



**KnowING IPR project
Fostering Innovation in the Danube Region
through Knowledge Engineering and IPR
Management**

Output 4.2 KnowING HUB Offline client application

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[Http://www.interreg-danube.eu/approved-projects/knowing-ipr](http://www.interreg-danube.eu/approved-projects/knowing-ipr)

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Introduction – KnowiNG HUB Offline client application

The following document “Output 4.2. KnowiNG HUB Offline client application” describes the main elements of the online web application as divided into two parts. *First part* describes the technical potential of the queries, in terms of emphasizing the strongest and most sophisticated part of the platform – the queries potentials. *The second part offers* very brief overview of why the KnowiNG HUB solution is more elaborated than compared solutions around the world.

The KnowiNG HUB offline client application can be downloaded from:

<https://knowing-ipr.fis.unm.si/>

The Output feeds from the deliverables of the Activity A4.1 (UxD activities), and Activity 4.2 (Development activities). The present Output 4.1. can serve as guiding document on the potentials of KnowiNG HUB and can serve participants of the KnowiNG HUB initiative to have a full guidance through the potentials of KnowiNG HUB.

KnowiNG HUB represents a transnational platform, providing online access to enriched data and supporting information for an efficient innovation processes supported by tools for an efficient IPR management. This collaborative online platform links providers of enriched data and information relevant for innovations, business and innovation support organizations and enterprises (especially SMEs and HEI&RI) from the Danube region.

KnowiNG HUB web portal and contribution to EUSDR

The featured Output contributes to PO2 of the DTP (number of tools for improving the institutional and infrastructural framework conditions for research and innovation), and more importantly it contributes to three Priority areas of the EUSDR.

Firstly, it contributes to PA7 since it provides access to patent data and provides knowledge on how to understand patent data. Additionally, it raises awareness on importance of IP, contributing to one of the key PA7 targets (to increase number of EPO and PCT patent applications in the Danube region). The Output and activity targets also PA9 targets in contributing improved educational outcomes, in the fields of innovation and entrepreneurship. Most importantly, the Outcome also contributes to PA8, due to support to enterprises through high performing training and is improving framework conditions for SMEs in areas where competitive infrastructure is missing.

Offline client application and services

Registering and downloading the application

To be able to reach the offline client application and its services a user needs to register. The registration is done through Google email service, leaving Terms and Conditions to and data protection compliance to the Google.

In order to reach the Offline application, the procedure is the following:

- Sign up with Google email
- Sign in
- Download the Offline application

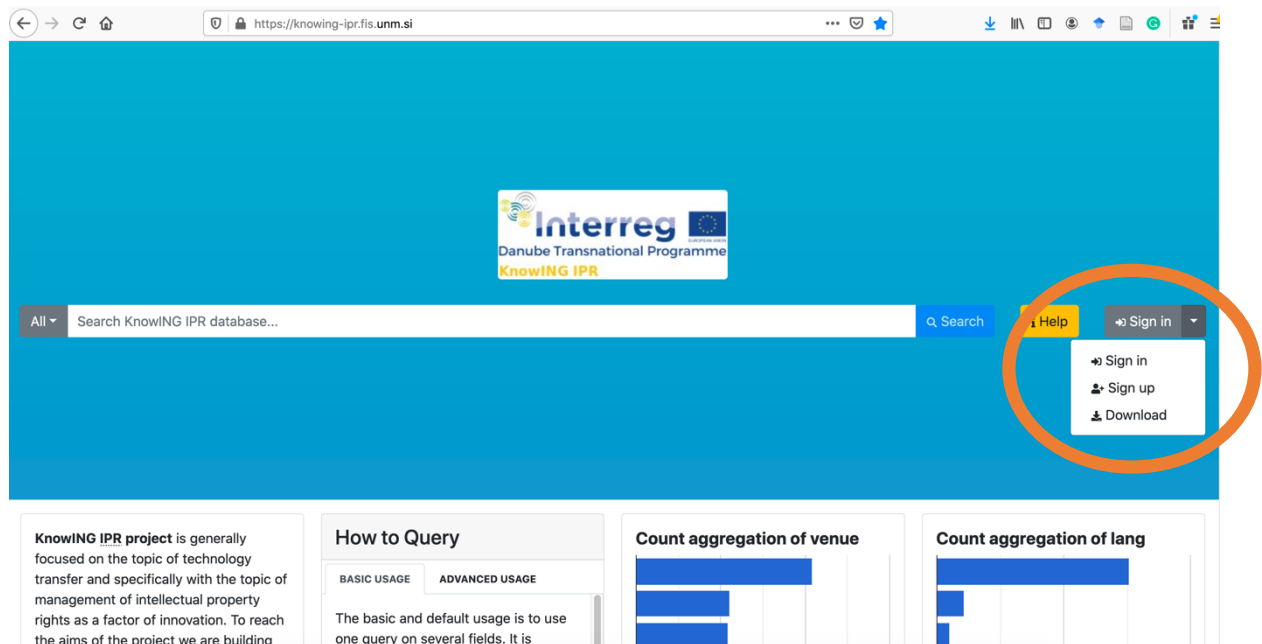


Photo 1: Display of sign in option

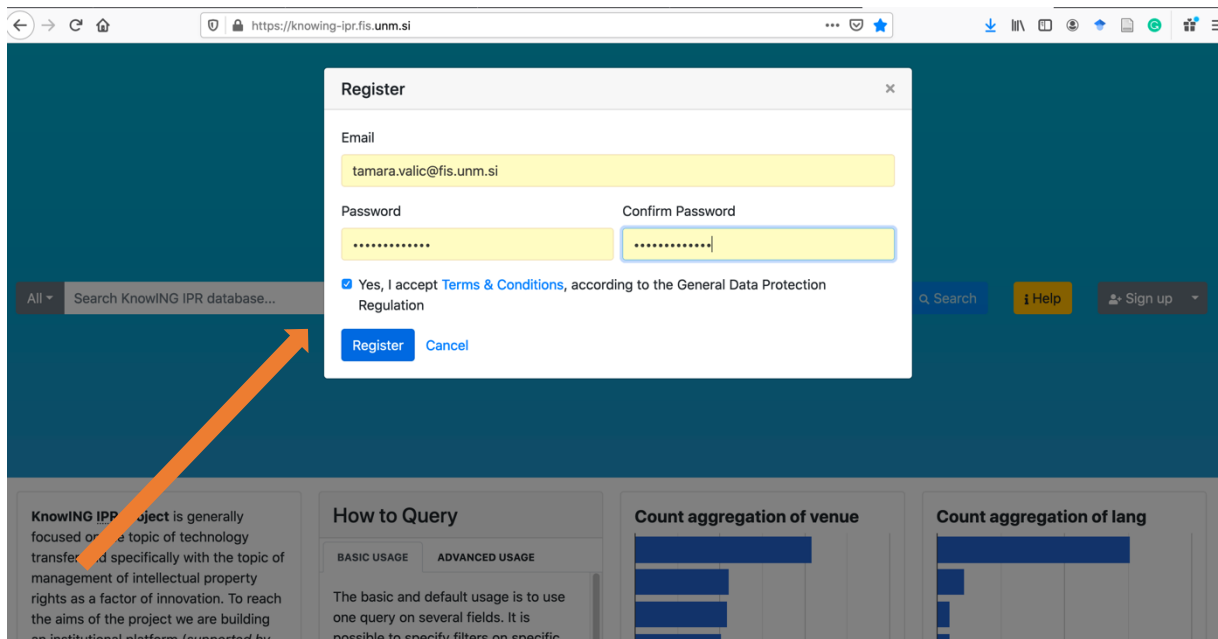


Photo 2: Display of sign up option, agreeing with Terms and Conditions

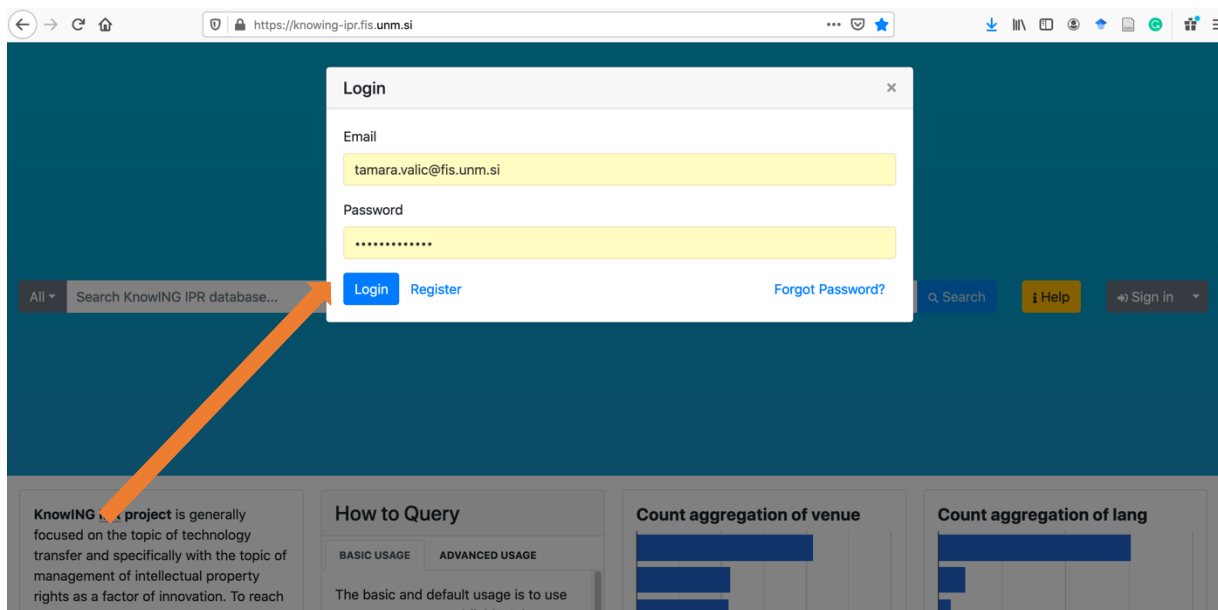


Photo 3: Display of Log in

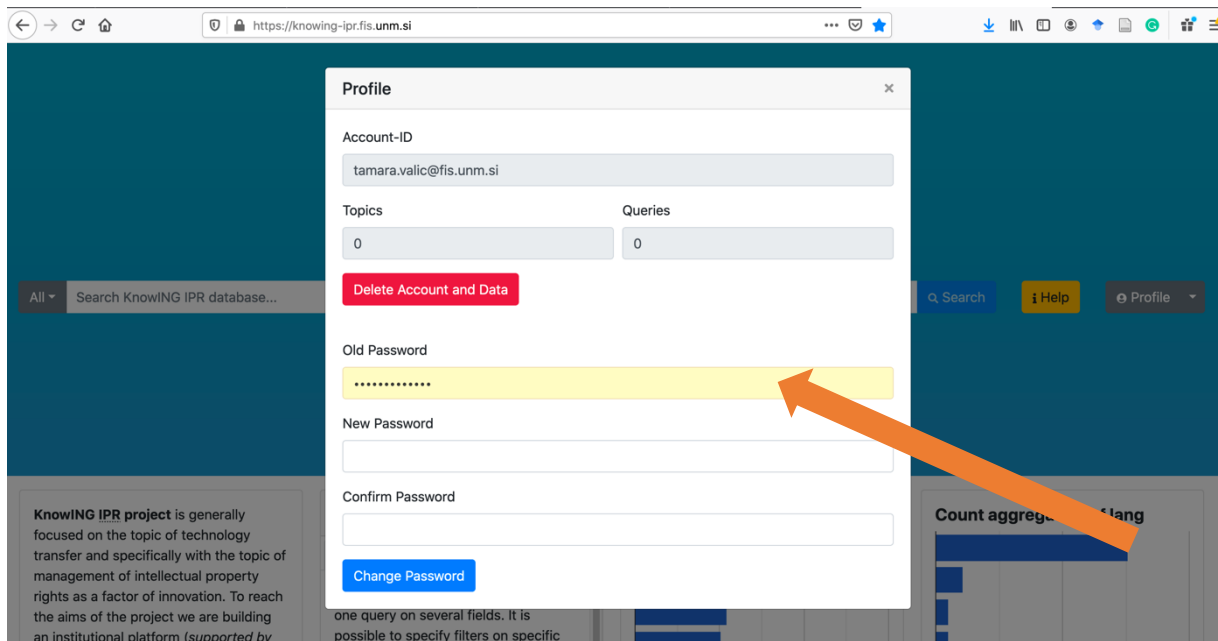


Photo 4: Display of Profile management possibilities

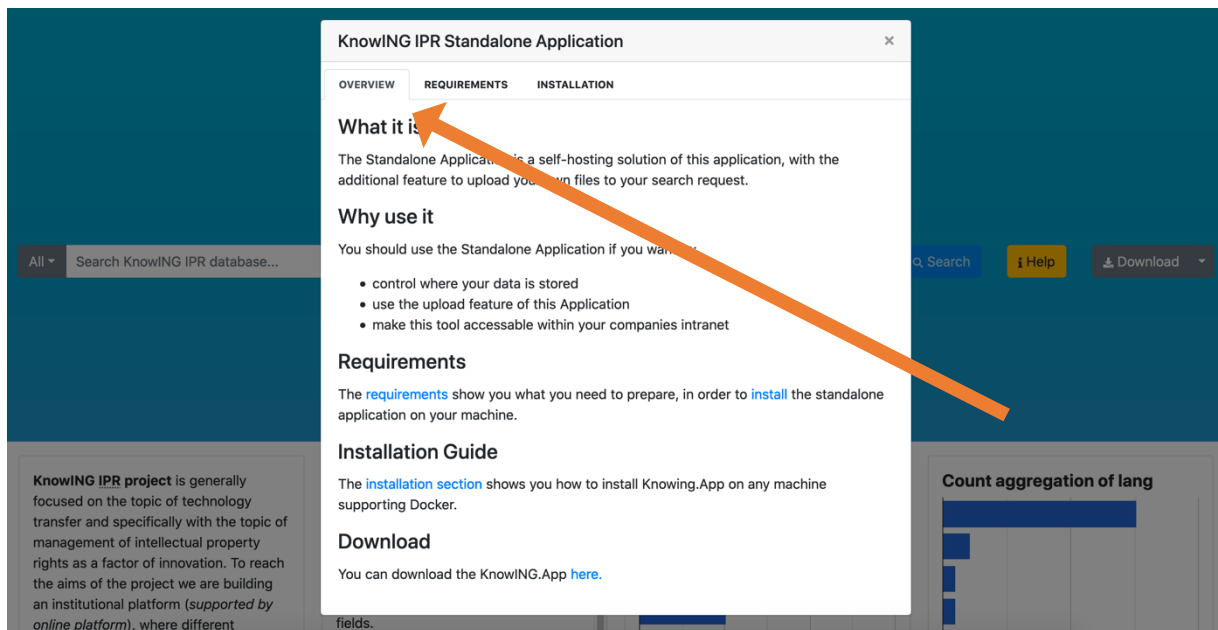


Photo 5: Display of download guidance, part 1

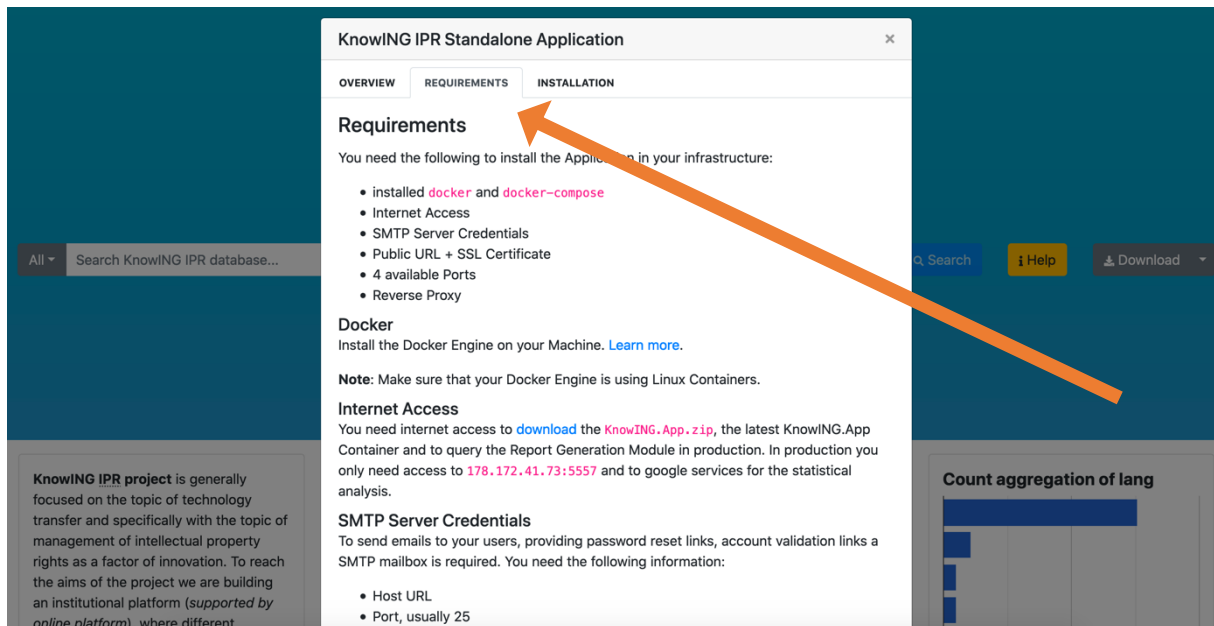


Photo 6: Display of download guidance, part 2

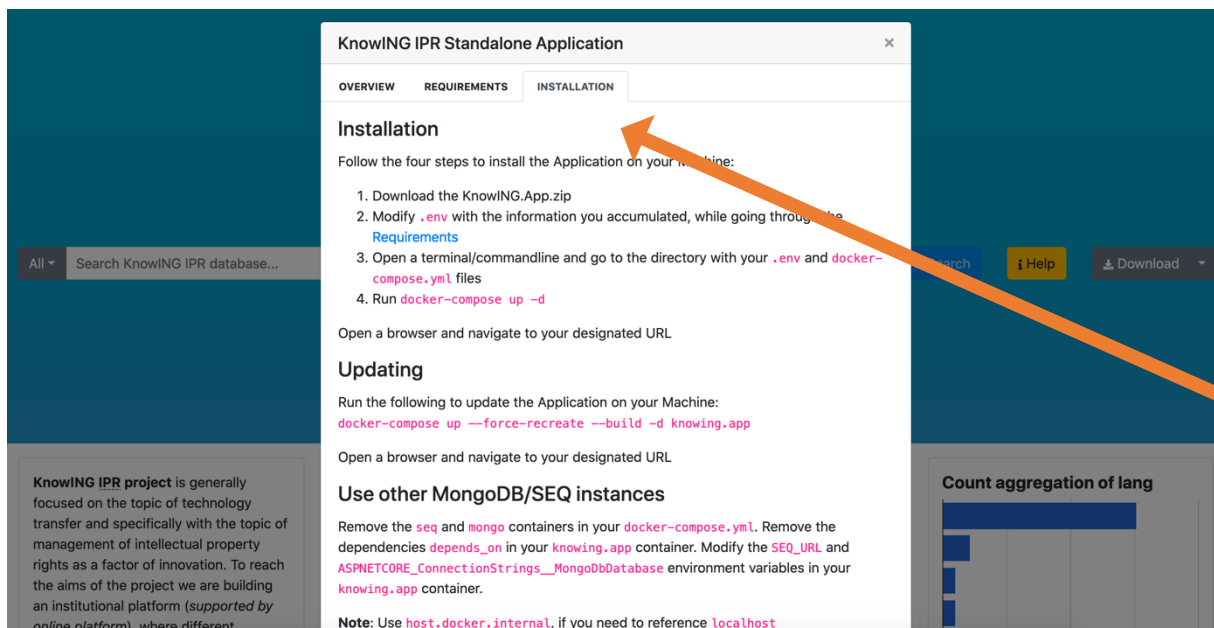
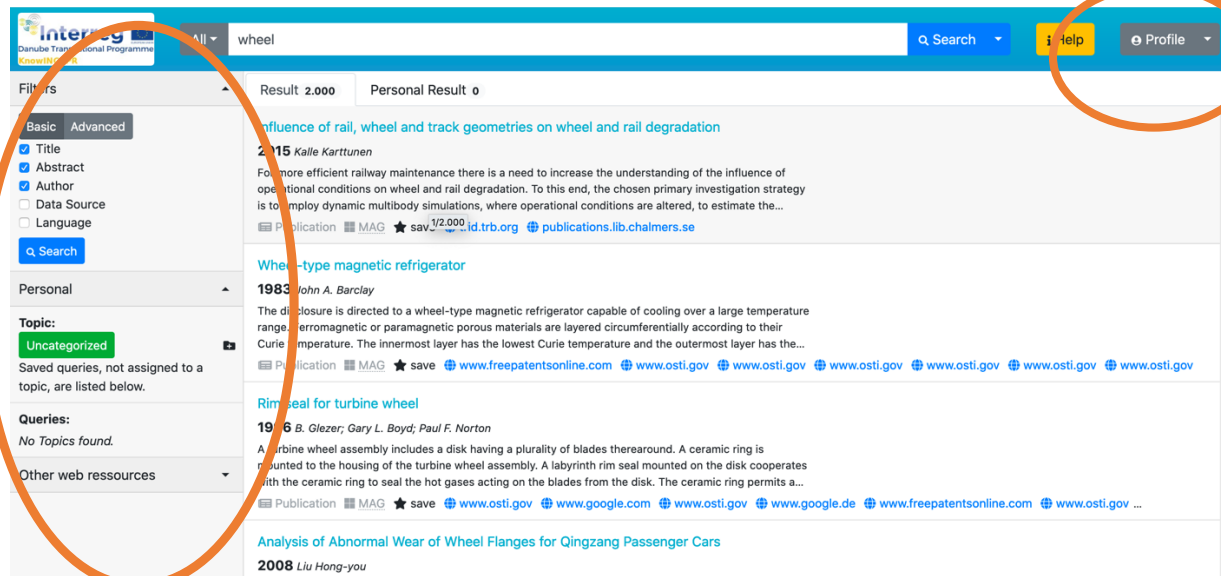


Photo 7: Display of download guidance, part 3

Personalised queries

Personalised queries offer a lot of options the basic, unregistered queries do not. As seen above, every user can be fairly easily registered and as such, every user has the possibility of creating own workspace. For the purpose of designing own workspace every user can create own topic, that will help him/her to categorize queries.

The work with managing own topics and saving own queries under designated topics is very easy and explained below:



The screenshot shows the Interreg search interface. At the top, there is a search bar with the text 'wheel' and a search button. To the right of the search bar are buttons for 'Help' and 'Profile'. Below the search bar, there are filters on the left side, including 'Basic' and 'Advanced' tabs, and a 'Personal' section. The 'Personal' section is highlighted with a red circle and shows 'Uncategorized' as the active topic. The main search results area displays several entries, including 'Influence of rail, wheel and track geometries on wheel and rail degradation' and 'Wheel-type magnetic refrigerator'.

Photo 8: Display of once registered and signed in

Structure the results by customised 'Topics'

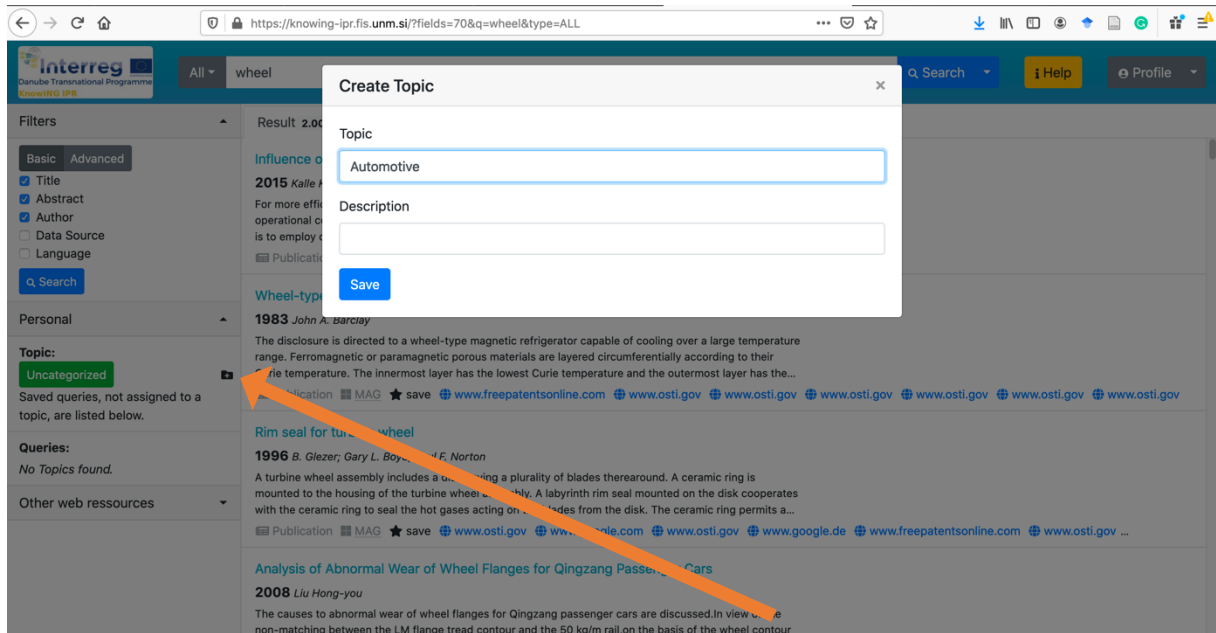


Photo 9: Creating a topic

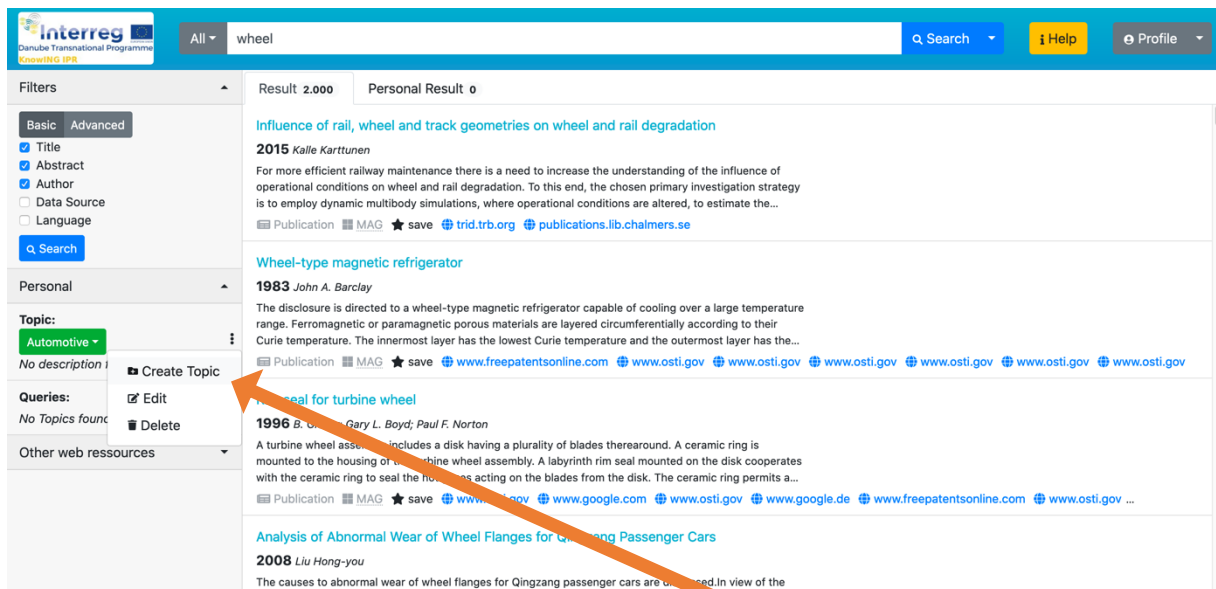
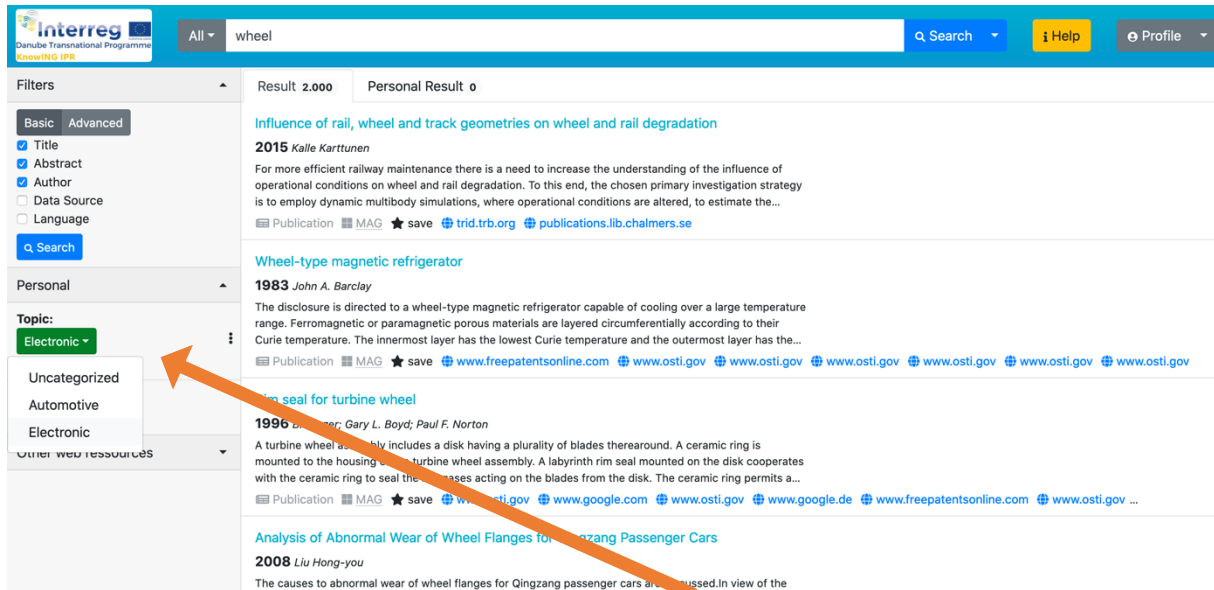
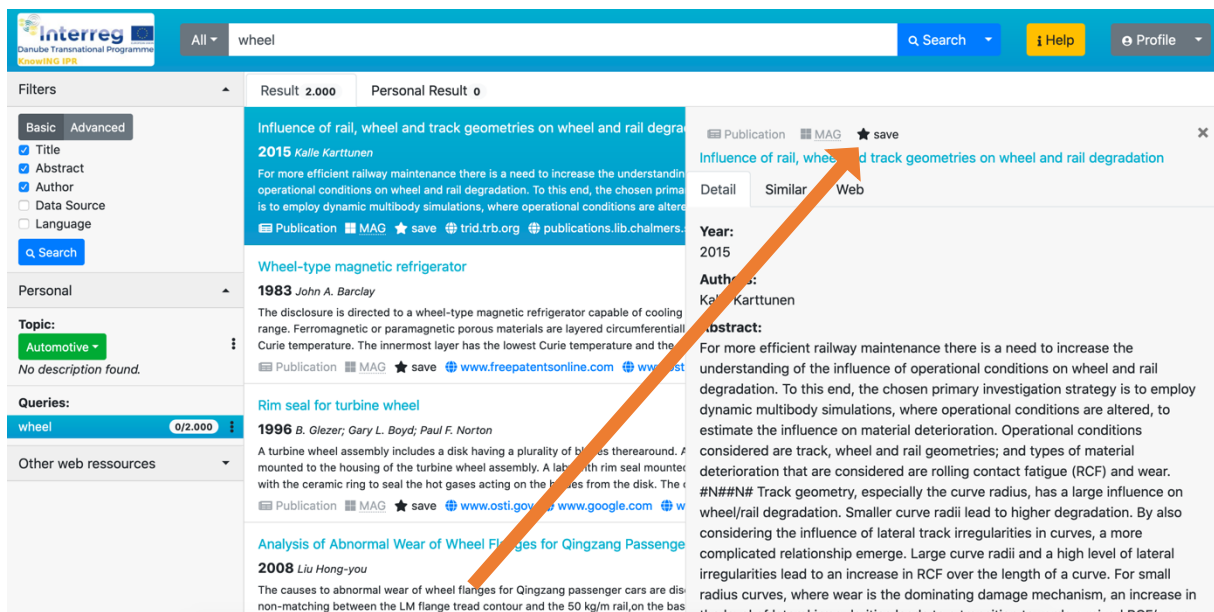


Photo 10: Creating a topic option



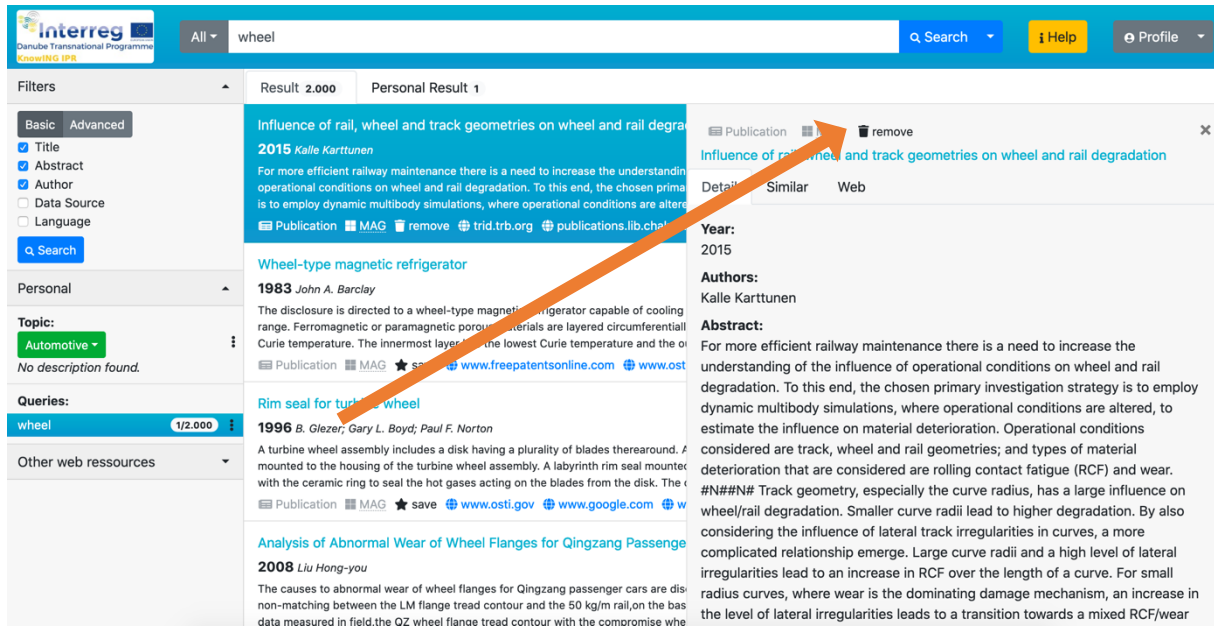
The screenshot shows the search results for the term 'wheel'. The search bar at the top contains 'wheel' and shows 'Result 2.000'. On the left, the 'Filters' panel is open, with the 'Topic' dropdown set to 'Electronic'. The search results list several articles, including 'Influence of rail, wheel and track geometries on wheel and rail degradation' (2015) and 'Wheel-type magnetic refrigerator' (1983). An orange arrow points from the 'Electronic' filter to the search results.

Photo 11: Topic view



This screenshot shows the same search results for 'wheel', but with the 'Topic' dropdown set to 'Automotive'. A 'Topic saving' dialog box is open over the first search result, 'Influence of rail, wheel and track geometries on wheel and rail degradation'. The dialog box contains the title, year (2015), author (Kalle Karttunen), and abstract. It has tabs for 'Detail', 'Similar', and 'Web'. An orange arrow points from the 'Automotive' filter to the dialog box.

Photo 12: Topic saving



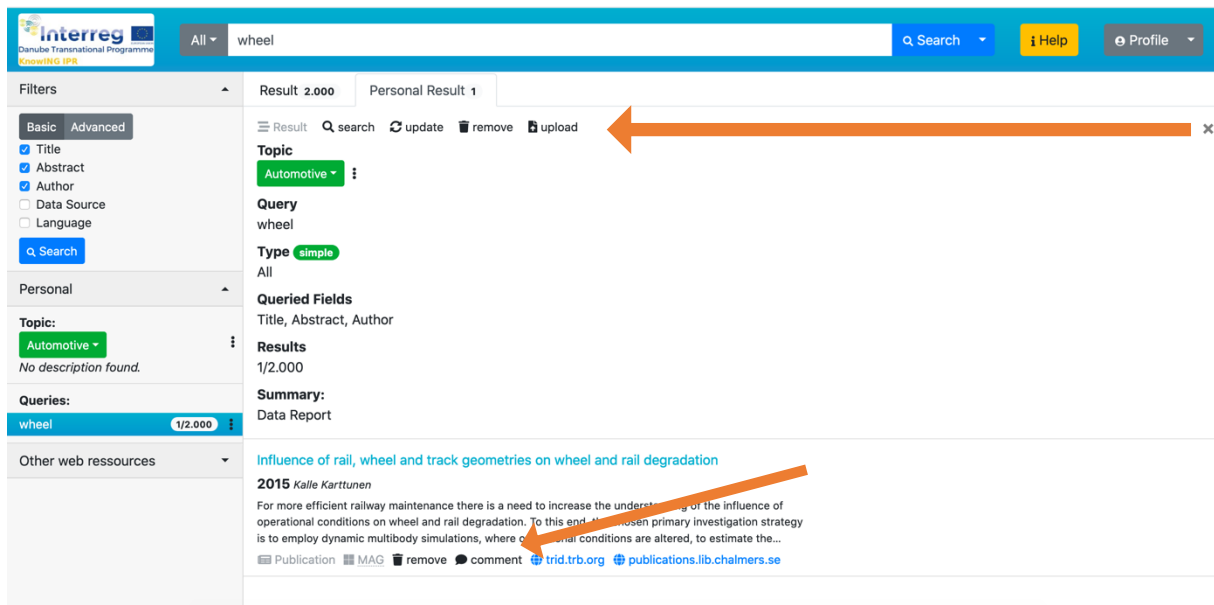
The screenshot shows the search results for 'wheel'. On the left, there are filters for 'Basic' and 'Advanced' search criteria, including Title, Abstract, Author, Data Source, and Language. The 'Personal' section shows the topic 'Automotive' and the query 'wheel' with 1/2,000 results. The main results list includes:

- 2015 Kalle Karttunen**: Influence of rail, wheel and track geometries on wheel and rail degradation. For more efficient railway maintenance there is a need to increase the understanding of the influence of operational conditions on wheel and rail degradation. To this end, the chosen primary investigation strategy is to employ dynamic multibody simulations, where operational conditions are altered, to estimate the influence on material deterioration. Operational conditions considered are track, wheel and rail geometries; and types of material deterioration that are considered are rolling contact fatigue (RCF) and wear. Track geometry, especially the curve radius, has a large influence on wheel/rail degradation. Smaller curve radii lead to higher degradation. By also considering the influence of lateral track irregularities in curves, a more complicated relationship emerge. Large curve radii and a high level of lateral irregularities lead to an increase in RCF over the length of a curve. For small radius curves, where wear is the dominating damage mechanism, an increase in the level of lateral irregularities leads to a transition towards a mixed RCF/wear.
- 1983 John A. Barclay**: Wheel-type magnetic refrigerator. The disclosure is directed to a wheel-type magnetic refrigerator capable of cooling range. Ferromagnetic or paramagnetic porous materials are layered circumferentially with the ceramic ring to seal the hot gases acting on the blades from the disk. The innermost layer has the lowest Curie temperature and the outermost layer has the highest Curie temperature.
- 1996 B. Glezer, Gary L. Boyd, Paul F. Norton**: Rim seal for turbine wheel. A turbine wheel assembly includes a disk having a plurality of blades therearound. A labyrinth rim seal mounted to the housing of the turbine wheel assembly. A labyrinth rim seal mounted with the ceramic ring to seal the hot gases acting on the blades from the disk. The ceramic ring is mounted to the housing of the turbine wheel assembly.
- 2008 Liu Hong-you**: Analysis of Abnormal Wear of Wheel Flanges for Qingzang Passenger. The causes to abnormal wear of wheel flanges for Qingzang passenger cars are discussed. The non-matching between the LM flange tread contour and the 50 kg/m rail, on the basis of the data measured in field, the QZ wheel flange tread contour with the compromise wheel flange tread contour is proposed.

An orange arrow points to the 'remove' button for the first result.

Photo 13: Topic removing

Managing saved results by adding personalised comments to each of the results



The screenshot shows the search results for 'wheel'. On the left, there are filters for 'Basic' and 'Advanced' search criteria, including Title, Abstract, Author, Data Source, and Language. The 'Personal' section shows the topic 'Automotive' and the query 'wheel' with 1/2,000 results. The main results list includes:

- 2015 Kalle Karttunen**: Influence of rail, wheel and track geometries on wheel and rail degradation. For more efficient railway maintenance there is a need to increase the understanding of the influence of operational conditions on wheel and rail degradation. To this end, the chosen primary investigation strategy is to employ dynamic multibody simulations, where operational conditions are altered, to estimate the influence on material deterioration. Operational conditions considered are track, wheel and rail geometries; and types of material deterioration that are considered are rolling contact fatigue (RCF) and wear. Track geometry, especially the curve radius, has a large influence on wheel/rail degradation. Smaller curve radii lead to higher degradation. By also considering the influence of lateral track irregularities in curves, a more complicated relationship emerge. Large curve radii and a high level of lateral irregularities lead to an increase in RCF over the length of a curve. For small radius curves, where wear is the dominating damage mechanism, an increase in the level of lateral irregularities leads to a transition towards a mixed RCF/wear.

An orange arrow points to the 'comment' button for the first result.

Photo 14: Managing saved results and adding a personal note

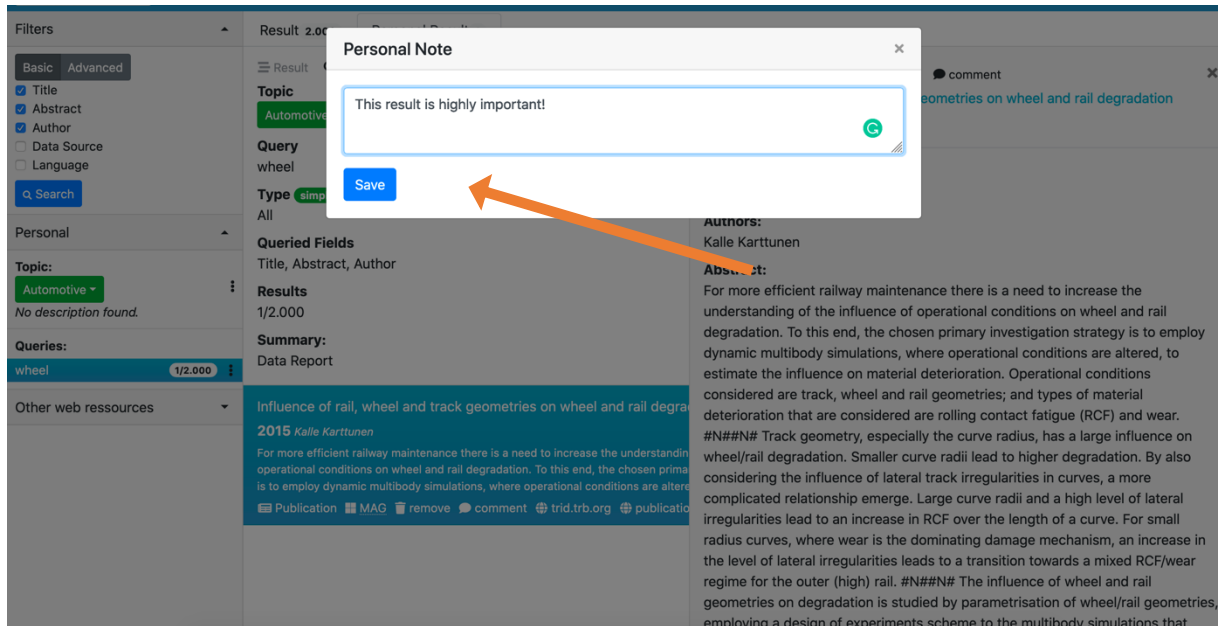


Photo 15: Adding a personal note

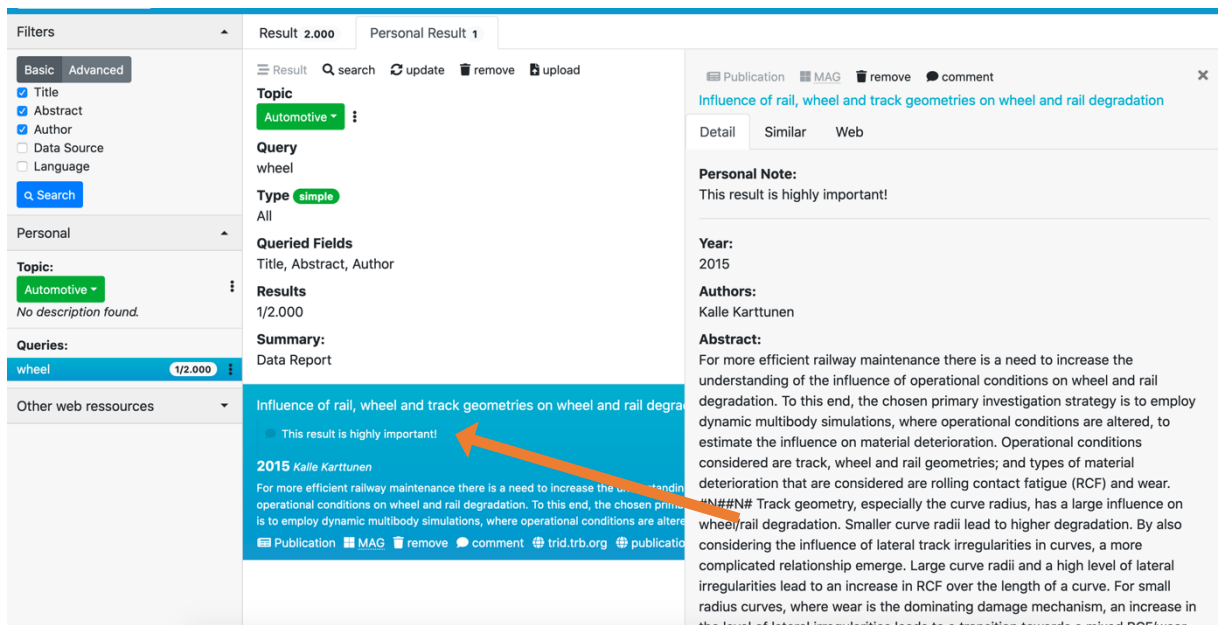


Photo 16: Personal note is visible among Saved personal results

Further analysis of data for patents and for publications

Further analysis of data is available when analysing separately patents and publications, where a user can upgrade queries by patents and by publication according to the 'year' and 'author', 'abstract' and 'owner' etc.

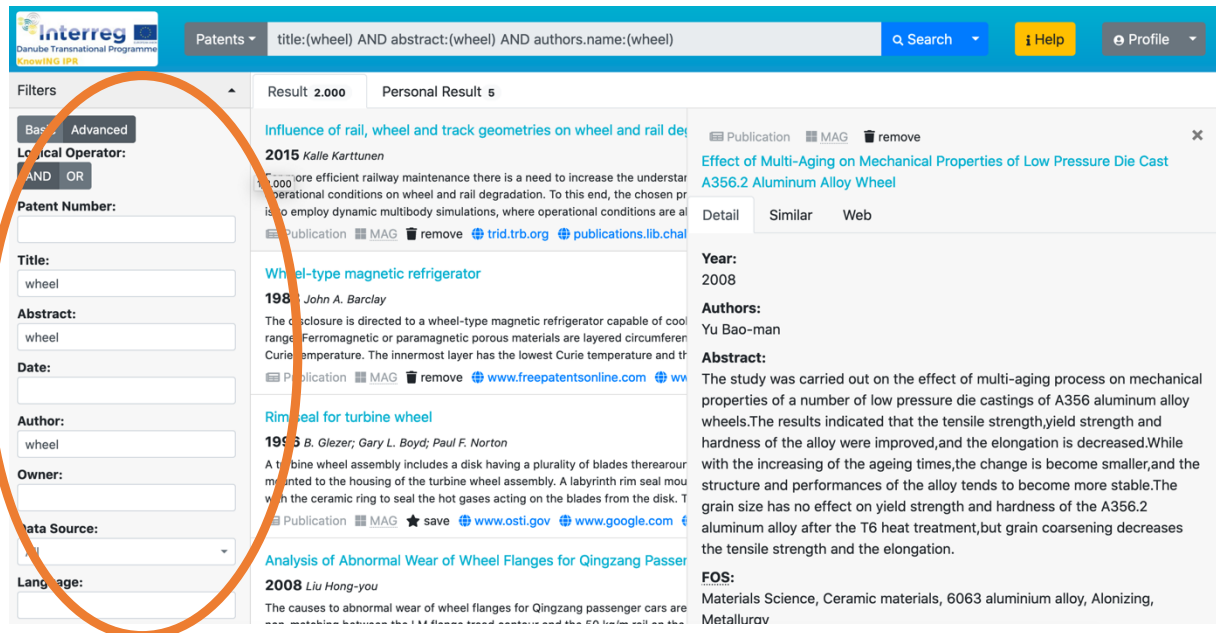


Photo 17: Additional queries within 'Patents'

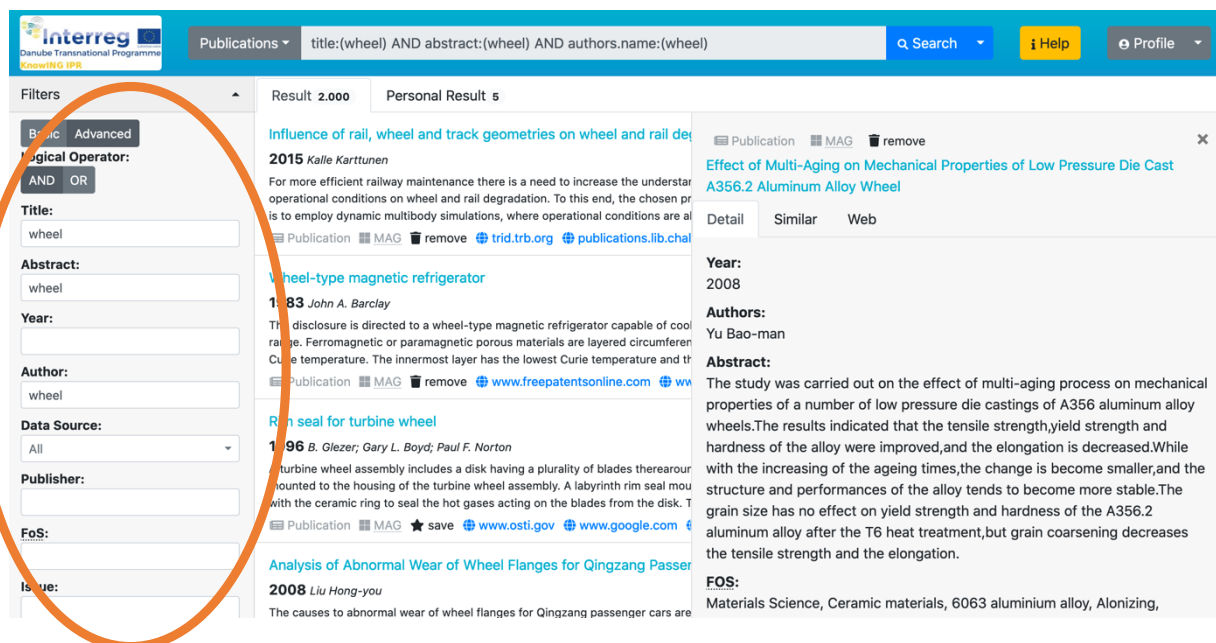


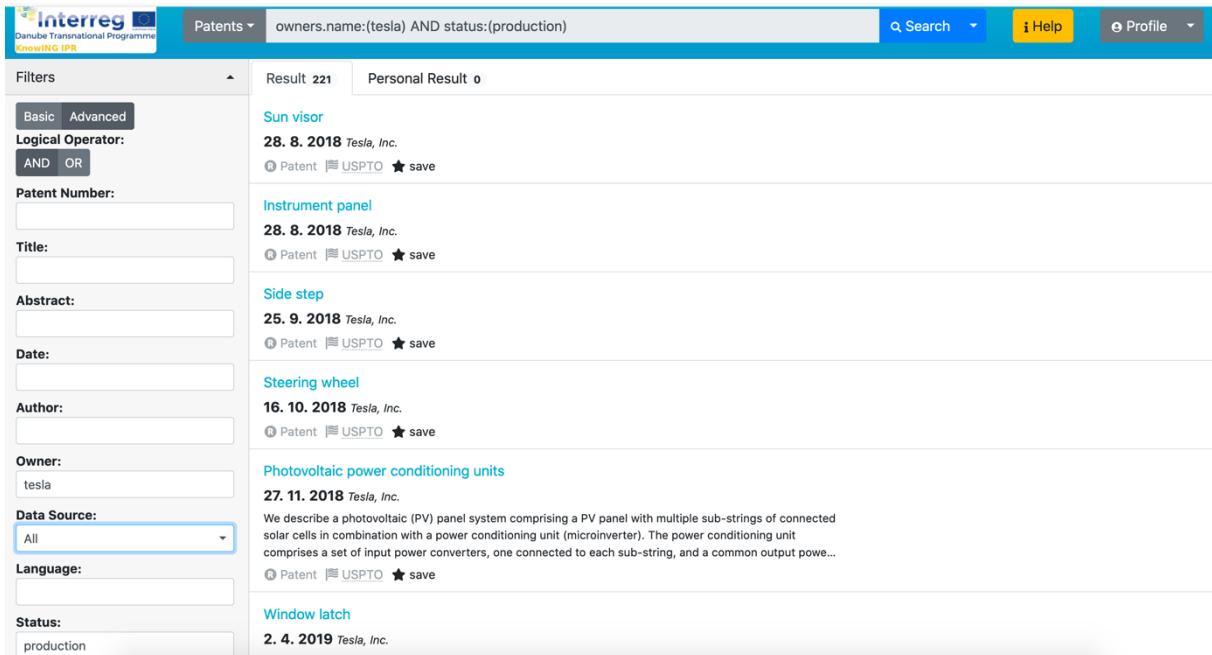
Photo 18: Additional queries within 'Publications'

The left side menu for advanced search offers numerous possibilities of search combinations:

- For patents: by patent number, by title, by abstract, by date, by data source, by author, by owner (including companies), by language by status, and by country.
- For publications: by title, by abstract, by year, by author, by data source, by publisher, by FoS, by issue of publication, url, keywords, and DOI.

Search for patents in 'production' status

When elaborating search for 'status' of patent, the status production is useful information. In the given case, we learn, for example, that company named Tesla is having a total of 221 patents in production.



The screenshot shows the Interreg Patents search interface. The search query is "owners.name:(tesla) AND status:(production)". The results are displayed in a list format, showing the following patents:

Patent Title	Date	Owner
Sun visor	28. 8. 2018	Tesla, Inc.
Instrument panel	28. 8. 2018	Tesla, Inc.
Side step	25. 9. 2018	Tesla, Inc.
Steering wheel	16. 10. 2018	Tesla, Inc.
Photovoltaic power conditioning units	27. 11. 2018	Tesla, Inc.
Window latch	2. 4. 2019	Tesla, Inc.

The interface also includes a filters sidebar on the left with fields for Patent Number, Title, Abstract, Date, Author, Owner, Data Source, Language, and Status. The Status field is currently set to "production".

Photo 19: Queries within patents by 'Owners' and by 'Status: Production'

What makes Knowing HUB platform so special

A promotional graphic for the Knowing HUB platform. It features a central image of a hand pointing at a glowing digital interface with a network of nodes and lines. The background is a mix of orange and white. Text is arranged in several sections: a top orange box with white text, a central white box with logos and contact information, and a right-side orange box with white text.

Explore the power of patent analytics to enhance your business and IPR management

Interreg 
Danube Transnational Programme
KnowiNG IPR

CONTACT US
knowing.ipr@fis.unm.si
www.interreg-danube.eu/knowing-ipr
and
<https://knowing-ipr.fis.unm.si>

Project co-funded by European Union funds (ERDF, IPA, ENI)

KnowiNG HUB
<https://knowing-ipr.fis.unm.si>

Photo 20: What makes KnowiNG HUB so special, part 1

GENERAL POTENTIAL

It is easy to manage, it gives user friendly innovation and R&D data search, but most of all - it includes links to even more data related to the conducted search.

What makes Knowing HUB platform so unique?

Safe to use

The users who register can conduct queries and save them. The users who do not want to save queries results online, can download the offline application.

DETAILED POTENTIAL

Structure and arrange your queries in 'Topics'

For registered users, you can create your own "Topics" folder where your queries and search results are saved. You can write notes to each of the results.

Patent and publication data combined & web search

Using KnowiNG HUB platform one can simultaneously browse through patent data and scientific publications data. Each query offers parallel web search of the topic and offers similar patents search.

Discover background data

Discover background data, like licensing opportunities and which patents are used in production.

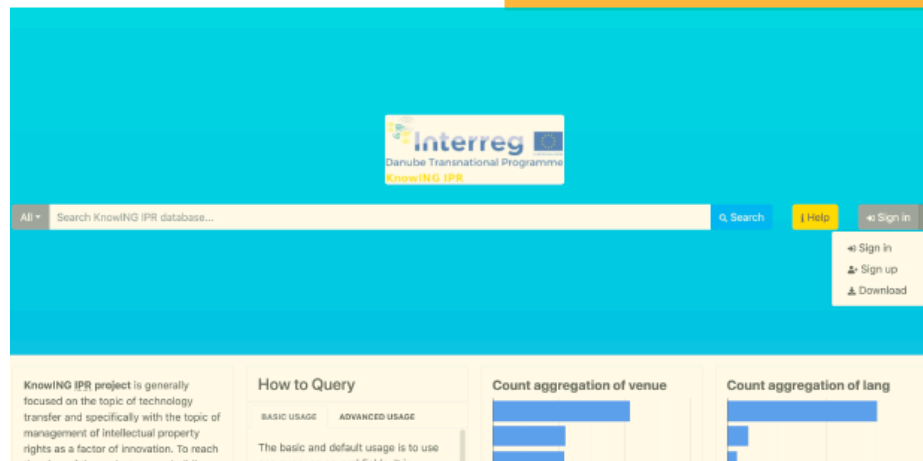


Photo 21: What makes KnowiNG HUB so special, part 2

Conclusion

To sum up, the Output 4.2 KnowING HUB offline client application offers elaborated and structured approach in exploitation of KnowING IPR results and it enables the analysis of the results in the offline mode. Doing so, it provides high levels of safety, since users can not in any way be tracked regarding their searches. Furthermore, the privacy and business secrets are safe with KnowING HUB Offline application.

The Offline client can be downloaded from the web portal that is and will continue to be hosted at the servers of the LP. Such arrangement is valid also after the projects end, ensuring the durability of the result. It is the complementary Output 4.3 that was elaborated to provide the path of ensuring the durability and exploitation of the results.

The Output feeds from the deliverables of the Activity A4.1 (UxD activities), and Activity 4.2 (Development activities). The present Output 4.2. can serve as guiding document on the potentials of KnowING HUB and can serve participants of the KnowING HUB initiative to have a full guidance through the potentials of KnowING HUB.