ?resource dbo:abstract ?abstract . }
  OPTIONAL { ?resource dbo:thumbnail ?thumbnail . }
  FILTER(langMatches(lang(?abstract),"en"))
}
```

## ADVANCED SEARCH USING GND USE CASE 2

- **Idea**
  - Perfect Search in Primo using GND ID's
  - Provide simple UI component
  - Provide Standard Normalization rules
- **Problems**
  - Pretty large number of Normalization rules needed
  - Search by ID's does not find all results
  - Explain it to the users

The whiteboard contains a handwritten table with the following structure:

	AUT	BIB				
	GND DS FT aufklappen	SID-DS CRE	SIB CON	SIB- TOP	SIB- TIT	SIB- PBL
CRE	✓	✓	✓	✓	✗	✓
CON		✓	✓	✓	✗	✓
TOP <i>Siehe unten</i>		□	□	□	□	□
TIT		✗	✗	✓	✓	✗
PBL		✓	✓	✓	✗	✓

TOP	b	V	J	P	S	U
Köp	✓	✓	✓	✗	✓	
Vorw.	✓	✓	✓	✗	✓	
Jung.	✓	✓	✓	✗	✓	
Person	✓	✓	✓	✗	✓	
Sachleg.	✗	✗	✓	✗	✓	
Werktit.	✗	✗	✓	✗	✗	

## ADVANCED SEARCH USING GND

### USE CASE 2

- **Normalization Rules**

- GND identifiers require about 70 rules from MARC21 to pnx lad24
- Implemented at installation level Standard\_almalrc MARC template
- Inherited by Institutions

```
<lad24>GND: 11859527X 689 PPP TOP</lad24>
```

```
<lad24>GND: 4165727-5 689 SSS TOP</lad24>
```

```
<lad24>GND: 123668352 700 XXX CON</lad24>
```

```
<lad24>GND: 11859527X 700 XXX CON</lad24>
```

```
<lad24>GND: 811240-X 710 XXX CON</lad24>
```

```
</addata>
```



# ADVANCED SEARCH USING GND

## USE CASE 2



TOP

SEND TO

LOCATIONS

DETAILS

AUTHORITY DATA

WIKIPEDIA

### Authority data

The Integrated Authority File ([Gemeinsame Normdatei - GND](#)) consists of authority data for approximately 9 million persons, families, corporate bodies, conferences and events, geographic entities, topics and works. It is used for cataloging purposes (authority control) in libraries, as well as by archives, museums, and research projects.

[show more](#)

Authorities	Advanced search	
<b>Participating Entities</b>		
<a href="#">Connelly, Michael , 1956-</a>	Responsible for	Subject in
<a href="#">Poe, Edgar Allan , 1809-1849</a>	Responsible for	Subject in
<a href="#">Mystery Writers of America</a>	Responsible for	Subject in
<b>Subject</b>		
<a href="#">Poe, Edgar Allan , 1809-1849</a>	Responsible for	Subject in
<a href="#">Kriminalgeschichte</a>		Subject in

### Wikipedia

Michael Connelly

## ADDITIONAL IDENTIFIERS FROM GND

### USE CASE 3

- **About**

- Make additional Identifiers of authors visible in Primo (ORCID, SCOPUS, RID, VIAF, ...)

- **Todo**

- Enable publishing of GND 024 in Alma Primo publishing profile
- Use XSLT to preprocess Primo publishing records to move 024 into right context
- Setup Primo Normalization rules to collect identifiers into PNX subfield \$G
- Develop a Primo NUI component to display icons and links based on \$G

- **Acknowledgement**

- Leonhard Zachtl, [ORCID 0009-0006-8820-3508](https://orcid.org/0009-0006-8820-3508)
- <https://catalogplus.tuwien.at>

# ADDITIONAL IDENTIFIERS FROM GND

## USE CASE 3

- GND MARC21 Authority example

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <record xmlns="http://www.loc.gov/MARC21/slim" type="Authority">
3   <leader>00000nz a2200000oc 4500</leader>
4   <controlfield tag="001">136205070</controlfield>
5   <controlfield tag="003">DE-101</controlfield>
6   <controlfield tag="005">20220316080422.0</controlfield>
7   <controlfield tag="008">080905n| |aznnaabn          | aaa   |c</
controlfield>
8   <datafield tag="024" ind1="7" ind2=" ">
9     <subfield code="a">136205070</subfield>
10    <subfield code="0">http://d-nb.info/gnd/136205070</subfield>
11    <subfield code="2">gnd</subfield>
12  </datafield>
13  <datafield tag="024" ind1="7" ind2=" ">
14    <subfield code="a">0000-0003-3978-4546</subfield>
15    <subfield code="2">orcid</subfield>
16  </datafield>
17  <datafield tag="024" ind1="7" ind2=" ">
18    <subfield code="a">B-3138-2008</subfield>
19    <subfield code="2">rid</subfield>
20  </datafield>
21  <datafield tag="024" ind1="7" ind2=" ">
22    <subfield code="a">57192942041</subfield>
23    <subfield code="2">scopus</subfield>
24  </datafield>
```

## ADDITIONAL IDENTIFIERS FROM GND USE CASE 3

### ● Primo Publishing before and after XSLT

```
1 <datafield tag="100" ind1="1" ind2=" ">
2   <subfield code="a">Glückler, Johannes</subfield>
3   <subfield code="d">1973-</subfield>
4   <subfield code="0">(DE-588)123832527</subfield>
5   <subfield code="4">aut</subfield>
6   <subfield code="2">GND</subfield>
7   <subfield code="0">41-GND-123832527</subfield>
8   <subfield code="9">Y</subfield>
9 </datafield>
10 <datafield tag="100" ind1="1" ind2=" ">
11   <subfield code="a">0000-0002-2507-1556</subfield>
12   <subfield code="2">orcid</subfield>
13   <subfield code="2">GND</subfield>
14   <subfield code="0">41-GND-123832527</subfield>
15   <subfield code="9">GND024</subfield>
16 </datafield>
```

```
1 <datafield tag="100" ind1="1" ind2=" ">
2   <subfield code="a">Glückler, Johannes</subfield>
3   <subfield code="d">1973-</subfield>
4   <subfield code="0">(DE-588)123832527</subfield>
5   <subfield code="4">aut</subfield>
6   <subfield code="e">VerfasserIn</subfield>
7   <subfield code="2">GND</subfield>
8   <subfield code="G">(orcid)0000-0002-2507-1556</
subfield>
9   <subfield code="9">Y</subfield>
10 </datafield>
```

## ADDITIONAL IDENTIFIERS FROM GND

### USE CASE 3

- AngularJS Component


```
1  /**
2   * pid-link.module.js
3   */
4
5  /* eslint angular/no-run-logic: 0 */
6
7  import ObvPidLinkProvider from './pid-link.provider';
8  import ObvPidLinkComponent from './pid-link.component';
9
10 export const ObvPidLinkModule = angular
11   .module('obvPidLink', [])
12   .provider('obvPidLink', ObvPidLinkProvider)
13   .component(ObvPidLinkComponent.selector, ObvPidLinkComponent)
14   .run(['$templateCache', ($templateCache) => {
15     $templateCache.put('components/search/fullView/details/service-details.html',
16       $templateCache.get('components/search/fullView/details/service-details.html')
17         .replace('</div><div ng-show="!value.isLinkable"', `
18           <obv-pid-link parent-ctrl="$ctrl" cur-value="curValue"></obv-pid-link>
19           </div><div ng-show="!value.isLinkable"`));
20   }])
21   .name;
```

# ADDITIONAL IDENTIFIERS FROM GND

## USE CASE 3

### ● Primo Example



	Details	
NACH OBEN		
SENDEN AN	Titel	Räumliche Simulationstechniken in der Architektur : Wege zu einer neuzeitlichen Raumgestaltung
STANDORTE	Person/Institution	<a href="#">Martens, Bob, 1961-</a> [VerfasserIn] ↓    
DETAILS	Verantwort.angabe	<a href="#">Bob Martens</a>
LINKS	Schlagwörter	<a href="#">Architekturmodell</a> <a href="#">Space (Architecture)</a>
WIKIPEDIA	RVK	ZH 3700 
NORMDATEN-...	BK	56.61 - Architektonisches Zeichnen 
	Umfangsangabe	149 S., Ill., graph. Darst., 1 View-Masterscheibe (7 Stereo-Bildpaare)
	Beschreibung	<b>Sprache/Schrift:</b> Zsfassung in engl. Sprache <b>Anmerkungen:</b> Literaturverz. S. 119 - 125
	Univ. Angaben	Zugl.: Wien, Techn. Univ., Habil.-Schr. <b>Institution:</b> Technische Universität Wien   Fakultät für Architektur und Raumplanung   Institut für Architektur und Entwerfen   E253

**THANK YOU FOR YOUR ATTENTION!**

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