



# Lessons Learned in Implementing Qualifications Databases

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# Agenda

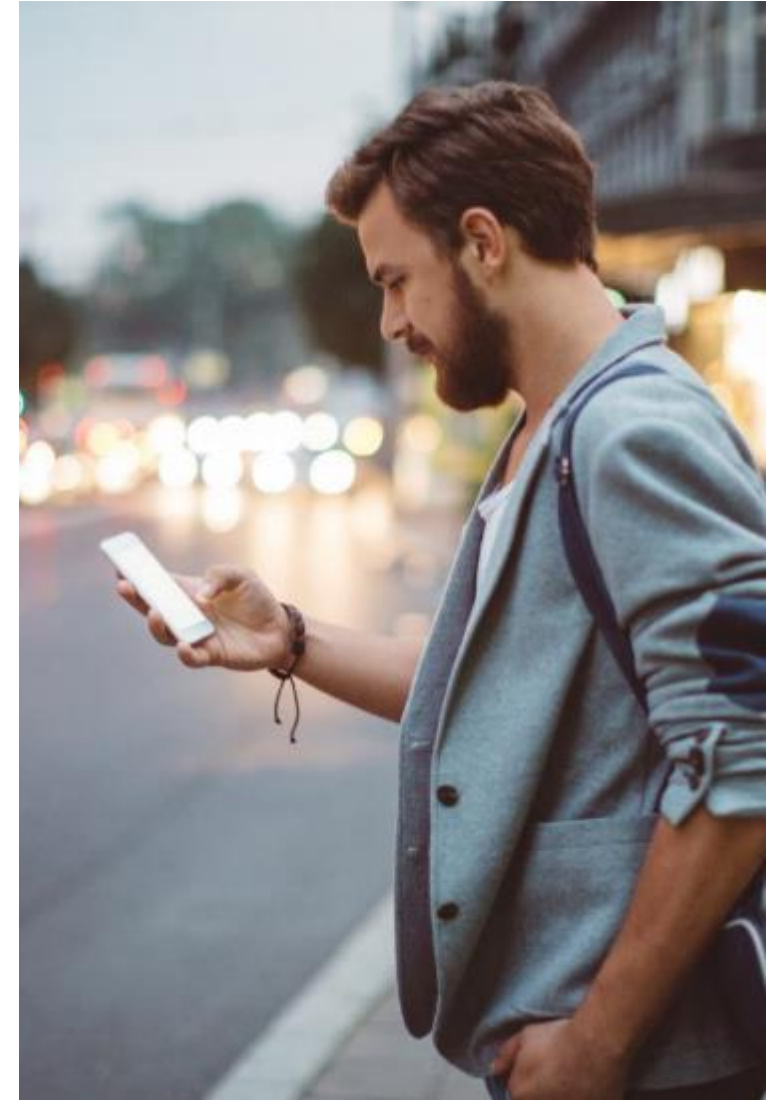
How do Qualifications Databases support Qualifications Frameworks?

Functions of Qualifications Databases

Scaling Qualifications Databases Regionally

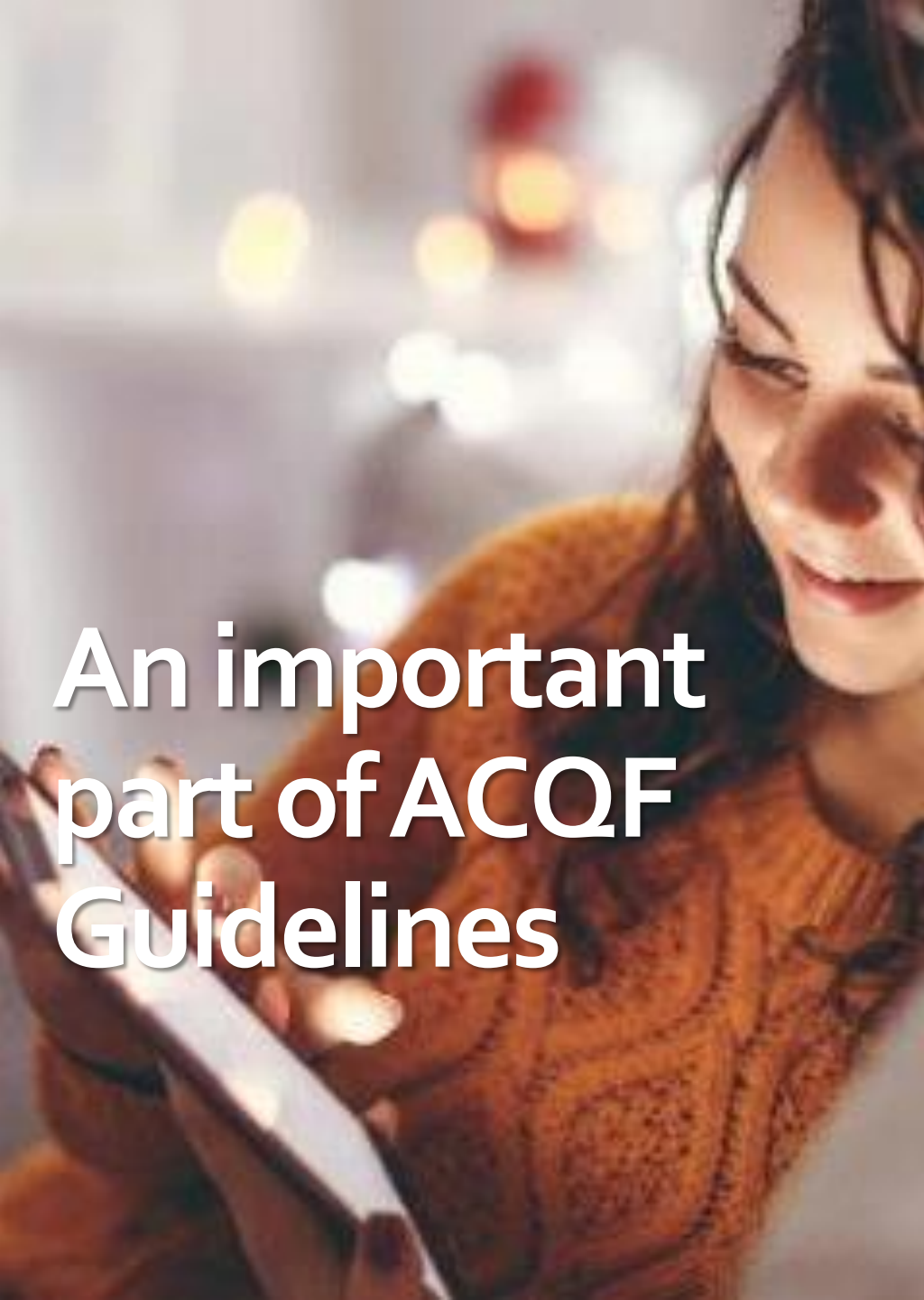
Legal and Organisational Considerations

Lessons: Qualifications Databases work best as Open Data



# How do Databases Support Qualifications Frameworks?

1



# An important part of ACQF Guidelines

- 3
- 4
- 5
- 9
- 10

|                               |  |
|-------------------------------|--|
| <b>Referencing</b>            | The outcome of the referencing of NQFs to the ACQF is important to the process of registration of qualifications on the ACQF database of qualifications                                      |
| <b>Validation Recognition</b> | Availability of qualification databases makes the process of validation and recognition of learning easier as they provide credible and reliable information on qualifications, NQFs and NQs |
| <b>Quality Assurance</b>      | Support of transparent processes and procedures for registering qualifications on the NQF or for describing the place of qualifications in the NQS.  |
| <b>Innovation Technology</b>  | Facilitates registration in databases of qualifications that are premised on technology such as micro-credentials.   |
| <b>Systemic view</b>          | Availability of NQFs and NQs makes the process of registering qualifications easier as they provide credible and reliable information on nationally quality assured qualifications.          |



# Purposes of Registration

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Provide users with information for study and career choices and management

Enhance mutual understanding, acceptability and recognition of qualifications

Provide for smooth verification and evaluation of qualifications

Promote the quality of education and training provision

Enhance mobility and portability of qualifications



# Benefits of Registration

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Transparency of information on qualifications

Enhances quality and recognition of qualifications

Facilitates mobility of learners and workers

Protecting learners, employers and the public from misrepresented qualifications

Deepens integration and harmonisation of qualifications among states;

Ease recognition and transfer of credits

Provides real time statistics of qualifications for decision making and policy development

Facilitates smooth verification and evaluation



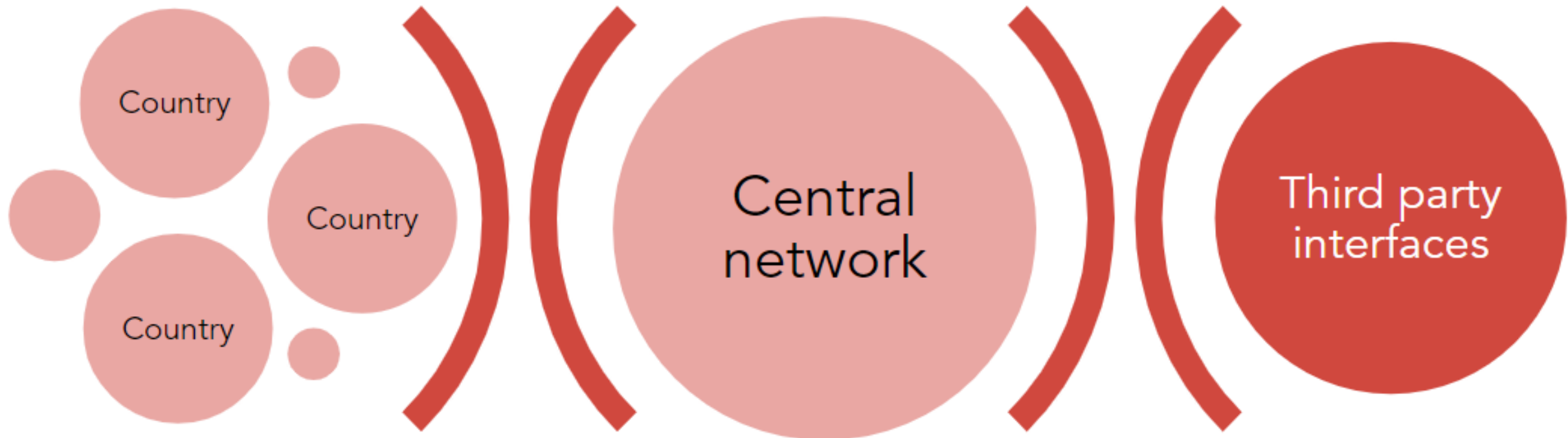


**Qualification Databases *increase Opportunities* for  
Users of Qualifications**

# Scaling Qualifications Databases Regionally

2





Standardised National  
Databases

Central  
network

Third party  
interfaces

# Qualifications Databases are better at Regional Scale

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Lesson 1

# Which is more powerful?

## Search & Compare only locally

The screenshot shows the Qualifications Register (QR) search interface. At the top, there are logos for the Qualifications Framework and the Education Bureau. A navigation menu includes 'About Us', 'Search', 'QR Operators', 'News & Events', 'Help', and 'Contact Us'. Below the menu is a banner image of a woman with glasses and the text 'QUALIFICATIONS REGISTER (QR)'. The main heading is 'Qualifications Search'. There are three input fields: 'Keywords' (with an example 'E.g. Title, Area of Study, Agency, Industry'), 'Types of Qualifications' (with an example 'E.g. RPL, N, SCQ, Award, NEQs'), and 'QF Level' (with an example 'E.g. 1, 2'). There are also buttons for 'Advanced Search', 'Reset', and 'Search'.

## Search & Compare across a Region

The screenshot shows the Europass search interface. At the top, there are three links: 'Créer votre CV Europass', 'Créer une lettre de motivation', and 'Testez vos compétences numériques'. The main heading is 'europass' with the tagline 'Passez à la vitesse supérieure'. Below this is the text 'Votre outil personnel gratuit pour se former en Europe' and a button 'Créer gratuitement votre profil Europass'. The main heading is 'Trouver'. There are three tabs: 'Des emplois', 'Des formations', and 'Information'. Below the tabs are three input fields: 'Mot-clé', 'Lieu', and 'Trouver'.

# Services offered by Qualifications Databases

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# Registration

## Database

Search

— By institution

— **By report**

Visualise data

Download data

Connect to API

Synergies

Find out more

eqar.eu > Database > Search > By report > **NCEQE: Accreditation of educational programmes**

## Cultural Studies (Modern Visual Culture and Media Communications), third cycle

LEPL - Apolon Kutateladze Academy of Arts

### NCEQE: Accreditation of educational programmes

|               |   |
|---------------|---|
| Programme     | Cultural Studies (Modern Visual Culture and Media Communications) |
| Qualification | PhD in Culturaz Studies   |
| Level         | third cycle   |

|                 |   |
|-----------------|---|
| DEQAR Report ID | 80680   |
| Agency          | <a href="#">National Center For Educational Quality Enhancement (NCEQE)</a> |
| Type            | Accreditation of educational programmes                                     |
| Status          | part of obligatory EQA system   |
| Formal decision | positive with conditions or restrictions                                    |
| Date            | 01/11/2022  |
| Valid until     | 31/12/2028  |





Searched system for medicine

Result: 1-8 of 8

SAQA has not yet received the content (such as purpose statements and outcomes) for the qualifications with the status "Registered-data under construction" or showing "DETAILS STILL UNDER CONSTRUCTION". As soon as the relevant source of the content submits it to SAQA, it will be possible to view these qualifications in full.

Title: Bachelor of Health Science in Radiography in Nuclear Medicine

ID: 91753

This is a Learning Programme recorded against qualification: 66950 ([Bachelor of Nuclear Medicine Radiography](#))

Pre-2009 NQF Level: Not Applicable

NQF Level: NQF Level 08

ABET Band: Undefined

Qualification Type: National First Degree(Min 480)

Originator: University of Johannesburg

Field: Field 009 - Health Sciences and Social Services

NQF Sub-framework: HEQSF

Min Credits: 486

Primary or Delegated QA Functionary: CHE - Council on Higher Education

Title: [Bachelor of Medicine and Bachelor of Surgery](#)

ID: 112488

Pre-2009 NQF Level: Not Applicable

NQF Level: NQF Level 08

ABET Band: Undefined

Qualification Type: National First Degree(Min 480)

Originator: Nelson Mandela University

Field: Field 009 - Health Sciences and Social Services

NQF Sub-framework: HEQSF

Min Credits: 930

Primary or Delegated QA Functionary:

Title: [Bachelor of Nuclear Medicine Radiography](#)

ID: 66950

Pre-2009 NQF Level: Level 7

NQF Level: NQF Level 08

ABET Band: Undefined

Qualification Type: National First Degree(Min 480)

Originator: Task Team - Radiography and Clinical Technology

Field: Field 009 - Health Sciences and Social Services

NQF Sub-framework: HEQSF

Min Credits: 480

Primary or Delegated QA Functionary: The individual Primary or Delegated Quality Assurance Functionary for each Learning Programme recorded against this qualification is shown in the table at the end of the qualification report

Title: Bachelor of Science Honours in Hyperbaric Medicine

ID: 115960

This is a Learning Programme recorded against qualification: 19659 ([Bachelor of Science Honours in Medical Sciences](#))

Pre-2009 NQF Level: Not Applicable

NQF Level: NQF Level 08

ABET Band: Undefined

Qualification Type: Honours Degree

Originator: Stellenbosch University

Field: Field 009 - Health Sciences and Social Services

NQF Sub-framework: HEQSF

Min Credits: 120

Primary or Delegated QA Functionary:

# Discovery

# Comparison

**Higher Technician's Certificate (BTS)**  
**"Higher Technician in Hospitality with Accommodation Option"**

The Higher Technician in Hospitality with a focus on accommodation aims to ensure a smooth and efficient operation of accommodation services in an establishment (floors, reception) while ensuring compliance with standards, policies and procedures in force, in accordance with the quality approach aimed (...)

[Read more](#)

**Hotel Accommodation Technician**

Planning and executing the activities of the reception service and floors in hotels, in order to guarantee a quality service and customer satisfaction.

## Similarity level

No similarity

## Key information

|                    |  |                      |
|--------------------|--|----------------------|
| Country            | Tunisia  | Portugal             |
| Language           | French   | Portuguese           |
| ISCED level        | 4  | 3                    |
| EQF                | -  | -                    |
| ISCED-F            | - Hotels and tourism<br>- Hotels and restaurants   | -                    |
| Workload           | 2437 hours   | 126.00 credit points |
| Entry requirements | The Higher Technician Diploma in Hospitality with a focus on accommodation is available to high school graduates in all fields and to holders of the Professional Technician Certificate who have passed the entrance exam organized by competent institutions in the following specialities or refer to the list of bridges between specialities:<br><ul style="list-style-type: none"> <li>• BTP reception and front desk</li> <li>• BTP floors and laundry</li> </ul> | -                    |

in Made in InVision



Screens (10 of 19)


## LEARNING OUTCOMES

|                   |   |  |
|-------------------|---|--|
| Learning outcomes | The qualification is composed of 2 competency units:<br><ul style="list-style-type: none"> <li>• Manage the reception service</li> <li>• Manage the housekeeping service</li> </ul> | <ul style="list-style-type: none"> <li>• UC00038 - Provide information on the tourism sector</li> <li>• UC00039 - Implement the rules of safety and health at work in hotels and restaurants</li> <li>• UC00040 - Serve the customer at the hotel reception desk</li> <li>• UC00041 - Make and manage reservations at the hotel unit</li> <li>• UC00042 - Plan and execute cleaning and tidiness of the customer area of a hotel unit</li> <li>• UC00043 - Plan and execute cleaning and tidying up of public and internal areas of the hotel unit</li> </ul> <p><a href="#">Read more</a></p> |
|-------------------|---|--|

## Relations

|             |   |   |
|-------------|---|---|
| ESCO skills | <ul style="list-style-type: none"> <li>• supervise staff</li> <li>• deal with arrivals in accommodation</li> <li>• deal with departures in accommodation</li> <li>• manage difficult clients</li> <li>• satisfy customers</li> <li>• communicate with customers</li> </ul> <p><a href="#">Read more</a></p> | <ul style="list-style-type: none"> <li>• hotel operations</li> <li>• maintain incident reporting records</li> <li>• manage logistics</li> <li>• monitor work for special events</li> <li>• Assess cleanliness of areas</li> </ul> |
| Skills      | - Supervising staff and the working   | - Carry out the reservation operations of the   |

# Guidance



**Anthony Fisher Camilleri**  
*Add your motto*

Consultant, Educational Policy and Quality Management Expert

[View full profile](#)

[Create a CV](#)

[Create a cover letter](#)

[My Applications](#)


[My Library](#)

[Test your digital skills](#)


## Opportunities for you

[Settings](#) [See My Favourites](#)


### Jobs



DIREKTOR POSLOVNEGA SEKTORJA / POMOČNIK...  
CANKARJEV DOM, KULTURNI IN KONGRESNI CENTER, Prešernova...  
07/07/2023 (today)




Internationell affärsutvecklare med fokus på samhällets omställning  
Statens Energimyndighet, Sweden  
07/07/2023 (today)




Drog- och brottsförebyggare med samordnaruppdrag  
Hässleholms kommun, Sweden  
07/07/2023 (today)


### Courses



Print Media Management and Tech  
Technological University Dublin, Ireland  
01/07/2023 (6 day(s) ago)



Diploma in Printing  
Malta College of Arts, Science and Technology (MCAST) (Up to Level ...  
23/06/2023 (2 week(s) ago)



Award in 3D Printing  
Melita Safety Training Services (MSTS), Malta  
23/06/2023 (2 week(s) ago)

### My Skills

[+ Add new skills](#)

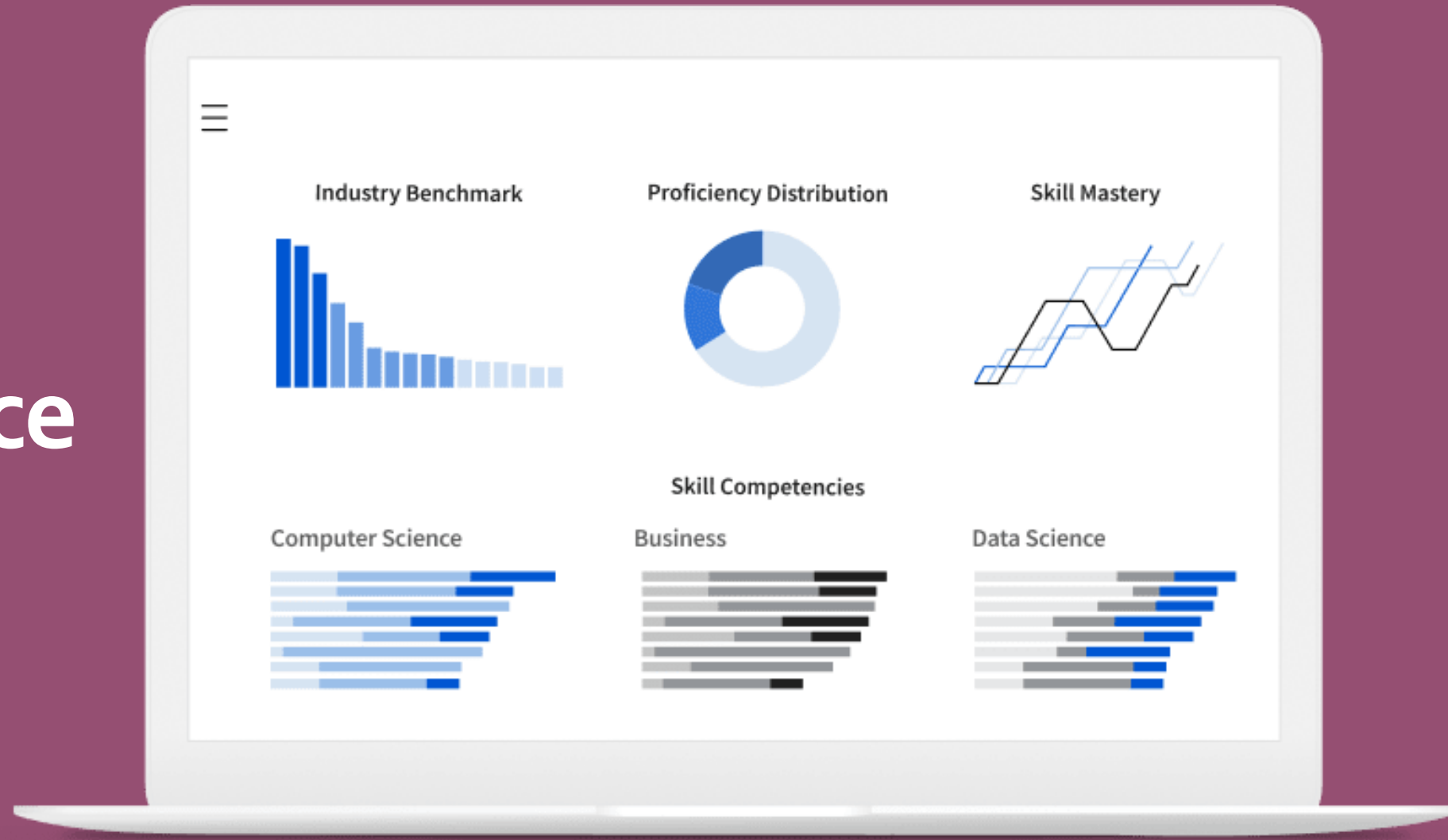
consult with business clients

### My Interests

[+ Add new interests](#)

● Management and administration

# Intelligence



# Credentials

## Graduate University Study of Civil Engineering

Valid from: 19/09/2019

Type: Converted

Credential id: urn:credential:a1246dba-6b94-4952-9948-50d1f5467e2c

Home

Export

Upload another credential

Share

English

Ildiko Mazar

ANTHONY FISHER CAMILLERI  
S.P.

Master of Science in Civil  
Engineering

Applied mathematics course

Applied mathematics Study visit

Concrete structures I course

Dynamics of structures and  
earthquake engineering course

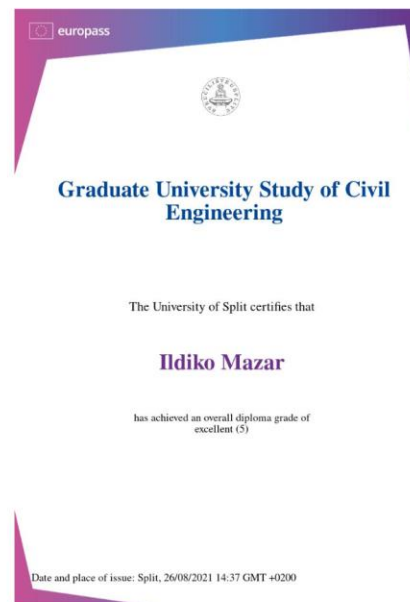
Geotechnical engineering course

Stability of structures course

Postgraduate doctoral study

Civil engineer

Recognition for credit



« < 1 / 1 > »

## Authentication and Verification Check



### FORMAT

This credential is technically valid.



### SEAL

The credential is Sealed by Anthony Fisher Camilleri S.p. E Seal. This credential has not been tampered with since issue.



### REVOCACTION

Function under development. Contact the awarding body for information about this credential's revocation status.



### ACCREDITATION

The credential does not contain reference to an accreditation record related to the awarding body.



### VALIDITY

The credential is still valid.



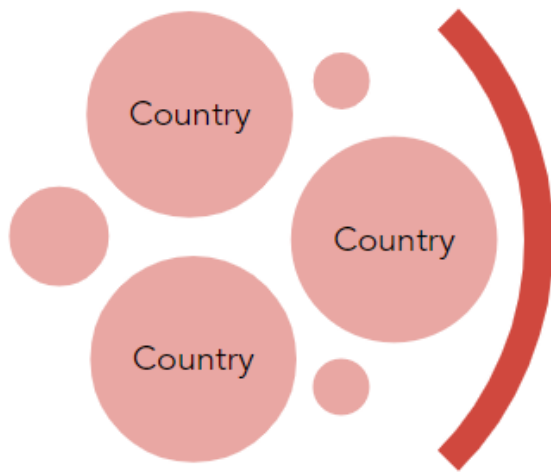
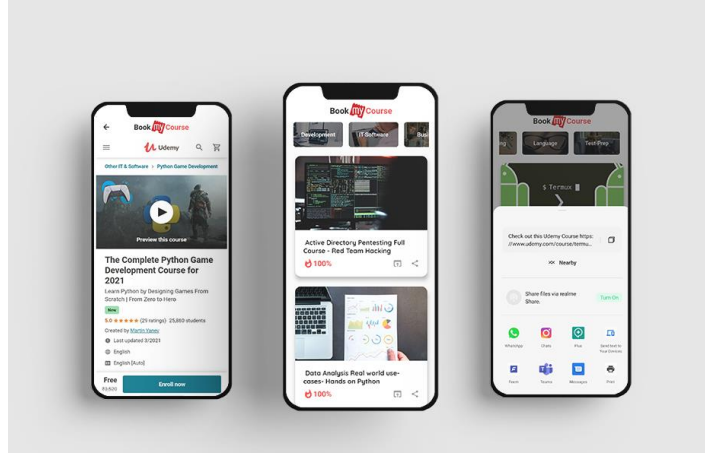
### VERIFIED



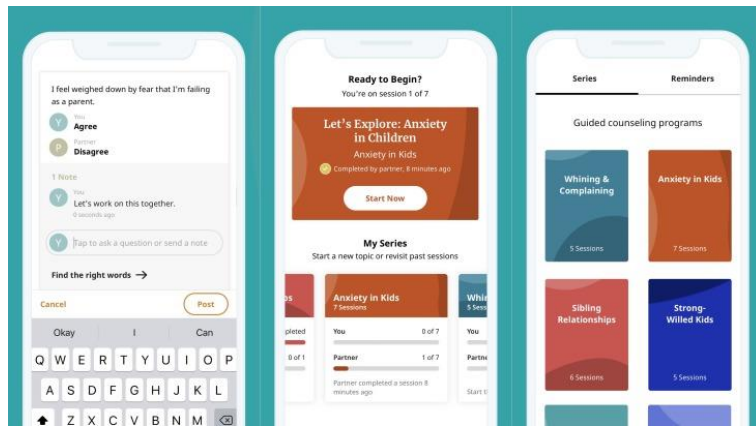
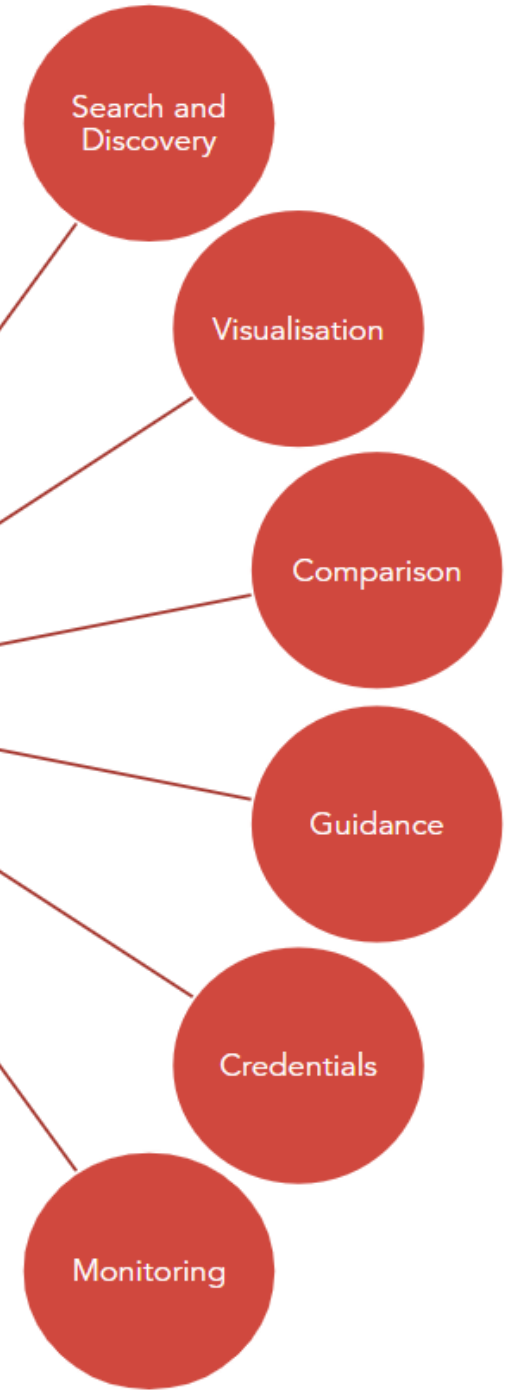
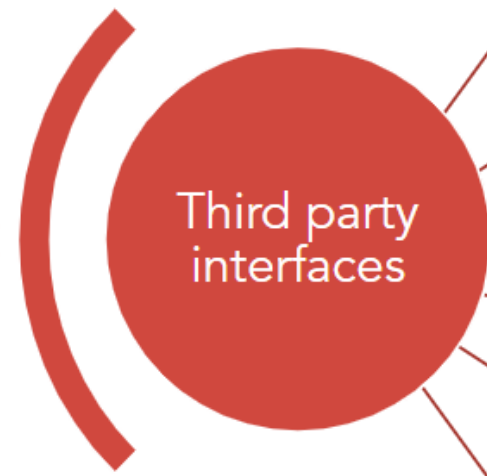
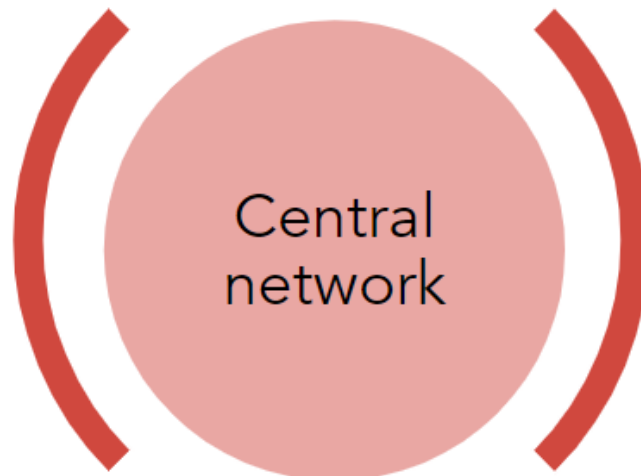
# Create a Public-Private Mix of Qualifications Services

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Lesson 2



Standardised National Databases



# Regulatory and Organisational Considerations

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# Set up Legal & Organisational Structures in tandem with IT

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Lesson 3

## Aspects of Interoperability

### Interoperability Framework



Legal  
Interoperability



Organisational  
Interoperability






Semantic  
Interoperability



Technical  
Interoperability



|                         | INITIAL  | DEVELOPING  | MATURE   |
|-------------------------|--|---|--|
| FOCUS                   | <br><b>Data Collection on Qualifications</b>  | <br><b>Discovery of Qualifications</b>  | <br><b>Qualifications Intelligence</b>  |
| FEATURES                | <b>1</b> Collection of information on qualifications from providers or from licencing / accreditation bodies in a standardised format  | <b>1</b> Browse and Search Qualifications Database<br><b>2</b> View Information on Qualifications<br><b>3</b> Export / Share Information on Qualifications  | <b>1</b> Automated Comparios of Qualifications<br><b>2</b> Suggestion of Similar Qualifications<br><b>3</b> Monitoring of Trends in Qualifications Development   |
| POLICY IMPACT / SERVICE | <ul style="list-style-type: none"> <li>Standardsdisation improves quality of qualification standards.</li> <li>Collection of data gives national overview of qualifications supply.</li> </ul> | Transparency and Visibility of Qualifications: <ul style="list-style-type: none"> <li>Allows for practice sharing between qualification creators</li> <li>Allows users to discover new qualifications</li> <li>Allows users to discover new qualifications</li> </ul> | <ul style="list-style-type: none"> <li>Better guidance services for students, better ability to benchmark for qualification creator.</li> <li>Public authorities can measure impact of government policies and qualification development.</li> </ul> |



# Phases of Development of Qualification Databases

# Legislate Data Collection & Publication

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Lesson 4

# Regulation Required

Working Qualifications Framework  
to define content

Mandate for Real-Time Data Provision  
from Qualification Providers

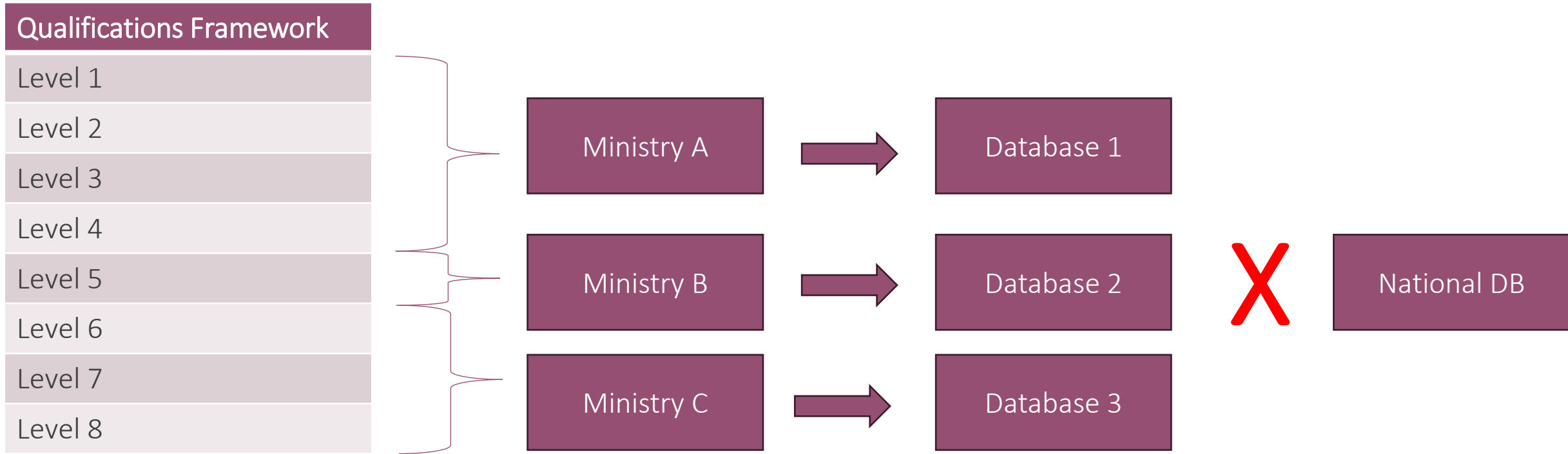
Establishment of Database as Authentic  
Source of Data



# Centralise Management of Qualifications Frameworks (and Databases)

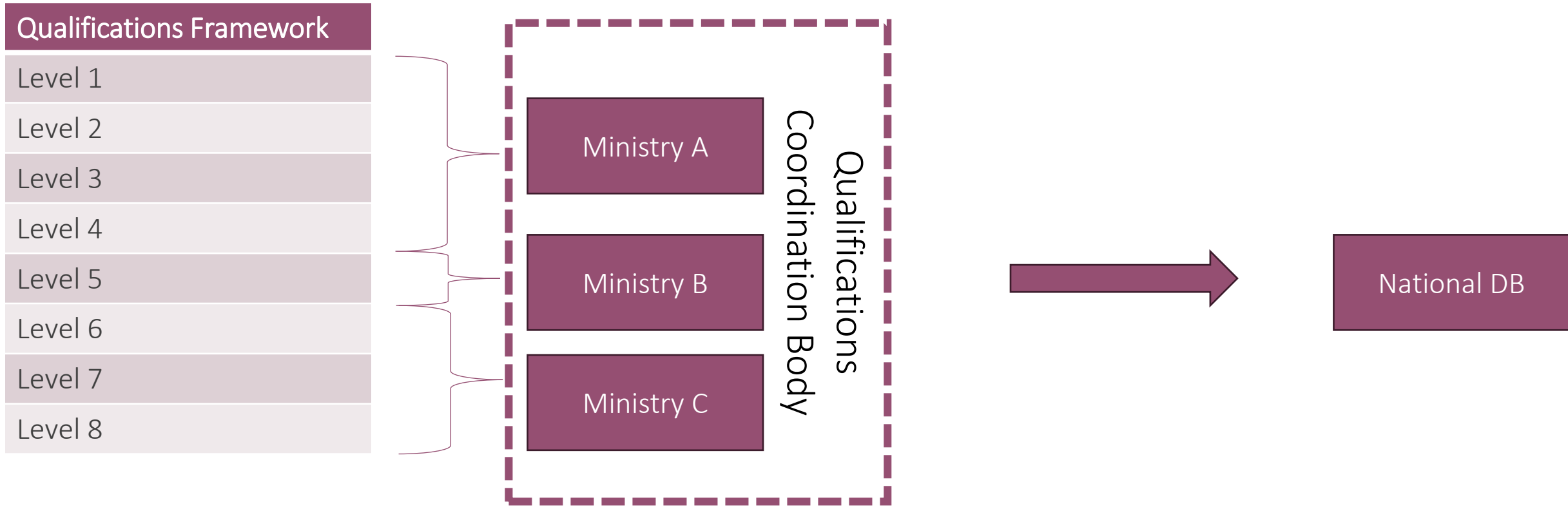
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Lesson 5



**A typical but inefficient practice**

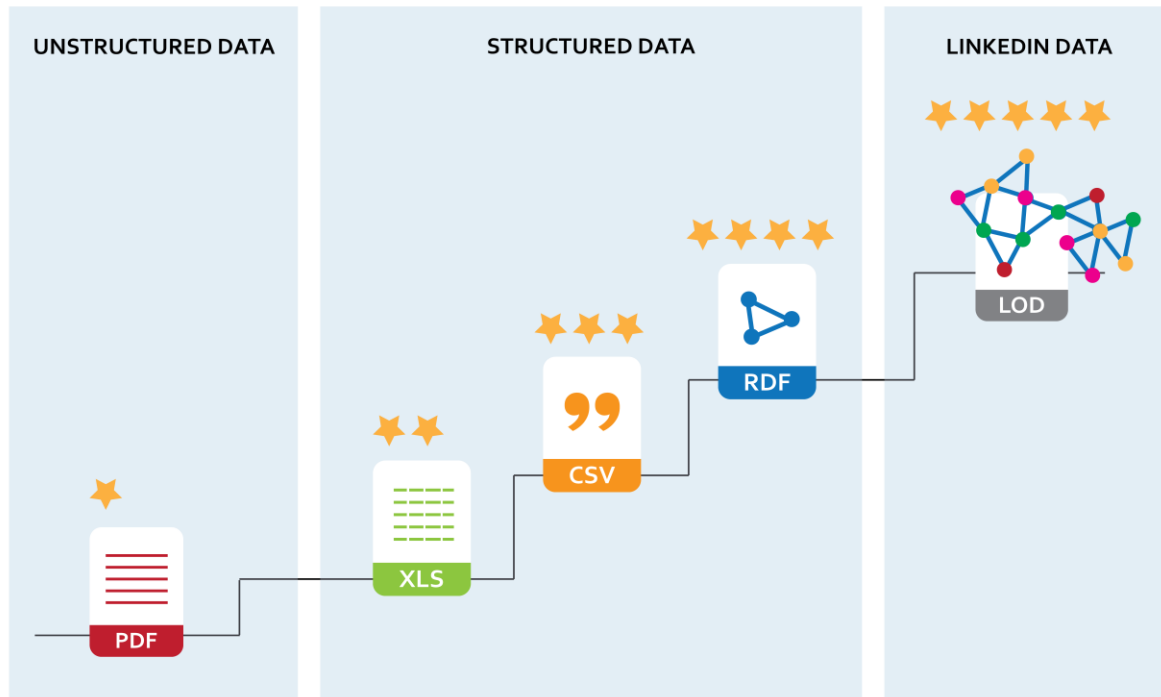




**A better way**

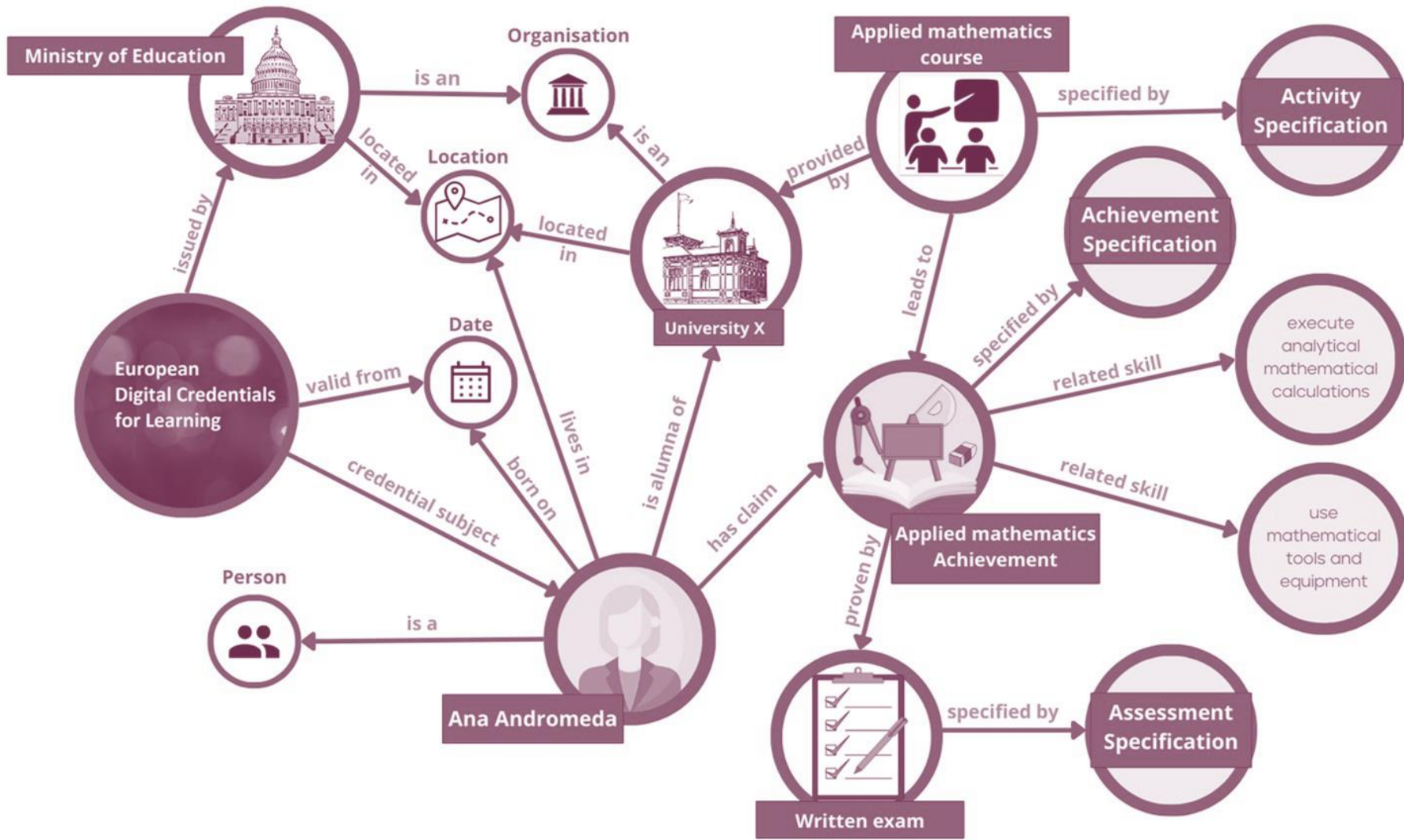
# Importance of Open Data

5



# Linked Open Data

- **Linked Open Data gives context to data**
  - different databases record the same data in the same way using open standards
  - concepts in one database are linked to concepts in another database



# Knowledge Graphs

# Use a Common Data Model based on Linked Data

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Lesson 6

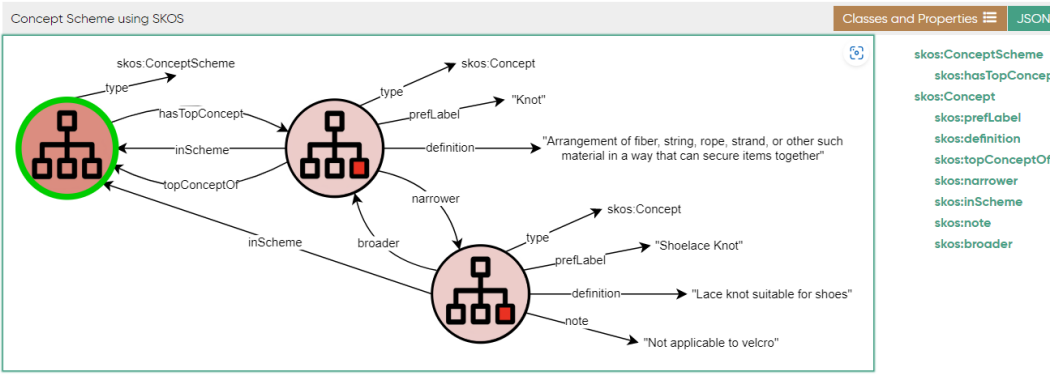
Show/Hide All  
format, capitalization, and so on. For example: { "ceterms:ctid": "ce-c6bffa5f-be74-4f98-963f-1cc536328c73" } instead of { "ctid": "ce-c6bffa5f-be74-4f98-963f-1cc536328c73" }. See "E Context"

- **Language Maps:** Examples on this page and data in the Credential Registry uses the compact form of language maps where the value of language-dependent properties is "description" is an object with one or more key-value pairs consisting of a BCP 47 language code key and a value that is either a string or an array of strings. For example: { "ceterms:name": { "en": "Credential Name" }, "ceterms:keyword": { "en": [ "keyword one", "keyword two" ] } }. See "Indexing language-tagged strings in JSON-LD"

### 2.1.5. Concept Schemes for Controlled Vocabularies

Where the value for a property is to be drawn from an enumeration of predefined terms (i.e. a controlled vocabulary) these terms are defined using the W3C Simple Knowledge C (SKOS) vocabulary. SKOS allows Concepts to be identified with terms (such as words or alphanumeric codes), defined, labeled, related to each other and collected in schemes (i.e. CTDL defines many such enumerations or schemes, each in its own namespace. The URIs for CTDL concept scheme namespaces all begin <https://pur1.org/ctdl/vocass/>, which is f the concept scheme. The name of the term appended to the concept scheme URI gives a unique URI for the term that can be resolved to obtain all the encoded information ab

For historic reasons, a common pattern in CTDL is for properties that take a value from controlled vocabulary do so with that value provided as a **CredentialAlignmentObject**. Th definition and a source for the term to be provided even where the concept term is not defined using SKOS; however for a few properties the SKOS vocabulary is used to do the s



2.1.6. Primary and Secondary Classes

- Standardisation & Interoperability
- Improved Data Quality
- Increased Efficiency
- Enhanced Collaboration and Decision Making

# Steps towards a Common Data Model

- Identify an International Standard to Align
- Create a national model based on the standard
- Integrate the national model into business processes
- Integrate the business processes into IT Tools



# Questions

Find Out More  
[www.cogni.zone](http://www.cogni.zone)  
[www.knowledgeinnovation.eu](http://www.knowledgeinnovation.eu)

