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# Digital Prosopographical Information in the Virtual Record Treasury of Ireland's Knowledge Graph for Irish History

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of Ireland Maynooth



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OF GALWAY

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# What is the VRTI?

- **Virtual Record Treasury of Ireland (VRTI)** is a digital reconstruction of national treasury of records destroyed in 1922 Irish Civil War  
<https://virtualtreasury.ie/>
- Project involves interdisciplinary research with historians and computer scientists
  - in requirements gathering, interface design and project planning
- Complimenting the records a **Knowledge Graph (KG)** of people, places, organisations, interests have been developed - the VRTI-KG: <https://virtualtreasury.ie/knowledge-graph>
- **Prosopography** : a description of a person's social and family connections, career, etc., or a collection of such descriptions.



- Semantic Web technologies have been employed to address the project's requirements which include:
  - a structured data format to interconnect related entities based on time periods and entity types;
  - data lineage so that the origins of data may be tracked;
  - data presentation in an engaging manner to the general public;
  - offering historians a user interface for finding, updating, editing and publishing KG data.

- Exploring the intertwined narratives of individuals and locations in Ireland, spanning from the medieval to the modern era
- Focusing on prosopographical aspect
- In total, the VRTI-KG contains 8807 men and 965 women from Irish history
  - the Dictionary of Irish Biography and Irish Exchequer Payments 1270-1446
  - biographical data in CSV formats
- The out-of-the-box tooling were presented to demonstrate prosopographical data for people represented in the KG

- Consists of named individuals for qualifying entities in the CIDOC Conceptual Reference Model (CIDOC-CRM)
- CIDOC-CRM a high-level, event-based ontology
  - for human activity, things and events,
  - a formal structure for describing concepts and relationships commonly used in the cultural heritage domain
- To model Irish historical data, the VRTI ontology introduced bespoke types
  - **b2022:Floruit**, **b2022:Office**, **b2022:Occupation**, and **b2022:Rank** for the professional groups to which a person belonged
  - **b2022:Chapel**, **b2022:Manor**, **b2022:Harbour** and **b2022:Friary** for places
  - **b2022:ofHusband** and **b2022:ofWife** to link a marriage event

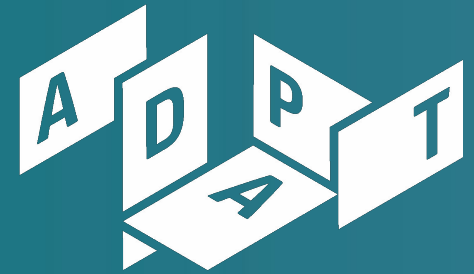
# Use Case: Oscar Wilde

```
@prefix cidoc: <http://erlangen-crm.org/current/> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix b2022: <https://ont.virtualtreasury.ie/ontology#> .

<https://kb.virtualtreasury.ie/person/Wilde_Oscar-Fingal-OFlahertie-Wills_c19_dib_a9036
  > a cidoc:E21_Person ;
cidoc:P71i_is_listed_in <https://www.dib.ie/biography/Wilde-Oscar-Fingal-OFlahertie-
  a9036> ;
b2022:DIB_area_of_interest
  <https://kb.virtualtreasury.ie/dib-area-of-interest/IE/Theatre-Film-and-TV> ,
  <https://kb.virtualtreasury.ie/dib-area-of-interest/IE/Literature> .

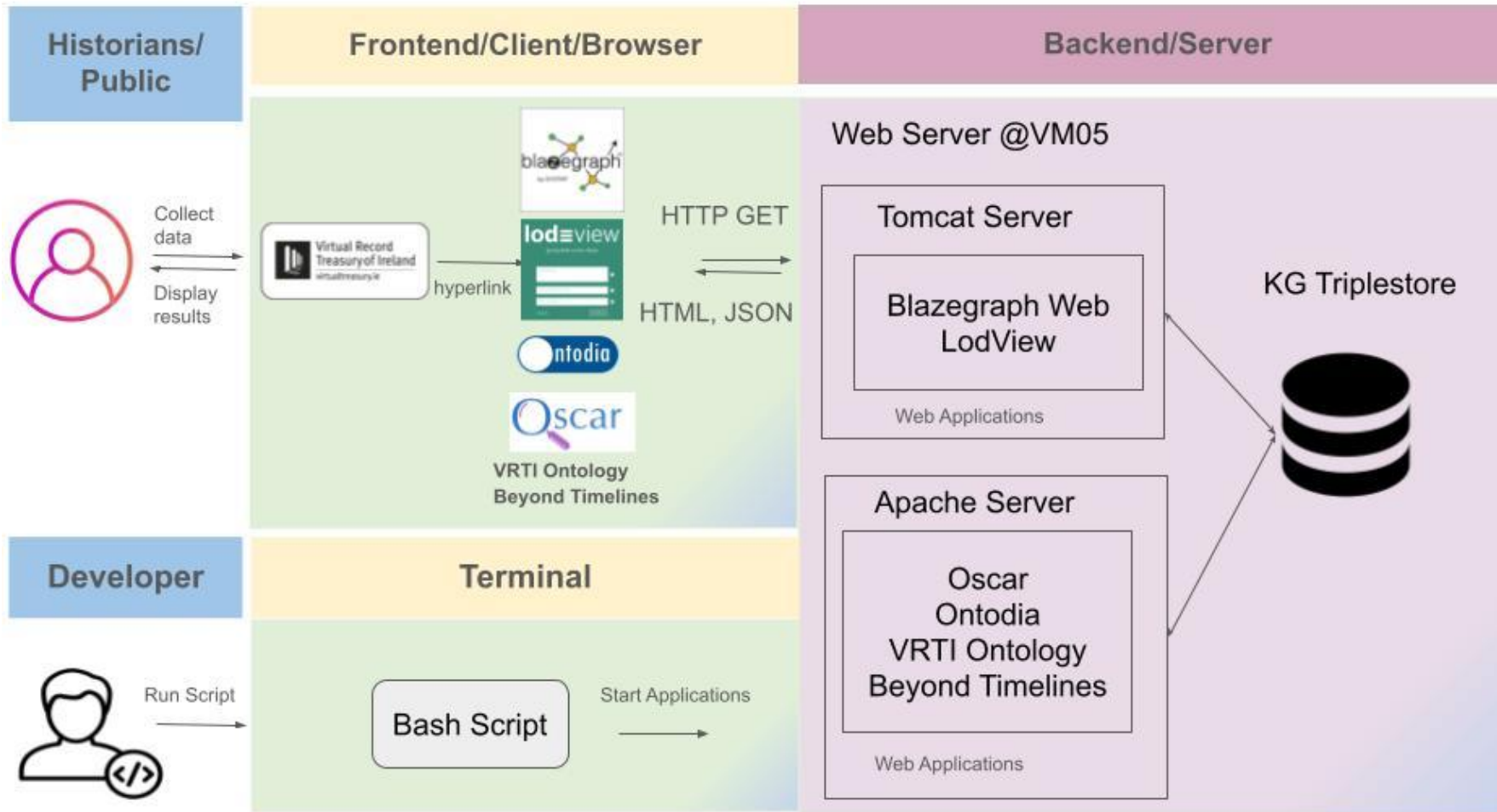
<https://kb.virtualtreasury.ie/birth/Wilde_Oscar-Fingal-OFlahertie-Wills_c19_dib_a9036>
  a cidoc:E67_Birth ;
cidoc:P4_has_time-span <https://kb.virtualtreasury.ie/time-span/1854-10-16_1854-10-16>;
cidoc:P7_took_place_at <https://kb.virtualtreasury.ie/place/IE/Dublin> ;
cidoc:P98_brought_into_life <https://kb.virtualtreasury.ie/person/Wilde_Oscar-Fingal-
  OFlahertie-Wills_c19_dib_a9036> .
```

# VRTI-KG Technical Architecture



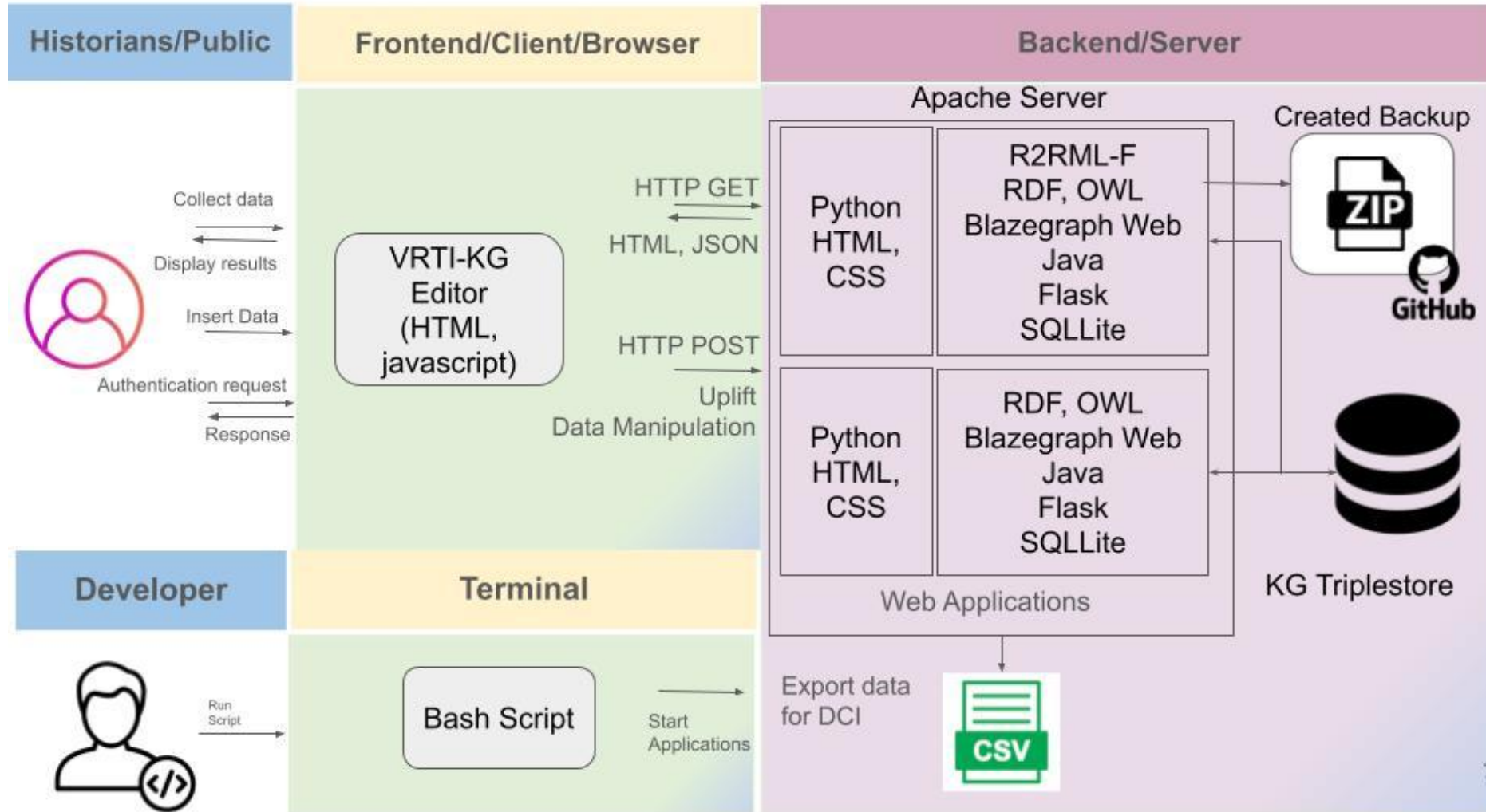
**Engaging Content**  
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# Production Server Diagram



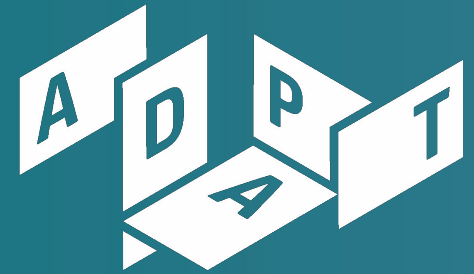


# Development Server Diagram



# Exploring VRTI-KG via tools


Interfaces interacting with VRTI-KG



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# LodView Tool

[https://kb.virtualtreasury.ie/person/Wilde\\_Oscar-Fingal-OFlahertie-Wills\\_c19\\_dib\\_a9036](https://kb.virtualtreasury.ie/person/Wilde_Oscar-Fingal-OFlahertie-Wills_c19_dib_a9036) AN ENTITY OF TYPE: **E21\_Person**



<b>vrtn:DIB_ID</b>	a9036
<b>crm:P2_has_type</b>	vrtn:Male
<b>crm:P1_is_identified_by</b>	<a href="https://kb.virtualtreasury.ie/normalized-appellation-surname/Wilde">https://kb.virtualtreasury.ie/normalized-appellation-surname/Wilde</a> ↳ Wilde
	<a href="https://kb.virtualtreasury.ie/normalized-appellation-surname-forename/Wilde_Oscar-Fingal-OFlahertie-Wills">https://kb.virtualtreasury.ie/normalized-appellation-surname-forename/Wilde_Oscar-Fingal-OFlahertie-Wills</a> ↳ Wilde, Oscar Fingal O'Flahertie Wills
	<a href="https://kb.virtualtreasury.ie/normalized-appellation-forename/Oscar-Fingal-OFlahertie-Wills">https://kb.virtualtreasury.ie/normalized-appellation-forename/Oscar-Fingal-OFlahertie-Wills</a> ↳ Oscar Fingal O'Flahertie Wills
<b>vrtn:DIB_area_of_interest</b>	<a href="https://kb.virtualtreasury.ie/dib-area-of-interest/IE/Literature">https://kb.virtualtreasury.ie/dib-area-of-interest/IE/Literature</a> ↳ Literature
	<a href="https://kb.virtualtreasury.ie/dib-area-of-interest/IE/Theatre-Film-and-TV">https://kb.virtualtreasury.ie/dib-area-of-interest/IE/Theatre-Film-and-TV</a> ↳ Theatre Film and TV
<b>crm:P71i_is_listed_in</b>	<a href="https://www.dib.ie/biography/Wilde-Oscar-Fingal-OFlahertie-a9036">https://www.dib.ie/biography/Wilde-Oscar-Fingal-OFlahertie-a9036</a>
<b>rdf:type</b>	crm:E21_Person
<b>owl:sameAs</b>	<a href="http://www.wikidata.org/entity/Q30875">http://www.wikidata.org/entity/Q30875</a>
<b>foaf:depiction</b>	<a href="http://commons.wikimedia.org/wiki/Special:FilePath/Accession%20Number-%201983-1863-0001%20%282719964225%29.jpg">http://commons.wikimedia.org/wiki/Special:FilePath/Accession%20Number-%201983-1863-0001%20%282719964225%29.jpg</a>

- Allows to navigate the VRTI-KG data

# Ontodia Tool

Classes

Search for...

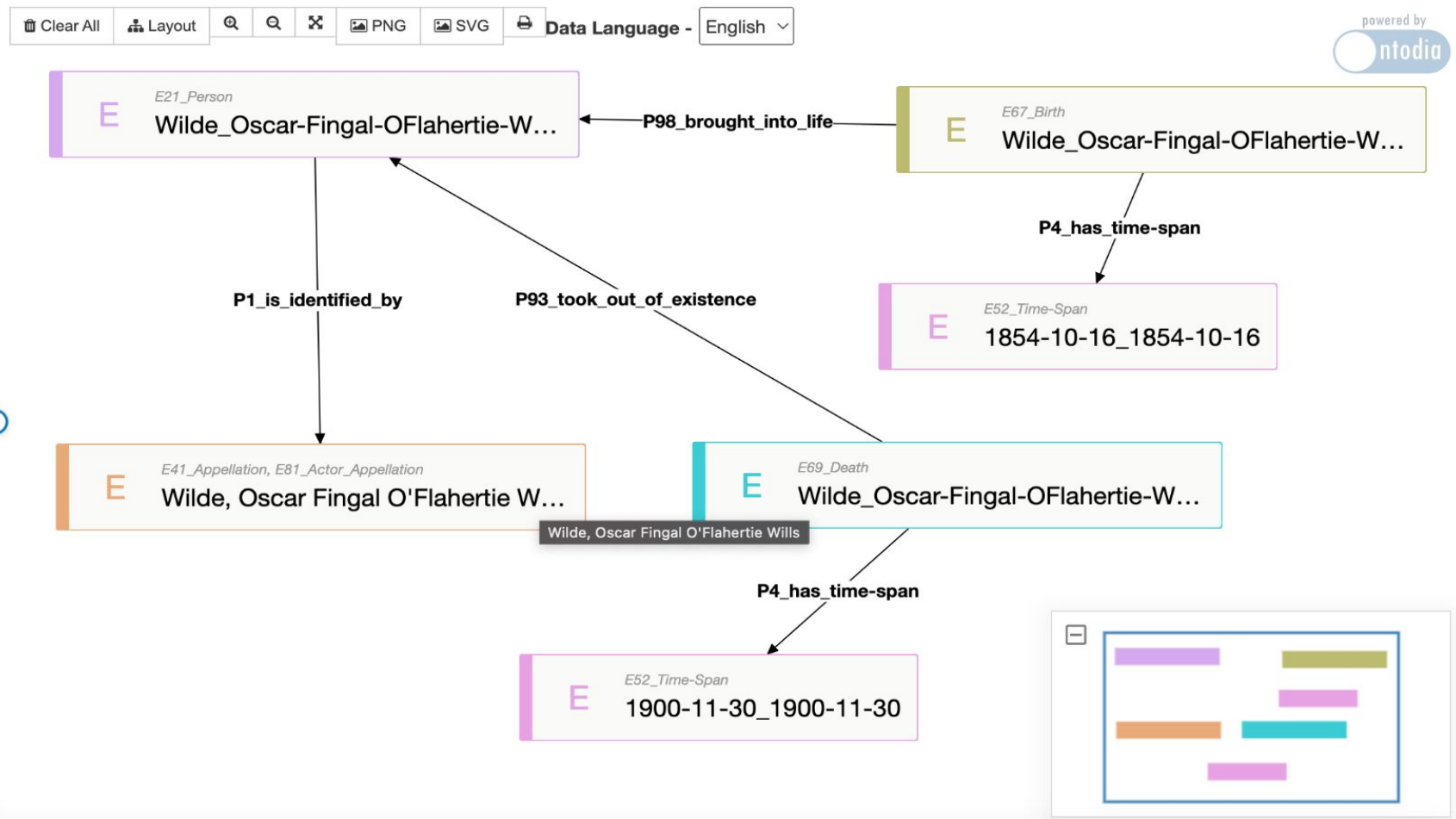
- Marriage
- MedievalKingdom
- Merge
- Modern county
- ModernBarony
- ModernTownland
- Name
- Name variant
- Occupation
- ODNB

Instances

Has type: Name

wilde

- Wilde, Oscar Fingal O'Flahertie Wills
- Wilde, William Charles Kingsbury
- Wilde, Jane Francesca Agnes
- Wilde, Dorothy Ierne
- Wilde, William Robert Wills



Oscar Wilde



Virtual Record  
Treasury of Ireland +  
Maoinchiste Annála Samhalta na hÉireann



Number of rows per page:

[Export results](#)

Sort:

Limit to 2/2 results

< Fewer

More >

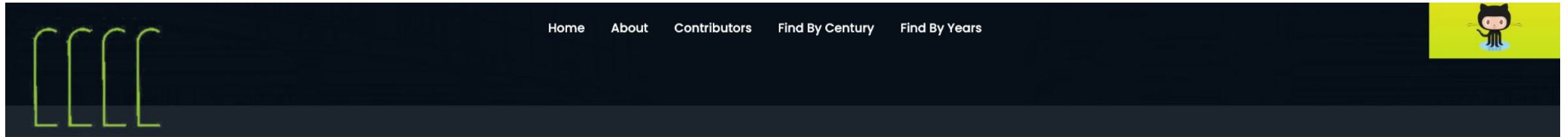
All

Show only

Exclude

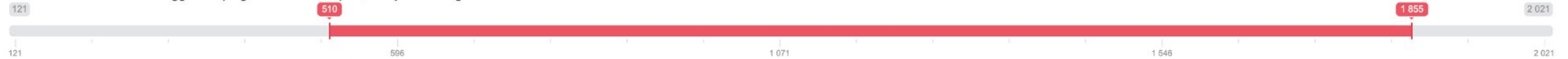
Subject	Predicate	Object
<a href="https://kb.virtualtreasury.ie/normalized-appellation-surname-forename/Wilde_Oscar-Fingal-OFlahertie-Wills">https://kb.virtualtreasury.ie/normalized-appellation-surname-forename/Wilde_Oscar-Fingal-OFlahertie-Wills</a>	<a href="http://www.w3.org/2000/01/rdf-schema#label">http://www.w3.org/2000/01/rdf-schema#label</a>	Wilde, Oscar Fingal O'Flahertie Wills
<a href="https://www.dib.ie/biography/Wilde-Oscar-Fingal-OFlahertie-a9036">https://www.dib.ie/biography/Wilde-Oscar-Fingal-OFlahertie-a9036</a>	<a href="http://www.w3.org/2000/01/rdf-schema#seeAlso">http://www.w3.org/2000/01/rdf-schema#seeAlso</a>	<a href="https://www.dib.ie/biography/Wilde-Oscar-Fingal-OFlahertie-a9036">https://www.dib.ie/biography/Wilde-Oscar-Fingal-OFlahertie-a9036</a>

# Beyond Timelines Tool



Use the slider below to select the time interval that you want to explore:

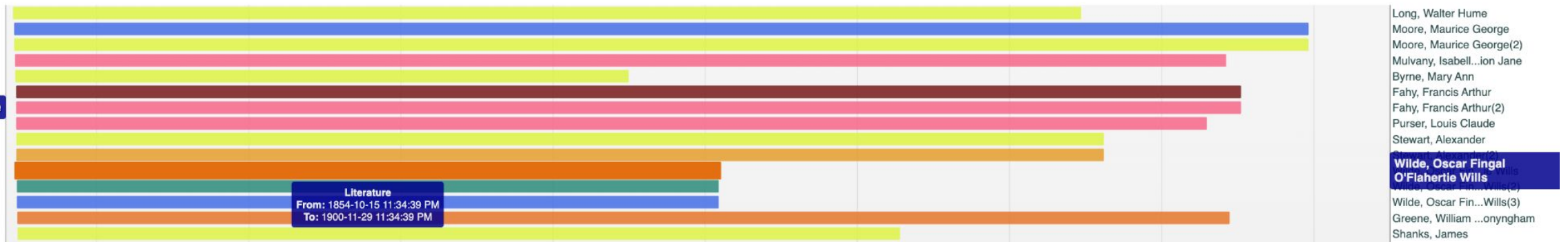
The interval can be either dragged keeping the same time span, or adjusted using the handles.



To select a time interval greater than 600 years, enter the start and the end date of the interval in the fields above

Explore

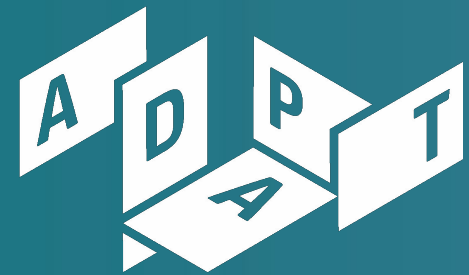
Life Timeline



Beyond Timelines view for people born between 1854 and 1855

# VRTI-KG Editor and Explorer

Search, Edit and Create Resources in VRTI-KG



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- Limited search capabilities
- No support for editing of data
- No presentation of natural language information
- No support to visualise Geospatial data





- A bespoke tool to enable multifaceted search of VRTI-KG



Virtual Treasury Home

Type name of a Person, Place, Occupation, Organisation, Interest...

Suggested Search: Beckett Samuel Barclay, Meath, novelist, Religion

Search Results

Main Search Bar

Advanced Search

People **Name: john** x Place **County: wexford** x

150 results | Select an Advanced Search below to retrieve more results

Enter keyword

Name

Gender

Birth Place

Death Place

Interest











Occupation

Office

Timeline Search

People in Results



 Alexander John Montgomery Birth Date: 01-01-1720 Death Date: 29-09-1800	 Alfred John Webb Birth Date: 10-06-1834 Death Date: 31-07-1908	 Andrew Fitzjohn Sall Birth Date: 01-01-1624 Death Date: 05-04-1682	 Andrew John Horne Birth Date: 08-08-1856 Death Date: 05-09-1924	 Andrew John Weir Birth Date: 24-03-1919 Death Date: 18-09-2000
 Anthony John Mullane	 Aodogán John Eoin O'Sullivan O'Rahilly	 Bartholomew John Teeling	 Benjamin John Plunket	 Brendan John Smith

- Customised summary pages for different entities

[home](#) / [entity card](#) / [person](#) / [Wilde Oscar Fingal O'Flahertie Wills c19 dib a9036](#)



Oscar Fingal O'Flahertie Wills Wilde

## Person in VRTI-KG

URI: [https://kb.virtualtreasury.ie/person/Wilde\\_Oscar\\_Fingal-O'Flahertie-Wills\\_c19\\_dib\\_a9036](https://kb.virtualtreasury.ie/person/Wilde_Oscar_Fingal-O'Flahertie-Wills_c19_dib_a9036)

[Copy Link](#)

Tagged As: [DIB Person](#)

Knowledge Panel 

Hide Panel 

Oscar Fingal O'Flahertie Wills Wilde is a [Male](#) in the VRTI Graph.

Wilde had a **Career** in [Literature](#), [Theatre Film and TV](#) and [Theatre, Film and TV](#). Wilde appears in the [Dictionary of Irish Biography](#) and is assigned a DIB ID of 'a9036'. Wilde was listed with the following **Occupations**: [playwright, poet, and prose writer](#). Additional association: [Anglican](#).

Wilde was **Born** on 16-10-1854. Place of Birth: [Co. Dublin](#) and [Dublin](#). Wilde **Died** on 30-11-1900 at 46 years old. Place of Death: [France](#) and [Paris](#).

Find References to Wilde in the VRTI: [Search VRTI](#).

Oscar Fingal O'Flahertie Wills Wilde has an associated [Wikidata Page](#).

More details of Oscar Fingal O'Flahertie Wills Wilde can be found below.

Date Information 

Gender:	<a href="#">Male</a>
Birth Date:	16-10-1854
Death Date:	30-11-1900
Place of Birth:	<a href="#">Co. Dublin</a> <a href="#">Dublin</a>
Place of Death:	<a href="#">France</a> <a href="#">Paris</a>

Structured Natural Language

Tabular Format

# VRTI-KG Explorer - exploration of use of generative AI

## • Integrated ChatGPT Search

Bernard Shaw  William Yeats  Ernest Shackleton  Arthur Wellesley  Cork Jobs  John Butler  John Butler Age  John Butler's Age  Arthur's Birth  Richard's Job   
 Edward Common Job's  Collin's Question

Prompt: Tell me about Oscar Wilde



[Source](#)

Oscar Fingal  
O'Flahertie Wills Wilde

Tell me about Oscar Wilde?

ChatGPT response

Natural Language extracted from VRTI-KG results using ChatGPT ≡

Oscar Wilde was a male playwright, poet, and prose writer. He was born on October 16, 1854, and died on November 30, 1900. Wilde's birthplace was in Dublin, Ireland. He had interests in literature, theatre, film, and TV. Wilde was associated with the Anglican organization. For more information about Oscar Wilde, explore the links below.

### Links

Links in the VRTI related to Results

Search Links

Links to VRTI-KG

Name

Link

Oscar Fingal O'Flahertie Wills Wilde

[https://kb.virtualtreasury.ie/person/Wilde\\_Oscar-Fingal-OFlahertie-Wills\\_c19\\_dib\\_a9036](https://kb.virtualtreasury.ie/person/Wilde_Oscar-Fingal-OFlahertie-Wills_c19_dib_a9036)

# Geospatial Searching

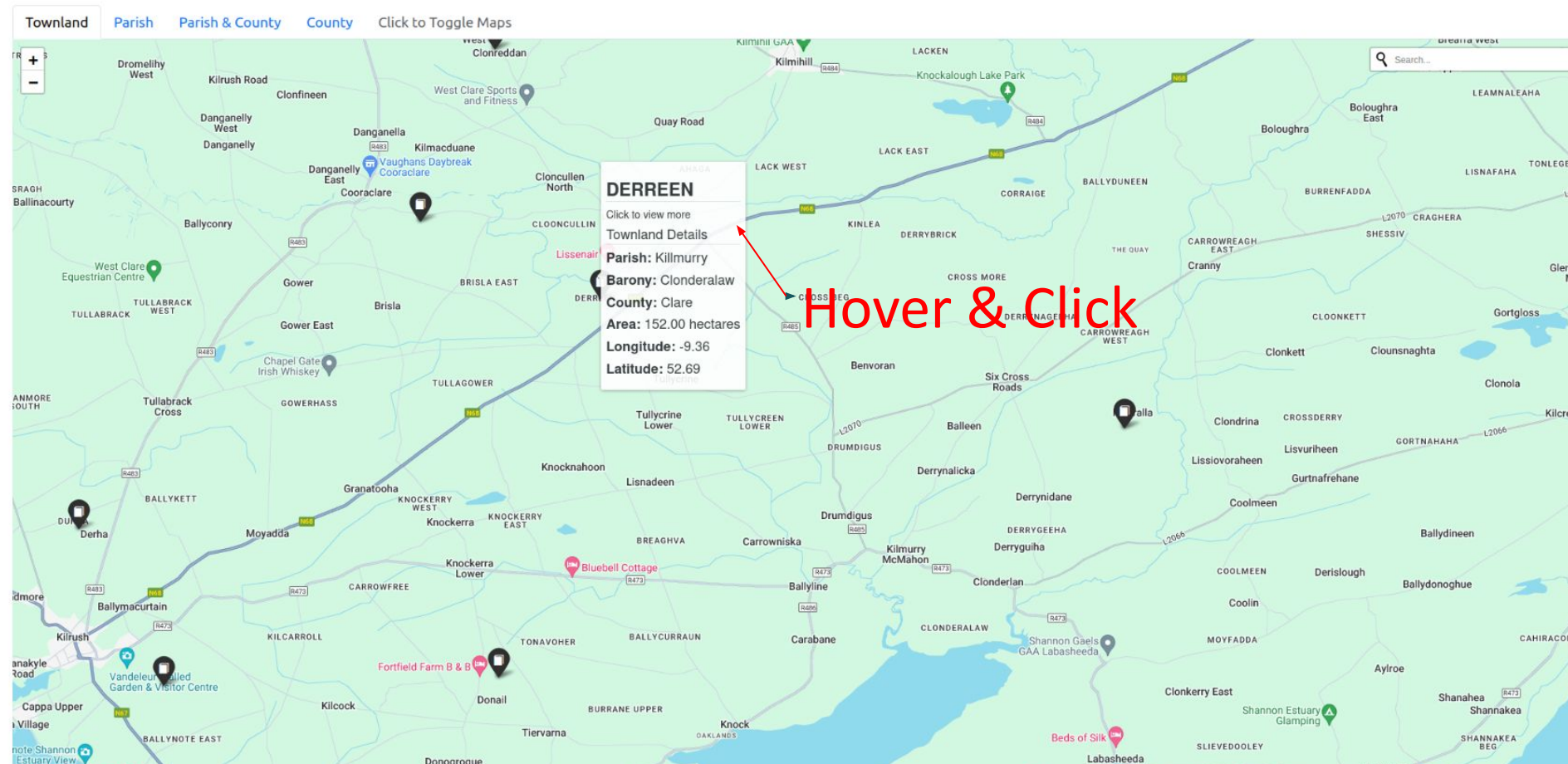
- Support for visualization of Geospatial Data

View Maps 

Counties → Baronies → Parishes → Townlands

Explore them by clicking the maps below

Different Places available



Townland Parish Parish & County County Click to Toggle Maps

DERREEN  
Click to view more  
Townland Details  
Parish: Kilmurry  
Barony: Clonderalaw  
County: Clare  
Area: 152.00 hectares  
Longitude: -9.36  
Latitude: 52.69

Hover & Click

- Previous implemented approach involved bulk upload of spreadsheets

	A	B	C	D	E	F	G
1	ID	NORMALISEDFORENAME	NORMALISEDSURNAME	COUNTRY	GENDER	AREAOFINTEREST	STATUSOCCUPATION
2	a0001	William	A'Court		M	Administration and Diplomacy;Politics	diplomat;politician, and lord lieutenant
3	a0002	Jacques	Abbadie		M	Religion	huguenot dean of Killaloe, preacher
4	a0003	Abbán	Abbán		M	Saints	saint in the Irish tradition
5	a0004	Charles	Abbot		M	Travel and Exploration;Politics	tourist in Ireland;chief secretary for Ireland
6	a0005	Thomas Kingsmill	Abbott		M	Classics and Languages;Religion	scholar;clergyman
7	a0006	Abraham	Abell		M	History, Archaeology and Antiquarianism	antiquary and public figure at Cork
8	a0007	Joshua	Abell		M	Philanthropy and Community Work	philanthropist
9	a0008	Leslie Patrick	Abercrombie		M	Architecture	architect and town planner
10	a0009	Ralph	Abercromby		M	Military	soldier
11	a0010	John	Abernethy		M	Religion	presbyterian minister
12	a0011	William	Abernethy		M	Photography	professional photographer
13	a0012	James Johnston	Abraham		M	Medicine;Literature	surgeon;writer
14	a0013	Leonard	Abrahamson		M	Medicine	doctor
15	a0014	Anne Crawford	Acheson		F	Arts and Crafts	sculptor
16	a0015	Archibald	Acheson		M	Gentry and Aristocracy;Politics	landowner;politician, and colonial governor
17	a0016	Robert	Acheson		M	Religion;Politics	presbyterian minister;United Irish leader
18	a0017	Charles	Acton		M	Music and Dance	music critic
19	a0018	Archibald	Adair		M	Religion	Church of Ireland bishop
20	a0019	John George	Adair		M	Gentry and Aristocracy	land speculator and evicting landlord
21	a0020	Patrick	Adair		M	Religion;History Archaeology and Antiquarianism	presbyterian minister;historian
22	a0021	Rhona Kathleen	Adair		F	Sport	amateur international golfer

- VRTI-KG editor allows editing of VRTI-KG using bespoke interface

**Wilde, Oscar Fingal O'Flahertie Wills** 



← Edited Person


Knowledge Graph Link: [https://kb.virtualtreasury.ie/person/Wilde\\_Oscar-Fingal-OFlahertie-Wills\\_c19\\_dib\\_a9036](https://kb.virtualtreasury.ie/person/Wilde_Oscar-Fingal-OFlahertie-Wills_c19_dib_a9036) 

Named Graph: <https://kb.virtualtreasury.ie/person/>

Edit Resource 


















## Associated Attributes

View Hidden Data 

















History of Edits 

Show Links 

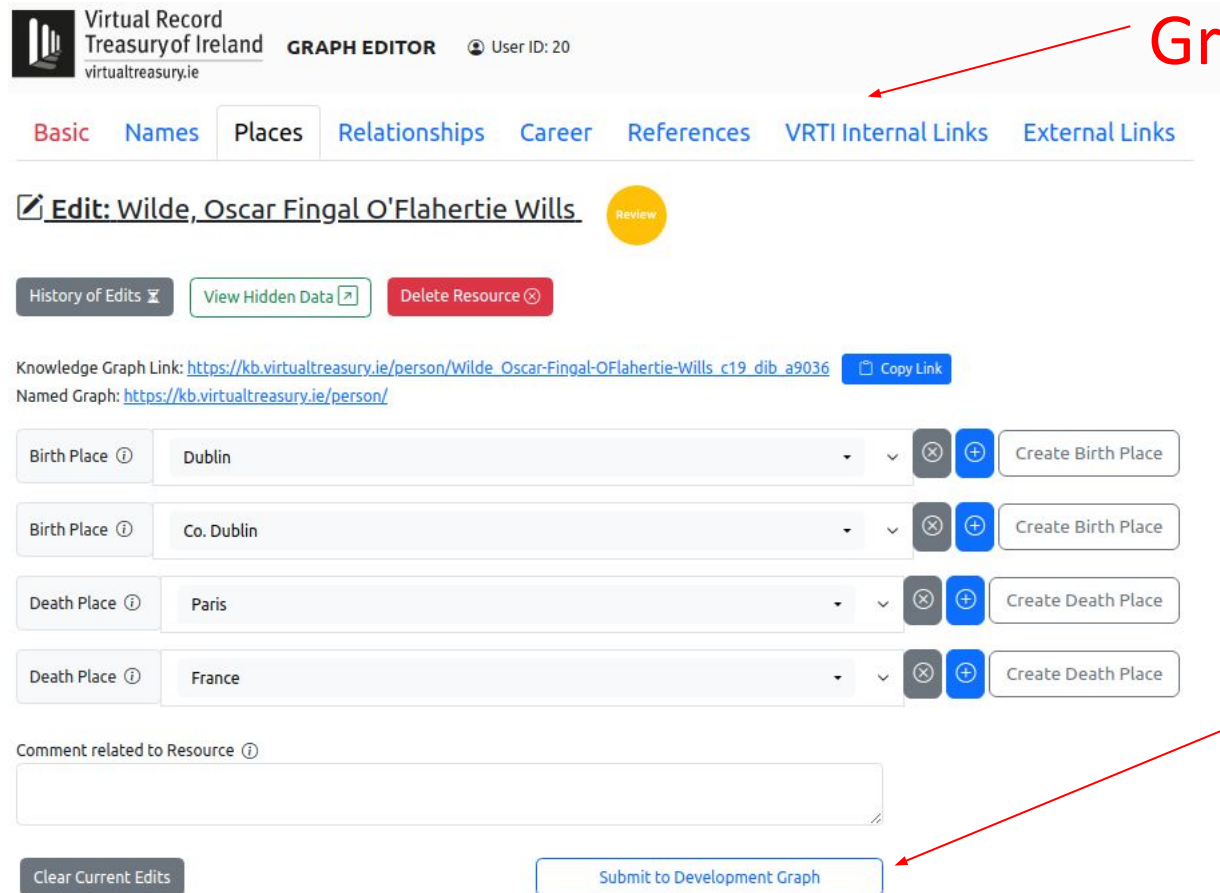
### Filled Values

Label	Value
Birth Date Lower 	1854-10-16
Birth Date Upper 	1854-10-16
Birth Place 	<a href="#">Dublin</a>   <a href="#">Co.-Dublin</a>
DIB ID 	a9036
DIB Page 	<a href="#">Wilde-Oscar-Fingal-OFlahertie-a9036</a>
Death Date Lower 	1900-11-30
Death Date Upper 	1900-11-30
Death Place 	<a href="#">Paris</a>   <a href="#">France</a>
First Name 	<a href="#">Oscar-Fingal-OFlahertie-Wills</a>
Full Name 	<a href="#">Wilde_Oscar-Fingal-OFlahertie-Wills</a>
Gender 	<a href="#">Male</a>
Image 	<a href="#">Oscar%20Wilde%20281854-1900%29%201889%2C%20May%2023.%20Picture%20by%20W.%20and%20D.%20Downey.jpg</a>   <a href="#">Oscar%20Wilde%20portrait%20by%20Napoleon%20Sarony%20-%20albumen.jpg</a>   <a href="#">Accession%20Number-%201983-1863-0001%20%282719964225%29.jpg</a>
Interest 	<a href="#">Literature</a>   <a href="#">Theatre-Film-and-TV</a>
Last Name 	<a href="#">Wilde</a>
Occupation 	<a href="#">playwright-poet-and-prose-writer</a>
Organisation 	<a href="#">Anglican</a>
Source 	<a href="#">DIB009036_1   James-McGuire-and-James-Quinn-eds-Dictionary-of-Irish-Biography-Cambridge-2009   Wilde-Oscar-Fingal-OFlahertie-a9036</a>

### Empty Values

Label	Value
Variant Name 	No value
Alias 	No value
Patronymic Matronymic 	No value
Office 	No value
ODNB 	No value
Mother 	No value
Father 	No value
Husband Of 	No value
Wife Of 	No value
Child Of 	No value
Floruit Upper 	No value
Floruit Lower 	No value
Reference 	No value
Rank 	No value
Member Of Church 	No value
Comment 	No value

- Form input translated into KG query



Grouped Attributes

Translate into Query

# Conclusion

- VRTI is a digital resource of national importance which already is attracting huge interest from scholars and public alike
- Current phase of KG development is seeking to make user interaction with the KG less technical and more engaging
  - including exploration of generative AI
  - linking of KG with the digital records



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## CALL TO ACTION

**Get involved in evaluating the Explorer in coming months ... no technical or historical expertise needed!**