Training on the use and maintenance of the digital tool

Author(s):	Vitalijs Komasilovs (LLU), Aleksejs Zacepins (LLU),
Review:	FvB
Date:	24.03.2022
Deliverable N°:	D4.6

DiBiCoo – Digital Global Biogas Cooperation
Grant Agreement N°857804

Executive Summary of D4.6

The purpose of this document is to describe the activities taken to train the FvB to maintain the DiBiCoo Biogas and Gasification Matchmaking platform after the project end, thus guarantee the continuous use of the platform. This deliverable is linked and is a continuation of the Deliverable 4.4 - Follow-up strategy for the continuous use of the tool

This deliverable describes in a nutshell functions of the platform's administrator user and shows examples of the operation within the back-end of the project.

This deliverable target users are members of the FvB, as all actions and content management can be done by the platform's owners.

During the DiBiCoo project life-time this role is assigned to the LLU and after the project FvB will maintain the platform. So to add some specific information to the platform request to the FvB should be done and then required information can be added to the platform. This operation can be done by the IT specialist as the specific knowledge is required.

All questions about the platform can be addressed to the DiBiCoo project team from Latvia University of Life Sciences and Technologies (vitalijs.komasilovs@llu.lv; aleksejs.zacepins@llu.lv).

Summary of the DiBiCoo Project

The **Digital Global Biogas Cooperation (DiBiCoo)** project is part of the EU's Horizon 2020 Societal Challenge 'Secure, clean and efficient energy', under the call 'Market Uptake Support'.

The target importing emerging and developing countries are Argentina, Ethiopia, Ghana, South Africa and Indonesia. Additionally, the project involves partners from Germany, Austria, Belgium and Latvia. The project started in October 2019 with a 33 months-timeline and a budget of 3 Million Euros. It is implemented by the consortium and coordinated by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

The overall objective of the project is to prepare markets in developing and emerging countries for the import of sustainable biogas/biomethane technologies from Europe. DiBiCoo aims to mutually benefit importing and exporting countries through facilitating dialogue between European biogas industries and biogas stakeholders or developers from emerging and developing markets. The consortium works to advance knowledge transfer and experience sharing to improve local policies that allow increased market uptake by target countries. This will be facilitated through a digital matchmaking platform and classical capacity development mechanisms for improved networking, information sharing, and technical/financial competences. Furthermore, DiBiCoo will identify five demo cases up to investment stages in the 5 importing countries. Thus, the project will help mitigate GHG emissions and increase the share of global renewable energy generation. The project also contributes to the UN Sustainable Development Goals (SDG 7) for 'Affordable and clean energy", among others.

Further information can be found on the DiBiCoo website: www.dibicoo.org.

Contents

<u>List of Abbreviations</u>

API	Application programming interface
BMP	Biogas and Gasification Matchmaking platform
D	Deliverable
FvB	Fachverband Biogas
LLU	Latvia University of Life Sciences and Technologies
RES	Renewable energy sources

List of Figures

**Digital global
Biogas
Cooperation**

Introduction

In order to operate and specially to maintain the DiBiCoo Biogas and Gasification Matchmaking platform, personnel from FVB was trained in a dedicated online training organised by LLU. The training contained the basics of the developed platform, information on how to make changes, how to maintain the database, and on potential future software developments.

Part of the training was dedicated to the FvB managers, and other part was provided for the IT staff.

Within the DiBiCoo project it was agreed that after the project end all access to the crucial platform infrastructure and project code will be transferred from the LLU to FvB to continuously operate the platform. Transferring activities should be taken by the IT specialist, and not by the general user as specific knowledge is required for successful platform transfer procedure. Knowledge and expertise in software development (back-end, front-end, databases), cloud infrastructure, internet technologies are needed for the successful implementation of the described steps and transfer of the platform for FvB.

This deliverable is linked to and is a continuation of the Deliverable 4.4 - Follow-up strategy for the continuous use of the tool and describes in a nutshell functions of the platform's administrator user and shows examples of the operation within the back-end of the project.

This deliverable target users are members of the FvB, as all actions and content management can be done by the platform's owners.

During the DiBiCoo project life-time this role is assigned to the LLU and after the project FvB will maintain the platform. Therefore, to add some specific information to the platform, a request to the FvB should be done and then it can be decided if the required information could be added to the platform. This operation can be done by the IT specialist as specific knowledge is required.

In the timeline of the project it was agreed to have different types of the platform's users: guest, authorized and administrators. As the platform after the project end will be managed by the FVB partner, representatives from this organization were already added to the administrators of the platform and individual training session was organised to introduce the FvB staff with possible administrator activities on the platform.

1 Administrator functions

During this training session on 10.08.2021 FvB staff were introduced to previously agreed administrator user functionality. Administrator actions includes:

- Manage the business categories - it is necessary to have the option to manage the business categories on the platform, including the feature to add new categories in case of need.
- Review the company profiles and business opportunities - it is necessary to have a review/control mechanism before publishing new company profiles and business opportunities, to ensure the data quality and because of the potential risk of the malware

- Send messages to all platform users - it is necessary to have the mechanism to inform all registered platform users about new platform functionality or provide general information.

All administrative functions can be accessed from the platform's user menu (Figure 1):
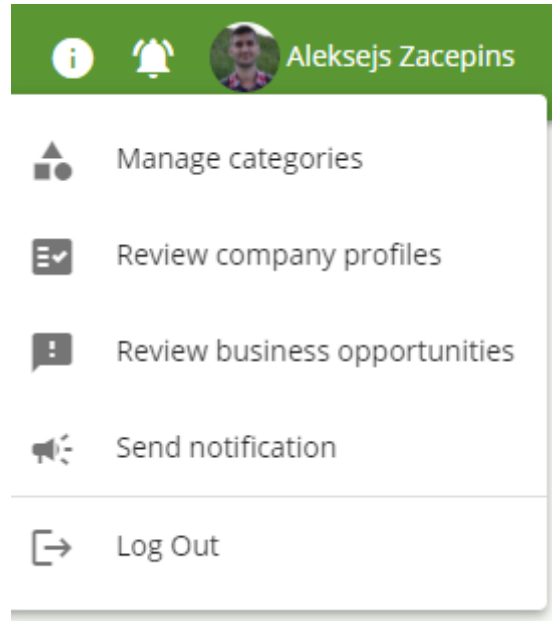

Figure 1. Administrator functions

1.1 Management of the categories

It is possible to manage pre-defined categories on the platform, create new categories. Deletion of the categories from the user interface is not possible, as this can lead to errors in the existing company profiles.
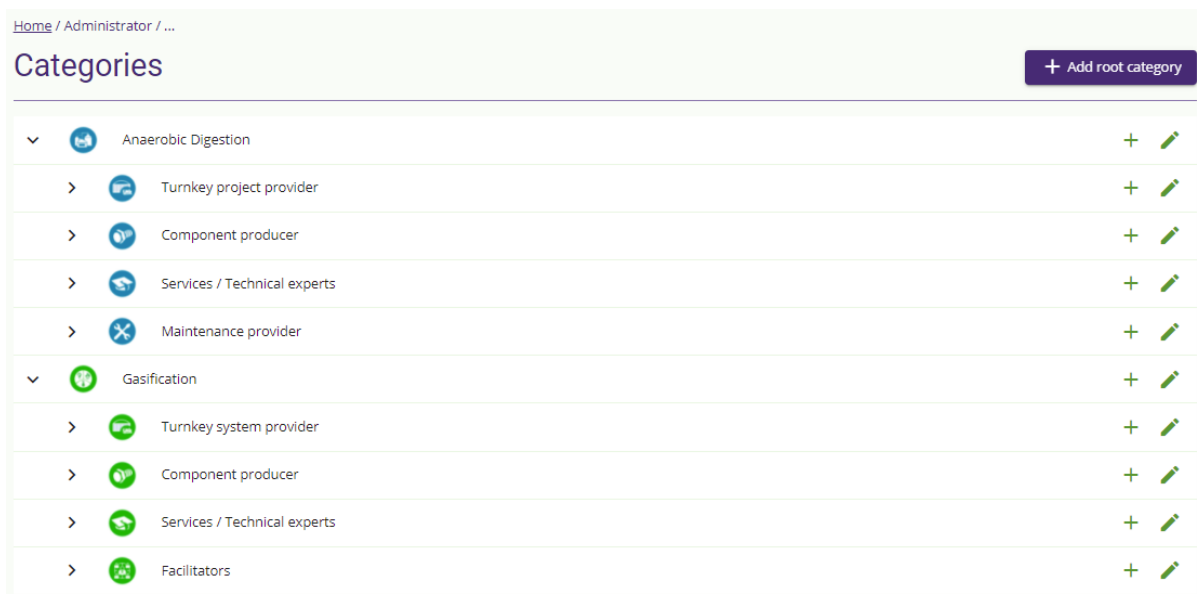
Digital global Biogas Cooperation

Figure 2. Category tree with action buttons

1.2   Review of the company profiles

One of the primary administrator functions is to review created company profiles, as profiles can be published at the platform only after acceptance by the platform administrator.

Administrator can view the company profiles grouped by three categories:

- Pending review – profiles that are submitted by the user to be published at the platform
- Reported only – published companies, that have been reported of inappropriate content
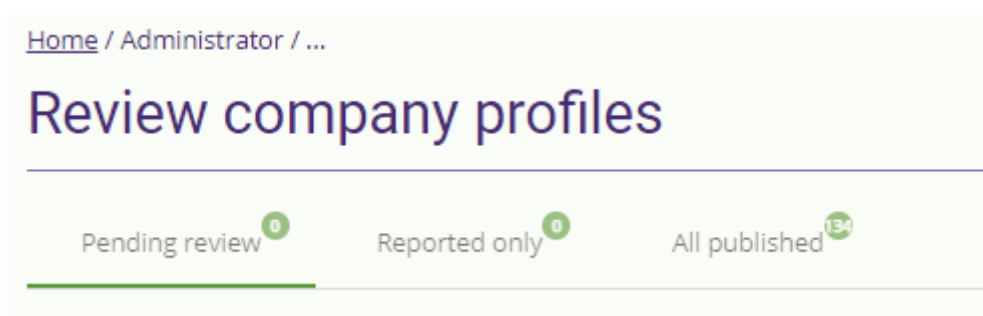- All published – all published companies

Figure 3. Company profile view by different statuses

1.2.1   Pending review

When new company profiles are submitted for publishing, administrator will see it at the Pending review tab:
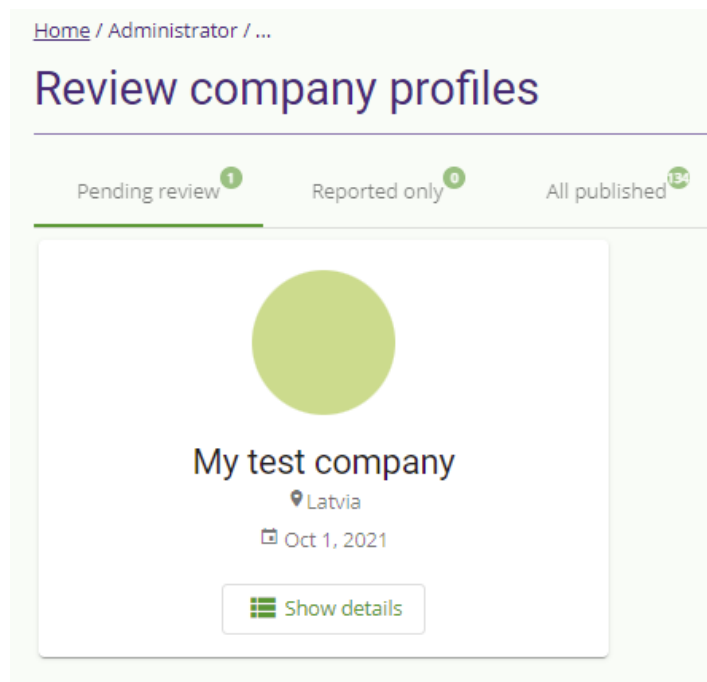
Digital global Biogas Cooperation

Figure 4. Company profile pending review view

To proceed with the review process the administrator should view Company details by clicking the button "Show details".
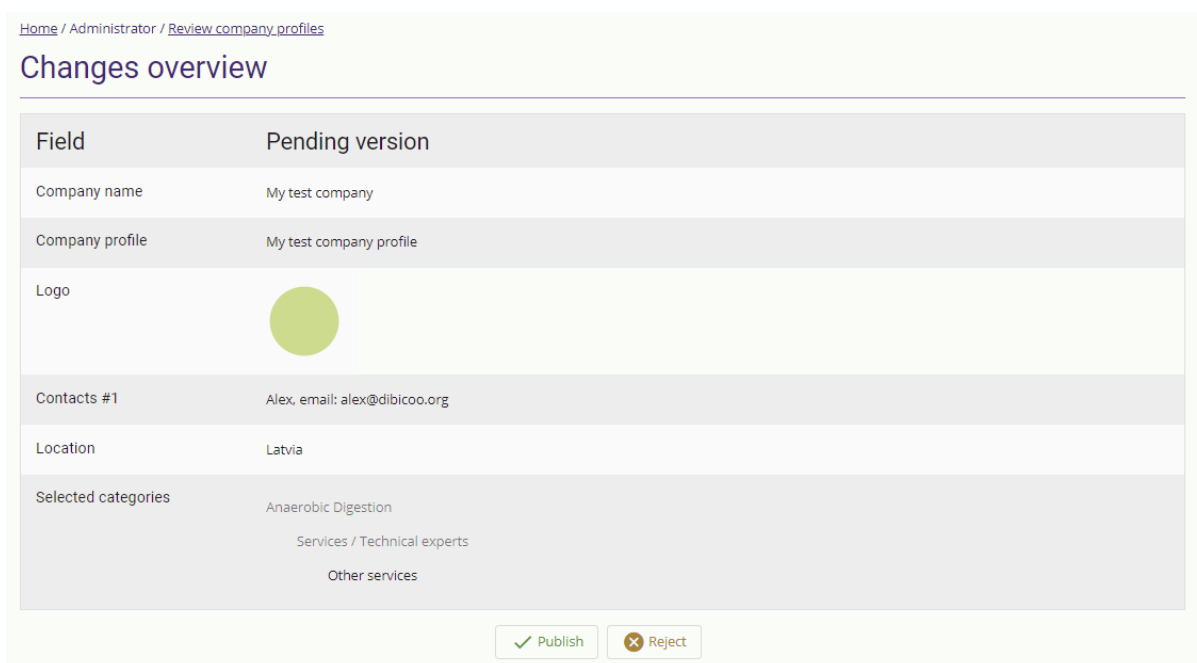

Figure 5. Reviewing information in the Company profile

If the provided information is correct the "Publish" -button should be clicked. After that company profile will be published at the platform and all platform users will be able to explore it. As well

company manager will get an in-platform notification about the successful publishing of the company profile.

If the provided information is incorrect the "Reject" -button should be clicked. If doing this administrator should provide the reason for rejecting the profile. This reason will be visible by the company manager.

1.2.2 Reported only

When company profile is reported by the platform user, administrator will see it at the Reported only tab. Administrator can see the company details, view submitted report and unpublish the company profile if needed.
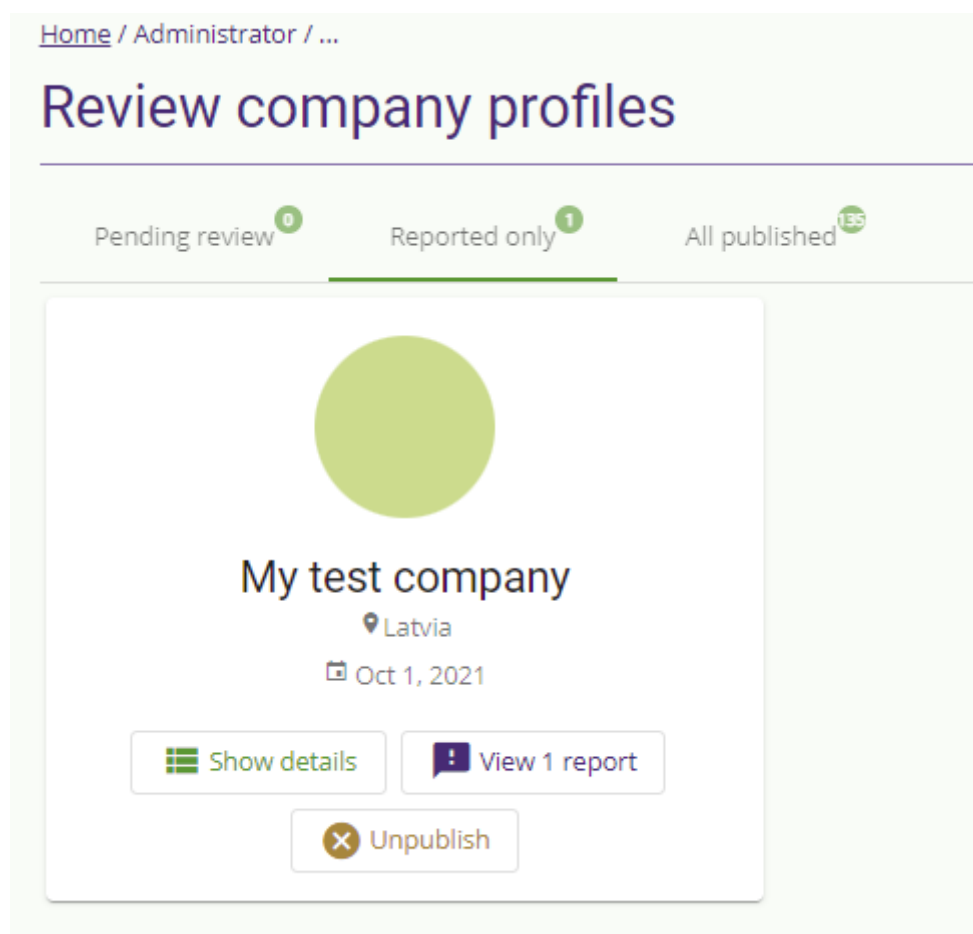

Figure 6. View of reported companies

1.2.3 All published

Administrator can see all published company profiles on the platform:
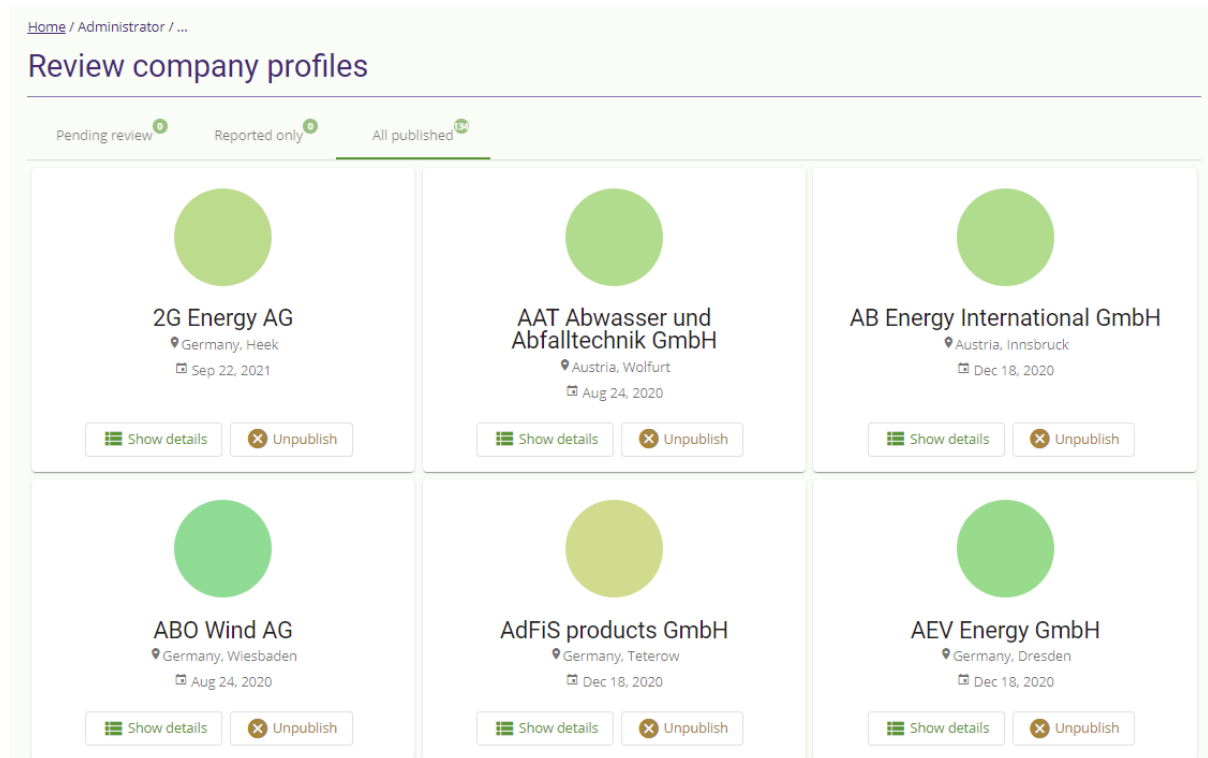
Digital global Biogas Cooperation

Figure 7. View of all published companies

Administrator can unpublish public company profiles at any time. If doing this administrator should provide the reason for unpublishing. This reason will be visible by the company manager.

Figure 8. Unpublishing of the Company profile

1.3 Review business opportunities

One of the administrator functions is to review created business opportunities, as they can be published at the platform only after acceptance by the platform administrator.

Administrator can view the business opportunities grouped by three categories:

- Pending review – profiles that are submitted by the user to be published at the platform
- Only reported – published companies, that have been reported of inappropriate content
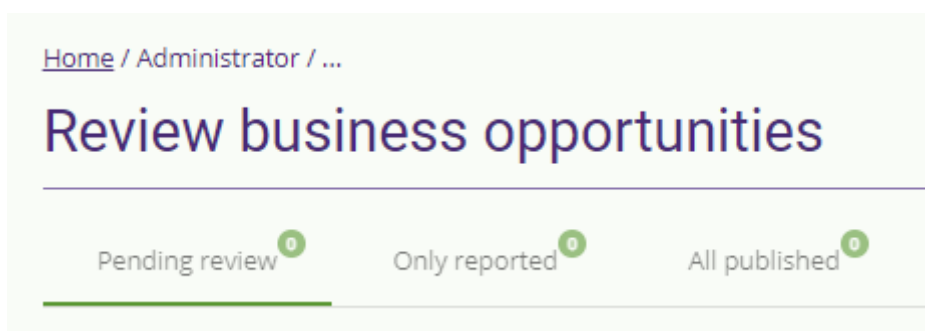- All published – all published companies

Figure 9. Business opportunity view by statuses

1.3.1 Pending review

When new business opportunity is submitted for publishing, administrator will see it at the Pending review tab.
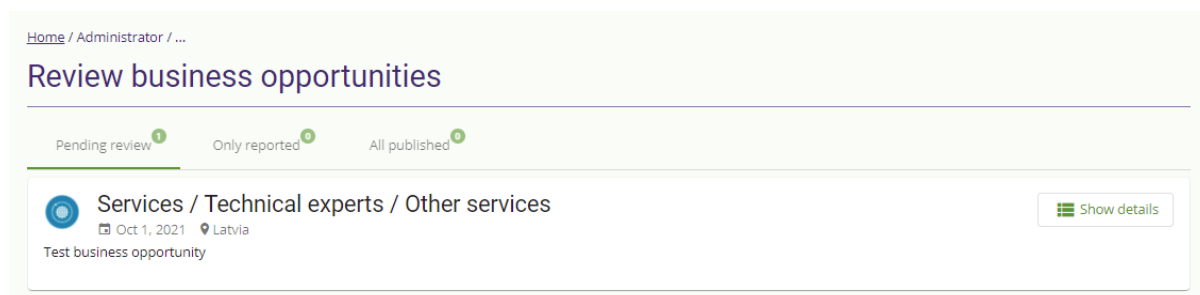

Figure 10. Pending review view

To proceed with the review process administrator should view record details by clicking the button "Show details".

Digital global Biogas Cooperation

Home / Administrator / Review business opportunities

Changes overview

Field	Pending version
Main category	Services / Technical experts
Category	Other services
Description	Test business opportunity
Target location	Latvia
Contact location	Latvia
Contacts #1	Alex, email: alex@dibicoo.org
Due date	Oct 2, 2021

✓ Publish   ✗ Reject

Figure 11. Reviewing information in the business opportunity

If provided information is correct the "Publish" -button should be clicked. After that business opportunity will be published at the platform and all platform users will be able to explore it. As well owner will get an in-platform notification about the successful publishing of the business opportunity.

If provided information is incorrect the "Reject" -button should be clicked. If doing this administrator should provide the reason for rejecting the record. This reason will be visible by the record owner.

1.3.2 Reported only

When business opportunity is reported by the platform user, administrator will see it at the Reported only tab. Administrator can see the record details, view submitted report and un-publish the business opportunity if needed.
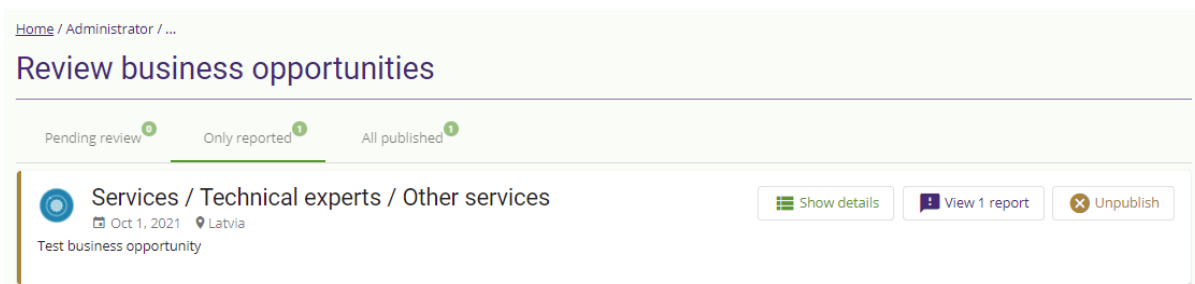
Digital global Biogas Cooperation

Figure 12. View of reported business opportunities

1.3.3   All published

This tab shows all published business opportunities. Administrator can unpublish them at any time. If doing this administrator should provide the reason for unpublishing. This reason will be visible by the author of the business opportunity.

1.4   <u>Send messages to all platform users</u>

Within the platform a mechanism how all platform users can be informed about updates on the platform is developed. Within the message some general information can be provided (like information about conferences, about some DiBiCoo events, etc.).

This feature is available for the platform administrators and is implemented as a platform notification function.

Administrator can create a notification (providing title, content and optional links):

Figure 13. Send notification to all platform users

Then this notification will be sent to all registered platform users, they will see it on the platform.

2   Content management

Any actions related to the content management and adding new information (content) to the platform can be performed from the back-end of the platform thus can be done only by the platform owners. During the DiBiCoo project life-time this role is assigned to the LLU and after the project FvB will maintain the platform. Therefore, to add some specific information to the platform, a request to the FvB should be done and then it can be decided if the required information could be added to the platform. This operation can be done by the IT specialist as the specific knowledge is required.

Training for the IT staff of the FvB on the use and function of the platform was completed during the online training organised by LLU on 15.03.2022. The training was dedicated to FvB Digital and IT staff. During the online session basic procedure of the content management was discussed and future needs for the additional training on the project code management was identified and agreed.

Below are provided several examples of how to make changes and modifications in project code.

2.1   Literature sources

One of the dynamic parts of the content are the literature sources, as it could be required to add new sources or delete the outdated ones.

Literature sources are defined in .html file which is located here:

```
front-end > src > app > knowledge base > literature > literature.com-
ponent.html
```

Literature source is defined and presented in an element called <mat-card>. For the source title, subtitle, cover image, content and links should be defined. Example below shows the structure of the literature source definition:

```
    <mat-card>

      <mat-card-header>

        <mat-card-title>Guide to biogas</mat-card-title>

        <mat-card-subtitle>Agency  for  Renewable  resources,  FNR,
2012</mat-card-subtitle>

      </mat-card-header>

      <a target="_blank"         href="https://mediathek.fnr.de/me-
dia/downloadable/files/samples/g/u/guide_biogas_engl_2012.pdf">

        <img mat-card-image

          src="https://storage.googleapis.com/dibicoo-matchmaking-
tool.appspot.com/literature/guide_biogas_engl_2012_cr.png"

          alt="Guide to biogas, cover"></a>
```

```
<mat-card-content>

    A book that covers nearly all relevant aspects of biogas
topics, from general biological

    basics, feedstock, technology, biogas use until biogas plant
construction and operation.

</mat-card-content>

<mat-card-actions>

    <a mat-button target="_blank"            href="https://me-
diathek.fnr.de/media/downloadable/files/samples/g/u/guide_bio-
gas_engl_2012.pdf">

        <mat-icon>description</mat-icon> View PDF

    </a>

</mat-card-actions>

</mat-card>
```

2.2 Media upload to the Google Cloud

Often it is required to upload different files, images to the Google cloud infrastructure for local storage and possible upload to the platform.

To do this it is needed to go to the google cloud storage and simply upload the file to the parent directory or create a new directory.

Existing structure of the storage is presented below:

dibicoo-matchmaking-tool.appspot.com

Location	Storage class	Public access	Protection
europe-west3 (Frankfurt)	Standard	Value hidden	None

OBJECTS   CONFIGURATION   PERMISSIONS   PROTECTION   LIFECYCLE

Buckets > dibicoo-matchmaking-tool.appspot.com

UPLOAD FILES   UPLOAD FOLDER   CREATE FOLDER   MANAGE HOLDS   DOWNLOAD   DELETE

Filter by name prefix only ▾   ≡ Filter Filter objects and folders

	Name	Size	Type	Created ❓	Storage class	Last modified	Public access ❓
☐	📄 DiBiCoo platform user manual.pdf	2.7 MB	application/pdf	Oct 21, 20…	Standard	Oct 21, 202…	⚠ Public to internet Copy URL
☐	📄 DiBiCoo platform user manual_202`	2.2 MB	application/pdf	Oct 21, 20…	Standard	Oct 21, 202…	⚠ Public to internet Copy URL
☐	📄 Prev.version_DiBiCoo platform user	2 MB	application/pdf	Sep 30, 20…	Standard	Sep 30, 20…	⚠ Public to internet Copy URL
☐	📁 attachments/	—	Folder	—	—	—	—
☐	📁 backups/	—	Folder	—	—	—	—
☐	📁 categoryImages/	—	Folder	—	—	—	—
☐	📁 factsheets/	—	Folder	—	—	—	—
☐	📁 frontPage/	—	Folder	—	—	—	—
☐	📁 literature/	—	Folder	—	—	—	—
☐	📁 logos/	—	Folder	—	—	—	—

Figure 14. Structure of the Google cloud storage

Then it is important to change the file access rights, if the file should be publicly accessible. This can be done from the action menu (three dots) > edit access. To make the file publicly available to all users: Entity should be Public, Name - allUsers and Access - Reader (see Figure 14 below):

Edit access

Object name: DiBiCoo platform user manual.pdf

⚠ This object is **public and can be accessed by anyone on the internet**. To remove public access, search for and remove all public entries from the object's permissions.

If you don't rely on individual object-level access, you can start managing all access uniformly at the bucket-level. Go to the bucket's Permissions tab to get started. Learn more
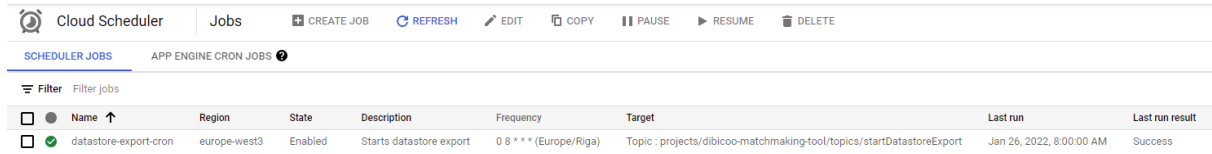
Entity 1 *	Name 1 *	Access 1 *
Public ▾	allUsers ▾	Reader ▾

Figure 15. File edit access options

Then link to the file can be inserted to the project code or used externally by the link (Copy URL).

2.3 Backup

Ecosystem is built in a way that data backup for user content is performed automatically on a constant basis. Data has backup every day and retention policy is 60 days, which means that backup data is stored for 60 days.

Figure 16. Data backup policy

The DiBiCoo Consortium

COORDINATOR

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

PARTNERS FROM EXPORTING COUNTRIES

WIP RENEWABLE ENERGIES

AUSTRIAN ENERGY AGENCY

EBA European Biogas Association

kompost & biogas verband

Fachverband BIOGAS

Latvia University of Life Sciences and Technologies

PARTNERS FROM IMPORTING COUNTRIES

INTA

SELECTRA WASTE·WATER·BIOENERGY

iceaddis innovation . collaboration . entrepreneurship

GreenCape

rdi Resilience Development Initiative

SEES INSTITUTE FOR SUSTAINABLE ENERGY AND ENVIRONMENTAL SOLUTIONS

Project website: www.dibicoo.org

Project Coordinator Contact Dr. Johannes Anhorn Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH www.giz.de	 Wielinger Straße 52 82340 Feldafing, Germany johannes.anhorn@giz.de

Author(s)
Vitalijs Komasilovs (Latvia University of Life Sciences and Technologies),

Aleksejs Zacepins (Latvia University of Life Sciences and Technologies)

Review
Marc Reinhard (FvB), Frank Hofmann (FvB).

Photo credits:
The author(s) if not otherwise stated (Name/Partner Acronym).

Latvia, 2022