FAIRshare

DIGITAL TOOLS FOR FARM ADVISORS

D4.4 DATS Assessment Tool template for Advisors

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Technical References

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Task	4.4 The development and use of an assessment tool to assist advisors to identify the issues affecting adoption in the context of different UCs
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1 INTRODUCTION

Work Package 4 aims to identify change management and innovation process issues arising from the adoption of new digital tools and services in at least 29 different farm advisory contexts. These will be identified through the User Cases (UCs) in which advisors will use some DATS (1-3) and will evaluate whether the selected DATS enhances the effectiveness and efficiency of their activities in their defined UC.

Task 4.4 revolves around the development and use of an assessment tool to help farm advisors and their organisations have a structured approach to compare digital tools and services from different contexts. This tool will help farm advisors explore what they really want in a tool or service, and based on their needs select the most appropriate solution for their own context. This report aims describe the different issues considered in the development of this assessment tool for advisors.

2 BACKGROUND

This tool is developed based on learnings from deliverables **D3.5-Classification of high impact advisory tools** and **D2.2- Practical Method and recording Template for Collecting Good Practices**. Apart from these, outputs from Tasks 4.1, 4.2 and 4.3 were also beneficial for the development of this tool.

The aforementioned deliverables were used to identify the main characteristics relevant for the tool assessment, and eventually to help advisors to select and try new tools based on their needs. Once these key points were extracted, the tool was enhanced with the results of Tasks 4.1, 4.2 and 4.3. Specifically, learnings from Task 4.3 regarding the learnings from ongoing pilot's adoption of DATS allowed for the most paramount topics and aspects to be identified and thus, they were included in the assessment tool.

In a final step, the assessment tool was tested by farm advisors of the different partners integrated in each regional Hub of the FAIRshare project (Western Europe, Central Europe, North Eastern Europe and South Eastern Europe), and further refined and adapted based on their feedback and testing, to develop the final version.

3 OBJECTIVE

The main goal of the assessment tool is to assist advisors in identifying suitable digital tools available to them or farmers, which are relevant to the their individual business needs, and capability in terms of handling digital tools and services.

Drawing on experiences from the diversity associated with the pilot 'observations of DATS adoptions', the tool created can be customized to a wide range of different regional, social and sectorial contexts. The assessment tool is web based but also available as a download version, so advisors can use it in circumstances where connectivity to the internet is limited.

To further facilitate its use, the tool is accompanied with a set of notes and instructions and is available in 11 different regional languages as a downloadable Excel file.

4. APPROACH/DESCRIPTION

The tool consists of two Excel spreadsheets, the assessment tool and the Dashboard (Figures 1 and 2).

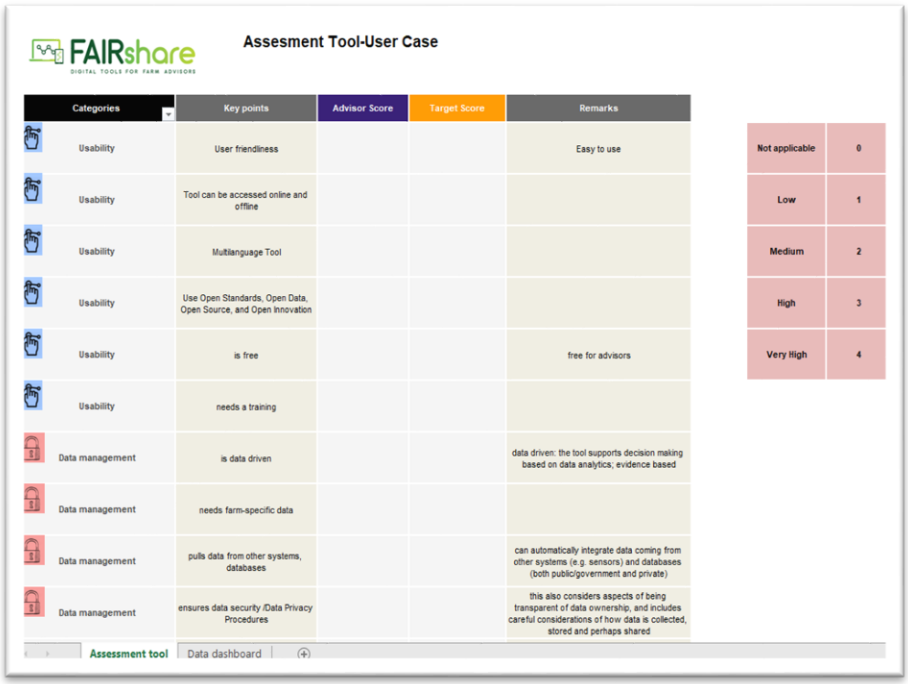

Figure 1. View of the assessment tool

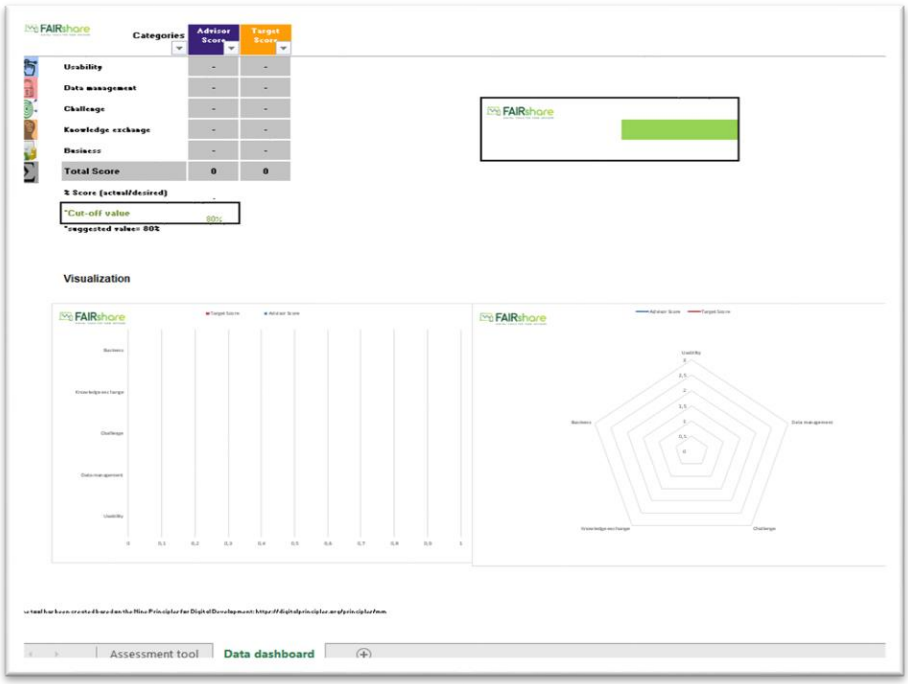

Figure 2. View of the Dashboard

4.1 Assessment tool

It is important to highlight that this tool has been designed specifically for farm advisors, thus questions are designed to consider the advisors´ point of view. The assessment tool is focused on 5 distinctive principles or the so-called 'categories':

- Usability
- Data management
- Challenge
- Knowledge exchange
- Business

Each category contains different characteristics or 'key points', which will then be evaluated in two columns, the "**advisor score**" and the "**target score**" columns.

- The **target score** represents the desired score, the ideal score for a DATS. This score should be filled beforehand. The ideal score is related to the challenge advisors face and therefore is the desired outcome expected when advisors try to meet a challenge/solve a problem. This ideal scoring will allow the advisor to compare the real score ("advisor score") of the evaluated tool with the desired score ("target score")
- The **advisor score** is based on the points given by the advisor to a certain chosen DATS and thus represents the real score of a tool.

In order to evaluate the tools we provide five levels of scoring for each option:

- Not applicable-0
- Low-1
- Medium-2
- High-3
- Very high-4

4.1.1 Categories and Key points

As stated above, the tool contains five categories and a group of key points in each category. These categories and key points are intended to identify the main issues at stake, to better address the expectations and needs of the advisors in identifying suitable digital tools available to them. These five categories and key points help the individual advisor to think about their needs and expectations in a systematic way and thus to assess the suitability of the tool to their own context.

4.1.2 Usability

Usability is important and it influences the actual use of a tool. This category refers to the ease of use that any tool has for a user. In the assessment tool six main key points have been considered in relation to usability, which are:

- Is it **user friendly** (easy to use)
- Can the tool be **accessed online and offline**
- Is it a **multi-language tool**
- Does it use **Open Standards, Open Data, Open Source, and Open Innovation**
- Is it **free of charge** (for advisors)
- Does it **require training**

4.1.3. Data Management

Data Management is the combination of the different management functions to guarantee the correct, fluent and safe management of corporate data. In this category, there are six key points considered, including:

- Is it **data driven**
- Does it require **farm-specific data**
- Can it **pull data from other systems, databases**
- Does it **ensure data security /data privacy procedures**
- Is it **interoperable** with other tools
- Does it **supports quality control** of the data

4.1.4 Challenge

Taking into account that farmer´s challenges are linked to advisor's challenges, there are nine key points to consider:

- Does it **improve decision support**
- Does it **improve diagnostic support**
- Can it allow for **better interaction between farmers and advisors**
- Can it help to **increase farm incomes/ profit**
- Can it **enhance mitigation, adaptation & resilience to climate change**
- Will it **save time**
- Will it **save money**
- Can it **reduce workload**
- Will it **enable a systemic/holistic perspective on the farming business**

4.1.5 Knowledge exchange

Knowledge exchange refers to the relationships and networks created between different actors in the advisory system and the flow of knowledge between them. The four key points considered here are:

- Will it **enhance advisor-to-advisor exchange**
- Will **it enhances advisor-to-farmer exchange**
- Can it **enhance advice frequency**
- Is it **collaborative, in allowing advisors and farmers to interact with the same** tool/dataset

4.1.6 Business

Business refers to the economic viability and ability of advisory organizations to enhance their services, offerings and add value to their existing business. The five key points considered here are:

- Can it **improve the economic position** of advisory services
- Does it **fits with existing organization strategy and services**
- What will be the **change management challenge and opportunity**
- Is there a **potential for added value** to existing services
- Will it **give economic advantages** in general

4.2 Dashboard

Once the advisor has filled and scored all the key points in the assessment tool, the Dashboard data displays the average Advisor score obtained for the tool in each category and the average for the Target score.

FAIRshare	Categories	Advisor Score	Target Score
	Usability	-	-
	Data management	-	-
	Challenge	-	-
	Knowledge exchange	-	-
	Business	-	-
	Total Score	0	0

Figure 3. Average score for Advisor score and Target score

These averages are then represented in a graphical way in two Excel charts; a spider diagram and a column chart. These type of charts then show the differences between these two series in a visual and different way (Figure 4).

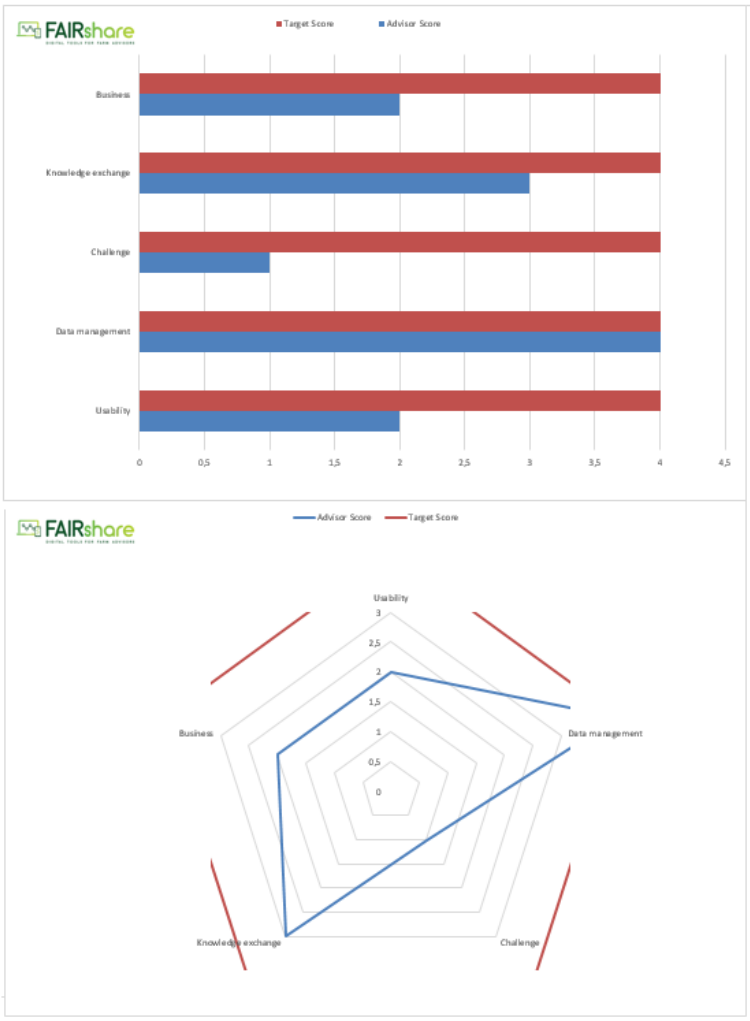

Figure 4. Visualization of the averages of Advisor score and Target score

In the dashboard (result screen), results are presented by combining the advisor score and the target score. The division between advisor score and target score is calculated as **% score (advisor/target**). A cut-off value of 80% is suggested (however, it can be edited) and is used to determine if the tool meets the needs of the advisor.

If the percentage score, (advisor score/target score) is **more than the cut-off value, the tool is considered suitable for the UC**. However, the users have the opportunity to modify this value in order to decide for themselves how selective they want to be. On the contrary, **if the percentage score, (advisor score/target score) is less than the cut-off value, the tool is considered not suitable for the UC** and a recommendation is made to try another tool or examine the areas where the tool did not score properly and see if these could be changed or adapted (Figure 5).

Figure 5. Final result of the usage of the evaluated tool

5 USER-TESTING

In order to refine and adapt the assessment tool, it has been tested with sixteen advisors in four user cases across the four regional hubs of the FAIRshare project. This evaluation has allowed us to capture the regional dimension in exploiting the potential of DATS. This evaluation has been made by advisors from TEAGASC, I4AGRI, SEASN, ZLTO, LAAS and INTIA.

Apart from the evaluation of the tool, these entities have made valuable suggestions to be incorporated into the refinement of the tool. All in all, the assessment tool has been enhanced continuously throughout its development by gathering, incorporating and testing advisors' feedback.

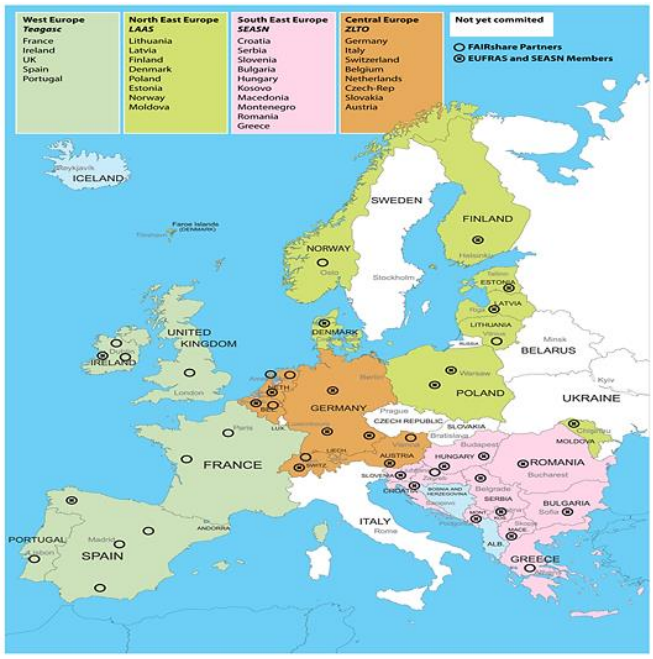

Figure 6. Distribution of partners and network members in 4 regional hubs

6 DEVELOPMENT OF ONLINE TOOL

The assessment tool has since been integrated onto the FAIRshare Permanent Networking Facility (PNF) (see https://fairshare-pnf.eu/) and this activity has been carried out by AUA.

By making it accessible through the FAIRshare PNF, access to the assessment tool will be facilitated and will co-exist alongside the inventory of over 260 DATS collected to date. This means the tool will be visible and readily available for advisors across Europe and beyond, to help identify suitable DATS to address their needs and find solutions in their own context.

This activity has been divided in two stages:

1) The tool is now available as a download in 11 different regional languages of the FAIRshare project at: https://fairshare-pnf.eu/assessment-tool. This download function means that even in circumstances where connectivity is limited the tool will still be functional.

2) The tool will also be developed as a web-based tool, in which advisors can log in to the FAIRshare PNF and use the tool in a web-based format. This will be refined and updated in the coming months.

The web-based assessment tool also includes some guidelines to facilitate its use:

Brief description:

The assessment tool was developed to help farm advisors identify and select suitable DATS to help them address the needs and challenges that they face in their everyday work. The assessment tool allows farm advisors to compare different digital tools based on a uniform set of characteristics which can help them to select the most appropriate tool based on their needs. The assessment tool is not an evaluation tool, rather it is a comparison tool that helps advisors think about and explore what they really want in a tool or service, and directs them to select the most appropriate solution based on their needs.

How it works:

The assessment tool will help advisors to evaluate the selected DATS and assess whether it is suitable or not in helping them address their needs.

- Advisors should assess what their needs are and define their main challenge(s).

- Open the assessment tool spreadsheet and go to column D (Target Score). Fill this column from 0 to 4 with the desired score, which is the ideal score that a DATS should have to meet advisor´s needs.

- Advisors can then select a tool to address their needs and evaluate it. For this, go to column C (Advisor Score) and fill it from 0 to 4. The advisor will give the real score of the selected tool in meeting their needs.

- Open Data dashboard spreadsheet. You can edit the cut-off value*, however we suggest a cut off value of 80%, and this value is used to determine if the tool meets the needs of advisors. **If the percentage score, (advisor score & target score combined) is more than the cut-off value, the tool is considered suitable**. If the percentage score is **less than the cut-off value, the tool is considered unsuitable** and a recommendation will be made to try another tool.

*The users have the opportunity to modify this value in order to decide for themselves how selective they want to be.

As mentioned, the assessment tool is already integrated in the PNF, as a downloadable excel file in 11 languages. In the following Figures 7, 8 and 9, the corresponding views of the platform are presented, where a user can access or interact with it:

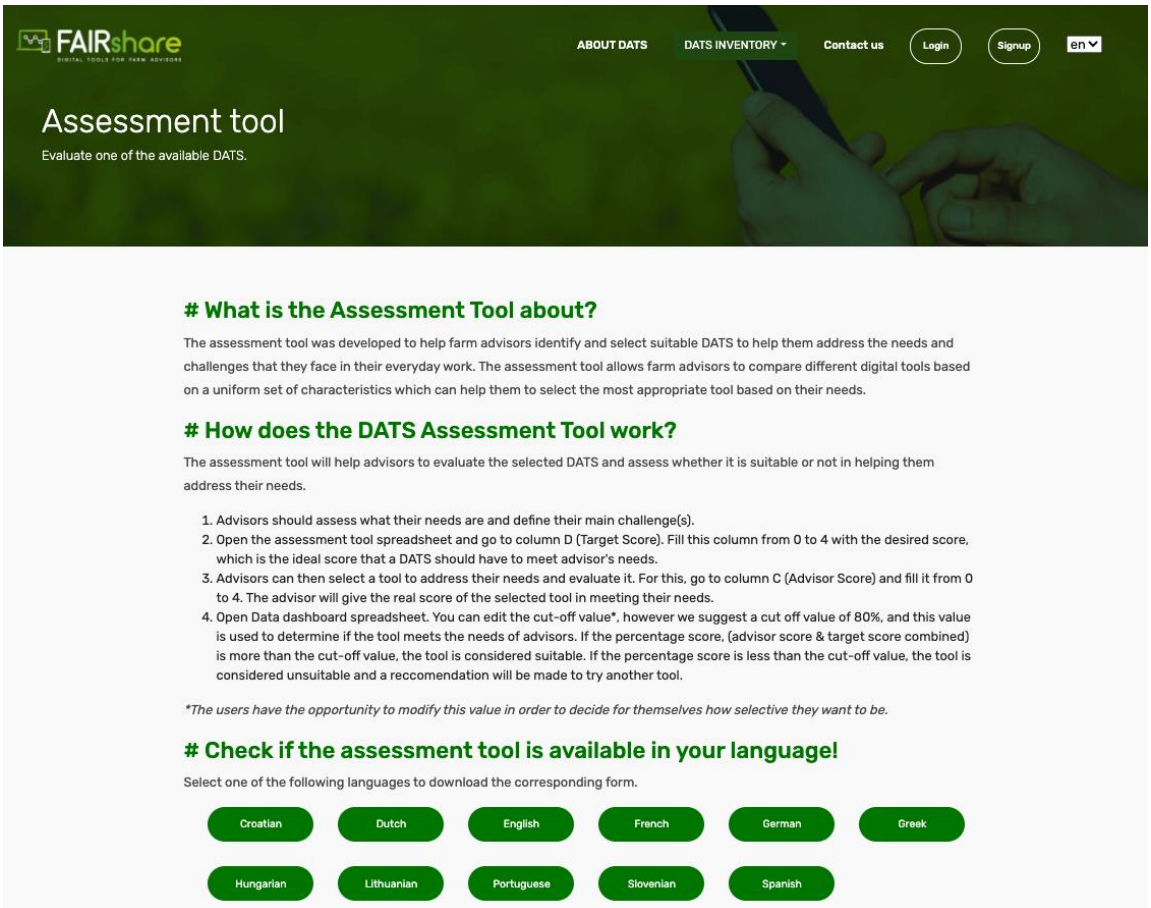

Figure 7. An explicit view hosting the assessment tool, with a short description, guidelines on its use and 11 links to downloadable excel files, in the 11 corresponding languages.

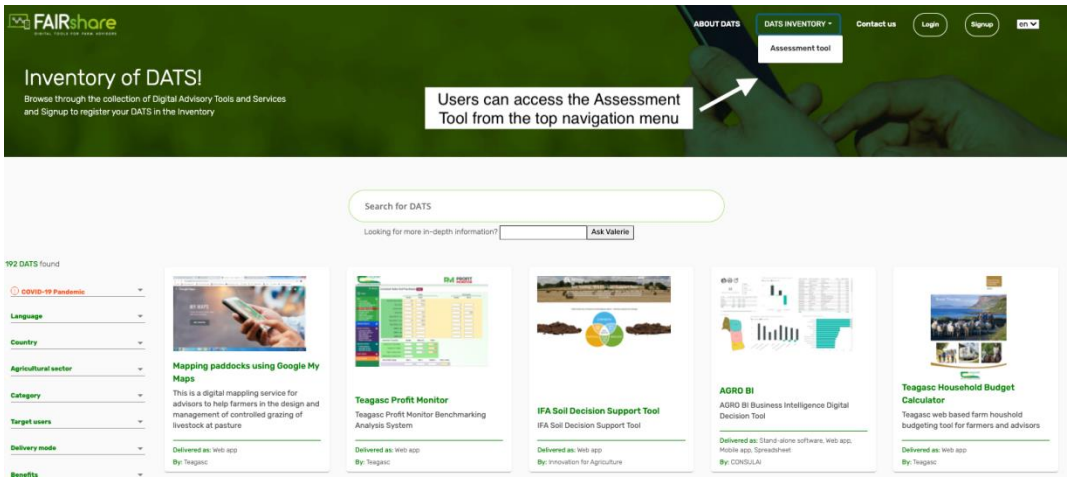

Figure 8. A user can access the assessment tool from the top navigation menu.

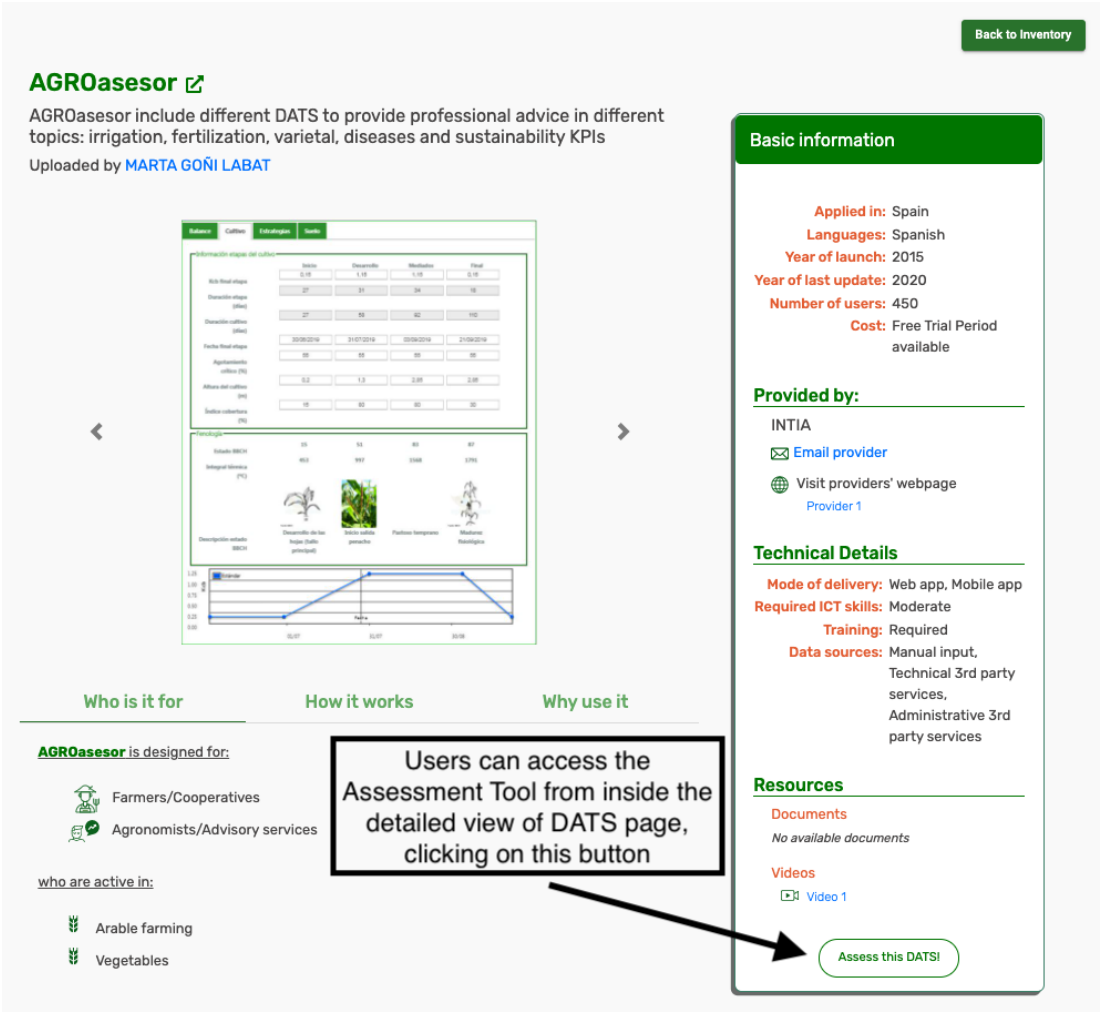

Figure 9. Another access point for the user to access the Assessment Tool from inside the detailed view of each of the DATS in the Inventory.

7 CONCLUSIONS

The assessment Tool provides a very clear way to practically assist advisors in identifying suitable digital tools that can help them to address their needs. Thanks to the active contribution of partners, this Assessment Tool has been developed and refined to cater to a wide variety of different regional, social and sectoral contexts.

8 REFERENCES

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- Peter Paree (2020). D 3.5-Classification of high impact advisory tools. Report for the FAIRshare project H 2020 818488.

ANNEX 1- ASSESSMENT TOOL

Categories	Key points	Advisor Score	Target Score	Remarks
Usability	User friendliness			Easy to use
Usability	Tool can be accessed online and offline			
Usability	Multilanguage Tool			
Usability	Use Open Standards, Open Data, Open Source, and Open Innovation			
Usability	is free			free for advisors
Usability	needs a training			
Data management	is data driven			data driven: the tool supports decision making based on data analytics; evidence based
Data management	needs farm-specific data			
Data management	pulls data from other systems, databases			can automatically integrate data coming from other systems (e.g. sensors) and databases (both public/government and private)
Data management	ensures data security /Data Privacy Procedures			this also considers aspects of being transparent of data ownership, and includes careful considerations of how data is collected, stored and perhaps shared

Categories	Key points	Advisor Score	Target Score	Remarks
Data management	Allows interoperability			
Data management	Supports quality control of the data			there is a way to validate or control the quality of the data
Challenge	Improves decision support			Better and well explained decisions
Challenge	Improves diagnostic support			Easy problem diagnosis, advise based on data instead of field visit
Challenge	Better interaction between farmer and advisor			
Challenge	Increase of profit/farm income			For the farmer
Challenge	Enhanced mitigation, adaptation & resilience to climate change			The tool helps to fight against climate change
Challenge	Saves time			For the advisor, more efficient work
Challenge	Saves money			For the advisor
Challenge	Reduces workload			improve quality of life of advisor

Categories	Key points	Advisor Score	Target Score	Remarks
Challenge	enables a systemic/holistic perspective on the farming business			creates visuals, infographics, schemes of farm as total
Knowledge exchange	enhances advisor-to-advisor exchange			This relates to the quality of the exchange or the interaction
Knowledge exchange	enhances advisor-to-farmer exchange			This relates to the quality of the exchange or the interaction
Knowledge exchange	enhances advice frequency			More frecuent advice
Knowledge exchange	is collaborative, advisor and farmer interact with the same tool/dataset			
Business	Improves economic positon of advisory services			advisory service economy
Business	Fits with existing organization strategy and services			of advisory organisation
Business	Change management challenge and opportunity			service is agile (reacts on societal change)
Business	Potential for added value to existing services			Potential for added value: monetary or otherwise i.e. less work, better communications etc
Business	Gives economic advantages in general			macro economy