



CATO-2 Deliverable WP 2.4-D01

Progress report: Frameworks for reporting pilot plants results

Prepared by: Merih Cibis

Reviewed by: Gerard Stienstra

Approved by: J.Brouwer
(CATO-2 Director)

A handwritten signature in blue ink, likely belonging to J. Brouwer, the CATO-2 Director.

1 Executive Summary (restricted)

Several methods approached for information sharing have been investigated, and one method for gathering information needs was attempted within this WP.

In the course of 2010 a framework was setup to that helps in identifying information needs for CATO-2 WP's, and that can facilitate in matching those needs, with information available elsewhere in the CATO-2 programme.

In the summer of 2010 meetings were scheduled to make an inventory of the information need of the different WP-leaders. These meetings were cancelled due to limited attendees. The CATO-2 wide inventory resulted in only several specifications of the need information for a WP. Ad hoc information sharing within CATO-2 has proven up to now most effective.

WP2.4.1 is discontinued in CATO-2b for the years 2-5.

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Document Change Record

(this section shows the historical versions, with a short description of the updates)

Version	Nr of pages	Short description of change	Pages

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2 Applicable/Reference documents and Abbreviations

2.1 Applicable Documents

(Applicable Documents, including their version, are documents that are the “legal” basis to the work performed)

	Title	Doc nr	Version date
AD-01	Beschikking (Subsidieverlening CATO-2 programma verplichtingnummer 1-6843	ET/ED/9078040	2009.07.09
AD-02	Consortium Agreement	CATO-2-CA	2009.09.07
AD-03	Program Plan	CATO2-WP0.A- D.03	2009.09.29

2.2 Reference Documents

(Reference Documents are referred to in the document)

	Title	Doc nr	Issue/version	date

2.3 Abbreviations

(this refers to abbreviations used in this document)

WP	Work Package
SP	Sub program
NDA	Non-disclosure agreement (for information sharing)

3 Introduction

The target of CATO-2 program is to facilitate and enable the integrated development of CCS demonstration sites in the Netherlands. Within the program, it is aimed to support the realisation of demonstration sites for CO₂ capture, transport and storage.

CATO-2 program is based on applied research efforts of associate parties. The program consists of 5 sub program (SP) lines. These SP lines are further divided to work packages. Different WP's aim to gather knowledge and applied research results for different aspects of the CO₂ capture, transport and storage.

3.1 Goal

The WP 2.4.1 aims to develop a common framework for data and information sharing between CATO-2 parties. Common information sharing framework is required since CATO-2 consortium consists of many smaller WP's and in many cases, an existing information in one WP is required by other WP's and comparison/ evaluation can only be done by using a common structure.

WP 2.4.1, named as "Common framework development" comprehends the design of a common framework for the reporting of pilot plant results to SP2, in particular WP 2.2.; the techno-economic chain analysis. By using common frameworks, the results of the capture and storage pilots can be compared and evaluated. Such comparison does not only focus on the performance of individual parameters but also on how far the pilots helped to the further development of the technology, how much still would need to be done (after the pilots) to reach technical and economic targets for commercialization, at what costs, etc. Such information is fundamental for the development of a CCS implementation plan (task 2.4.4).

This task has been has activities in the first year of CATO-2 (CATO 2a) only. The results at the end of year 1 will be transferred and used in WP1.4

3.2 Approach

In this work package several methods are evaluated for use in CATO-2, one method is tried and tested and several ad-hoc methods that have been used in practice in CATO-2a are described.

The following steps have been taken Identification and description of methodologies

- Inventory and description of methodologies
- Methodology applied and results
- Conclusions
- Recommendations

3.3 Reading aid

This document includes several aspects of common frame work development within CATO-2 program. Chapter 4 gives information about the approach of WP 2.4.1. In chapter 5, the different methodologies are given and discussed. Chapter 6 consists of the details of the selected methodology whereas chapter 7 gives the actual results of the application of the method. Chapter 8 and chapter 9 are the conclusions and the recommendations respectively.

4 Identification and description of methodologies

The inventory of available techniques yielded the following techniques, that were applicable for the research and development processes that are taking place in the CATO-2 programme.

- 1 Inventories
- 2 Mapping
- 3 Matchmaking
- 4 Centralises infrastructure
- 5 Interviews

In the paragraphs below, the tools above are described, with their suitability for CATO-2 programme.

4.1 Inventories

The most straightforward way for setting up a common reporting framework is by monitoring the information streams, i.e. by following the correspondence, publication and reports that are circulated within the programme. By analysing the document streams, the information streams become clear and the needs for information are then derived from that.

However, in the first year of CATO-2 not all WP's have started, and have produced report at the time of writing this report. Therefore alternative measures for inventory are needed, such as interviews and enquiries (see 4.5).

Positive reactions followed from WP2.1 and WP 2.2.1 that replied with to our request for filling in the information needs.

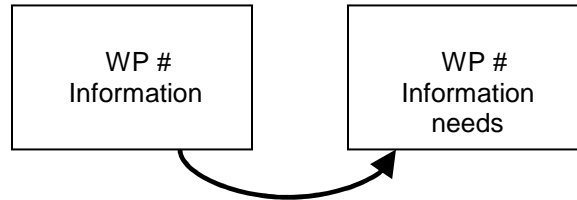
4.2 Mapping

Information Mapping is a research-based approach for creating structured documents and communications that are clear, concise, and user-focused. When applied, it results in maps of the

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information needs and potential sources and helps visualise the results of inventories and analyses.

Applied to CATO-2, mapping is done by sorting the needed information, arising questions and the answers categorized depending on the work packages where knowledge stands.



Below a sample of how common framework by mapping may be developed is given. Required information is shared within individual WP's and between WP's that share stakeholders and or are within the same overall WP (SP). Within the WP's this is done by categorizing needs and their reciprocation.

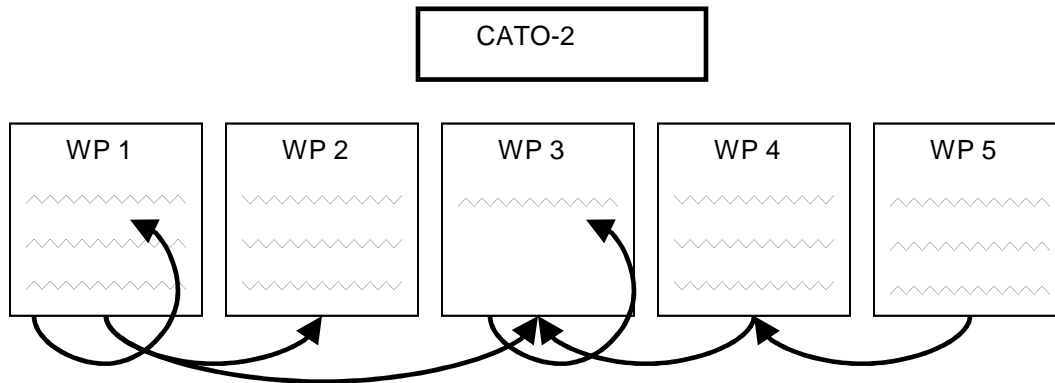


Figure 1. example of mapping of information flows and needs within CATO-2

4.3 Matchmaking

Once an first inventory of information needs is made, more detail information can be gathered by engaging more parties with information needs ie. WP-leaders.

Matchmaking is a tool that helps to parties find each other to meet the needs and sources of formation. During a meeting, information needs are exchanged and people can by direct interaction make their needs clear and express these during the meeting, e.g. by making use of a market place.

As an example of matchmaking, within SP2 WP 2.1 specific information was gathered on the information needs for the research and development on transportation of CO2. In a dedicated workshop, a session was planned to make an inventory of the technical aspects of the transport chain.

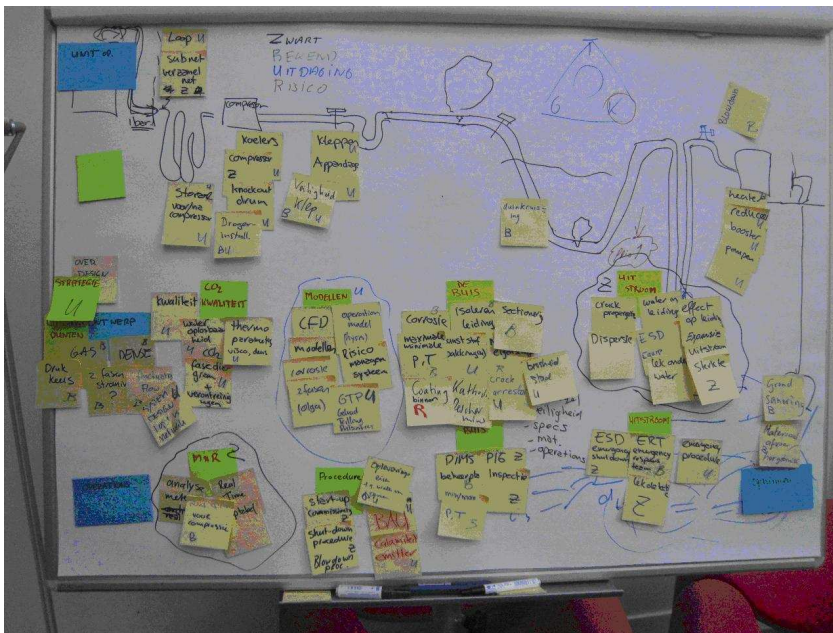


Figure 2. results of mapping and matchmaking for WP2.1

Matchmaking can be a very powerful too to engage those with information needs.

4.4 Centralized structure

By this method, an indirect approach is meant. The questions of the WP's are directed first to a central point. The required information is analyzed, categorized and delivered to the parties who has the relevant information. Answers are collected also in a central point and distributed to where needed.

This approach can be strengthened by making use of information technology, e.g. by starting a forum discussion on the internal website to express information needs, and/or by administering all request for information, etc.

4.5 Interviews

Within several work packages interviews have been used as a tool for gathering information.

This focuses approach, aimed at a limited group (within CATO-2) can be a powerful means to make an inventory of information needs.

Examples of such approaches can be found within CATO-2 in SP4 and SP1. However, upon request these interviews were not reported and finalised at this stage, and could not be used for the purpose of WP2.4.1.

5 Selection of methodology

Status of the Common framework development, under WP 2.4.1 has been active until the end of the first year of the consortium. However, the framework for data sharing is more valuable as questions arise from the research side which needs time. Since the WP is active only for a short period of time, an efficient method should have been used to build up a common framework. Effectiveness in short time is therefore the criteria for selection of the methodology used for common framework development.

6 Methodology in detail and results

The chosen methodology is combination of the methods described in chapter 4. Questions are collected and roughly categorized. These parties (who have the questions and the answers are matched.) This is planned by the following steps:

- Preparation of a questionnaire about the required information by CATO-2 parties
 - Which information is required by which WP?
 - From which WP can the required information be found?
- Rough analysis to categorize the required information and in which WP it stands
- A workshop to show the results and match the parties of questions and answers.

The only important input of common framework comes from the WP's. Therefore, as it is planned, a questionnaire has been prepared and delivered to 26 WP leaders to be filled in. Unfortunately, only 3 questionnaires have been filled and sent back. One of the questionnaires mentions that do not require information from any other WP's. The organized workshop has not also attracted sufficient attendees. It can be concluded that realizing a common framework for information sharing does not appeal the parties at this stage of the consortium.

7 Conclusions

Base on the results and methodology applies, it can be concluded that:

- Building a single common reporting framework for matching the need for information within CATO-2 and make that information available for sharing between parties in CATO-2 would not be advisable as long as the information needs for parties within CATO-2 are unclear.

- Several observations can be made that explain why this is the case:
 - At this stage in time, WP's are many cases focussed on setting their research, and information needs are not yet clear.
 - For many WP-leaders, it is unknown where in the programme certain data is, who has what information.
 - It difficult to describe the information need if it is there.
 - Some WP's do not have any information needs.
 - Confidentiality plays an important role in the willingness of data
 - The response to questionnaires sent out to WP-leaders was very low.

8 Recommendations

Organise a yearly workshop on information sharing

In time more research questions will become clear as especially University R&D programs will take shape. As a result, sharing of information with CATO-02 will be required. The method chosen and detailed in this report can be applied readily for future matching of information needs.

Limit the number of NDA's within CATO-2

NDA is one of the restrictions in information sharing. It is therefore recommended to limit the number of NDA's so that common framework can be developed based on sharable information.

Facilitate information sharing under an NDA

A non-disclosure agreement can help sharing data that is confidential in nature, that would otherwise not be shared between parties within the CATO-2 programme.

Make use of WP deliverables where possible

Information that is in a work package deliverable can be made public and can in that way There can be restrictions for publication under the CATO-2 rules, however both the deliverable itself and the (public) summary can contain details that can be used for sharing information within CATO-2.