

COBACORE

Community Based Comprehensive Recovery

Grant Agreement N° 313308

D3.1 Mock-ups of interface of COBACORE workspace and functional behaviour of COBACORE

**WP3 Concept development and
support mechanisms**

Version: 1.0

Due Date: 31-03-2014

Delivery Date: 31-03-2014

Nature: O

Dissemination Level: PU

Lead partner: TNO

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This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 313308.

Deliverable Title: Mock-ups of interface of COBACORE workspace and functional behaviour of COBACORE

Deliverable Number 3.1

Keywords: Functional specification; platform design

Executive Summary:

D3.1 describes the core feature set of the COBACORE platform, the underlying assumptions and information elements, and introduces a number of interaction patterns. D3.1 is a guiding document that serves as a blueprint for the actual implementation of the COBACORE platform, and that can be used by other work packages to guide the implementation and evaluation of the platform.

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1 Introduction

This report represents deliverable 3.1 (D3.1) of work package 3 (WP3), which is titled: *Mock-ups of interface of COBACORE workspace and functional behaviour of COBACORE*.

1.1 WP3 and its contribution to the COBACORE project

The Community Based Comprehensive Recovery (COBACORE) project aims to support common needs assessment and recovery planning efforts in complex multi-sectorial, multi-stakeholder crisis environments by building upon the community as an important source of information and capabilities. COBACORE aims to help bridge the so-called collaboration gap: failure of collaboration through insufficient information sharing among partners, incompatible work practices and misaligned decision making processes. In the field of humanitarian needs assessment, this collaboration gap is ubiquitous and detrimental to the efficiency of many recent relief efforts. Closing this gap is the key to reduce the time needed for needs assessment, better needs monitoring, and planning.

Through the role and tasks of WP3 the COBACORE concept is developed. It is WP3 responsibility to define the underlying tool behaviour concepts that define how end-users interact with the COBACORE platform. Therefore WP3 will develop user interface concepts, functional mechanisms and use procedures for effective use of the COBACORE platform.

The role and tasks of WP3 are closely related to the other work packages in COBACORE. As such the interface concepts developed by WP3 of COBACORE workspace are specified and illustrated in a mock-up based on functional requirements specified by WP1, information models from WP2. Further the interface concepts have consequences for the experimentation and evaluation requirements in WP5 and constraints of COBACORE platform, responsibility of WP4.

1.2 Deliverable 3.1

D3.1 describes the core feature set of the COBACORE platform, the underlying assumptions and information elements, and introduces a number of design patterns that can be used by WP2 (information model), WP4 (constraints of the COBACORE platform) and WP5 (experimentation and evaluation of the COBACORE concepts) to structure their work, especially in light of the intermediate evaluation session (WP5). D3.1 is a 'textual mock-up' – a guiding document that serves as a blueprint for the actual implementation of the COBACORE platform.

This document describes the COBACORE development process (Chapter 2), and the core feature set to be used in the development of the COBACORE platform (Chapter 3).

2 COBACORE development process

The domain analysis, as carried out by the WP1 team and described in D1.1, has established the core domain issues that are abound in the disaster recovery domain, and affect recovery performance. Table 1 **Error! Reference source not found.** summarises the findings in three core issues:

Issue	Description
I1	Information provision issues between the professional community and the affected community
I2	Collaboration issues between the professional community and the responding community
I3	Inefficiencies in needs and capacities matching between the affected and responding community

Table 1: COBACORE core issues

From these three core issues, three core functions were derived. These functions assert the major functions that the COBACORE platform should provide. Table 2 **Error! Reference source not found.** lists the three main COBACORE functions.

Function	Description
U1	Enhance information exchange between the professional community and the affected community
U2	Facilitate collaboration between the professional community and the responding community
U3	Improve needs and capacities matching between the affected and responding com

Table 2: COBACORE core functions

The three core functions do not state *how* the platform should behave or look, but denote the value of the platform for the target user groups. The functions thus guide the development of platform features and interfaces.

Further elaboration on the functions yields desirable *features*: aspects of the platform that contribute to the fulfilment of the stated functions. Because of the general nature of the functions, there will be many ways to satisfy them. One could suggest features that focus more on improving collaborative work and information exchange (e.g. build a portal that makes it easier for user to find matching needs and capacities), or one could suggest features by which the platform itself becomes more autonomous (e.g. the platform does the needs and capacities matching). There is no single best answer.

Because of the variety in applicable use cases for our platform, and the overall novelty of the approach, we are not in a position to settle on the final feature set of the platform early on in the project. The original proposal gave a general direction for the platform functionality, but fell short of a functional specification of the eventual platform. Through domain analysis and

stakeholder evaluation sessions, we need to uncover valuable platform functionalities, and we need a project development strategy that can accommodate for this step-by-step process.

We have adopted a simple incremental platform development process. The process derived major platform functions from identified domain issues. From asserted functions, features are derived in a number of iterations, starting with the definition of a core feature set. Features should not be regarded as fine-grained functional specifications, but rather as blueprints that need to be satisfied by the eventual implementations. The features give direction to the implementation by proposing logical structures, interaction patterns and suitable interface elements. The actual design and implementation choices result from considerations by the various COBACORE project teams, from their own perspective.

In subsequent phases, new features can be defined that build upon previously implemented features, and thus add new capabilities to the platform. Not all proposed features might be realisable during the project due to time constraints or technical limitations, so certain features might need to be realised in follow-up projects. **Figure 1Error! Reference source not found.** illustrates this feature development process.

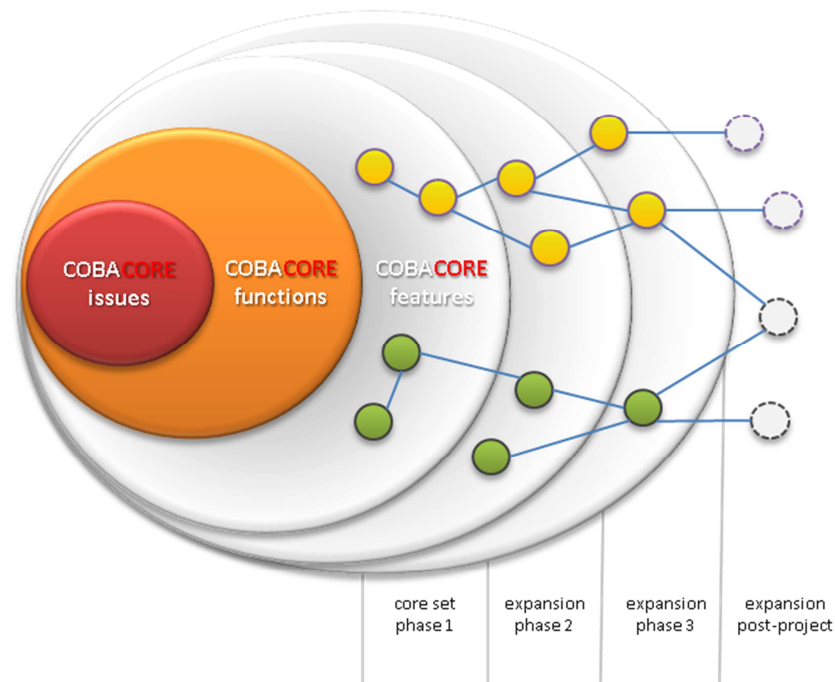


Figure 1: The COBACORE feature development process

The optimal set of features is inherently a result from a collaboration between stakeholders, project concept designers and technical project partners.

It is important to note that features do not equal *implementations*. Implementations need to satisfy the properties of the features, but might take on widely different shapes. For every suggested feature, there are multiple ways to implement them. Possible Implementations might differ in terms of process workflow, interface layout or technical design. The form in which a feature is eventually implemented will result from a collaboration between project concept designers, technical engineering teams and stakeholders.

Features are developed in an incremental fashion. The table below described the three main sets of features (as also shown in Figure 1Error! Reference source not found.).

Feature set	Description
Core set	The core set of core features represent the minimum functional requirements that the platform implementation should fulfil.
Expansion sets	Incremental sets of features that build upon previously sets of features.
Post-project sets	Sets of features that have been recognised, but will not be implemented during the project.

Table 3: COBACORE feature development phases

The *core set* of features represents the foundation of the platform. When implemented, the core set of features represent the minimal form of the platform that satisfies the *functions*.

Chapter 3 describes the core set of features of the COBACORE platform in textual mock-ups, and thus give a first impression of the functional behaviour and form of the COBACORE platform.

3 COBACORE core features descriptions

As mentioned in the introduction, the first phase of the feature development process consists of establishing a core set of features. This set is also referred to as the *'No-Regrets list'*, hinting at the critical quality of these features. These core features represent the minimum functional requirements that the platform implementation should fulfil. Table 3 summarises the core feature set. This set is the result from stakeholder consultations and project-internal concept design activities in which multiple options are assessed.

id	feature name	prime user group	feature purpose
F1/AR	Actor registration	Affected community, Responding community, Professional community	Provides means for users to register actors with the platform. An actor is the bearer of a need, a capacity or an activity.
F2/NR	Need registration	Affected community	Provides means for users to register needs related to their recovery from a disaster. They may register needs for themselves, or as representative of a group.
F3/CR	Capacity registration	Responding community, Professional community	Provides means for actors to register capacities that they are willing to provide towards the disaster recovery.
F4/NCO	Needs and capacities overview	Affected community, Responding community, Professional community	This feature provides means for users to view registered needs and capacities, and perform various filtering and sorting operations to establish an informative overview.
F5/NCM	Needs and capacities matching	Affected community, Responding community	Provides means for users to establish matches between registered need profiles and registered capacity profiles. After a match has been determined, it can be effectuated as an activity.

F6/AAO	Actors and activities overview	Affected community, Responding community, Professional community	Provides means for users to view registered actors and activities, and perform various filtering and sorting operations to establish an informative projection.
F7/BSO	Baseline situation overview	Professional community	Provides an overview of the situation in the affected area through projection of baseline data and information.
F8/BRV	Basic recovery views	Professional community	Provides the user with options to build data views that are relevant to understanding the recovery process, and thus provide a basis for further analysis and plan-definition.
F9/BIE	Basic information exchange	Affected community, Responding community, Professional community	Provides means for users to exchange information (documents, data, digital media), centred around mutual capacity profiles and activities.
F10/ACT	Activity registration	Responding community, Professional community	Provides means for users to register an activity with the platform. An activity is a recovery effort in which actors partake.

Table 4: The COBACORE core feature set

In the following sections, we describe each COBACORE core features on a number of characteristics. Table 5 lists the attributes we use to define each feature.

Attribute	Description
Identifier	An identifying code
Name	The colloquial name of the feature
Description	A brief description of its purpose
fulfils function	A specification of the <u>function</u> it fulfils: <ul style="list-style-type: none"> • U1/Enhance information exchange • U2/Facilitate collaboration • U3/Improve needs and capacities matching
primary user community	A selection of the primary target user group of this feature <ul style="list-style-type: none"> • Professional community • Affected community • Responding community
related features	A listing of the core features that have a direct relationship with feature that is being described.
required information input	A description of the information that is required for this feature, and a description of the most likely source of that information.
information output	A description of the information that is produced through this feature, and a description of the nature of the information.
interaction patterns and interface elements	A description of the elemental interaction patterns and interface elements that could be used to instantiate the feature.
evaluation criteria	A description of the major evaluation criteria for the feature.

Table 5: Attributes used to describe features

3.1 Core feature descriptions

3.1.1. Feature 1: Actor registration

Attribute	Description
Identifier	F1/AR
Name	Actor registration
Description	This feature provides means for users to register actors with the platform. An actor is the bearer of a need, a capacity or an activity. Users can register themselves as actors, someone else, or a group, and will be asked to provide information about the actor.
fulfils function	<ul style="list-style-type: none"> • U1/Enhance information exchange • U2/Facilitate collaboration • U3/Improve needs and capacities matching
primary user community	<ul style="list-style-type: none"> • Responding community • Professional community • Affected community
related features	<ul style="list-style-type: none"> • F2/Need registration • F3/Capacity registration • F6/Actors and activities overview • F10/Activity registration
required information input	<ul style="list-style-type: none"> • user input
information output	The output of this feature is an actor profile . An actor profile contains information about the actor, such as contact information, location, and other relevant characteristics. Note that need and capacity profiles are not part of the actor profile, but are intrinsically linked.
interaction patterns and interface elements	A form through which a user can provide relevant personal details and contact information. Input accelerators could be used where applicable (e.g. using map-based selections to obtain location information).
evaluation criteria	Quality of the resulting actor profile – does the profile contain sufficient information to capture the actor’s characteristics and engage the actor in follow-up activities?

3.1.2. Feature 2: Need registration

Attribute	Description
Identifier	F2/NR
Name	Need registration
Description	This feature provides means for users to register needs related to their recovery from a disaster. They may register needs for themselves, or as representative of a group.
fulfils function	<ul style="list-style-type: none"> • U1/Enhance information exchange • U3/Improve needs and capacities matching
primary user community	<ul style="list-style-type: none"> • Affected community
related features	<ul style="list-style-type: none"> • F1/Actor registration • F4/Needs and capacities overview • F5/Needs and capacities matching
required information input	<ul style="list-style-type: none"> • associated registered actor profile • user input
information output	The output of this feature is a need profile . A need profile includes information about the nature of the need, the location where the need exists, the actor associated with the need and other relevant information.
interaction patterns and interface elements	Form-based input. The user is taken through a number of entry-fields in a form that help to register the various characteristics of a need. Some entries might be constrained to predefined values, such as the recovery domain to which the needs belongs. Other entries might be supported by input accelerators, such as map-based input to gather geospatial information. At the end, the user is presented with the final need profile.
evaluation criteria	Quality of the resulting need profile – does the profile sufficiently capture the actor’s need? Does the profile capture enough information for follow-up activities?

3.1.3. Feature 3: Capacity registration

Attribute	Description
Identifier	F3/CR
Name	Capacity registration
Description	This feature provides means for users to register capacities that they are willing to provide towards the disaster recovery.
fulfils function	<ul style="list-style-type: none"> • U2/Facilitate collaboration support • U3/Improve needs and capacities matching
primary user community	<ul style="list-style-type: none"> • Responding community • Professional community
related features	<ul style="list-style-type: none"> • F1/Actor registration • F4/Needs and capacities overview • F5/Needs and capacities matching • F9/Basic information exchange
required information input	<ul style="list-style-type: none"> • associated registered actor profile • user input
information output	The output of this feature is a capacity profile . A capacity profile includes information about the nature of the capacity, the location where the capacity exists, the actor associated with the capacity and other relevant information.
interaction patterns and interface elements	Form-based input. The user is taken through a number of entry-fields in a form that helps to register the various characteristics of a capacity. Some entries might be constrained to predefined values, such as the type of capacity that is being offered, or the recovery domain to which the capacity belongs to. Other entries might be supported by input accelerators, such as map-based input to gather geospatial information. At the end, the user is presented with the final capacity profile for a check.
evaluation criteria	Quality of the resulting capacity profile – does the profile sufficiently capture the actor’s capacity? Does it profile enough information for follow-up activities?

3.1.4. Feature 4: Needs and capacities overview

Attribute	Description
Identifier	F4/NCO
Name	Needs and capacities overview
Description	This feature provides means for users to view registered needs and capacities, and perform various filtering and sorting operations to establish an informative overview.
fulfils function	<ul style="list-style-type: none"> • U1/Enhance information exchange • U2/Facilitate collaboration • U3/Improve needs and capacities matching
primary user community	<ul style="list-style-type: none"> • Responding community • Professional community • Affected community
related features	<ul style="list-style-type: none"> • F1/Actor registration • F2/Need registration • F3/Capacity registration • F5/ Needs and capacities matching
required information input	<ul style="list-style-type: none"> • registered actor profiles • registered need profiles • registered capacity profiles
information output	<p>An output of this feature is a presentation view: a needs and capacities view.</p> <p>An another output of this feature could be a subset of the registered needs and capacities, based on a certain query This subset could be used by other features for further processing (for instance: select a group registered needs and capacities based on a geographic location, and send associated actors supporting information through F10: basic recovery information exchange).</p>
interaction patterns and interface elements	<p>This feature presents registered needs and capacities in a list form, with filtering options, sorting options and search options to allow the user to define relevant selections. This feature might include additional views, such as basic map projections to plot registered needs and capacities on a map using their registered location. Users can also view further details of the registered needs and capacities, such as time- and date-stamps, associated actor</p>

characteristics, categories and so on.

evaluation criteria

Information presentation quality and usability. Does the feature present the available information in a suitable manner, and do the item management functions provide enough means to obtain the preferred view on the data.

3.1.5. Feature 5: Needs and capacities matching

Attribute	Description
Identifier	F5/NCM
Name	Needs and capacities matching
Description	This feature provides means for users to establish matches between registered need profiles and registered capacity profiles. After a match has been determined, it could be effectuated by sending out requests for contact, or some other form of establishing contact.
fulfils function	<ul style="list-style-type: none"> U3/Improve needs and capacities matching
primary user community	<ul style="list-style-type: none"> Responding community Affected community
related features	<ul style="list-style-type: none"> F1/Actor registration F2/Need registration F3/Capacity registration F4/Needs and capacities overview
required information input	<ul style="list-style-type: none"> Registered need profiles Registered capacity profiles
information output	This feature produces established matches between needs and capacities. Such a match can be effectuated as an activity, and registered in the system as an activity profile .
interaction patterns and interface elements	<p>Based on the overview provided through Need & Capacity Overview (F4/NCO), this feature provides means to an authorised user to connect a need with a capacity. A user is authorised to make connections for needs and capacities that are associated to his actor profile. Therefore, a user could self-establish a match between his registered need (e.g. the need for transport) with the capacity that another actors is providing (e.g. a car, or a transport service). A match can be made via a number of selection steps, or via a wizard-type interaction.</p> <p>Once a match has been established by the actor, an activity proposition sequence is started via a wizard, or a similar method. In this sequence, the user provides a justification for the match, and can affirm the activity by sending out a request for contact to the receiving actor.</p>

evaluation criteria

Information presentation quality and usability. Does the feature present the available information in a suitable manner, and does the item management function provide enough means to obtain the preferred view on the data.

3.1.6. Feature 6: Actors and activities overview

attribute	Description
identifier	F6/AAO
name	Actor and activity overview
description	This feature provides means for users to view registered actors and activities, and perform various filtering and sorting operations to establish an informative projection.
fulfils function	<ul style="list-style-type: none"> • U1/Enhance information exchange • U2/Facilitate collaboration • U3/Improve needs and capacities matching
primary user community	<ul style="list-style-type: none"> • Responding community • Professional community • Affected community
related features	<ul style="list-style-type: none"> • F1/Actor registration • F4/Needs and capacities overview • F5/Needs and capacities matching • F10/Activity registration
required information input	<ul style="list-style-type: none"> • registered need profiles • registered capacity profiles • registered actor profiles
information output	<p>Presentation view: an actor and activity view.</p> <p>An another output of this feature could be a subset of the registered actors and activities, based on a certain query This subset could be used by other features for further processing (for instance: select a group registered actors based on their geographic location, and send this supporting information through feature F9/Basic information exchange).</p>
interaction patterns and interface elements	<p>This feature presents registered actors and activities in a list form, with filtering options, sorting options and search options to allow the user to define relevant selections. This feature might include additional views, such as basic map projections to plot registered actors and activities on a map using their registered location. Users can also view further details of the registered actors and activities, such as time- and date-stamps, associated type or other relevant properties.</p>

evaluation criteria

Information presentation quality and usability. Does the feature present the available information in a suitable manner, and do the item management functions provide enough means to obtain the preferred view on the data.

3.1.7. Feature 7: Baseline situation overview

attribute	Description
identifier	F7/BSO
name	Baseline situation overview
description	This feature provides an overview of the situation in the affected area through projection of baseline data and information.
fulfils function	<ul style="list-style-type: none"> • U1/Enhance information exchange
primary user community	<ul style="list-style-type: none"> • Professional community
related features	<ul style="list-style-type: none"> • F8/Basic recovery views
required information input	Baseline data-sources that contain data about the affected area. This may include data from the pre-crisis state and information about the current state.
information output	Presentation view: Baseline situation overview
interaction patterns and interface elements	This feature would be best-implemented using map-based and graph-based projections of situational data. Additionally, textual representations of relevant operational information could be added, and selection means to select a time-frame.
evaluation criteria	Information presentation quality and usability . Does the feature present the available information in a suitable manner, and do the item management functions provide enough means to obtain the preferred view on the data.

3.1.8. Feature 8: Basic recovery views

attribute	description
identifier	F8/BRV
name	Basic recovery views
description	This feature provides the user with options to build data views that are relevant to understanding the recovery process, and thus provide a basis for further analysis and plan-definition. The <i>Baseline situation overview</i> feature supports this feature.
fulfils function	<ul style="list-style-type: none"> U1/Enhance information exchange
primary user community	<ul style="list-style-type: none"> Professional community
related features	<ul style="list-style-type: none"> F7/Baseline situation overview
required information input	<ul style="list-style-type: none"> registered need profiles registered capacity needs baseline data sources
information output	Presentation view: Basic recovery view : a view in which various information sources are projected in an integrated manner as to obtain a deeper understanding of the situation. For instance: a hotspot projection of needs onto the baseline situation view .
interaction patterns and interface elements	This feature would be best implemented using a map-based and graph-based projection of need and capacity registrations. Additionally, textual representations of relevant operational information could be added, and selection means to select a time-frame.
evaluation criteria	Information presentation quality and usability . Does the feature present the available information in a suitable manner, and do the item management functions provide enough means to obtain the preferred view on the data.

3.1.9. Feature 9: Basic information exchange

attribute	description
identifier	F9/BIE
name	Basic information exchange
description	<p>This feature provides means for users to exchange information (documents, data, digital media), centered around mutual recovery interests.</p> <p>For instance, this feature could provide professionals with the means to convey information about capacity deployment (e.g. instructions, tutorials, suggestions for action) to selected other community members, or request specific information. Conversely, responding community members (e.g. volunteers) can request supporting information concerning their offered capacities from professional community members.</p>
fulfils function	<ul style="list-style-type: none"> U2/Facilitate collaboration
primary user community	<ul style="list-style-type: none"> Affected community Responding community Professional community
related features	<ul style="list-style-type: none"> F4/Needs and capacities overview F6/Actors and activities overview
required information input	<ul style="list-style-type: none"> registered actor profiles registered capacity profiles
information output	<p>This feature results in the exchange of digital content that is related to capacity deployment or recovery progress. These materials might include training instructions, general preparatory advice, and other relevant information.</p>
interaction patterns and interface elements	<p>This feature might take the shape of a direct information exchange between parties, or an indirect exchange that makes use of a document repository.</p> <p>For the direct information exchange, the feature would require a receiving contact search option, a document upload, annotation, and transfer management option on the sending side. On the receiving end, a notification of reception and document management options is required (e.g. open, store, annotate, delete).</p> <p>For indirect information exchange, the feature would</p>

require on the sending side: means to **categorise and annotate** and **upload** digital materials to a repository. On the receiving end, the user should have **filtering options** to select relevant materials, and **document download and management options** to obtain the materials.

evaluation criteria

Quality and usability of exchange process. Does the process lead to the right information with the right actor, and is the process organised in an effective and efficient manner?

3.1.10. Feature 10: Activity registration

attribute	Description
identifier	F10/ACT
name	Activity registration
description	This feature provides means for users to register an activity with the platform. An activity is a recovery effort in which actors partake. This feature might be materialised as an explicit functionality (in which the user is given the option to explicitly register an activity), or an implicit functionality (in which an activity results from the matching of a need with a capacity). Both varieties result in an activity profile that includes essential properties such as time-specification, associated actors, needs and capacities, location and description.
fulfils function	<ul style="list-style-type: none"> • U1/Enhance information exchange • U2/Facilitate collaboration • U3/Improve needs and capacities needs and capacities matching
primary user community	<ul style="list-style-type: none"> • Responding community • Professional community
related features	<ul style="list-style-type: none"> • F1/Actor registration • F2/Need registration • F3/Capacity registration • F5/Needs and capacities matching • F6/Actors and activities overview • F9/Notification and information exchange
required information input	<ul style="list-style-type: none"> • user input
information output	The output of this feature is an activity profile . An activity profile contains information about the activity, such as contact information, location, and other relevant characteristics. The resulting activity profile can be viewed through views such as the <i>actors and activities</i> view. Note that need and capacity profiles are not part of the actor profile , but might be associated.
interaction patterns and interface elements	A form through which a platform-user can provide relevant activity details. Input accelerators could be used where applicable (e.g. using map-based selections to obtain location information, or a clock to select valid time

frames).

evaluation criteria

Quality of the resulting actor profile – does the profile contain sufficient information to capture the actor's characteristics and engage the actor in follow-up activities?

3.2 Information structures and views

The feature descriptions in the previous section give rise to a number of elemental information and presentation elements (*views*). We will briefly outline these elements.

3.2.1. Information elements: profiles

The core features allow users to register an **actor**, a **need**, a **capacity**, and an **activity**. These four items are core concepts to the COBACORE platform. The features allow users to *instantiate* these concepts as information objects. We call these objects *profiles*. This leads to four distinctive types of profiles that are of use in the COBACORE platform:

- **Actor profile**
- **Need profile**
- **Capacity profile**
- **Activity profile**

Each profile is characterised by a number of attributes). The definition of properties and the values will be an ongoing discussion, and will be influenced by the outcome of stakeholder evaluation sessions. In the tables below, we give a number of informal suggestions for profile attributes.

Profile	Attribute	Description	Values
actor profile	type	the type of actor	[individual, group, family, network, organisation]
	name	the name of the actor	Text
	contact details	contact information – relevant contact details	[address, phone number, email address, social media accounts]

Table 6: Suggested properties for the actor profile

Profile	Attribute	Description	Values
need profile	type	the type of need	[physical objects, labour, information, instruction, service]
	recovery domain	the recovery domain to which the need is related	[Institutional and governmental, Mobility and transport, Vital and critical infrastructure, Social, cultural and educational, Healthcare, Economic, Environmental, Safety and security]
	description	a concise description of the need	text
	registrant	the actor that has registered the need	<association with actor profile>
	owner	the actor that has the need	<association with actor profile>
	location	the location where the need exists. For a need this denotes the area where the need is present – not the location where the need is registered	a geographical coordinate or an area.
	time and date	the timeframe in which the need exists (might be open-ended, might be recurring)	start and stop time and date.
	severity	the severity of the registered need	[low, medium, high]
	urgency	the urgency of the registered need	[low, medium, high]

Table 7: Suggested properties for the need profile

Profile	Attribute	Description	Values
capacity profile	type	the type of capacity	[physical, labour, information, instruction, service, financial, expertise]
	recovery domain	the recovery domain to which the capacity is related	[Institutional and governmental, Mobility and transport, Vital and critical infrastructure, Social, cultural and educational, Healthcare, Economic, Environmental, Safety and security]
	description	a concise description of the need	text
	registrant	the actor that has registered the capacity	<association with actor profile>
	owner	the actor that has the capacity	<association with actor profile>
	location	the location where the capacity is available. For a capacity this denotes the deployment area – e.g. where an actor would be available to deploy his capacity.	A geographical coordinate or an area.
	time and date	the timeframe in which the capacity exists (might be open-ended, might be recurring)	start and stop time and date.
	severity	the severity of the registered capacity	[low, medium, high]
	urgency	the urgency of the registered capacity	[low, medium, high]

Table 8: Suggested properties for the capacity profile

Profile	Attribute	Description	Values
activity profile	type	the type of activity	[to be determined]
	name	the colloquial name of the activity.	text
	description	a concise description of the activity	text
	status	the status of the activity	[planned, current, completed]
	needs	the needs that are associated with this activity	<association with need profiles>
	capacities	the capacities that are associated with this activity	<association with capacity profiles>
	actors	the actors that are associated with this activity – those actors that partake in this activity	<association with actor profiles>
	registrant	the actor that has registered this activity	<association with actor profiles>
	organiser	the actor that is responsible for this activity and that can be contacted	<association with actor profiles>
	time and date	the timeframe in which the capacity exists (might be open-ended, might be recurring)	start and stop time and date.
	urgency	the urgency of the proposed activity	[low, medium, high]

Table 9: Suggested properties for the activity profile

3.2.2. Presentation elements: views

The core features in section 3.1 give rise to four distinct views on the available information structures – i.e. the aforementioned profiles. The following views follow from the feature descriptions:

- Needs and capacities view
- Actor and activity view
- Baseline situation view
- Basic recovery views

The **needs and capacities view** is a view that presents registered needs and capacities in a list form, with filtering options, sorting options and search options to allow the user to define relevant selections. This feature might include additional views, such as basic map projections to plot registered needs and capacities on a map using their registered location. Users can also view further details of the registered needs and capacities, such as time- and date-stamps, associated actor characteristics, categories and so on.

The **actor and activity view** presents registered actors and activities in a list form, with filtering options, sorting options and search options to allow the user to define relevant selections. This feature might include additional views, such as basic map projections to plot registered actors and activities on a map using their registered location. Users can also view further details of the registered actors and activities, such as time- and date-stamps, associated type or other relevant properties.

The **baseline situation view** presents an overview of the situation in the affected area through projection of baseline data and information. This view will most likely be in the form of a map-based and graph-based projection of situational data. Additionally, textual representations of relevant operational information could be added, and selection means to select a time-frame.

The **basic recovery views** is a collection of informative views that the user can take that are relevant to understanding the recovery process, and thus provide a basis for further analysis and plan-definition. These views build on baseline data, and registered actors, needs, capacities and activity profile, and give the user options to build specific map-based or graph-based projections of data. Additionally, textual representations of relevant operational information could be added, and selection means to select a time-frame.

3.3 Feature relationships

Features can have relationships with other features, essential information concepts and views. **Error! Reference source not found.** Figure 2 shows the relationships of the core features, core information structures (concepts-profiles) and their corresponding views, as described in section 3.1.

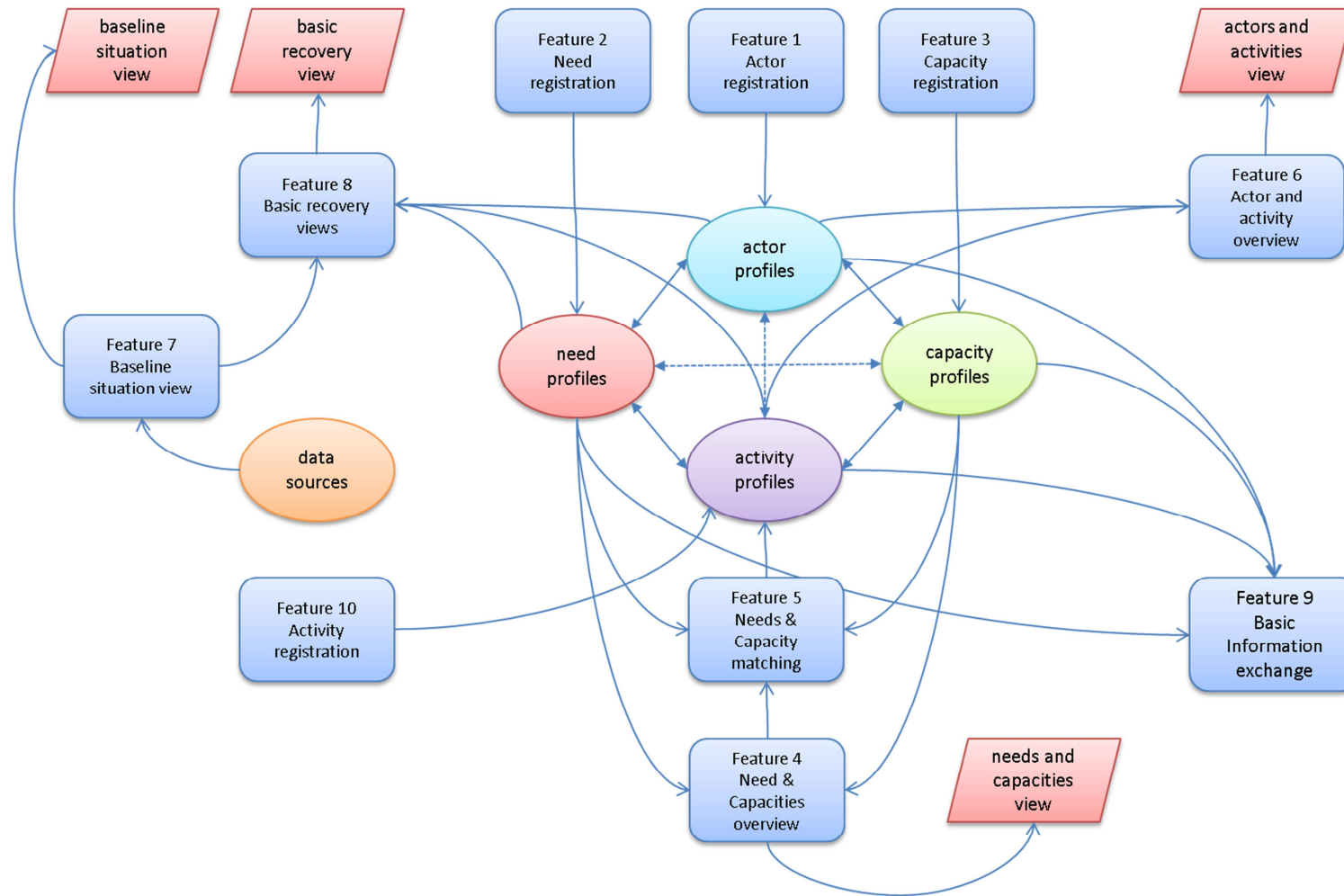


Figure 2: Relationships between the core features, their corresponding profiles and views

3.4 Interaction patterns per target user group

The core features as described in the previous sections provide us with an overview of interaction patterns and information elements per target user groups.

3.4.1. Professional community

The following features have the professional community as their prime user group:

Features	Corresponding views
1. Actor registration	
4. Needs and capacities overview	Needs and capacities view
6. Actors and activities overview	Actors and activities view
7. Baseline situation overview	Baseline situation view
8. Basic recovery views	Basic recovery views
9. Basic information exchange	
10. Activity registration	

Table 10: Core platform features and views for members of the professional community

Drawing on the above features and views, an interface for a member of the professional community would consist of at least the following features and views:

- **Actor registration:** A form by which a member of this community can self-register, or a group he represents. A form allows the user to provide relevant details and contact information. This form may make use of input accelerators where applicable (e.g. using map-based selections to obtain location information).
- **Activity registration:** A form through which a member of this community can provide relevant activity details. Input accelerators could be used where applicable (e.g. using map-based selections to obtain location information, or a clock to select valid timeframes).
- **Needs and capacities overview:** A view on registered needs and capacities. This view presents registered needs and capacities in a list form, with filtering options, sorting options and search options to allow the user to define relevant selections. This feature might include additional views, such as basic map projections to plot registered needs and capacities on a map using their registered location. Users can also view further details of the registered needs and capacities, such as time- and date-stamps, associated actor characteristics, categories and so on.
- **Actors and activities overview:** A view on registered actors and activities. Registered actors and activities are presented to the user in a list form, with filtering options, sorting options and search options to allow the user to define relevant selections. This feature might include additional views, such as basic map projections to plot registered actors and activities on a map using their registered location. Users can also view further details of the registered actors and activities, such as time- and date-stamps, associated type or other relevant properties.
- **Baseline situation view.** An overview of the situation in the affected area through projection of baseline data and information. This view would be best-implemented using map-based and graph-based projections of situational data. Additionally, textual

representations of relevant operational information could be added, and selection means to select a time-frame.

- **Basic recovery views.** The user is provided with options to build data views that are relevant to understanding the recovery process, and thus provide a basis for further analysis and plan-definition. Such a view would present information in an integrated manner as to obtain a deeper understanding of the situation. For instance: a hotspot projection of needs onto the baseline situation view. This feature would be best implemented using a map-based and graph-based projection of needs and capacities registrations. Additionally, textual representations of relevant operational information could be added, and selection means to select a time-frame.
- **Basic Information exchange.** Members of this community are provided with means to exchange and receive information (documents, data, and digital media). This community member could exchange information with other community members in a direct exchange, or in an indirect exchange that makes use of a document repository. For the direct information exchange, the feature would require a receiving contact search option, a document upload, annotation, and transfer management option on the sending side. On the receiving end, a notification of reception and document management options is required (e.g. open, store, annotate, delete). For indirect information exchange, the feature would require on the sending side: means to categorise and annotate and upload digital materials to a repository. On the receiving end, the user should have filtering options to select relevant materials, and document download and management options to obtain the materials.

3.4.2. Affected community

The following features have the affected community as their prime user group:

Features	Corresponding views
1. Actor registration	
2. Need registration	
4. Needs and capacities overview	Needs and capacities view
5. Needs and capacities matching	
6. Actors and activities overview	Actors and activities overview
9. Basic information exchange	

Table 11: Core platform features and views for members of the affected community

Drawing on the above features and views, an interface for a member of the professional community would consist of at least the following features and views:

- **Actor registration:** A form by which a member of this community can register himself, or a group he represents. A form allows the user to provide relevant details and contact information. This form may make use of input accelerators where applicable (e.g. using map-based selections to obtain location information).
- **Activity registration:** A form through which a member of this community can provide relevant activity details. Input accelerators could be used where applicable (e.g. using map-based selections to obtain location information, or a clock to select valid timeframes).
- **Need registration:** A form by which a member of this community can register a need. The user is taken through a number of entry-fields in a form that help to register the

various characteristics of a need. Some entries might be constrained to predefined values, such as the recovery domain to which a need can belong. Other entries might be supported by input accelerators, such as map-based input to gather geospatial information. At the end, the user is presented with the final need profile.

- **Needs and capacities overview:** A view on registered needs and capacities. This view presents registered needs and capacities in a list form, with filtering options, sorting options and search options to allow the user to define relevant selections. This feature might include additional views, such as basic map projections to plot registered needs and capacities on a map using their registered location. Users can also view further details of the registered needs and capacities, such as time- and date-stamps, associated actor characteristics, categories and so on.
- **Needs and capacities matching:** The user is provided with means to connect a need with a capacity. A user is authorised to make connections for needs and capacities that are associated to his actor profile. Therefore, a user could self-establish a match between his registered need (e.g. the need for transport) with the capacity that another actors is providing (e.g. a car, or a transport service). A match can be made via a number of selection steps, or via a wizard-type interaction. Once a match has been established by the actor, an activity proposition sequence is started via a wizard, or a similar method. In this sequence, the user provides a justification for the match, and can affirm the activity by sending out a request for contact to the receiving actor.
- **Actors and activities overview:** A view on registered actors and activities. Registered actors and activities are presented to the user in a list form, with filtering options, sorting options and search options to allow the user to define relevant selections. This feature might include additional views, such as basic map projections to plot registered actors and activities on a map using their registered location. Users can also view further details of the registered actors and activities, such as time- and date-stamps, associated type or other relevant properties.
- **Basic Information exchange.** Members of this community are provided with means to exchange and receive information (documents, data, and digital media). This community member could exchange information with other community members in a direct exchange, or in an indirect exchange that makes use of a document repository. For the direct information exchange, the feature would require a receiving contact search option, a document upload, annotation, and transfer management option on the sending side. On the receiving end, a notification of reception and document management options is required (e.g. open, store, annotate, delete). For indirect information exchange, the feature would require on the sending side: means to categorise and annotate and upload digital materials to a repository. On the receiving end, the user should have filtering options to select relevant materials, and document download and management options to obtain the materials.

3.4.3. Responding community

The following features have the responding community as their prime user group

Features	Corresponding views
1. Actor registration	
3. Capacity registration	
4. Needs and capacities overview	Needs and capacities view
5. Needs and capacities matching	
6. Actors and activities overview	Actors and activities view
9. Basic information exchange	
10. Activity registration	

Table 12: Core platform features and views for members of the responding community

Drawing on the above features and views, an interface for a member of the professional community would consist of at least the following features and views:

- **Actor registration:** A form by which a member of this community can register himself, or a group he represents. A form allows the user to provide relevant details and contact information. This form may make use of input accelerators where applicable (e.g. using map-based selections to obtain location information).
- **Activity registration:** A form through which a member of this community can provide relevant activity details. Input accelerators could be used where applicable (e.g. using map-based selections to obtain location information, or a clock to select valid timeframes).
- **Capacity registration:** This feature provides means for actors to register capacities that they are willing to provide towards the disaster recovery. The user is taken through a number of entry-fields in a form that help to register the various characteristics of a capacity. Some entries might be constrained to predefined values, such as the type of capacity that is being offered, or the recovery domain to which the capacity belongs to. Other entries might be supported by input accelerators, such as map-based input to gather geospatial information. At the end, the user is presented with the final capacity profile.
- **Needs and capacities overview:** A view on registered needs and capacities. This view presents registered needs and capacities in a list form, with filtering options, sorting options and search options to allow the user to define relevant selections. This feature might include additional views, such as basic map projections to plot registered needs and capacities on a map using their registered location. Users can also view further details of the registered needs and capacities, such as time- and date-stamps, associated actor characteristics, categories and so on.
- **Needs and capacities matching:** The user is provided with means to connect a need with a capacity. A user is authorised to make connections for needs and capacities that are associated to his actor profile. Therefore, a user could self-establish a match between his registered need (e.g. the need for transport) with the capacity that another actors is providing (e.g. a car, or a transport service). A match can be made via a number of selection steps, or via a wizard-type interaction. Once a match has been established by the actor, an activity proposition sequence is started via a wizard, or a similar method. In this sequence, the user provides a justification for the match, and can affirm the activity by sending out a request for contact to the receiving actor.

- Actors and activities overview:** A view on registered actors and activities. Registered actors and activities are presented to the user in a list form, with filtering options, sorting options and search options to allow the user to define relevant selections. This feature might include additional views, such as basic map projections to plot registered actors and activities on a map using their registered location. Users can also view further details of the registered actors and activities, such as time- and date-stamps, associated type or other relevant properties.
- Basic Information exchange.** Members of this community are provided with means to exchange and receive information (documents, data, and digital media). This community member could exchange information with other community members in a direct exchange, or in an indirect exchange that makes use of a document repository. For the direct information exchange, the feature would require a receiving contact search option, a document upload, annotation, and transfer management option on the sending side. On the receiving end, a notification of reception and document management options is required (e.g. open, store, annotate, delete). For indirect information exchange, the feature would require on the sending side: means to categorise and annotate and upload digital materials to a repository. On the receiving end, the user should have filtering options to select relevant materials, and document download and management options to obtain the materials.

3.4.4. Comparison of core features and view per target user group

The following table shows a comparison of core platform features and views per target user group:

Features	Corresponding views	Professional community	Affected community	Responding community
F1/Actor registration		●	●	●
F2/Need registration			●	
F3/Capacity registration				●
F4. Needs and capacities overview	Needs and capacities view	●	●	●
F5/Needs and capacities matching			●	●
F6. Actors and activities overview	Actors and activities overview	●	●	●
F7. Baseline situation overview	Baseline situation overview	●		
F8. Basic recovery views	Basic recovery views	●		
F9. Basic information exchange		●	●	●
F10. Activity registration		●		●

Table 13: Comparison of core features and views per target user group

4 Path forward

This D3.1 represents the current thinking about the core features of the COBACORE platform. The features were developed from the issues and function propositions that resulted from the WP1 domain analysis, and were adopted by the WP2, WP4 and WP5 teams in light of the upcoming intermediate evaluation in June 2014.

- The WP2 team will use the core features and the surrounding structures to shape their data model.
- The WP4 team will use the core feature to establish their functional requirements, and use those to develop the intermediate platform, and subsequent versions.
- The WP5 team will use the core features to establish the performance criteria for the intermediate evaluation, and to assess the outcome of the intermediate evaluation.

After the intermediate evaluation, the WP3 team will initiate the formation of the next set of features, and thus provide a basis for the development of the final evaluation version of the COBACORE platform.