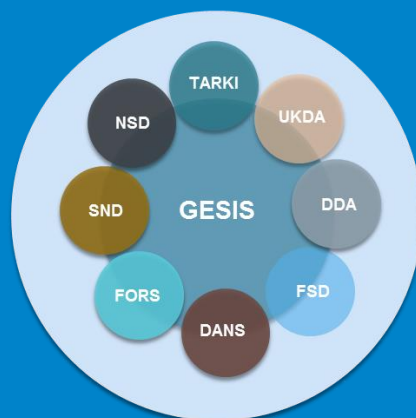


CESSDA ERIC

Consortium of European Social Science Data Archives  
European Research Infrastructure Consortium

# How the Euro Question Bank project makes survey questions available to the social sciences



Azadeh MahmoudHashemi

Esra Akdeniz

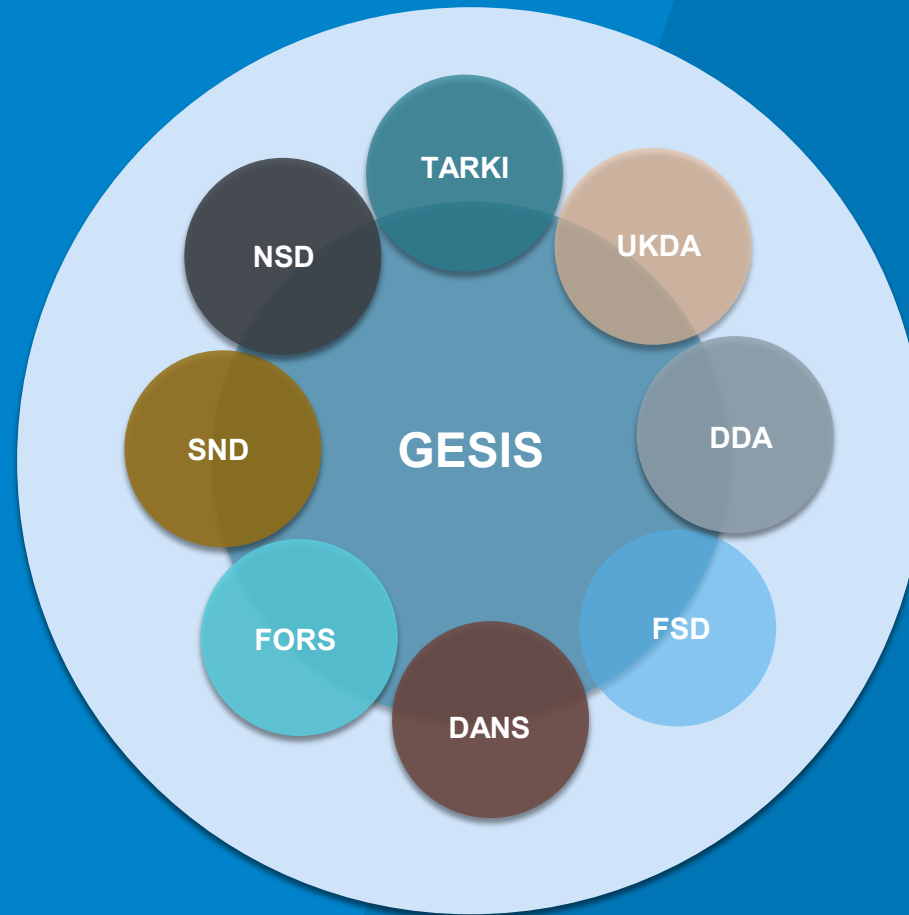
Wolfgang Zenk-Möltgen

Alexander Mühlbauer

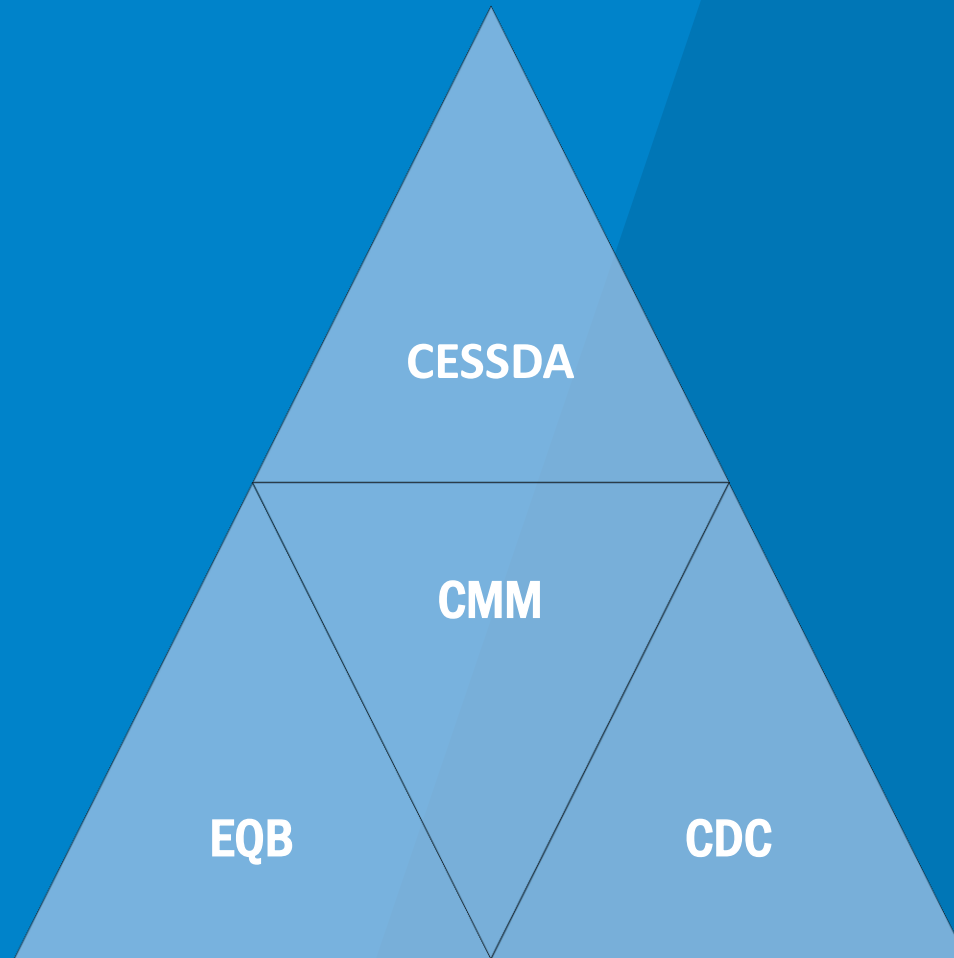
# Outline

- » Introduction
- » Goals
- » Key features
- » EQB Metadata Schema
- » Modular Architecture
- » EQB Prototype
- » EQB Deliverables

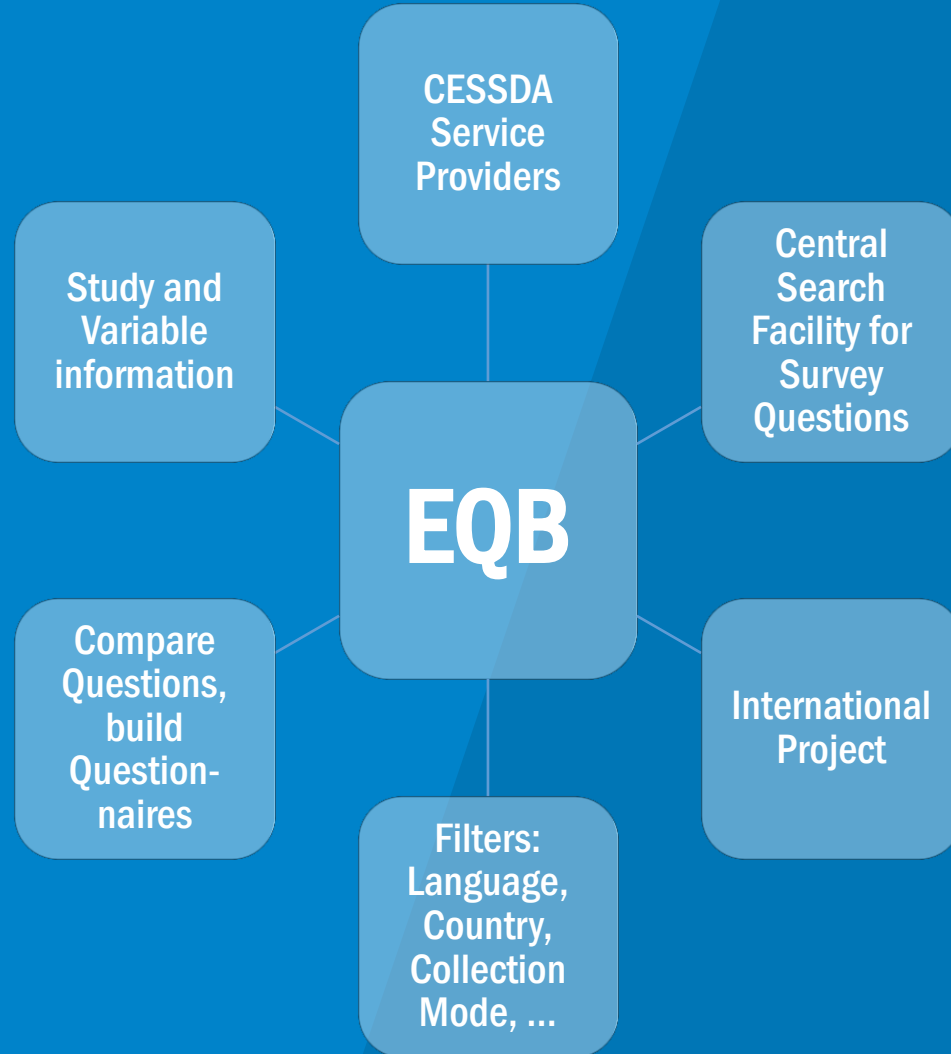
# Euro Question Bank Partners



# Cooperation of Euro Question Bank



# Goals of EQB



# Key Features of EQB

Metadata model includes  
XPath mappings from DDI-C  
to DDI-L

Multilingual thesaurus  
(ELSST)

UI allows to search for  
question texts, response  
alternatives and keywords

Access to CESSDA  
resources without switching  
systems

# EQB Metadata Schema: Questions

Element	Occurrence
1. Questions	1
1.1 Question Item	0-n
1.2 Question Grid	0-n

0-n → Optional and repeatable

0-1 → Optional, but not repeatable

1-n → Mandatory and repeatable

1 → Mandatory, but not repeatable

# EQB Metadata Schema: Responses

Element	Occurrence
2. Response Domain Type	0-1
2.1 Code Domain	0-1
2.2 Scale Domain	0-1
2.3 Numeric Domain	0-1
2.4 Text Domain	0-1
2.5 Missing Domain	0-1

0-n → Optional and repeatable

0-1 → Optional, but not repeatable

1-n → Mandatory and repeatable

1 → Mandatory, but not repeatable



# EQB Metadata Schema: Dataset/Variable

Element	Occurrence
3. Datasets	0-1
3.1 PID Dataset	0-n
3.2 Dataset Title	1-n
3.3 Reference Dataset to Study	1
3.4 Variable	1-n

0-n → Optional and repeatable

0-1 → Optional, but not repeatable

1-n → Mandatory and repeatable

1 → Mandatory, but not repeatable

# EQB Metadata Schema: Instrument

Element	Occurrence
4. Instrument	0-1
4.1 Instrument Name	1
4.2 Instrument Language	1
4.3 Reference to Question	1

0-n → Optional and repeatable

0-1 → Optional, but not repeatable

1-n → Mandatory and repeatable

1 → Mandatory, but not repeatable

# EQB Metadata Schema: Study

Element	Occurrence
5. Study	1
5.1 PID	1
5.2 Number	1-n
5.3 Title	1-n
5.4 Publisher	1-n
5.5 Year of publication	1-1
5.6 Time Method	0-n
5.7 Country	0-n
5.8 Topic Classification	1-n

0-n → Optional and repeatable

0-1 → Optional, but not repeatable

1-n → Mandatory and repeatable

1 → Mandatory, but not repeatable

# EQB Metadata Schema: Study Group

Element	Occurrence
6. Study Group	0-1
6.1 Study Group ID	0-n
6.2 Study Group Title	1
6.3 Study Group Description	0-1
6.4 Study Group URL	0-n
6.5 Reference of Study Group to Study	1-n

0-n → Optional and repeatable

0-1 → Optional, but not repeatable

1-n → Mandatory and repeatable

1 → Mandatory, but not repeatable

# EQB Metadata Schema: Person

Element	Occurrence
7. Person	0-1
7.1 Person Name	1
7.2 Affiliation	0-1

0-n → Optional and repeatable

0-1 → Optional, but not repeatable

1-n → Mandatory and repeatable

1 → Mandatory, but not repeatable

# EQB Metadata Schema: Institution

Element	Occurrence
8. Institution	0-1
8.1 Institution Name	1
8.2 Institution Abbreviation	0-1

0-n → Optional and repeatable

0-1 → Optional, but not repeatable

1-n → Mandatory and repeatable

1 → Mandatory, but not repeatable

# EQB Metadata Schema: Meta-metadata

Element	Occurrence
9. Reference to Institution	1

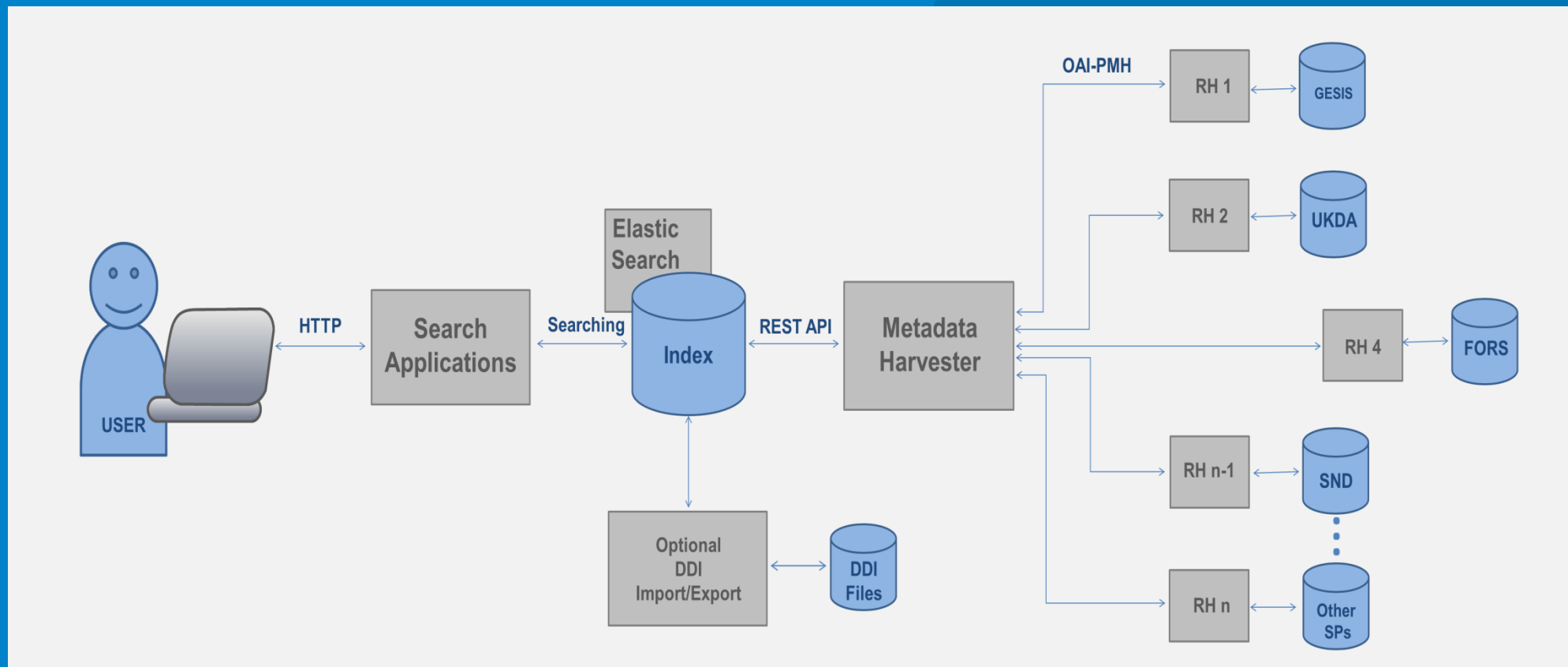
0-n → Optional and repeatable

0-1 → Optional, but not repeatable

1-n → Mandatory and repeatable

1 → Mandatory, but not repeatable

# Modular Architecture





# Elasticsearch Configuration

Defined Elasticsearch Mapping according EQB Metadata Model

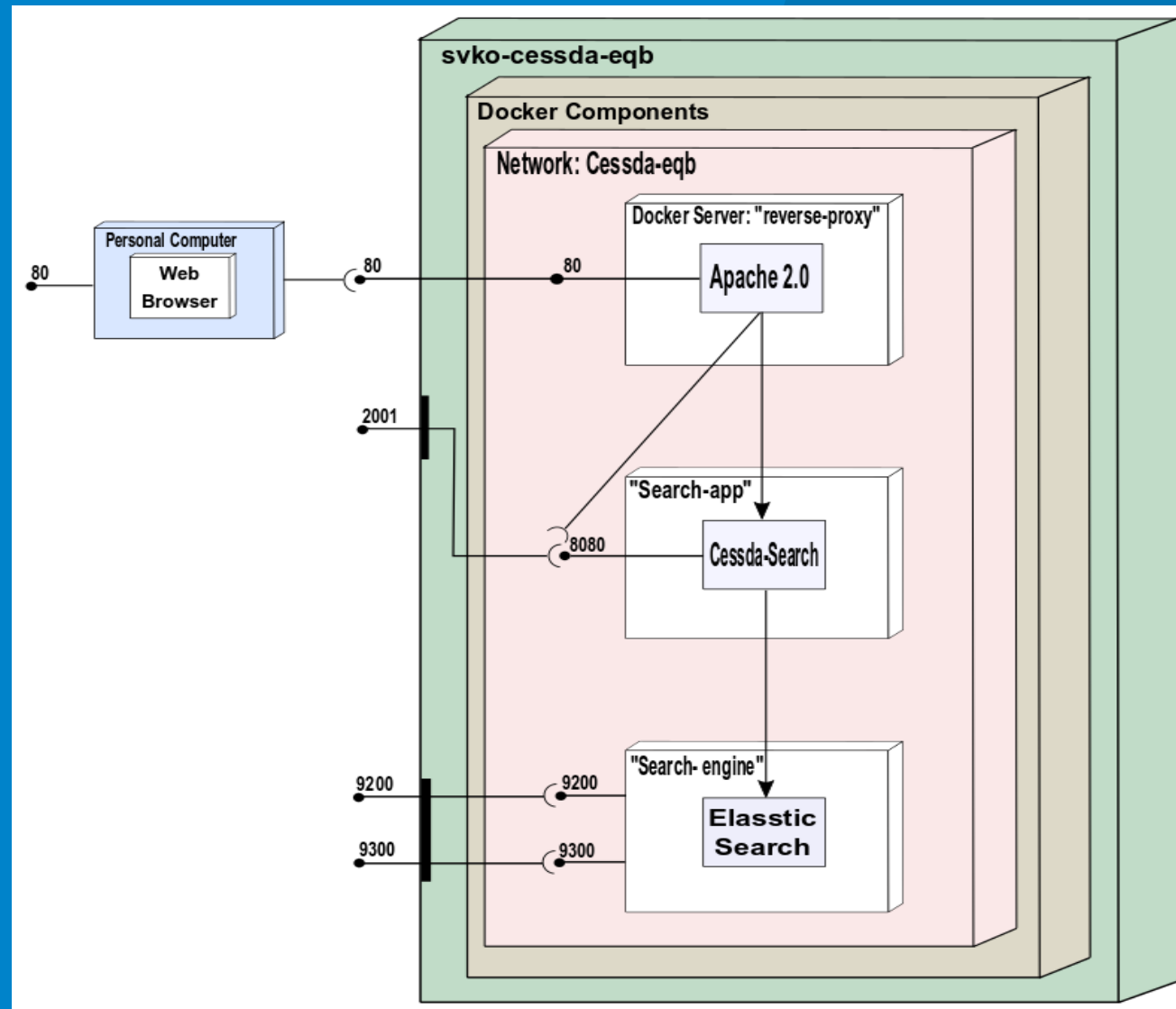
First-Level validation with JSON-Schema for „Question“ documents

# Modular Software Deployment

```
18 search-engine:
19   image: docker.elastic.co/elasticsearch/elasticsearch:6.2.2
20   container_name: search-engine
21   restart: always
22   ports:
23     - 9200:9200
24     - 9300:9300
25   networks:
26     - cessda-eqb
27
28 search-app:
29   image: docker-private.gesis.intra/cessda/cessda.eqb.search.app:0.4.0-SNAPSHOT
30   container_name: search-app
31   restart: always
32   ports:
33     - 2001:8080
34   depends_on:
35     - search-engine
36   networks:
37     - cessda-eqb
38
```

- » CESSDA Technical Framework as foundation
- » All services are encapsulated as Docker Images
- » All services are deployed as Docker Containers
- » All services are orchestrated by executable configuration

# Docker Component Deployment



# EQB Prototype

multiweb.gesis.org/cessda-  
multiweb.gesis.org/cessda-eqb/#!search

## Euro Question Bank

Find social science questions ...

Country  
Choose a country  
 Switzerland (2511)

Language  
Choose a language  
French (837)  
German (837)  
Italian (837)

Reset

Items per page 50 Page 1 / 51

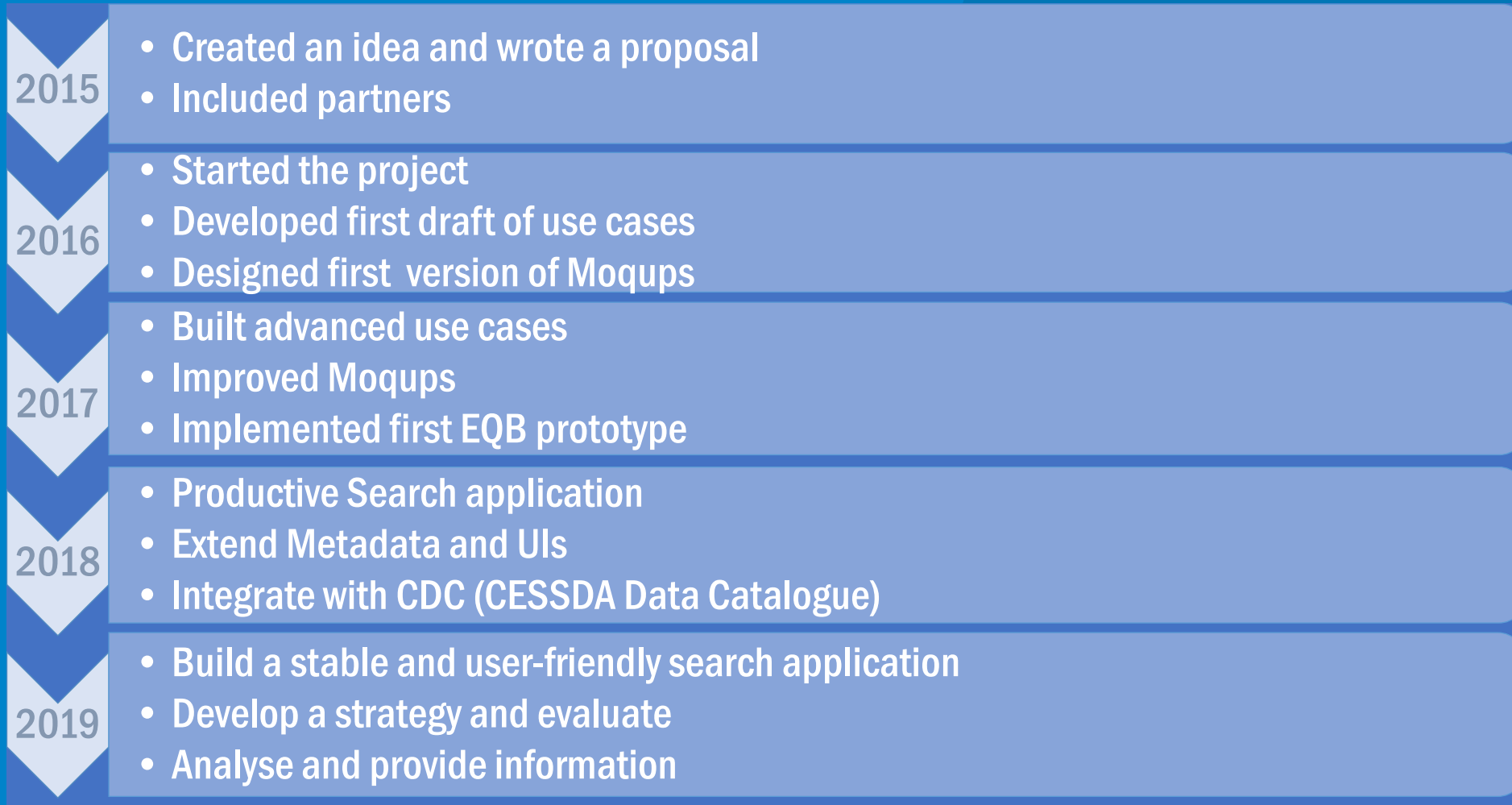
Results (2511 of 83150)

NOUS COMMENÇONS AVEC QUELQUES QUESTIONS SUR LA VIE EN GENERAL, LE TEMPS DE LOISIRS ET DE TRAVAIL.  
Q1  
Pour chacune des choses suivantes, pouvez vous me dire si, dans votre vie, cela est très important, assez important, pas très important, ou pas important du tout ?  Compare  Basket

COMINCIAMO CON ALCUNE DOMANDE SULLA VITA IN GENERALE, SULLE ATTIVITA DEL TEMPO LIBERO E SU QUELLE LAVORATIVE.  
Q1  
Mi dica, per favore, per ciascuno dei seguenti ambiti se è molto importante, abbastanza importante, non importante o per niente importante nella sua vita. ...  Compare  Basket

WIR BEGINNEN MIT EINIGEN FRAGEN ÜBER DAS LEBEN IM ALLGEMEINEN, FREIZEITBESCHÄFTIGUNGEN UND DAS ARBEITSLIBEN.  
Q1  Compare  Basket

# Past and future deliverables of EQB



# Conclusion

## EQB...

- is an international project
- found a solution to search survey questions in different languages
- covers useful features: searching/comparing questions, building questionnaires and finding additional study and variable information,...
- develops and implements different services and components with new technologies (like Docker)
- integrates different technologies and formats from all CESSDA SP and beyond
- cooperates with CMM and CDC

# ENJOY IASSIST 2018 !

- Azadeh MahmoudHashemi ([azadeh.hashemi@gesis.org](mailto:azadeh.hashemi@gesis.org))
- Esra Akdeniz ([esra.akdeniz@gesis.org](mailto:esra.akdeniz@gesis.org))
- Wolfgang Zenk-Möltgen ([wolfgang.zenk-moeltgen@gesis.org](mailto:wolfgang.zenk-moeltgen@gesis.org))
- Alexander Mühlbauer ([alexander.muehlbauer@gesis.org](mailto:alexander.muehlbauer@gesis.org))

