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professional and ethical codes for socio-economic research in the information society

Functional Map of a European Socio-Economic Research Project

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The RESPECT Project is about:

RESPECT for research ethics

RESPECT for intellectual property

RESPECT for confidentiality

RESPECT for professional qualifications

RESPECT for professional standards

RESPECT for research users

The aims of the project are to:

- develop a voluntary code of practice for the conduct of socio-economic research in the Information Society
- contribute to the development of common European standards and benchmarks for socio-economic research
- contribute to the development of high standards in cross-national and cross-disciplinary socio-economic research.
- contribute to broader ethical and professional debates within the socio-economic research community.
- help reduce barriers to the mobility of socio-economic researchers within the EU and Accession States.
- provide succinct information on good practice in socio-economic research for research users both inside and outside the IST community.

For full details, see the project website: **www.respectproject.org.**

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1. Introduction

An occupational profile describes the work tasks to be carried out within the framework of a specific occupational activity, as well as the related knowledge, skills and abilities. It is an important instrument for assessment, as well as for the elaboration of vocational education programs. A professional competency profile provides the basis for a variety of human resource activities (recruitment, selection, training). The RESPECT project has been developed in order to draw up professional and ethical codes for socio-economic research, with a particular (but not exclusive) focus on the research requirements of the IST programme. The main purposes for creating this professional competency profile are:

- to be a reference document for compiling the voluntary code of practice (see Annex 1: link between the occupational profile and the code)
- to be the basic material for the production of a user manual to European socio-economic research
- to contribute to the broader professional debate about the curriculum consequences of international research
- to contribute to the debate on creating quality standards and assessments of European socio-economic research.

The method of functional analysis has been used to develop the occupational profile. The product of this analytical process is a functional map. This map is a broad representation of the tasks required for a European socio-economic research project.

Before we come to the presentation of this specific profile we will discuss the content and usability of occupational profiles in general. Then we shall focus on the profile developed within the RESPECT project. We describe the research design and methodology used to develop the profile and give an overview of the content of this profile.

1.1 Occupational profiles in general

Since occupational profiles are an important instrument for assessment, but above all for the elaboration of vocational

training, we expected an extensive implementation in all European countries. However, we could not find any information to confirm this supposition. In an overview of the policy in EU countries concerning the adaptation of vocational education, only a few countries mentioned the implementation of occupational profiles (CEDEFOP, 2000). Nevertheless, it would be too hasty to conclude that all the other countries do not develop or use occupational profiles. David Fretwell *et al.* (2001) state that many, but not all, developed countries use the method of occupational profiles in their labour market policies, but most of them have not institutionalised use of the method.

Although we do know some examples of European occupational profiles (*eg* the European Computer Driving Licence), we cannot say that it is common. Nor are there uniform European models to develop occupational profiles. In fact, there are several major methodologies for developing occupational profiles, all of which start with analysing what people in certain occupations actually do. In spite of this common basis, methods differ considerably, and so do the occupational profiles that result from the analysis. The fundamental change of economies and in the organisation of work in the past 20 years, is the major factor to affect the evolution of methodologies. Occupations have become more complex. Employees have more responsibilities linked with a broader range of competencies and less routine. In response to those changes, new methods for occupational analysis are being developed, and attention has shifted from analysing discrete job tasks to analysis of broader occupational competencies. Nowadays, we see a tendency to develop general profiles with universal and basic skills required to participate in the labour market. Definitions of competencies vary, and reflect the differences in the approach taken by different countries to the development of occupational profiles. Generally, we may say that an occupational competency is the ability to perform activities common to an occupation within an acceptable range (Fretwell *et al.*, 2001).

The World Bank (Fretwell *et al.*, 2001) mentions three methodologies for defining occupational profiles, which reflect the evolution from initial task-based to competence-based occupational analysis. The classification is based on the type of analysis. The methods include:

- job/task analysis
- DACUM (Developing A CurriculUM)
- functional analysis.

1.1.1 Job analysis

The establishment of occupational skill standards started with job analysis. This approach has been predominant for a long time in many industrialised countries, since it is especially suited to

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analysing tasks in mass production processes and in situations where there is little flexibility in the organisation of production processes. In spite of the fundamental changes, job and task analysis is still used for specific purposes and in specific sectors. It is used in ergonomics to identify how to improve working conditions. It is used in some human resource management work in the United States to bring job descriptions in line with more classical American leadership principles. In Europe, where the emphasis has been on broad human resource development, it is not widely used in industry, although there are trends suggesting that this approach is increasingly being adopted to define jobs in new administrative occupations in some subsectors (*eg* telephone call centers).

The aim of the analysis is to divide and subdivide jobs and tasks into their constituent parts, in order to provide information for training and to develop benchmarks for piece-rate wages. To identify the tasks, repeated observations onsite are required, which makes this method and wage classification system more expensive than others.

1.1.2 DACUM

DACUM is an acronym for Developing A CurriculUM. The DACUM approach to occupational analysis is quite different from job analysis. DACUM uses guided group discussion. A trained facilitator leads a small group of expert workers in a discussion of what they do on a day-to-day basis. The workers are guided to describe their activities in terms of tasks expressed as behavioural competencies that involve a verb, an object and usually a modifier. Each member of the group is encouraged to describe all of the activities in which they engage. This whole-group brainstorming provides the basis for identifying the major duties of a job. The tasks that make up the duties are then specified. As each work activity is proposed, the group discusses it and comes to consensus on how it should be stated as a task. The results are then checked with other workers outside the discussion group. It is recommended to check them by surveying 50 or more similar workers and/or supervisors of such workers.

The DACUM process also includes the separate identification of work enablers, including general knowledge and skills, worker behaviours (personal traits and interpersonal skills), and tools and equipment used. The experts are also asked to identify future trends and concerns that may affect what they do and how they do it.

1.1.3 Functional analysis

Functional analysis starts with the identification of the key purpose of an occupation in the major sectors where it is found, identifying the main functions, breaking these in turn down into

subfunctions until outcomes for each function are identified following a strictly logical sequence. The technique can be applied to multiple sectors, to a single sector or at an individual enterprise level. By concentrating on the functions or results/outcomes instead of the activities, the descriptions produced are independent of the technology or methods used to achieve the function. In other words, instead of describing what people are doing, functional analysis describes what people have to achieve.

Functional analysis uses a consultative process that involves practitioners, managers and in some cases the users or 'consumers' of occupational profiles. The consultative process is used twice: first to develop the occupational profile and secondly to confirm its accuracy.

The methodology starts with functional mapping, which is an analysis of the sector, starting with the key purpose statement and subsequently analysing down to individual functions. The final level of analysis is referred to as the 'functional units'. It is an outcome that an individual might be expected to achieve. These functional units are analysed one by one to identify the performance requirements. The performance requirements do not identify the technology and methods used, which makes the approach more flexible and applicable to the occupation in varying circumstances. The methods and technology used are described separately in what are called 'the range indicators'.

1.1.4 Mixed methodology

In recent years, mixed methods have increasingly been used to develop occupational profiles. At HIVA, we were involved in the development of such a mixed method. The method has been developed for the screening and monitoring of the Flemish labour market (Belgium has a strong regionalised system of labour market policies), and is used by an agency specifically set up for this purpose. The social partners and the educational sector support and use the profiling activities of this agency to improve the connection between occupational skills demands and the skills training of the vocational and educational training sector.

Since we used some elements of this method to develop the occupational profile of European socio-economic research, we consider it useful to clarify the content of this Flemish mixed method of occupational profile analyses in more detail.

The method contains five phases. In the first phase, the observational unit has to be defined. This can be:

- a *function*: a coherent unity of tasks that can exist separated from the person who practices the function. Functions are related to an organisation.
- a *group of functions*: a collection of related functions

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- a *profession*: a coherent unity of tasks that are more or less standardised so they can exist independently from the person who practices the job
- a *professional cluster:* a collection of related professions
- an *occupation*: relates to a person and their role in the labour market
- a *sector*: a group of related economic entities or enterprises.

Besides defining the observational unit, the first phase contains familiarisation with the research field and the delineation of the route.

The second phase in this methodology involves the preparation for a conference, during which the profile will be established; formulation of an information document that will form the guidelines during the conference and selection of the participants. Since this information document is the basis of the development of an occupational profile, a lot of energy will be spent on its creation. The following resources can be used for the formulation:

- secondary resources (distillations from well-defined profiles)
- interviews with experts
- company visits.

Finally, the information document will contain a task analysis and an inventory of the required competencies and knowledge. Tasks will be subdivided in:

- executive tasks: the core of the function
- preparatory tasks: tasks preceding the executive tasks
- supportive tasks: organisational tasks beyond the level of the employee's own job.

The conference is the third phase. The participants develop and refine the intended product on the basis of the information document. The conference also identifies the professional attitudes required for the job.

The fourth phase is the orientation towards the future. In this phase, the impact of plausible changes will be estimated.

Finally, in the fifth phase, the profile will be validated by presenting the draft profile to an additional number of people familiar with the occupation.

1.2 The occupational profile of socio-economic research

To develop the occupational profile of socio-economic research, we used a combination of functional analysis and the mixed

method, common in the Flemish part of Belgium. From the method of functional analysis, we extracted the way of describing the tasks, skills and knowledges (key purpose, key areas, flowchart of tasks *etc.*). From the mixed method we borrowed the method of data collection (in-depth interviews and workshops). Below, we explain that we have chosen a specific kind of observational unit for the occupational profile. We go on to give an overview of the structure used in the compiled occupational profile. Finally, we summarises some general remarks that have been made at the validation workshops.

1.2.1 Observational unit

The rapid social and economic changes that accompany the introduction of IST technologies have exceeded the limits of the traditional boundaries between socio-economic disciplines. Increasingly, there is a need both for interdisciplinarity (involving the development of new concepts, models and methodologies that transcend the barriers between disciplines), and for multi-disciplinarity (involving the creation of teams whose members have different areas of expertise and professional backgrounds, but who work alongside each other in complementary ways).

James Wickham (2002) noted that project calls of the European Union usually request that projects are interdisciplinary. None of the cluster projects belong clearly within a particular discipline and indeed most participants' own disciplinary adherence, or even training, is probably unclear.

This evolution made us decide to focus on the research project as the observational unit, and not for instance on the 'occupation' of a socio-economic researcher. Defining the research project as the observational unit made it possible to transcend the disciplinary approach of mapping European socio-economic research. A disciplinary point of view would made it impossible to construct one overall occupational profile. With this approach, we could cover all of these disciplines:

- Anthropology
- Business studies, industrial relations and management studies
- Communication sciences
- Criminology
- Cultural studies
- Demography
- Economics
- Educational sciences
- Ethics in social sciences
- Geography

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- Juridical sciences
- Political sciences
- Psychological sciences
- Sociology.

Moreover, EU funding has contributed to the processes whereby in countries like the UK, Sweden and Ireland university research increasingly involves distinct institutions within universities. Perhaps more importantly, EU funding has also stimulated the growth of private research organisations and research co-operatives. This is even more the case outside universities, where research centres such as non-academic organisations are extremely unlikely to be defined by any particular discipline (Fretwell *et al.*, 2001). This evolution is a second reason why we focused on the research project as the observational unit. It becomes quite difficult to allocate the required jobs within European socio-economic research projects to specific occupations, since the organisation of labour varies enormously between research organisations involved in the projects. For example:

- In some research institutions, researchers are responsible for the presentation of their texts, while researchers in other institutes get administrative support.
- The division of labour between the researcher and the project manager (or the professor and his assistant) within an institute is not recorded, and may vary between institutions; even within an institution there may be different agreements.

Together with the decision to focus on the research project instead of an occupation, we inevitably came to the conclusion that it would be impossible to map socio-economic research in its entirety. For this reason, we decided to focus on socio-economic research within a European project. However, the codes of practice developed within the RESPECT-project are oriented more towards all kinds of socio-economic research.

1.2.2 Results of the combined method to develop the occupational profile

We based the development of the profile on individual interviews with project co-ordinators, project managers, researchers and people in charge of administrative support.

We let the interviewees define the key purpose and the main functions of socio-economic research, and let them break these down to subfunctions until outcomes for each function were identified following a strictly logical sequence, as described in the method of functional analysis. The result of this analysis is a functional map, which contains three sections:

Overview of interviewed socio-economic researchers involved in European projects

	University		Private/NGO	
	Academic	Policy-oriented research centre	Institute	Small firm
Project co-ordinator		●	●	●
Co-ordinator work package	●	●	●	
Researcher	●	●	●	●
Administrator		●		

Source: HIVA, 2003

- a flowchart of tasks or functional units
- accompanying competences (knowledge and skills)
- range indicators.

We will discuss each of these three sections.

Flowchart of tasks or functional units

The map starts on the left hand side with a '*key purpose*' statement, which describes the unique nature and characteristics of European related socio-economic research, and which differentiates it from all other disciplines of research. *(Give scientifically based information and advice to policymakers in Europe and contribute to the scientific community.)*

The key purpose is separated in the first stage analysis into a number of main tasks that enable the key purpose to be met. These statements are called *key areas* and are coded alphabetically.

The fundamental question we asked to find these main tasks was: 'in order to achieve the key purpose of socio-economic research, what are people expected to be able to?'

We came to four key areas:

A. Prepare a European scientific research project

B. Conduct scientific research within a European scientific research project

C. Execute supporting tasks necessary to guarantee the progress of a European scientific research project

D. Disseminate the scientific research results.

Each key area is refined to reach a level of detail, called *'the functional units'*. At this level, we describe an outcome that an individual might be expected to achieve.

In the functional map, we have further subdivided the different tasks according to type and position within the project. The

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Table: Description of the different types of tasks

Type of task	Description
Management tasks	Tasks related to the management of the entire project (co-ordination)
	Tasks related to the management of the jobs within the national research organisation
Scientific tasks	Tasks related to the execution of the scientific research job (conceptual thinking, execution of the conceptual framework, reporting, dissemination of the results)
Administrative tasks	Tasks related to the administrative aspects of a research project (finances, administrative regulation of the European Union, *etc.*) and the logistic support and practical organisation of scientific events
Tasks concerning networking	Tasks related to national and international network building and maintaining of contacts, whether with regard to the project or not

Source: HIVA, 2003

pattern of the boxes refers to *the functional type of tasks.* We made a distinction between managerial, scientific, administrative and networking tasks (see Table). The shape of the box tells something about the *executor of the task*. We made a difference between a research partner, a lead partner and a project co-ordinator. A research partner is involved in the execution of the research assignments within the project, but does not bear the final responsibility. Conversely, a lead partner does bear the final responsibility for a work package within the project, but is not responsible for the entire project. The project co-ordinator has the general responsibility for the project.

Accompanying competencies (skills and knowledge)

Besides the presentation of the tasks related to socio-economic research, the occupational profile contains a list of skills and knowledge required to fulfil these tasks properly. Since the functional units (tasks described in the final level of the flowchart) are highly detailed, the skills and knowledge for these tasks will overlap. For this reason, we decided to deduce the required qualifications from the tasks formulated in the previous level.

Range indicators

Finally, we inserted range indicators to clarify some of the terms used in the flowchart. These terms or concepts are defined as range indicators. These terms have to do with the theory and method used in the European socio-economic research. A range of theoretical disciplines and methods are used in these research projects. Besides the efforts it would take, the occupational map would be no longer a simple and short document, if it had to map each of the relevant socio-economic theories and methods. Instead, theory and method are concepts, frequently used in the map and which refer to a range of disciplines and methods. The range they cover is recorded in a separate list. As such they can be circumscribed as range indicators. The advantage of such a range

indicator is that it could be updated easily to identify changes in theory or empirical methods, without changing the main structure and content of the occupational profile.

1.2.3 General remarks on the profile from the validation workshops

After developing the draft version of the functional map, we inserted a 'validation-phase'. We organised a workshop to discuss the profile with experts in four different countries: Belgium, Austria, United Kingdom and Germany. These workshops yielded a lot of interesting thoughts, which we could subdivide into two types: (1) general remarks concerning the entire profile and (2) specific remarks concerning particular parts of the profile. We incorporated the second type of thoughts in the final version of the profile. Below, we present the most important global considerations concerning the profile, which one should take into account when reading the profile:

- The profile has been developed based on a particular management structure of a European research project (one co-ordinator who has full responsibility for the ongoing project, the different research tasks subdivided in a number of workpackages, lead partners who are in charge of a workpackage *etc.*). This management structure was promoted by the majority of the experts, contacted in individual interviews and the workshops. But other models do exist and may be equally successful.
- The model of consortium that was the basis for this profile promotes the elaboration of existing networks (as does FP6). Still, this model has a rather 'closed' structure. Once the project is started, the project partners are defined and there is a limited tendency to contact other European experts throughout the project research. Besides, once a research-network has been developed (*eg* as a result of a earlier collaboration in a European research project) there is a tendency to endure this network without inviting new research institutes.
- The subdivision of tasks according to the executor in the first phase (preparation of the proposal and composition of the consortium) is a bit arbitrary, since the allocation of roles is recorded at the end of this phase.
- There is no hierarchical subdivision of tasks or classification of the tasks by importance, although some tasks are more important than others (concerning time-investment, quality of research, importance for the success of the project *etc.*).

In the following chapters we will present the functional map. Afterwards we discuss the usability of this profile from a European policy perspective.

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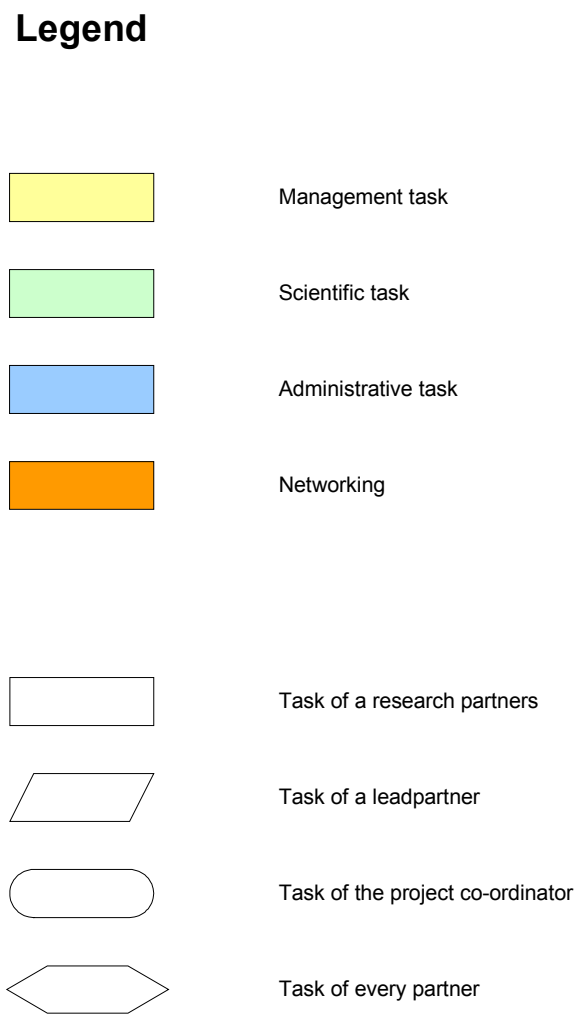
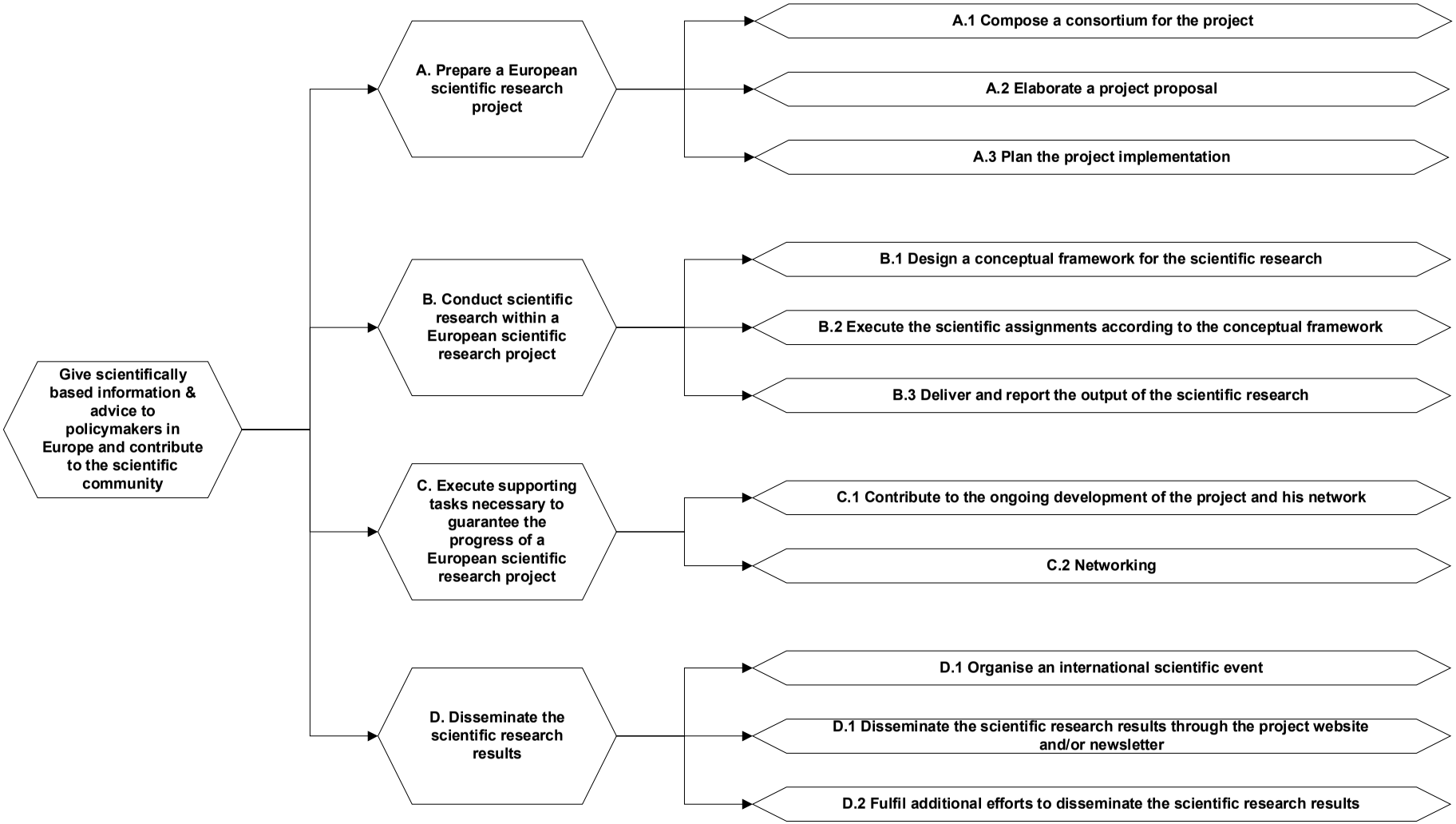
2. Flowchart of Tasks

The project website (www.respectproject.org) carries an interactive click-through version of the entire flowchart, including the additional tasks under section A for preparing a network of excellence (see Annex 2), and an integrated project (see Annex 3).





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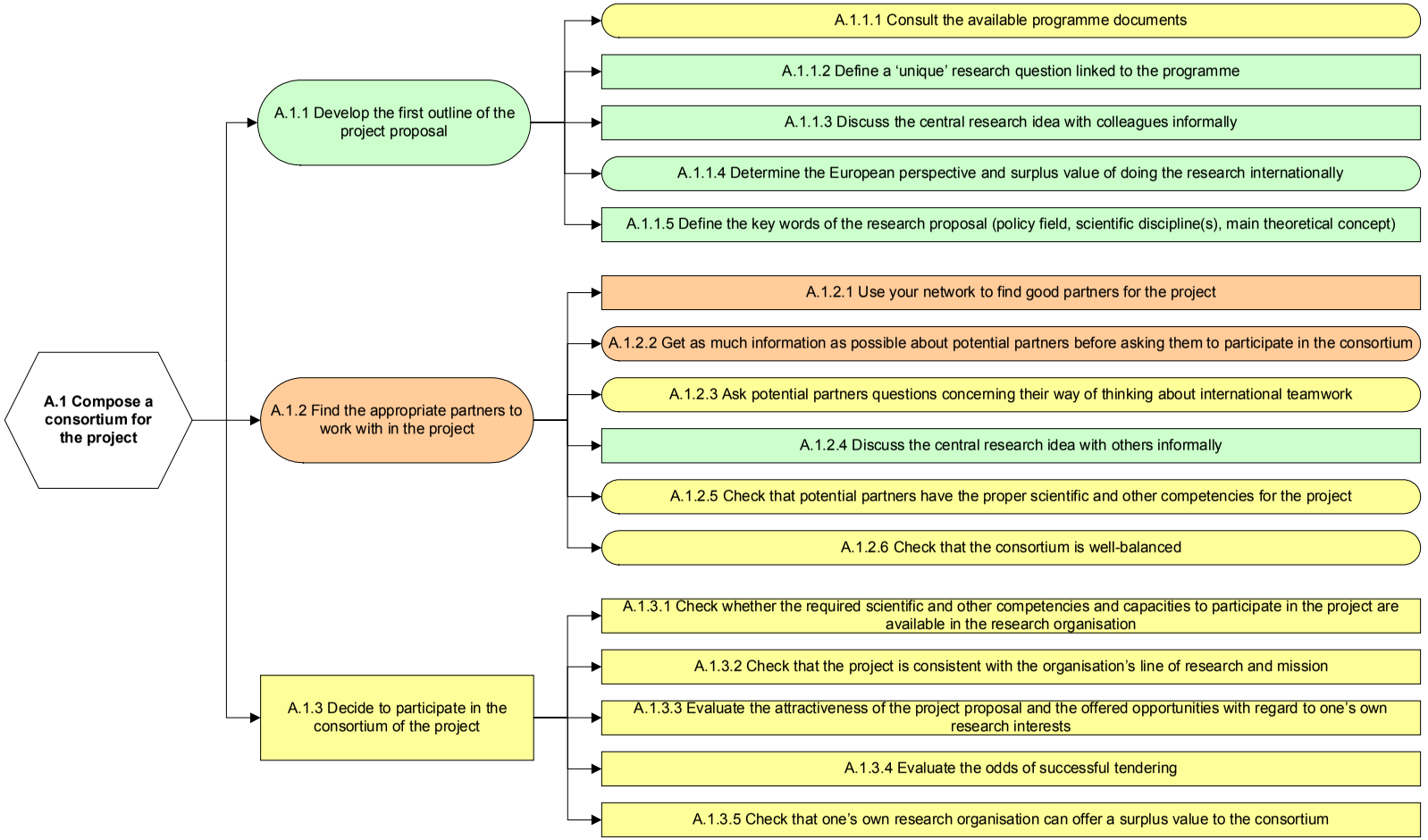
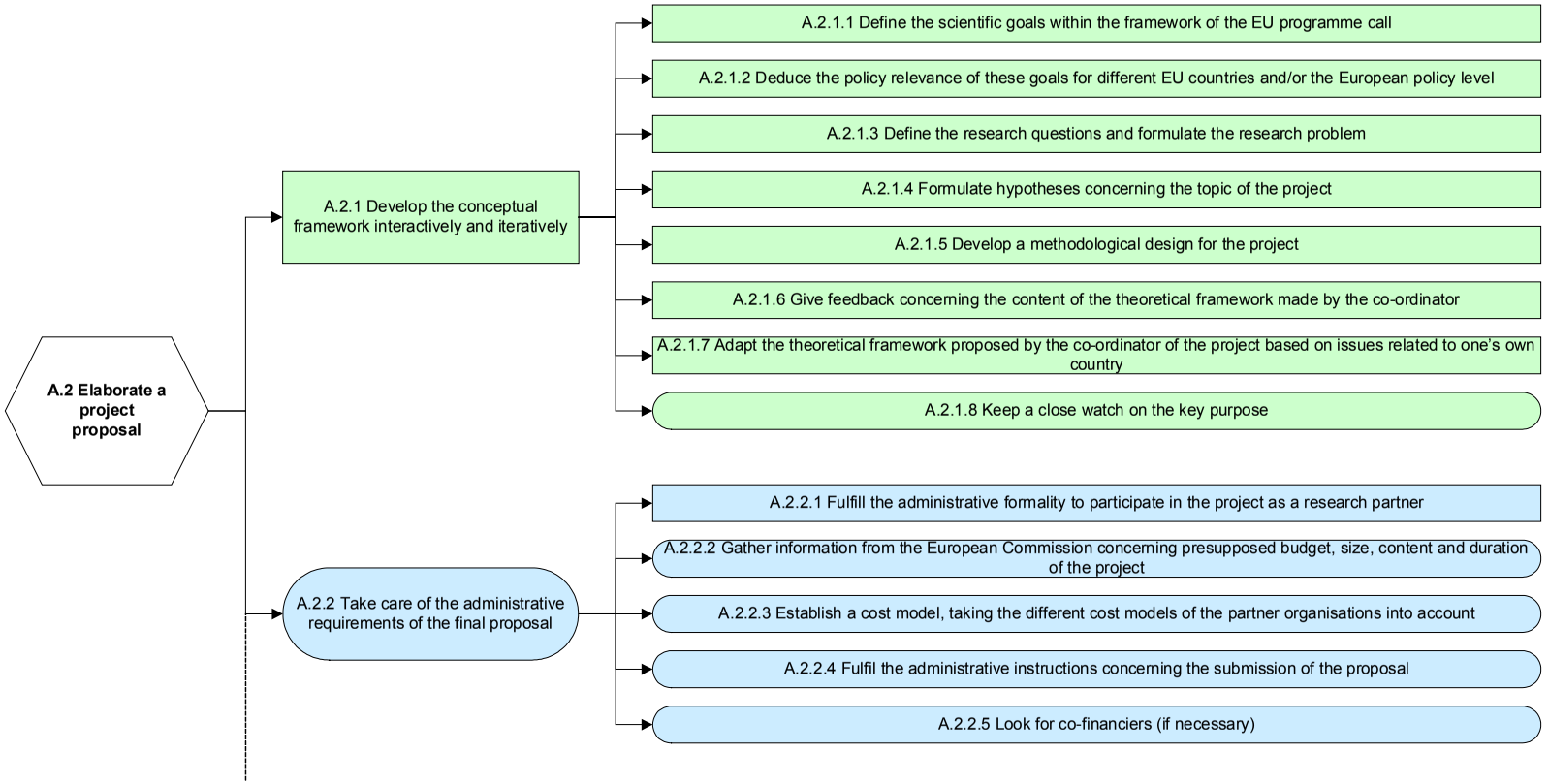
A.1 Compose a consortium for the project

The project co-ordinator develops the first outline of a project proposal and searches for appropriate partners to work with in the project. The co-ordinator selects partners because of their surplus value for the project team. Partners join the team if they fit into the project constellation. Together, they discuss the central research idea in an international perspective, and define the key words of the research proposal.



A.2 Elaborate a project proposal

Research partners develop the conceptual framework interactively and iteratively: they define scientific goals and their policy relevance, they discuss the theoretical framework, they define the research questions, they formulate hypothesis and they develop a methodological design for the project. The project co-ordinator takes care of the administrative requirements of the final proposal, sets up a management structure that decentralizes the responsibilities and authorities amongst the partners, and defines 'milestones' to evaluate the progress of the project. All partners estimate required time, manpower and budget. Finally, the final proposal is edited.



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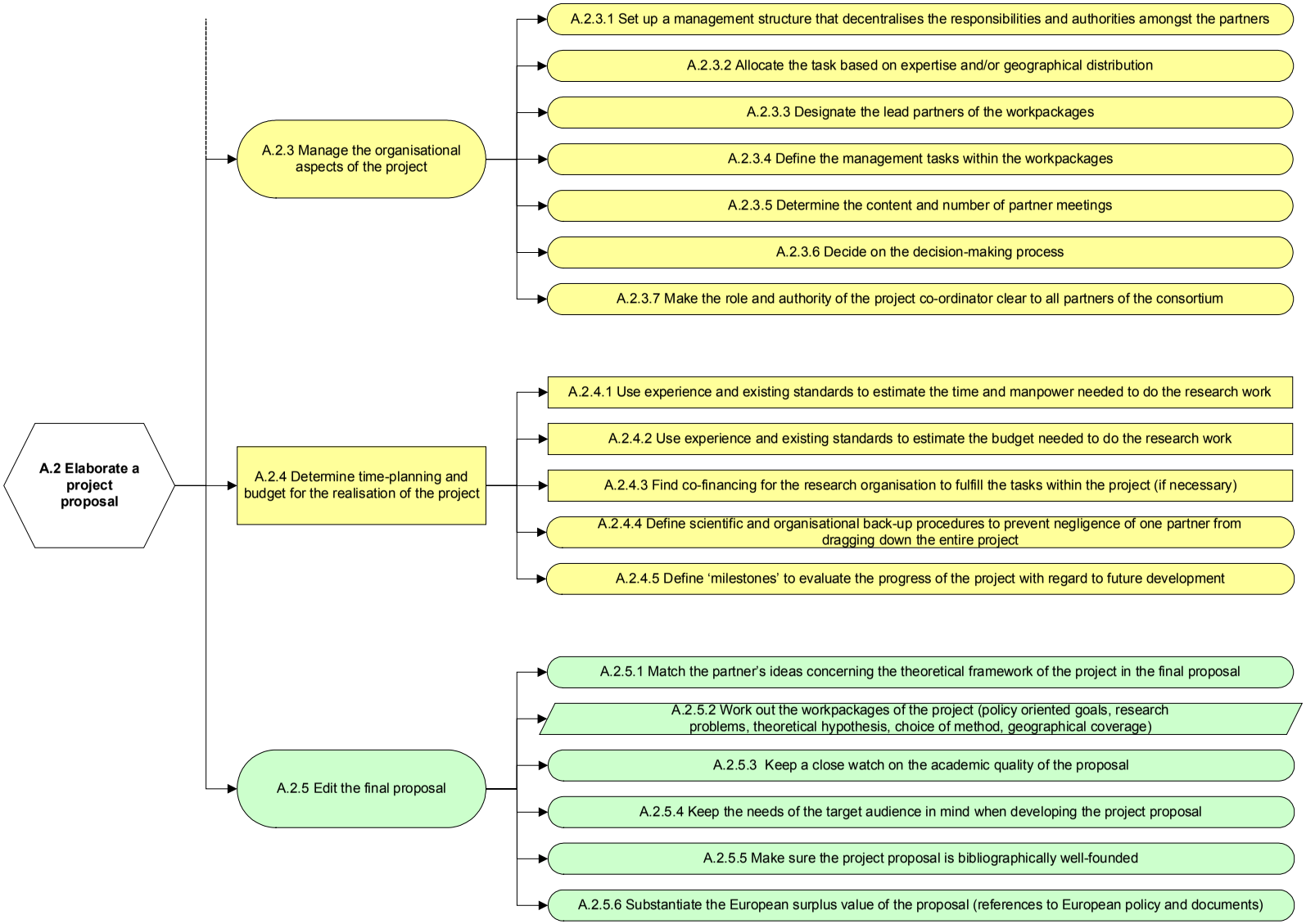
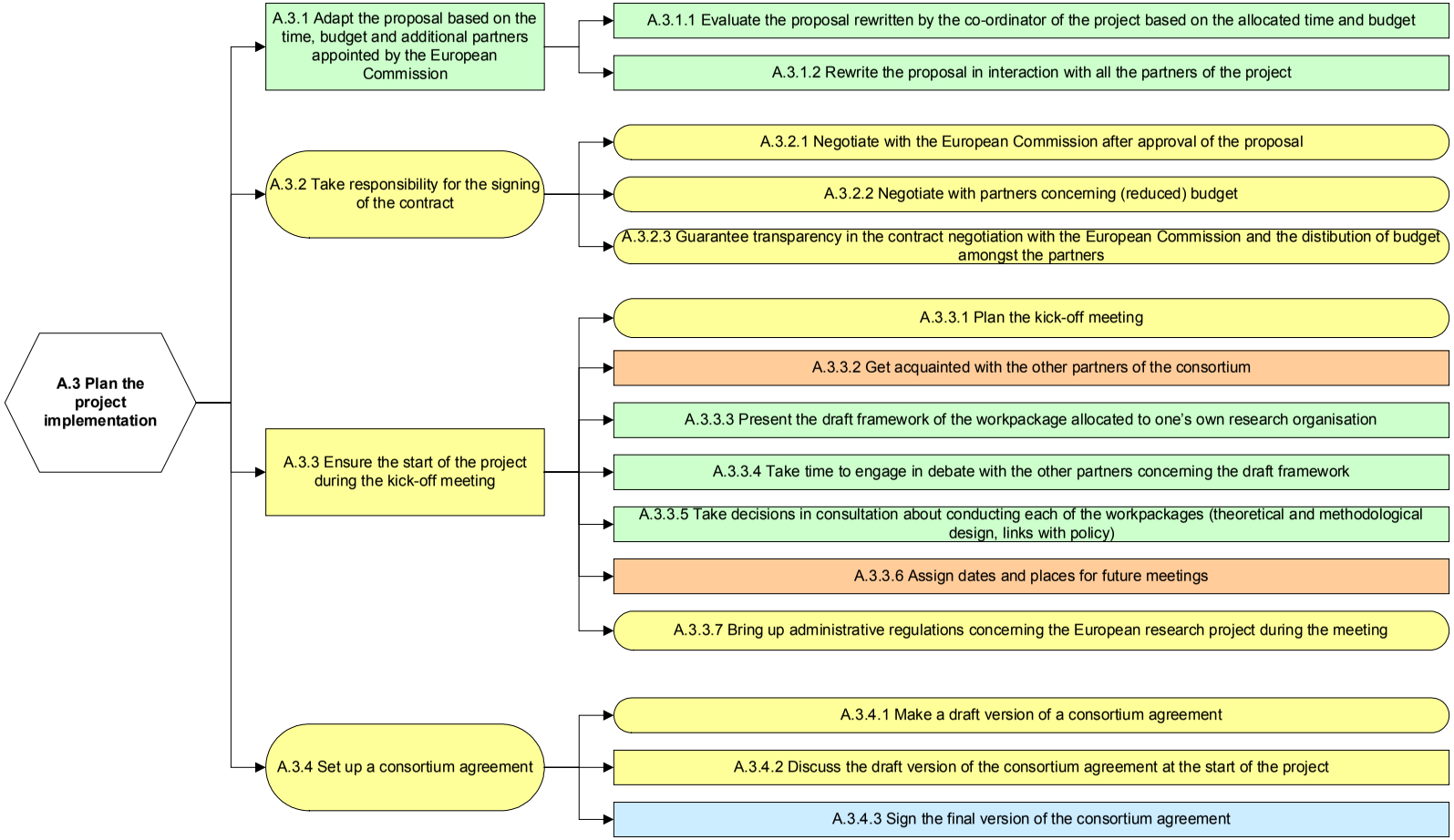

A.2 Elaborate a project proposal
A.2.3 Manage the organisational aspects of the project
A.2.3.1 Set up a management structure that decentralises the responsibilities and authorities amongst the partners
A.2.3.2 Allocate the task based on expertise and/or geographical distribution
A.2.3.3 Designate the lead partners of the workpackages
A.2.3.4 Define the management tasks within the workpackages
A.2.3.5 Determine the content and number of partner meetings
A.2.3.6 Decide on the decision-making process
A.2.3.7 Make the role and authority of the project co-ordinator clear to all partners of the consortium
A.2.4 Determine time-planning and budget for the realisation of the project
A.2.4.1 Use experience and existing standards to estimate the time and manpower needed to do the research work
A.2.4.2 Use experience and existing standards to estimate the budget needed to do the research work
A.2.4.3 Find co-financing for the research organisation to fulfill the tasks within the project (if necessary)
A.2.4.4 Define scientific and organisational back-up procedures to prevent negligence of one partner from dragging down the entire project
A.2.4.5 Define 'milestones' to evaluate the progress of the project with regard to future development
A.2.5 Edit the final proposal
A.2.5.1 Match the partner's ideas concerning the theoretical framework of the project in the final proposal
A.2.5.2 Work out the workpackages of the project (policy oriented goals, research problems, theoretical hypothesis, choice of method, geographical coverage)
A.2.5.3 Keep a close watch on the academic quality of the proposal
A.2.5.4 Keep the needs of the target audience in mind when developing the project proposal
A.2.5.5 Make sure the project proposal is bibliographically well-founded
A.2.5.6 Substantiate the European surplus value of the proposal (references to European policy and documents)

A.3 Plan the project implementation

If the European Commission does not allocate as much time and budget as demanded by the project proposal, partners have to discuss the redistribution of the restricted budget and approve an adapted proposal. The co-ordinator will need to negotiate with the European Commission. The project starts with a kick-off meeting, during which partners get acquainted with the consortium, work packages are presented, and dates and places for future meetings are assigned. The co-ordinator sets up a consortium agreement.



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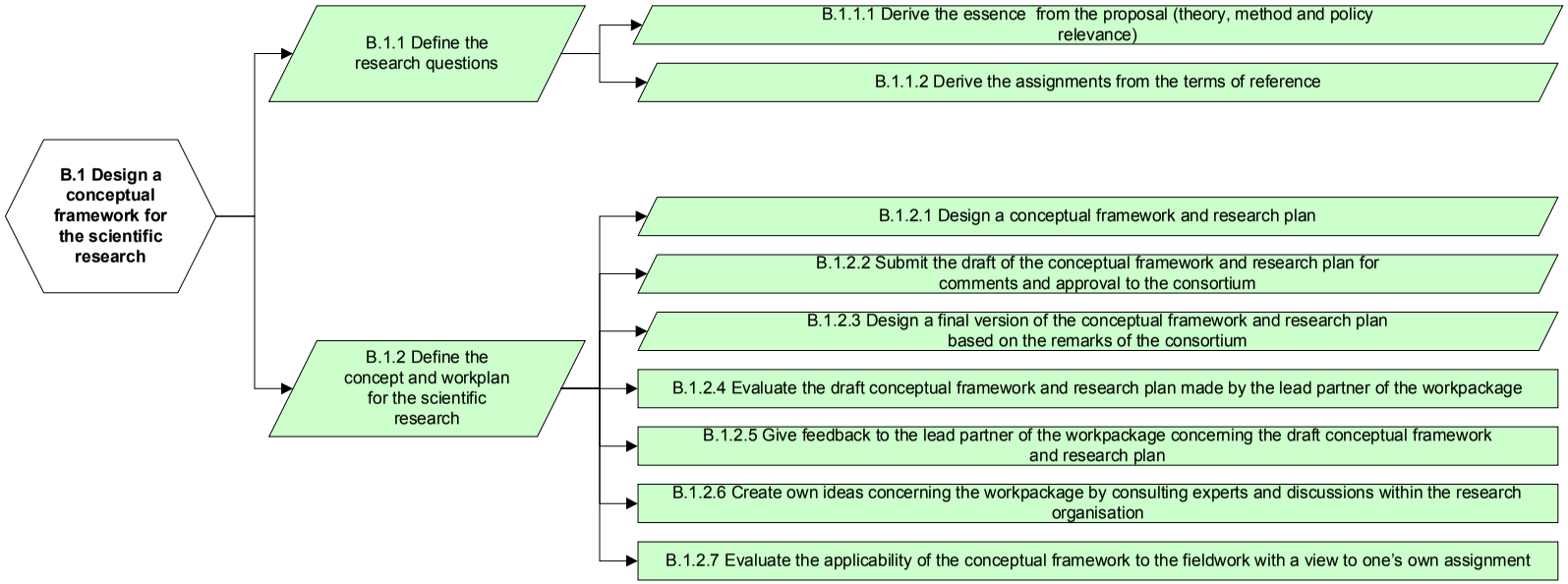
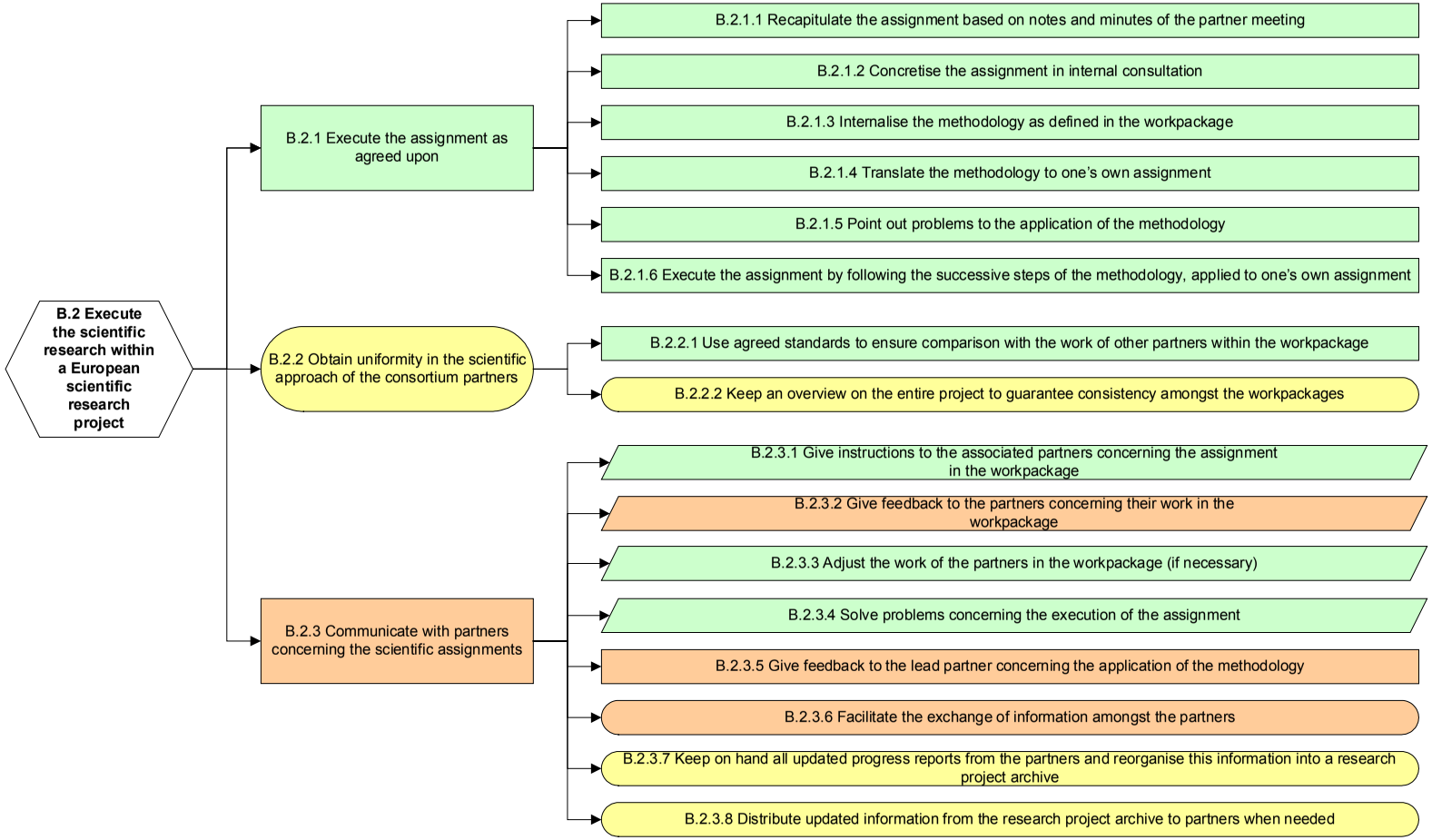
B.1 Design a conceptual framework for the scientific research

The lead partners clearly define the objectives of the scientific research. They define the concept and work plan for the scientific research, in which the conceptual framework and research plan is detailed.



B.2 Execute the scientific research within a European scientific research project

Research partners execute the assignment as agreed upon. Each partner follows the successive steps of the methodology as defined in the work package, and ensures comparison with the work of other partners within the work package. Partners give feedback about the work, help to solve problems, and adjust the work if necessary. The co-ordinator keeps an overview on the entire project, facilitates information exchange amongst partners and distributes information from the research project archive when needed.



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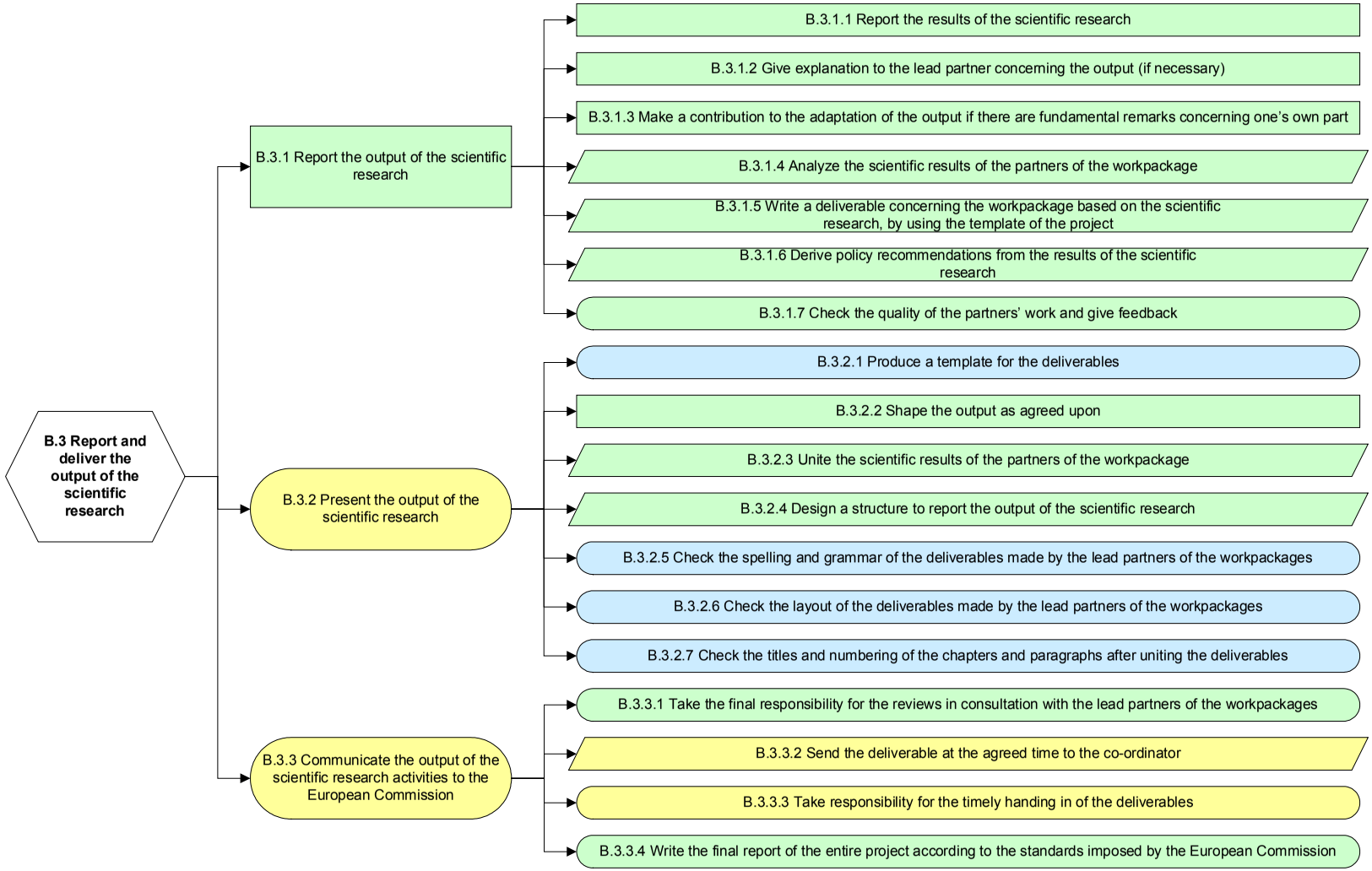
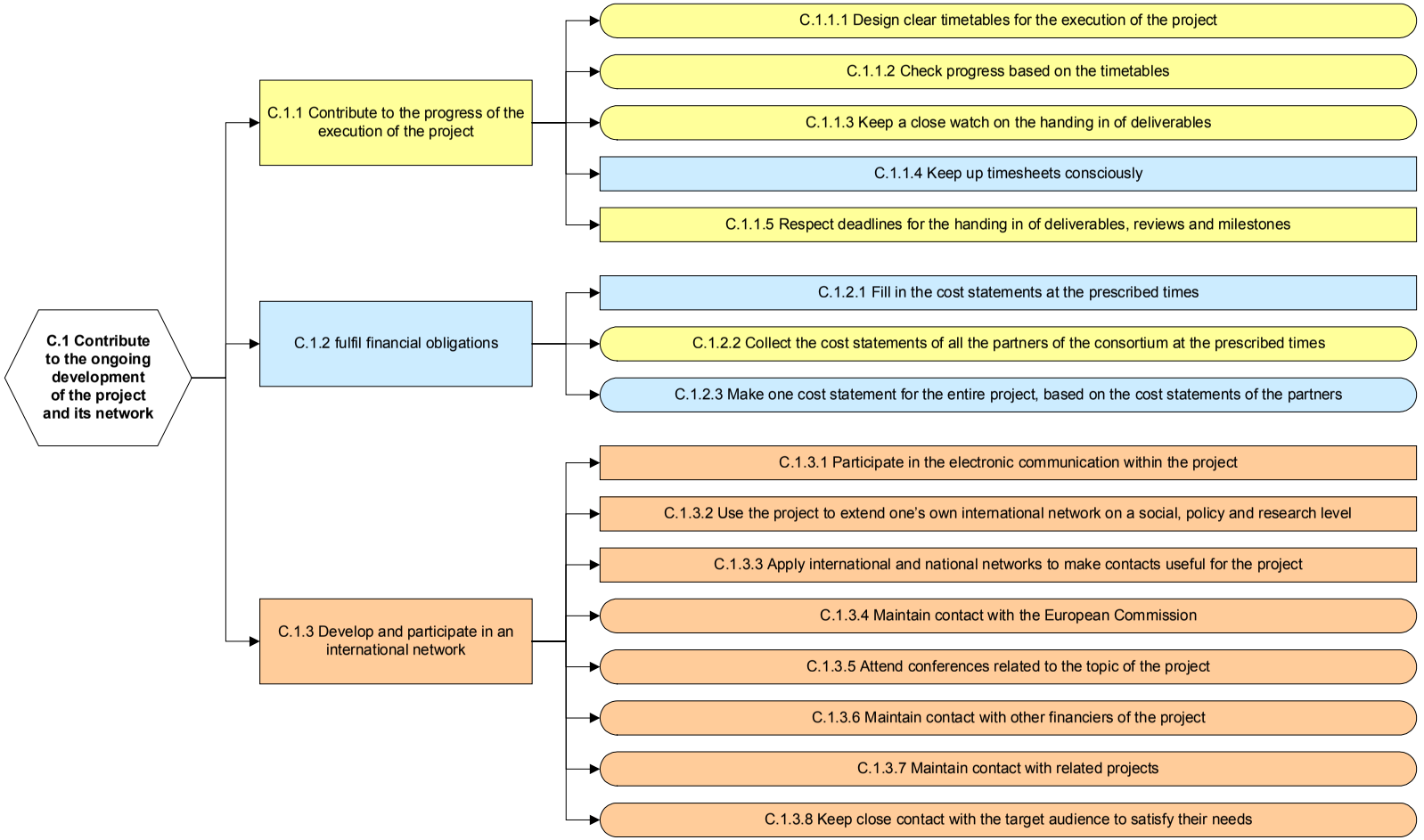
B.3 Report and deliver the output of the scientific research

Research partners shape the output of the scientific research. They explain the output, and adapt if there are fundamental remarks concerning one's own part. The lead partner analyzes the results of the partners, integrates these results into a deliverable concerning the work package, and derives policy recommendations. The project co-ordinator checks the quality of the partner's work, and unites the deliverables of different work packages. The co-ordinator communicates the output of the scientific research activities to the European Commission in time.



C.1 Contribute to the ongoing development of the project an his network

Research partners contribute to the progress of the execution of the project. They check progress based on clear timetables, and handle deliverables, reviews and milestones in time. Partners fill in the cost statements at the prescribed times, the co-ordinator collects them and makes one cost statement for the entire project. Partners develop and participate in the international network. The co-ordinator maintains contact with the European Commission and with related projects.



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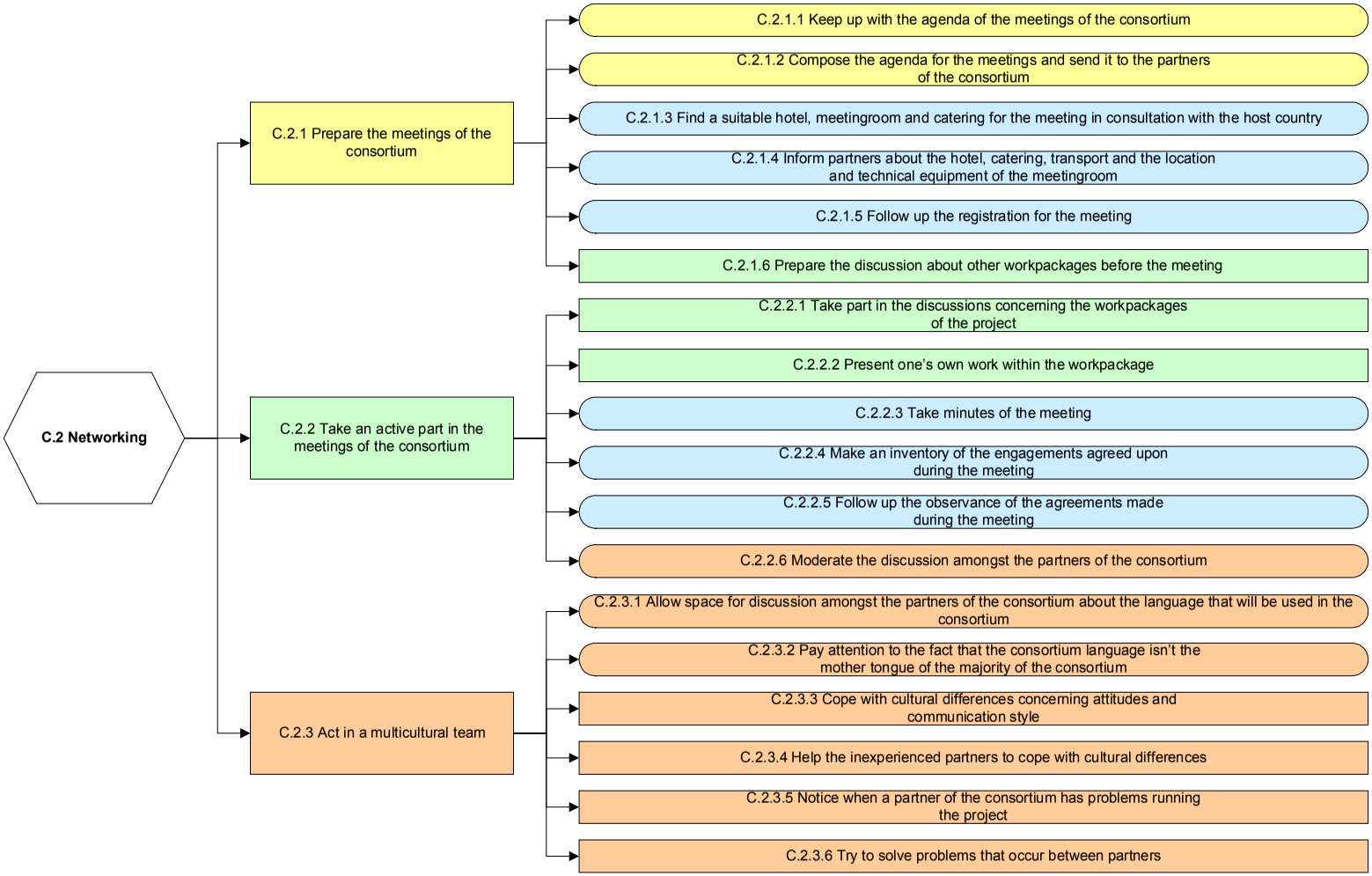
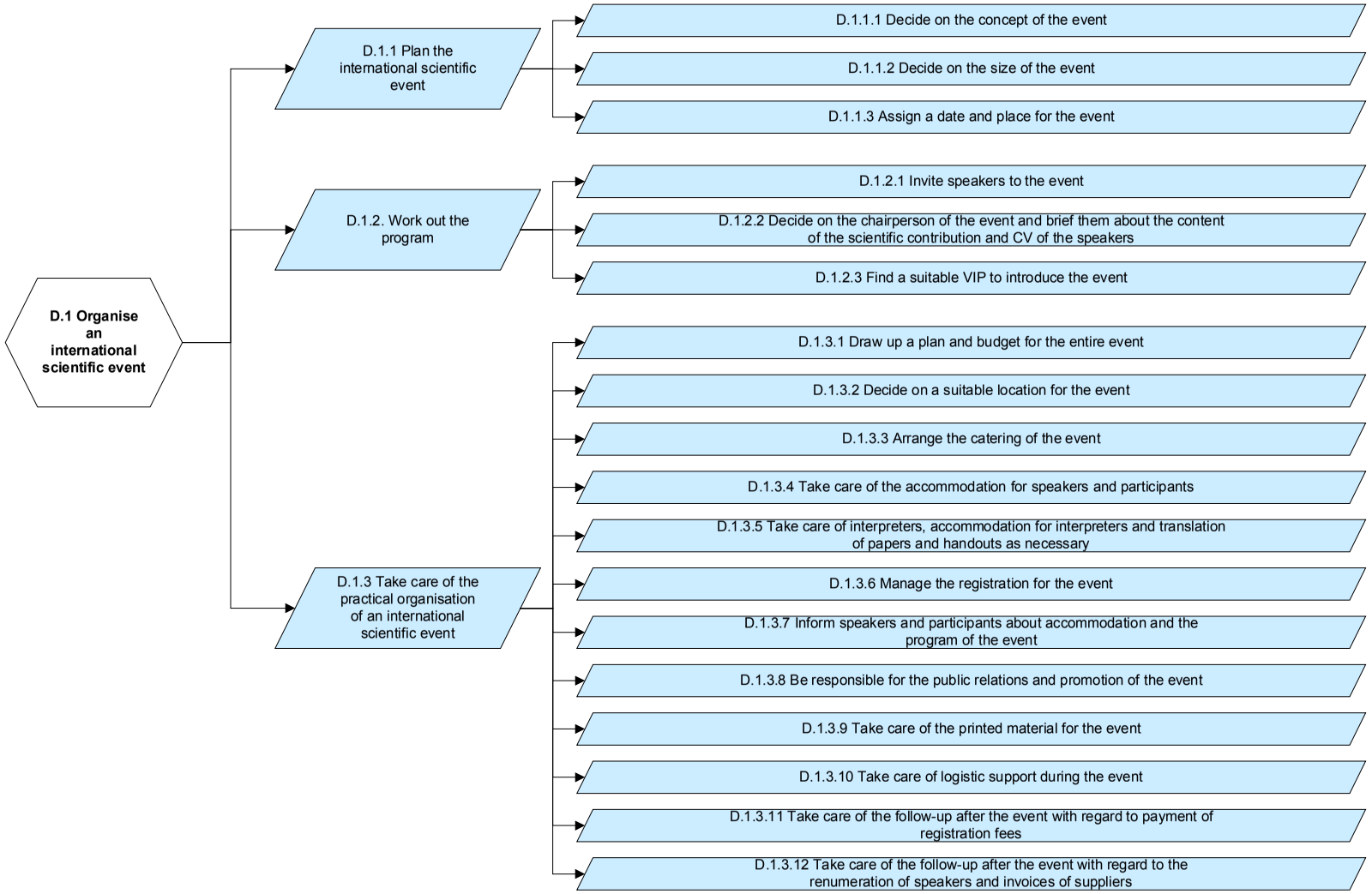
C.2 Keep in contact with the partners of the consortium

Research partners prepare the meetings of the consortium. The co-ordinator prepares the meeting by composing the agenda, and finding suitable accommodation and catering for the meeting. All partners prepare the discussions about other work packages. They take part in the discussions concerning the work packages of the project, and present their own work. The co-ordinator makes minutes of the meeting and makes an inventory of the engagements agreed upon during the meeting. Partners are aware of the fact that they act in a multicultural team, and have tot cope with differences concerning attitudes and communication style.



D.1 Organise an international scientific event

The lead partner will decide on the concept and the size of the international scientific event. They take care of the practical organization of the event: planning and budgeting the entire event, deciding on suitable locations, arranging the catering, taking care of the accommodation, inviting speakers and chairpersons, taking care of interpreters, taking care of logistic support during the event and of the follow-up after the event.



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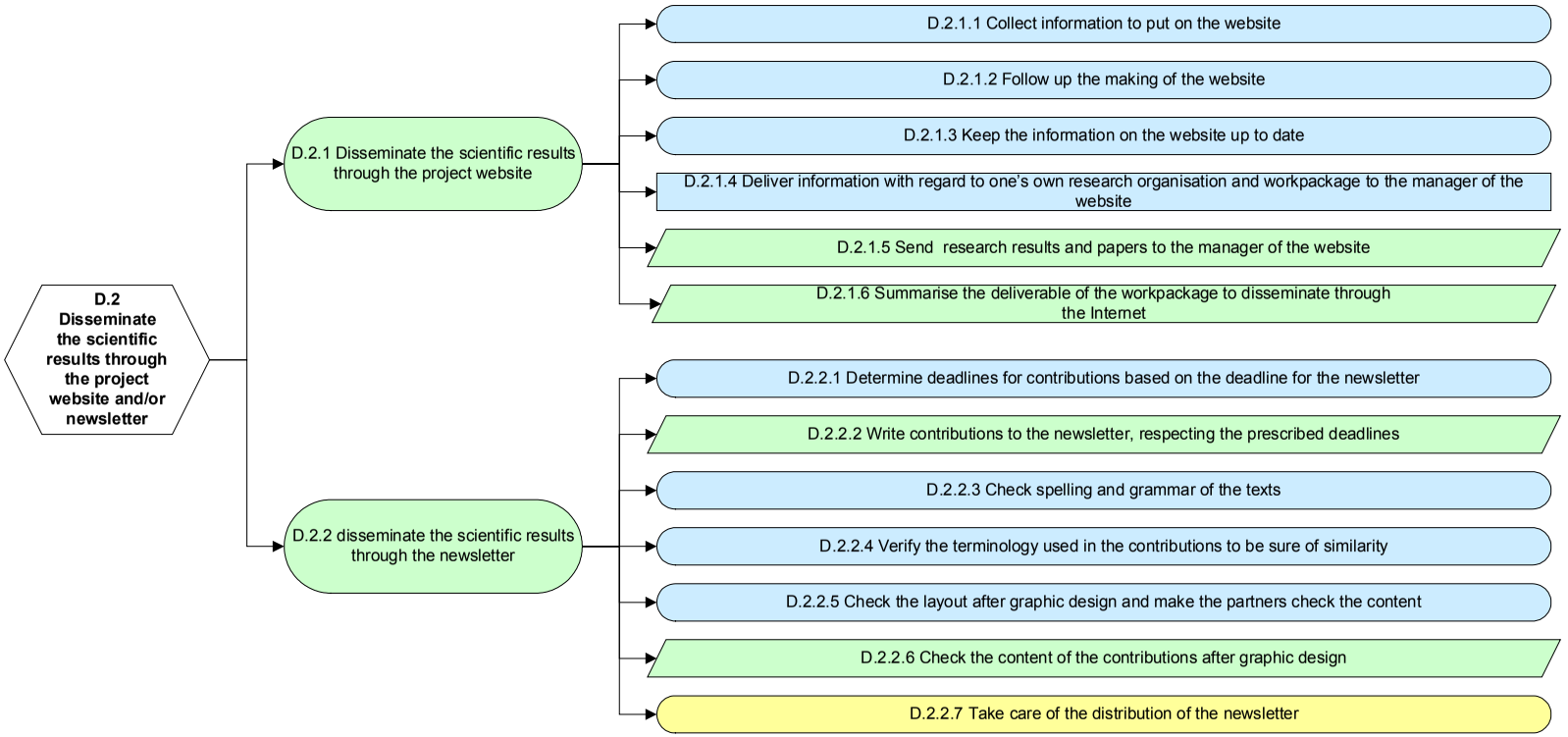
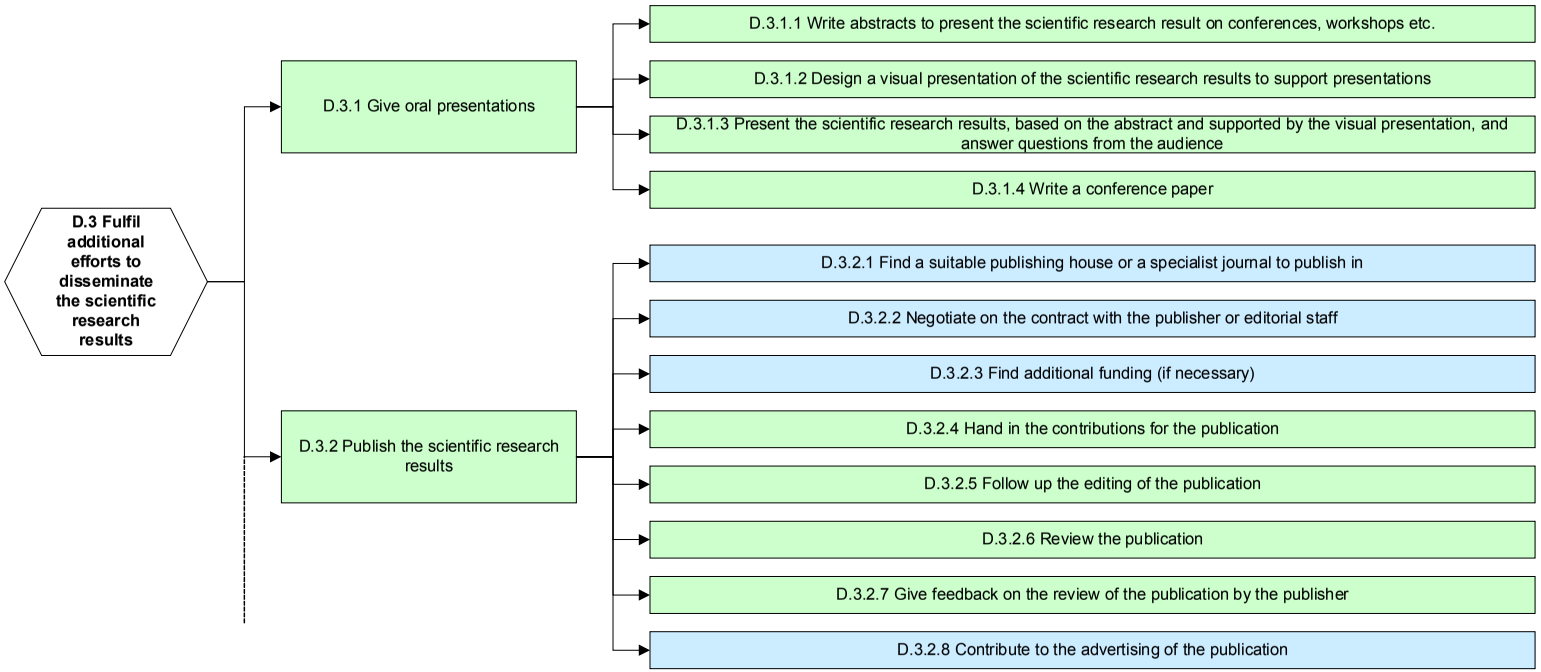
D.2 Disseminate the scientific results through the project website and/or newsletter

The research partners will disseminate the scientific results through the project website. Partners deliver information with regard to their own research organization and work package to the manager of the website. Lead partners send results and papers, and summarize the deliverable of the work package to disseminate through the Internet. They also write contributions to the newsletter, respecting the imposed deadlines. The co-ordinator determines these deadlines, checks spelling, grammar, terminology and lay-out, and takes care of the distribution of the newsletter.



D.3 Fulfil additional efforts to disseminate the scientific research results

Research partners present the scientific research result on conferences, workshops, etc. They write abstracts and conference papers. They also publish the results e.g. in specialist journals. They inform and/or advise national policy makers, by writing a policy brief, organizing workshops for these policy makers, or making sure they know about the website or read the newsletters. Press releases or 'populistic' versions of the main research results ensure dissemination through press and other media channels.



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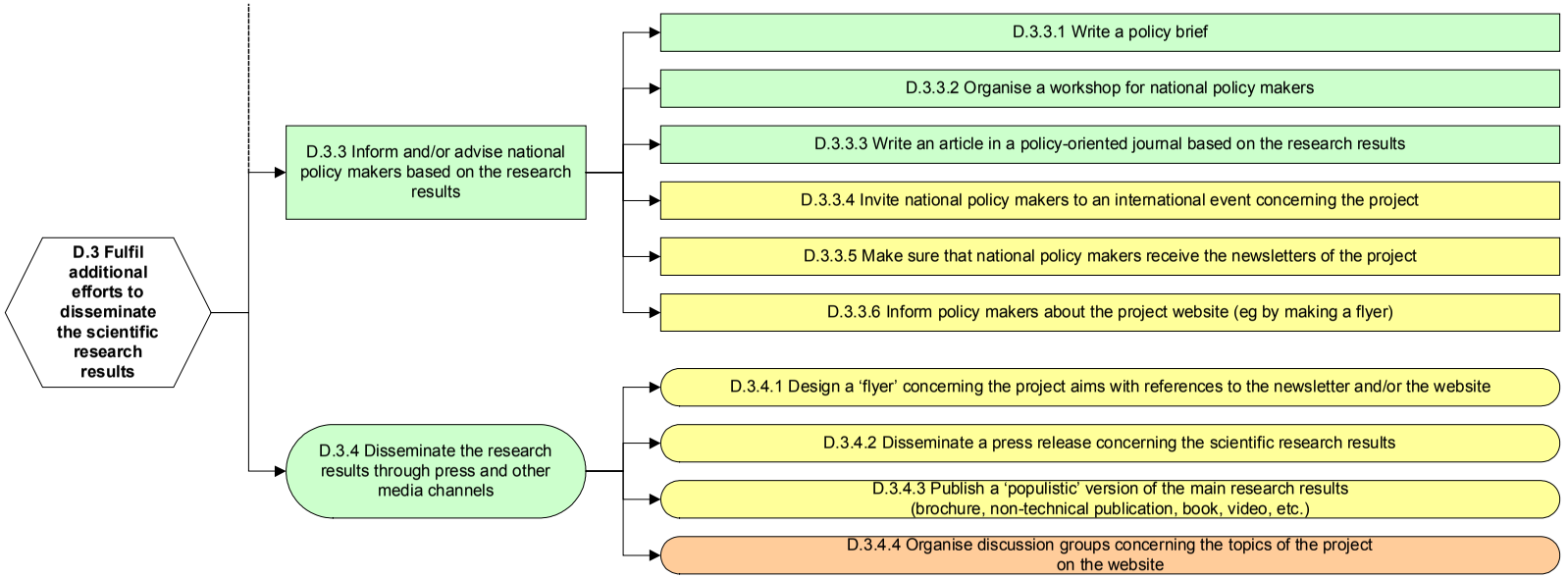
D.3 Fulfil additional efforts to disseminate the scientific research results
D.3.3 Inform and/or advise national policy makers based on the research results
D.3.3.1 Write a policy brief
D.3.3.2 Organise a workshop for national policy makers
D.3.3.3 Write an article in a policy-oriented journal based on the research results
D.3.3.4 Invite national policy makers to an international event concerning the project
D.3.3.5 Make sure that national policy makers receive the newsletters of the project
D.3.3.6 Inform policy makers about the project website (eg by making a flyer)
D.3.4 Disseminate the research results through press and other media channels
D.3.4.1 Design a 'flyer' concerning the project aims with references to the newsletter and/or the website
D.3.4.2 Disseminate a press release concerning the scientific research results
D.3.4.3 Publish a 'populistic' version of the main research results (brochure, non-technical publication, book, video, etc.)
D.3.4.4 Organise discussion groups concerning the topics of the project on the website

3. Knowledge and Skills

The RESPECT project website (www.respectproject.org) links these attributes to the interactive flowchart of tasks.

Overall knowledge and skills

Knowledge

- good knowledge of English/consortium language
- thorough knowledge of technical jargon in English/consortium language
- knowledge of the new communication technologies
- knowledge of the new technological tools
- knowledge of the European policy making process

Skills

- skills to communicate in English/consortium language
- skills to write in English/consortium language
- skills to make use of the new technological communication forms
- skills to work in a delocated team
- skills to listen and communicate clearly (communication skills)
- skills to use the new technological tools with regard to the project
- skills to act flexibly
- skills to respect the different European theoretical traditions (intellectual flexibility)
- social skills
- familiarity with a variety of cultures
- cultural sensitivity and flexibility
- skills in giving feedback

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A. Prepare a European scientific research project

A.1 Compose a consortium for the project

A.1.1 Develop the first outline of the project proposal

Knowledge

- Knowledge of where to find the available programme documents
- Knowledge of formulating research questions
- Knowledge of a range of problems that can be the basic assumption for socio-economic research
- Knowledge of European society

Skills

- Skills to define (a) problem(s) concerning the European interests, which gives occasion for socio-economic research
- Skills to define original research questions concerning the European interests
- Skills to bring some research experts together to discuss the central research idea
- Skills to distil the essence from the discussion concerning policy field, scientific disciplines and theoretical concept

A.1.2 Find the appropriate partners to work with in the project

Knowledge

- Knowledge of important competencies and attitudes to act in an international project
- Knowledge of methods or ways to collect information about potential partners/projects concerning important scientific and other competencies

Skills

- Skills to judge the scientific and other competencies and attitudes of other research organisations
- Skills to fall back on one's own international network
- Networking skills

A.1.3 Decide to participate in the consortium of the project

Knowledge

- Knowledge of the organisational structure and the different positions within one's own research organisation
- Knowledge of the competencies and capacities available within one's own research organisation
- Knowledge of the general research line of one's own research organisation
- Knowledge of the programme requirements
- Knowledge of the programme goals and contents
- Knowledge of policy themes and social discussions on a national as well as European level related to the topic of the project
- In-depth knowledge of the European state of the art of the specific research field

Skills

- Skills to match the proposal with one's own research interests
- Skills to participate in international networks of the specific research field
- Skills to judge the project in the light of the research line of one's own research organisation
- Skills to decide if the available competencies and capacities are sufficient to participate in the research project
- Skills to judge the capacities of the project co-ordinator

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A.2 Elaborate a project proposal

A.2.1 Develop the conceptual framework interactively and iteratively

Knowledge

- Knowledge of the central questions and debates of the epistemology and logic
- Knowledge of policy themes and social discussions on a national as well as European level related to the topic of the project
- Knowledge of the actors within society playing a part in the policy implementation relevant to the topic of the project
- Knowledge of general academic skills like logical and analytical thinking and the skills to summarise
- Knowledge of current developments within today's policy field (through newspapers, radio, television, Internet *etc.*)
- Knowledge of the basic concepts and theoretical mainstreams concerning the topic of the project, and the way in which these theories are complementary or not
- Introductory knowledge of adjacent fields of socio-economic study
- Knowledge of the reasons, consequences and correlation of the most important socio-economic developments within modern society, like individualism, rationalisation, and globalisation
- Knowledge of European structures and cultural diversities
- Knowledge of the basic concepts concerning frequently used research approaches and methods
- Knowledge of the basic concept concerning research design and his different steps
- Knowledge of the differences in application possibilities of qualitative and quantitative methods for the data collection and data analysis
- Knowledge of one's own national situation concerning the topic of the work package
- Knowledge of the competences of other partners

Skills

- Skills to translate social problems into research questions.
- Skills to transform unstructured problems into manageable research questions.
- Skills to de- and re contextualise.

- Skills to reason in terms of structures.
- Skills to select suitable theories to answer the formulation of problems.
- Skills to convert theories into a conceptual framework.
- Skills to work in a team.
- Skills to exploit diversity.
- Skills to change tack.
- Skills to give feedback.

A.2.2 Take care of the administrative requirements of the final proposal

Knowledge

- Knowledge of the administrative and financial rules and regulations related to European research projects
- Basic knowledge of the cost structure of socio-economic research in different European countries

Skills

- Skills to work accurately
- Skills to negotiate
- Skills to take care of accounting aspects

A.2.3 Manage the organisational aspects of the project

Knowledge

- Knowledge of the European interests of the different European countries
- Knowledge of important management tasks
- Knowledge of the role of the co-ordinator within the project
- Knowledge of decision-making processes

Skills

- Skills to mediate
- Skills to delegate
- Skills to redefine the main objectives of the project in operational objectives that are specific, measurable, actionable and reachable

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- Skills to translate European interests in the allocation of workpackages
- Skills to negotiate with research partners
- Skills to maintain transparency while negotiating
- Skills to formulate the role of the co-ordinator clearly
- Skills to obtain authority within the consortium
- Skills to find the correct balance between job-oriented and person-oriented aspects of the co-ordinating tasks
- Skills to exert a personal influence on the partners of the consortium

A.2.4 Determine the time-planning and budget for the realisation of the project

Knowledge

- Knowledge of standards to estimate time and budget needed to do research work
- Knowledge of clients who may be interested in the results of the study and may be willing to co-finance in the research project
- Knowledge of the structure of expenses of one's own research organisation
- Knowledge of the intellectual property of the project results (patents, copyright, data protection *etc.*)

Skills

- Skills to translate the structure of expenses into a budget needed to do research work
- Skills to convince clients to invest in the study
- Skills to determine a number of ways by which the objectives and/or results can be realised
- Skills to subdivide the formulated objectives in a way that the connection between parts is weaker than the connection within one part
- Skills to determine crucial phases in a research project
- Skills to stimulate 'weak' partners
- Skills to propose a just division of the budget
- Skills to change tack if necessary

A.2.5 Edit the final proposal

Knowledge

- Tacit knowledge of the European research plan (*eg* hidden rules)
- Knowledge of academic standards
- Knowledge of the basic concepts concerning frequently used research approaches and methods
- Knowledge of the basic concepts and steps of research design
- Knowledge of the different application possibilities of qualitative and quantitative methods for data collection and data analysis
- Knowledge of the target audience and its needs

Skills

- Skills to select a suitable research design for the formulation of the problem
- Skills to communicate with the European Commission, target audience and co-financiers about the content, design and results of the study
- Skills to formulate scientific ideas in a big broad vision
- Skills to understand the importance of European integration
- Skills to find a balance between referring to one's own bibliographic work and the work of others
- Skills to determine a hierarchy in targets: the subdividing of main objectives into operational targets and related results
- Skills to subdivide the formulated results into parts that can be autonomously fulfilled, so they can be allocated to different research institutes

A.3 Plan the project implementation

A.3.1 Adapt the proposal based on the time and budget appointed by the European Commission

Skills

- Skills to translate the consequences of changed budget and time into an adjustment of the research plan
- Skills to cope with flexibility concerning the research plan

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A.3.2 Take responsibility for the signing of the contract

Skills

- Skills to communicate with the European Commission concerning content, budget and time-planning of the project
- Skills to re-allocate the tasks based on the budget and time-planning apportioned by the European Commission with transparency
- Skills to be diplomatic

A.3.3 Ensure the start of the project during the kick-off meeting

Knowledge

- Knowledge of quality, information and organisation management
- Knowledge of presentation techniques
- Knowledge of meeting techniques
- Knowledge of the administrative regulations concerning European research projects, imposed by the European Commission
- Skills
- Skills to take the initiative
- Skills to act in a team
- Skills to perform in a group
- Skills to cope with cultural differences
- Skills to use criticism constructively
- Skills to listen and communicate
- Skills to let language, race, ethnicity, nationality, gender, disabilities, class, age and academic status inform your research findings and guide your research practice
- Skills to formulate, justify and evaluate chosen methods and means for the allocated workpackage
- Skills to participate actively in a meeting
- Skills to cope with different views
- Skills to contact with different people

A.3.4 Set up a consortium agreement

Knowledge

- Knowledge of the most important agreements which have to be made to make the collaboration work
- Knowledge of legal issues (model contracts, intellectual property rights, data protection, publishing rights and duties)
- Knowledge of differences in the research funding of private and public research institutes

Skills

- Skills to formulate agreements clearly
- Skills to express one's own ideas of doing research in an international team
- Skills to meet one's own ideas of doing research in an international team with the ideas of the co-ordinator

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B. Conduct scientific research with a European scientific research project

B.1 Design a conceptual framework for the scientific research

B.1.1 Define the research questions

Knowledge

- Knowledge of the European research language
- Knowledge of academic skills such as logical and analytical thinking

Skills

- Skills to distinguish essence from side issues
- Skills to listen and communicate clearly
- Skills to synthesise

B.1.2 Define the concept and workplan for the scientific research

Knowledge

- Knowledge of the socio-economic developments and current affairs within the field of study
- In-depth knowledge of the theoretical mainstreams/literature concerning the topic of the project
- Basic knowledge of adjacent fields of study
- Knowledge of the causes, effects and interrelationship of the most important socio-economic developments in recent society, like individualism, rationalisation and globalisation
- Knowledge of basic terms of frequently used research approaches and methods

- Knowledge of the basic terms and different steps of research design (put the research questions into practice, concretise the variables, define research units, observation units, method of observation, type of research *etc.*)
- Knowledge of information sources concerning the research questions
- Knowledge of the differences in application possibilities of qualitative and quantitative methods for the data collection and data analysis
- Knowledge of the methodology used in the research
- Knowledge of ethical codes

Skills

- Skills to balance academic rigorism and pragmatism
- Skills to search purposively and efficiently for information
- Skills to handle different research methods
- Skills to work out a research plan with different steps and phases of the research activities
- Skills to call on the expertise of others within the research organisation in support of one's own work and skills to use this expertise as an added value for the research project

B.2 Execute the scientific research within a European scientific research project

B.2.1 Execute the assignment as agreed upon

Knowledge

- Methodological knowledge and expertise

Skills

- Skills to persuade people to co-operate
- Skills to stick to the agreed standards concerning data collection
- Skills to implement methods to collect reliable information

B.2.3 Communicate with partners concerning the scientific assignments

Knowledge

- Knowledge of systems to encode information by origin, type, time of creation, subject and status

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- Knowledge of how to determine information flow
- Knowledge of methods to make information flow go according to plan
- Knowledge of procedures for approval and alteration of documents that contain agreements and/or decisions
- Knowledge of procedures to keep all partners informed about what to do with information they receive and which information they have to supply

Skills

- Skills to manage conflicts
- Skills to create clear procedures of approval and alteration
- Skills to keep an overview of the information supplier, information receiver, and what is expected from the receiver
- Skills to explain the research plan clearly to the associated partners (face-to-face or by email)
- Skills to listen and communicate clearly
- Skills to adapt the conceptual framework when problems occur in one of the other countries
- Skills to match the work of others with the conceptual framework, and give instructions when necessary
- Skills to take leadership
- Skills to delegate
- Skills to classify information by type, subject and version
- Skills to classify information in a way that all partners are able to retrace it

B.3 Report and deliver the output of the scientific research

B.3.1/2 Report/present the output of the scientific research

Knowledge

- Knowledge of academic writing methods to present research output
- Knowledge of scientific standards of research: the method of data collection and related meaning, reliability, validity and generality of the research
- Knowledge of the most important qualitative and quantitative methods for data analysis

- Knowledge of the basic features of European policy, in public as well as in private organisations
- Knowledge of the policy sector related to the topics of the project
- Knowledge of the policy instruments
- Knowledge of the scientific standards for written publications
- Knowledge of the most important developments within the European Union, especially those related to one's own research topic
- Knowledge of how to make a plan for quality check, which describes the timing and executors of the quality check.
- Knowledge of how to collect the requirements concerning the project results by consulting different sources
- Knowledge of methods of measurement to check the quality of interim and final project results and control to process

Skills

- Skills to communicate clearly concerning the results of the research
- Skills to adapt the methods of data collection and analysis when necessary
- Skills to give a written overview of one's own contribution to the workpackage
- Skills to go through written and oral information and select relevant information for one's own reporting
- Skills to interpret empirical research and other sources critically
- Skills to separate essentials from side issues with regard to the research questions
- Skills to analyse and evaluate the current policy
- Skills to translate results of scientific research into relevant policy recommendations
- Skills to match the results of the scientific research with the research questions
- Skills to present the results of the study clearly in written language
- Skills to adapt the reporting to the audience (academic community, European Commission, internal, national policy-makers, *etc.*)
- Skills to structure arguments
- Skills to make a template in a word processing programme
- Skills to work very accurately

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- Skills to compile different documents in a single document
- Skills to make the expected project aims and quality requirements clear to all partners of the consortium
- Skills to describe the quality requirements in a testable way

B.3.3 Communicate the output of the scientific research activities to the European Commission

Knowledge

- Knowledge of the deadlines for deliverables, enforced by the European Commission
- Knowledge of the imposed standards concerning the final report

Skills

- Skills to spread responsibilities among the lead partners and the co-ordinator
- Skills to delegate
- Skills to stimulate all lead partners of the consortium to hand in their deliverables on time
- Skills to compile the results of all workpackages
- Skills to distil the essence from the workpackages
- Skills to follow the imposed standards when writing the final report of the project

C. Execute supporting tasks necessary to guarantee the progress of a European scientific research project

C.1 Contribute to the ongoing development of the project and its network

C.1.1 Contribute to the progress of the execution of the project

Knowledge

- Knowledge of the principles to create and use schedules
- Knowledge of the intended results of the project or phases
- Knowledge of the activities to achieve the project/phase results
- Knowledge of the interdependence between activities
- Knowledge of the statutory regulations in the contracts with the European Commission
- Knowledge of the administrative procedures that have to be fulfilled during the project

Skills

- Skills to create a schedule in which the different measurements match with defined times in the execution of the project
- Skills to determine the required time for each activity (the amount of work divided by the available capacities and means of production)
- Skills to make a statement of progress
- Skills to make an overview of activities that are exceptionally off-course, and the proposed or agreed actions for correction during the execution of the project
- Skills to make an overview of incomplete activities, with a prognosis of potential disturbing influences and proposed

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precautionary measures and/or scenarios if this disruptions actually occur

- Skills to find a balance between checking progress and the socio-emotional situation of the partners
- Skills to make and follow up agreements (written, oral)
- Skills to manage one's own agenda and research planning
- Skills to maintain an accurate update of research activities

C.1.2 Fulfil financial obligations

Knowledge

- Basic knowledge of the cost funding of the European Commission
- Knowledge of the audit requirements
- Knowledge of the different forms to be filled in

Skills

- Skills to fill in cost calculation sheets following the rules of the European Commission

C.1.3 Develop and participate in an international network

Knowledge

- Knowledge of the impact of written language
- Knowledge of the sensitivity of written communication
- Knowledge of communication technologies (email, letters, fax, telephone, website *etc.*
- Knowledge of the conferences organised in Europe
- Knowledge of related projects
- Knowledge of the target audience of the project
- Knowledge of the European administration

Skills

- Skills to convert spoken language into written language
- Skills to establish contact with unfamiliar people
- Skills to acquaint existing contacts with regard to the project aims
- Skills to let the target audience formulate their needs
- Skills to maintain goal-oriented contacts

- Skills to cope with the European bureaucracy
- Skills to manage time to fulfil additional obligations with regard to the acquaintance of the project

C.2 Networking

C.2.1 Prepare the meetings of the consortium

Knowledge

- Knowledge of the agreed meeting dates
- Knowledge of the topics that have to be discussed during meetings
- Knowledge of needs concerning accommodation, catering and demands during meetings
- Knowledge of technical equipment
- Knowledge of the administrative aspects concerning planning and organising

Skills

- Skills to manage time
- Skills to plan and organise
- Skills to facilitate a social atmosphere

C.2.2 Take an active part in the meetings of the consortium

Knowledge

- Knowledge of research methods
- Basic knowledge of adjacent fields of study
- Knowledge of report meetings
- Knowledge of methods for discussion and brainstorming

Skills

- Skills to perform in a group
- Skills to share ideas
- Skills to express ideas concerning the work of other partners clearly
- Skills to formulate, establish, justify and evaluate the selected method and means for one's own workpackage in group

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- Skills to make explicit and profile one's own contribution to the research project
- Skills to cope with flexibility concerning meeting places (be prepared to travel)
- Skills to listen
- Skills to distinguish what is essential from side issues
- Skills to write in key notes
- Skills to make clear overviews
- Skills to apply methods for discussion and brainstorming
- Skills to lead a team
- Skills to initiate, co-ordinate and motivate

C.2.3 Act in a multicultural team

Knowledge

- Knowledge of negotiating skills
- Basic knowledge of the different European societies (politics, history, geography)
- Knowledge of the European discourse
- Knowledge of social dynamics of a group

Skills

- Skills to understand different cultures
- Skills to let differences in language, race, ethnicity, nationality, gender, disabilities, class, age, and academic status enrich your research findings
- Skills to cope with different views
- Skills to make contact with people with a different cultural background
- Skills to manage conflicts: working on the recovery of constructive communication between the conflicting parties
- Skills to be diplomatic
- Skills to manage crisis situations
- Skills to promote cohesion among the partners, without turning into an extreme form of 'groupthink'

D. Disseminate the scientific results

D.1. Organise an international scientific event

D.1.1 Plan the international scientific event

Knowledge

- Knowledge of international events with related topics
- Knowledge of the times in the calendar that have an adverse effect on the degree of participation in the international event (*eg* school holidays)
- Knowledge of the important aspects for a conference location (*eg* accessibility, available infrastructure, *etc.*)

Skills

- Skills to develop clear ideas with regard to the international event
- Skills to estimate the impact of the size of the audience on the type of the event

D.1.2/3 Work out the program/Take care of the practical organisation of an international scientific event

Knowledge

- Knowledge of technological infrastructure
- Knowledge of legislation concerning employment contracts (*eg* hostesses)
- Knowledge of renowned persons within the research field
- Knowledge of advertising channels for international scientific events
- Knowledge of public relation techniques

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Skills

- Skills to communicate formally with unfamiliar people
- Skills to plan and organise
- Skills to react to unexpected circumstances
- Skills to make an accurate budget
- Skills to work independently on the making of a documentation map, prospecting with regard to the location, catering, interpreters, printing services, *etc.*
- Skills to organise with a sharp eye for detail to guarantee a smooth course (*eg* put water out for the speakers, check the location of the sockets for projectors, change nameplates of the speakers, *etc.*)

D.2 Disseminate the scientific results through the project website and/or newsletter

D.2.1 Disseminate the scientific results through the project website

Knowledge

- Knowledge of the composition of a website
- Knowledge of how to adapt information on a website (*eg* delete information, add new information, change information, *etc.*)
- Knowledge of how to write a good summary (to briefly answer the most important research questions, be very readable, and often illustrated with convenient schemes and graphs).
- Knowledge of how to present research results to a broad public

Skills

- Skills to make partners hand in their contributions as agreed and on time
- Skills to communicate conceptual ideas concerning the website clearly to the web designer
- Skills to avoid technical jargon when presenting the research results

D.2.2 Disseminate the scientific results through the newsletter

Knowledge

- Knowledge of spelling and grammar checking programmes within word processing programmes
- Knowledge of different channels to spread the newsletter
- Knowledge of the target group for the newsletter
- Knowledge of how to present research results to a specific public

Skills

- Skills to use a spelling and grammar checking programme.
- Skills to work accurately
- Skills to use different channels to bring the newsletter to the target group
- Skills to hand in contributions on time

D.3 Fulfil additional efforts to disseminate the scientific research results

D.3.1 Give oral presentations

Knowledge

- Knowledge of presentation techniques
- Knowledge of a computer programme to make visual presentations (*eg* Powerpoint)
- Knowledge of how to write an abstract of the research results that meets the requirements of the conference, workshop, *etc.*

Skills

- Skills to give a clear oral presentation of the research results
- Skills to answer questions concerning the research design and results
- Skills to adapt the oral presentation to the audience (academic, populist, *etc.*)

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D.3.2 Publish the scientific research results

Knowledge

- Knowledge of publishing houses
- Knowledge of academic journals
- Knowledge of the standards for publications: guarantee reliability and validity though scientific justification (justification of the research design, the selection of research units or events, how the variables were made operational, the data collections, the methods of analysis)
- Knowledge of the standards for a well-considered research publication (research objectives, research questions, survey of preceding research activities concerning the topic, concept definition, justification of the research design, the research results, conclusion, discussion and policy recommendations if so desired)
- Knowledge of the reading public
- Knowledge of advertising channels

Skills

- Skills to negotiate
- Skills to bring the topic of the research onto the scientific agenda
- Skills to write the publication with regard to the reading public
- Skills to make use of advertising channels

D.3.3 Inform and/or advise European and/or national stakeholders based on the research results

Knowledge

- Knowledge of the powers of stakeholders
- Knowledge of the national policy with regard to the research topic
- Knowledge of the channels to communicate with stakeholders
- Knowledge of how to organise a policy-oriented workshop

Skills

- Skills to anticipate national policy with regard to the topic of the study

- Skills to bring the research results to the notice of stakeholders
- Skills to convince stakeholders of the importance of the research results for national policy
- Skills to communicate the research results to stakeholders
- Skills to write an article concerning the research results in a way that attracts the attention of stakeholders

D.3.4 Disseminate the research results through press and other media channels

Knowledge

- Knowledge of the content of a flyer concerning scientific research
- Knowledge of the content of a press briefing

Skills

- Skills to hold a press conference concerning the project
- Skills to bring the research to the notice of the media
- Skills to make an attractive flyer for the project
- Skills to formulate the research results in a populist way
- Skills to stimulate people to enter into a discussion on the website concerning the topics of the project

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4. Range Indicators

For some of the terms used in the occupational profile, we will give a list of possible interpretations. We do not pretend that this is a limited and exhaustive enumeration, but it will give you an idea.

Methodology

- interviewing methods
- observations, including the use of ethnographic methods
- surveys
- secondary data analysis
- non-medical experimental research involving human subjects
- comparative analysis, including cross-cultural research
- analytical literature surveys, scoping exercises and content analysis
- case studies
- participatory action research
- evaluations and assessment techniques
- forecasting techniques

Information administered by the project co-ordinator

- decision documents
- specifications concerning the content of the project
- research results, collected basic data, concepts *etc.*
- specifications concerning the budget of the project
- plans and reports concerning progress check
- minutes of the meetings
- correspondence

Levels of contacts (networking and target audience)

- local
- regional
- National
- international
- civil servants
- politicians
- representatives of interest groups
- companies
- general public
- stakeholders

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5. Conclusion

5.1 Concluding remarks

As a conclusion we want to make two kinds of final remarks on the constructed occupational profile.

First we will synthesise the particular skills and knowledge that are needed to create 'added' or 'unique' value to an European research project in the social and economic sciences. Secondly, we will briefly circumscribe the possible usability of the profile by different actors (policy makers and research organisations) as an assessment or evaluation tool.

5.2 'Unique' skills and knowledge

To develop the profile of socio-economic research, we first constructed the flowchart containing all required tasks within a European socio-economic research project. Afterwards, we deduced the required skills and knowledge to fulfil this tasks. This resulted in three types of skills and knowledge:

- skills and knowledge important for all kind of socio-economic research
- skills and knowledge that become more important in European research
- skills and knowledge unique for European research.

5.2.1 A continued relevance of key scientific norms and attitudes

The first type of skills shows that the core 'business' of European research is still scientific work. All skills and knowledge required to conduct socio-economic research are entered in the profile. In these concluding remarks, we just want to mention some important norms that each researcher should take into account when executing scientific work. As a European researcher, one stays a member of a professional, scientific community.

Taking this into consideration, we can summarise the key skills important for researchers acting in a scientific community and

which are as important for European research as for national research. He or she:

- should share scientific results with one another
- should evaluate scientific results by previously-determined objective criteria
- should avoid dogmatism and prejudice
- should demonstrate expertise
- and is committed to the contractual financiers without losing scientific integrity.

With regard to the other two types of skills and knowledge, it is quite difficult to distinguish which qualifications become more important in European research, and which are unique for European research. Therefore, we will treat them together. These skills and knowledge can be subdivided in four categories:

- networking
- European knowledge
- management and leadership
- dissemination.

5.2.2 Networking in a multicultural and delocated team

The most important task for every researcher in a European project, is to act properly in a multicultural and delocated team. *Networking* is an important part of European research. To do so, the researcher requires:

- basic knowledge of the different European societies
- profound knowledge of the consortium language (usually English)
- skills to express oneself in the consortium language
- skills to understand different cultures
- skills to let differences enrich the research findings
- skills to cope with different views
- skills to respect the different European theoretical traditions
- skills to make use of the new technological communication tools
- skills to convert spoken language into written language (knowledge of the impact and sensitivity of written language).

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5.2.3 'European' knowledge

To conduct European research, one should at least have a basic knowledge of Europe, its policy, the member states, the society, *etc.* This is why we consider *European knowledge* a very important part of the qualification needs within this profile. Among them, the most important ones are:

- knowledge of the basic features of European policy
- knowledge of the most important developments within the European Union, especially those related to one's own research topic
- knowledge of the European research language
- knowledge of the European qualification standards
- skills to handle different research methods
- good knowledge of European society, to define problems and research questions concerning European interests

5.2.4 Competencies of international project management

The third category of skills and knowledge — *management and leadership* — are exclusively for the co-ordinator and lead partners of a workpackage. They need:

- a broad international network
- tacit knowledge of European research programmes and areas
- good knowledge of European interests of the different European countries and the skills to translate this in the allocation of the workpackages
- negotiating skills and the capacity to personally influence people
- skills to classify information in a way that all partners are able to retrace it
- skills to delegate and spread responsibilities among the lead partners and the co-ordinator
- skills to adapt the conceptual framework when problems occur in one of the other countries
- skills to match the work of others with the conceptual framework, and give instructions when necessary.

5.2.5 Academic and policy-oriented dissemination on the international level

Finally, we come to the skills and knowledge required to *disseminate* the results of the study. In fact, the dissemination of

results of a European research project does not require unique skills and knowledge. They are quite the same as those required in a national research project, but with an international dimension. The most important ones are:

- knowledge of public relation techniques (*eg* advertising channels)
- skills to present research results for a broad public (website, newsletter)
- skills to give clear oral presentations (on international scientific events)
- knowledge of international academic journals
- knowledge of international standards of publications
- skills to bring the research project to the notice of the stakeholders and the media on a European level.

5.3 Usability of the profile as an assessment tool

Within the framework of the project, the profile has been the basic material for the production of a user manual to European socio-economic research and a reference document for compiling the voluntary code of practice.

More important, however, are the possible purposes that could go beyond the framework of the project. First of all, the profile could contribute to the broader professional debate about the curriculum consequences of international research. Recently, policy makers made great efforts to harmonise higher education in the EU-countries. One of the results of this harmonisation process has been the Bologna Agreement. Within this agreement, policy-makers gave attention to the importance of a European dimension in higher education. In the Communiqué of Prague, the Ministers of Education of the EU-countries formulated it as follows:

> *'In order to further strengthen the important European dimension of higher education and graduate employability, Ministers called upon the higher education sector to increase the development of modules, courses and curricula at all levels with "European" content, orientation and organisation. This concerns particularly modules, courses and degree curricula offered in partnership by institutions from different countries and leading to a recognised joint decree.'*
>
> (www.bologna-berlin2003.de/pdf/Prague_communiquTheta.pdf)

The profile of socio-economic research emphasises the importance of 'unified European research'. European knowledge, European networking and project management are indispensable elements to conduct 'high quality' European research. Therefore, training of this European knowledge, networking and international project management should be a valuable part of higher education courses today in the social and economic sciences.

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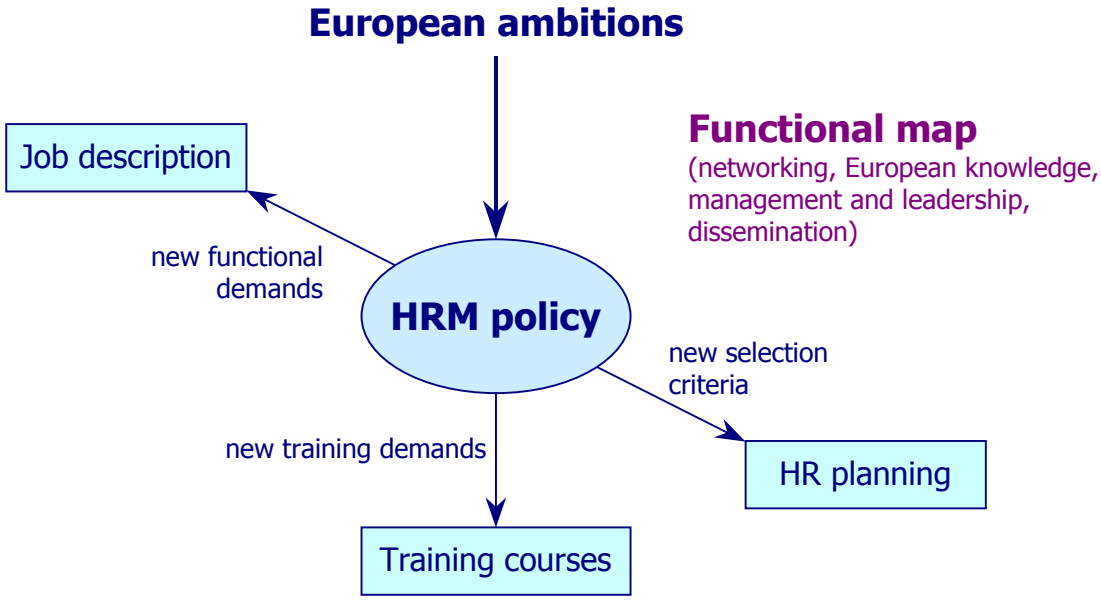
Secondly, the profile can contribute to the debate on creating quality standards and assessment of European socio-economic research. Concerning quality checks of European research projects, we think that these should not be restricted to results. During the process, the client can keep an eye on the quality of the work. We call this the progress check of quality in research. Since the profile describes the process of socio-economic research, it can be used as a guideline or checklist for such a progress check. It could be used as a structuring tool for detecting and determining quality problems.

Finally, the profile can contribute to the HRM policy of research organisations. In institutes with European ambitions, qualifications concerning European knowledge, networking, management and leadership and international dissemination become more important. The profile, with its enumeration of qualifications, can contribute to the adaptation of the job descriptions, training courses and human resource planning. European ambitions require new functional demands and new training demands, which will be reflected in the selection criteria (see Figure).

Figure: Possible contribution of the profile to the HRM policy of a research institute



Source: HIVA, 2003

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Annex 1: Link Between the Occupational Profile and the RESPECT Code

Professional and ethical code		Occupational profile	
1. Upholding scientific standards			
1.a	Ensure factual accuracy and avoid misrepresentation, fabrication, suppression or misinterpretation of data		
1.b	Take account of the work of colleagues, including research that challenges their own results, and acknowledge fully any debts to previous research as a source of knowledge, data, concepts and methodology	A.1.1	Develop the first outline of the project proposal
		A.2.1	Develop the conceptual framework interactively and iteratively
		B.1.1	Define the research questions
1.c	Critically question authorities and assumptions to make sure that the selection and formulation of research questions, and the conceptualisation or design of research undertakings, do not predetermine an outcome, and do not exclude unwanted findings from the outset	A.1.1	Develop the first outline of the project proposal
		A.2.1	Develop the conceptual framework interactively and iteratively
		A.2.5	Edit the final proposal
		B.1.1	Define the research questions
1.d	Ensure the use of appropriate methodologies and the availability of the appropriate skills and qualifications in the research team	A.1.2	Find the appropriate partners to work with in the project
		A.2.5	Edit the final proposal
		B.1.2	Define the concept and workplan for the scientific research
		B.2.3	Communicate with partners concerning the scientific assignments
1.e	Demonstrate an awareness of the limitations of the research, including the ways in which the characteristics or values of the researchers may have influenced the research process and outcomes, and report fully on any method-ologies used and results obtained (for instance when reporting survey results, mentioning the date, the sample size, the number of non-responses and the probability of error)	B.2.1	Execute the assignment as agreed upon
		B.3.1	Report the output of the scientific research
		B.3.2	Present the output of the scientific research
		B.3.3	Communicate the output of the scientific research activities to the European Commission
1.f	Declare any conflict of interest that may arise in the research funding or design, or in the scientific evaluation of proposals or peer review of colleagues' work	A.1.3	Decide to participate in the consortium of the project
1.g	Report their qualifications and competences accurately and truthfully to contractors and other interested parties, declare the limitations of their own knowledge and experience when invited to review, referee or evaluate the work of colleagues, and avoid taking on work they are not qualified to carry out	A.1.3	Decide to participate in the consortium of the project
		C.1.3	Develop and participate in an international network

Professional and ethical code		Occupational profile	
1.h	Ensure methodology and findings are open for discussion and full peer review	B.1.2	Define the concept and workplan for the scientific research
		B.2.2	Obtain uniformity in the scientific approach of the consortium partners
		C.1.3	Develop and participate in an international network
1.i	Ensure that research findings are reported by themselves, the contractor or the funding agency truthfully, accurately, comprehensively and without distortion. In order to avoid misinterpretation of findings and misunderstandings, researchers have a duty to seek the greatest possible clarity of language when imparting research results	B.3.1	Report the output of the scientific research
		B.3.2	Present the output of the scientific research
		B.3.3	Communicate the output of the scientific research activities to the European Commission
1.j	Ensure that research results are disseminated responsibly and in language that is appropriate and accessible to the target groups for whom the research results are relevant	D.1	Organise an international event
		D.2	Disseminate the scientific research results through the project website and/or newsletter
		D.3	Fulfil additional efforts to disseminate the scientific research results
1.k	Avoid professional behaviour likely to bring the socio-economic research community into disrepute	A.2.4	Determine time-planning and budget for the realisation of the project
		C.1.1	Contribute to the progress of the execution of the project
1.l	Ensure fair and open recruitment and promotion, equality of opportunity and appropriate working conditions for research assistants whom they manage, including interns/stagiaires and research students	A.2.3	Manage the organisational aspects of the project
1.m	Honour their contractual obligations to funders and employers	A.2.2	Take care of the administrative requirements of the final proposal
		A.2.4	Determine time-planning and budget for the realisation of the project
		C.1.2	Fulfil financial obligations
1.n	Declare the source of funding in any communications about the research	D.1	Organise an international event
		D.2	Disseminate the scientific research results through the project website and/or newsletter
		D.3	Fulfil additional efforts to disseminate the scientific research results

Professional and ethical code		Occupational profile	
2. Compliance with the law			
2.1.2.a	Researchers in socio-economic studies are obliged to protect personal data, ie information on identifiable individuals. In order to prevent misuse of data, data are to be stored properly and adequately (eg, by storing information through which individuals can be identified, separately from the remaining research material). Particular caution is necessary in this context with regard to the risks posed by electronic data processing and data transfer.	B.2.1	Execute the assignment as agreed upon
		B.2.2	Obtain uniformity in the scientific approach of the consortium partners
		B.2.3	Communicate with partners concerning the scientific assignments

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Professional and ethical code		Occupational profile	
2.1.2.b	Researchers should respect the anonymity, privacy and confidentiality of individuals participating in the research, and ensure that the presentation of data and findings does not allow the identity of individuals participating in a study, or informants, to be disclosed or inferred. Researchers should also ensure that this is also the case in the presentation of findings by contractors, funding agencies or colleagues. In cases where disclosure of the identity of a subject (whether an individual or an organisation) is central and relevant to the research such confidentiality cannot always be guaranteed. In such cases the problem should be addressed in open discussion with research subjects, with the aim of obtaining informed consent to any disclosure.	B.3	Report and deliver the output of the scientific research
		D.1	Organise an international event
		D.2	Disseminate the scientific research results through the website and/or newsletter of the project
		D.3	Fulfil additional efforts to disseminate the scientific research results
2.2.2.a	In principle, authorship is reserved for those researchers who have made a significant intellectual contribution to a research project, the writing of a research report or another scholarly piece of work. Seniority and position in a research institution's hierarchy alone is not sufficient for authorship. Honorary authorship is unacceptable. In cases where several persons collaborate on a research project or publication, the question of authorship and intended use of the results should be discussed, and consensus achieved among participating researchers as early on in the project as possible. The order of authors listed should take account of their respective contributions to the work. All collaborating researchers, whether named as authors of a publication or not, bear responsibility for the contents of the respective publications and the presentation of data and findings in these publications.	A.3.4	Set up a consortium agreement
		B.3	Report and deliver the output of the scientific research
		D.2	Disseminate the scientific research results through the website and/or newsletter of the project
		D.3	Fulfil additional efforts to disseminate the scientific research results
2.2.2.b	Any third parties' material protected by copyright must be clearly identified and clearly attributable to their original authors, regardless of the form their presentation and quotation might take (except in cases where it is necessary for the original author to remain anonymous; in such instances, however, it must be made clear that the information was provided by an anonymous person). Lack of permission for a given use is considered as theft of intellectual property. Even if material, including data, sources, information or ideas drawn from the work of others is not protected by copyright, it should be identified as third parties' material. Failure to acknowledge the original authorship of such material, as well as knowingly presenting ideas, methodologies and research findings of others in ways that may lead observers to suppose that they are one's own, is regarded as plagiarism and is unacceptable.	A.1.1	Develop the first outline of the project proposal
		A.2.1	Develop the conceptual framework interactively and iteratively
		A.2.5	Edit the final proposal
		B.1.2	Define the concept and workplan for the scientific research
		B.3.1	Report the output of the scientific research
		B.3.3	Communicate the output of the scientific research activities to the European Commission
		D.2	Disseminate the scientific research results through the website and/or newsletter of the project
		D.3	Fulfil additional efforts to disseminate the scientific research results

Professional and ethical code		Occupational profile	
3. Avoidance of social and personal harm			
3.a	Take account of the specific requirements of differing types of quantitative and qualitative research, ensuring that participation in research is voluntary, on the basis of informed consent	B.1.2	Define the concept and workplan for the scientific research
		B.2.1	Execute the assignment as agreed upon
3.b	Take special care to protect the interests of children, the mentally impaired, the elderly and other vulnerable groups	B.2.1	Execute the assignment as agreed upon
3.c	Ensure that the views of all relevant stakeholders are taken into account where this does not conflict with other ethical or scientific principles	A.1.1	Develop the first outline of the project proposal
		A.2.1	Develop the conceptual framework interactively and iteratively
		B.1.1	Define the research questions
		B.2.1	Execute the assignment as agreed upon
3.d	Ensure that research participants are protected from undue intrusion, distress, indignity, physical discomfort, personal embarrassment or psychological or other harm	B.1.2	Define the concept and workplan for the scientific research
		B.2.1	Execute the assignment as agreed upon
3.e	Ensure that the research process does not involve unwarranted material gain or loss for any participant	A.2.3	Manage the organisational aspects of the project
		A.2.4	Determine time-planning and budget for the realisation of the project
		B.1.2	Define the concept and workplan for the scientific research
		B.2.1	Execute the assignment as agreed upon
3.f	Ensure that research results are disseminated in a manner that makes them accessible to the relevant social stakeholders	B.3	Report and deliver the output of the scientific research
		D.1	Organise an international scientific event
		D.2	Disseminate the scientific research results through the project website and/or newsletter
		D.3	Fulfil additional efforts to disseminate the scientific research results
3.g	Ensure that research is commissioned and conducted with respect for all groups in society regardless of race, ethnicity, religion and culture, and with respect for and awareness of gender or other significant social differences	A.1.1	Develop the first outline of the project proposal
		A.2.1	Develop the conceptual framework interactively and iteratively
		B.1.1	Define the research questions
		B.2.1	Execute the assignment as agreed upon
		B.3	Report and deliver the output of the scientific research
3.h	Avoid harassment or discrimination against research assistants, trainees or other colleagues and minimise any safety risks	A.2.3	Manage the organisational aspects of the project
		A.2.4	Determine time-planning and budget for the realisation of the project
		A.3.4	Set up a consortium agreement
		B.2.2	Obtain uniformity in the scientific approach of the consortium partners

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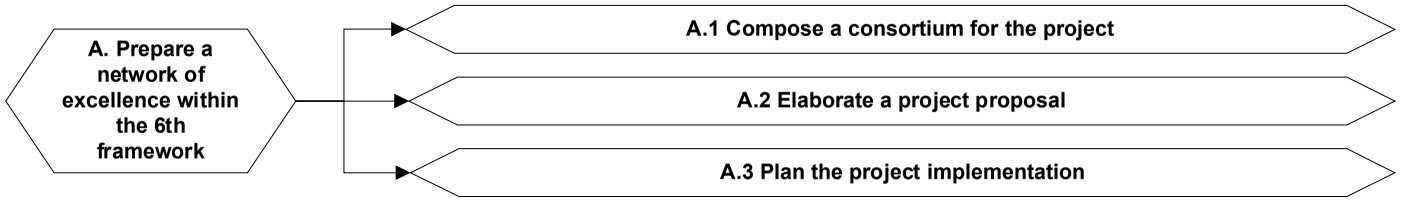
Annex 2: Flowchart of Additional Tasks for the Preparation Phase of a Network of Excellence



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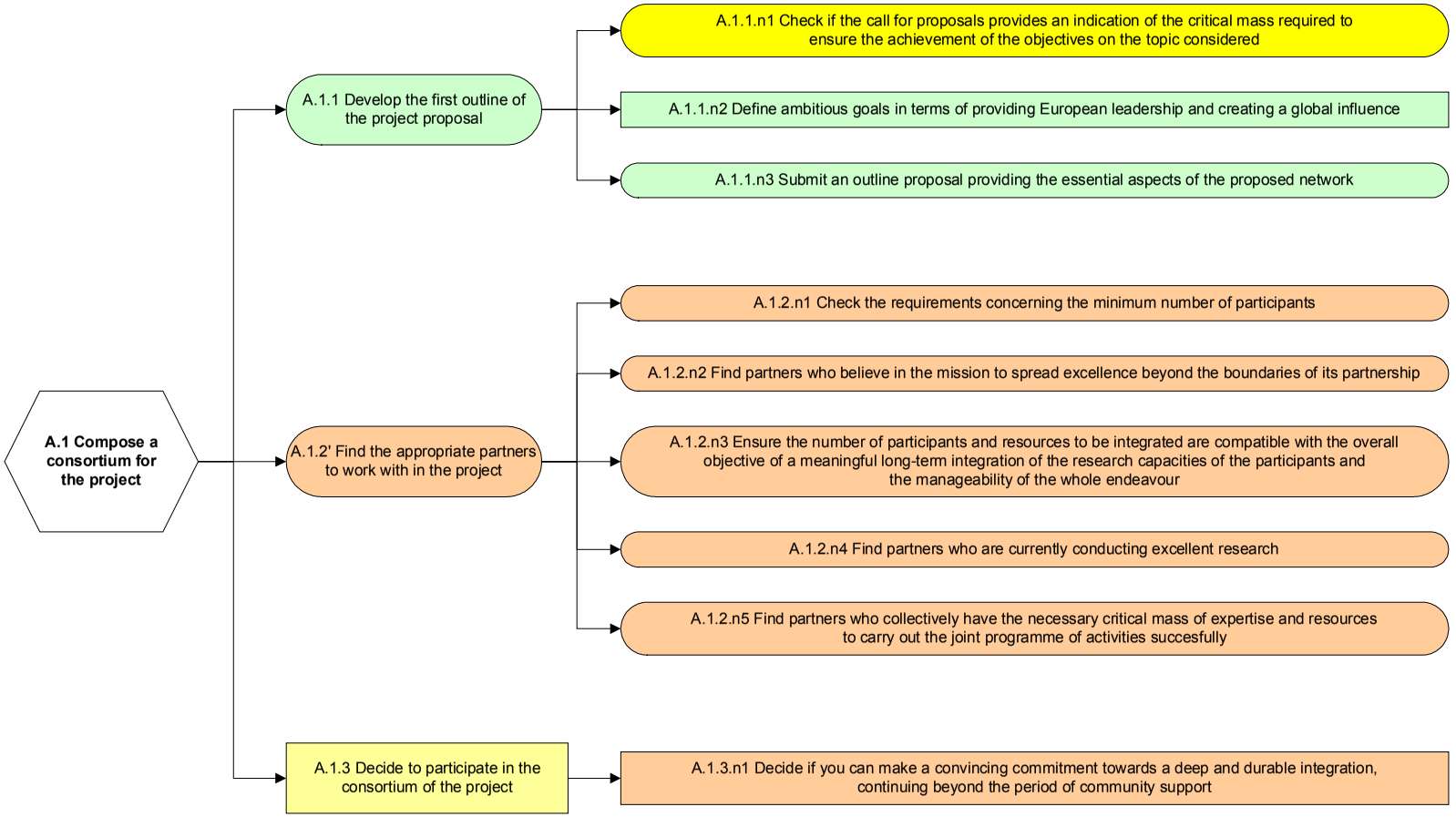
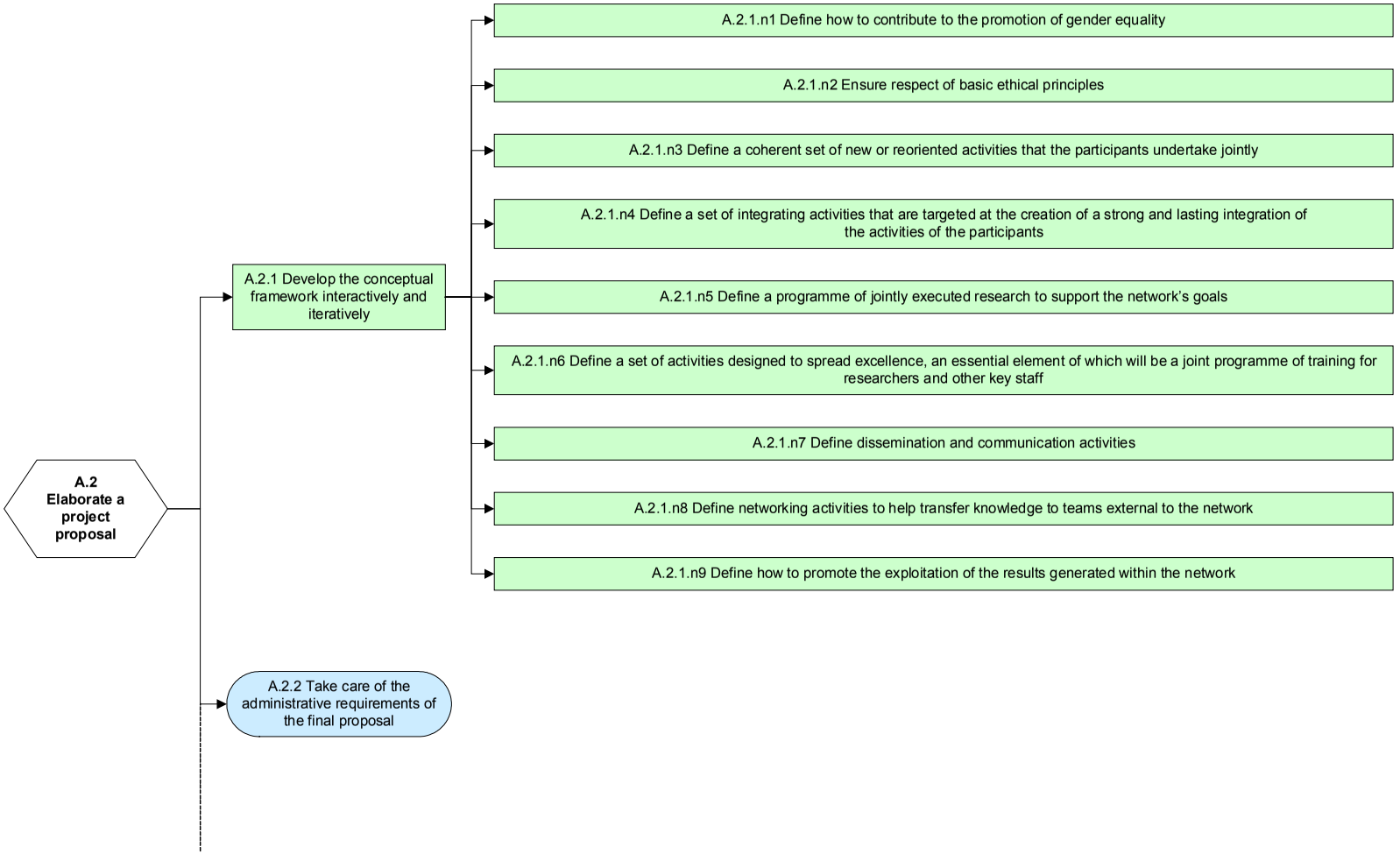

A.1 Compose a consortium for the project
A.1.1 Develop the first outline of the project proposal
A.1.1.n1 Check if the call for proposals provides an indication of the critical mass required to ensure the achievement of the objectives on the topic considered
A.1.1.n2 Define ambitious goals in terms of providing European leadership and creating a global influence
A.1.1.n3 Submit an outline proposal providing the essential aspects of the proposed network
A.1.2' Find the appropriate partners to work with in the project
A.1.2.n1 Check the requirements concerning the minimum number of participants
A.1.2.n2 Find partners who believe in the mission to spread excellence beyond the boundaries of its partnership
A.1.2.n3 Ensure the number of participants and resources to be integrated are compatible with the overall objective of a meaningful long-term integration of the research capacities of the participants and the manageability of the whole endeavour
A.1.2.n4 Find partners who are currently conducting excellent research
A.1.2.n5 Find partners who collectively have the necessary critical mass of expertise and resources to carry out the joint programme of activities succesfully
A.1.3 Decide to participate in the consortium of the project
A.1.3.n1 Decide if you can make a convincing commitment towards a deep and durable integration, continuing beyond the period of community support



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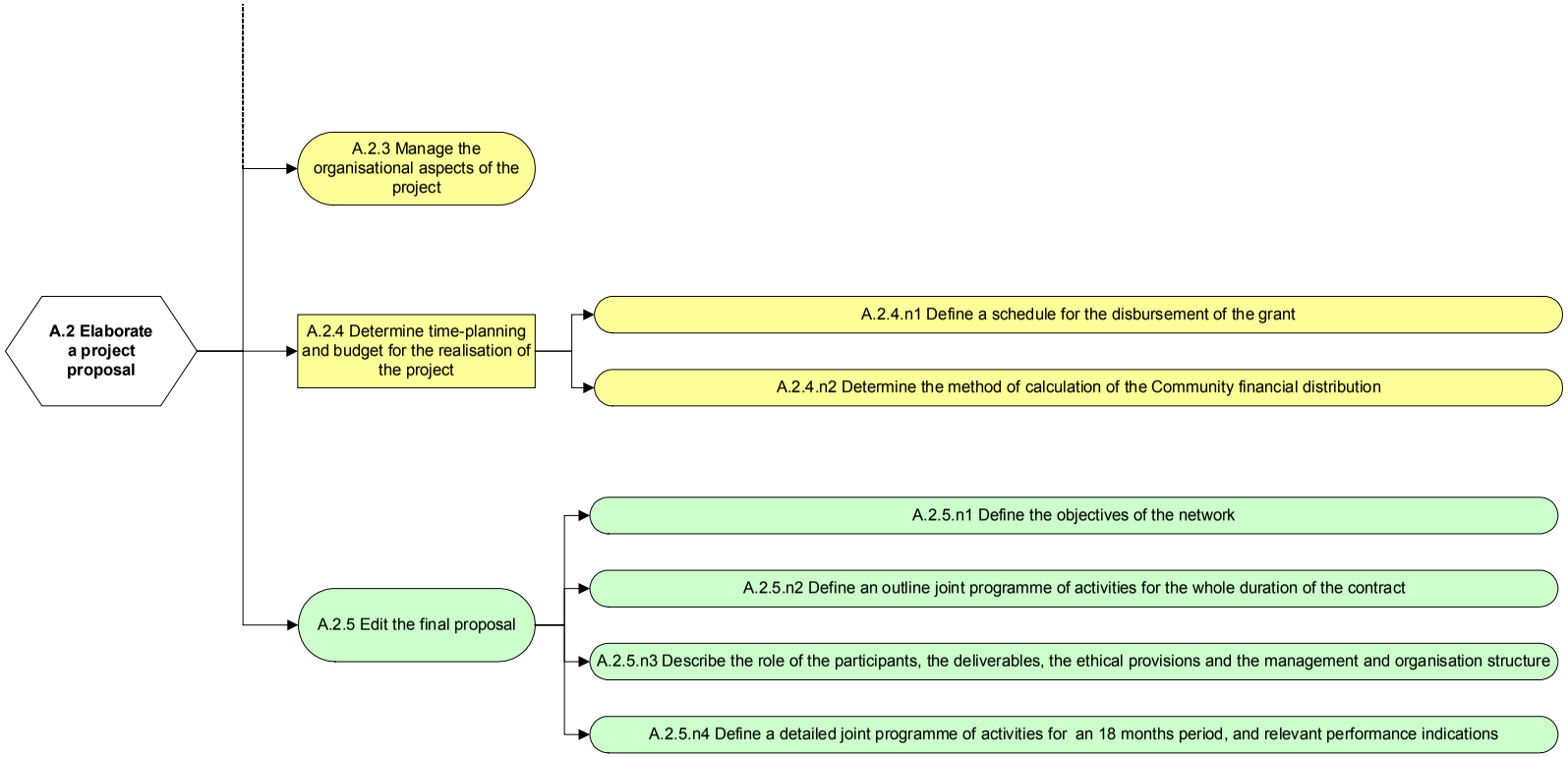
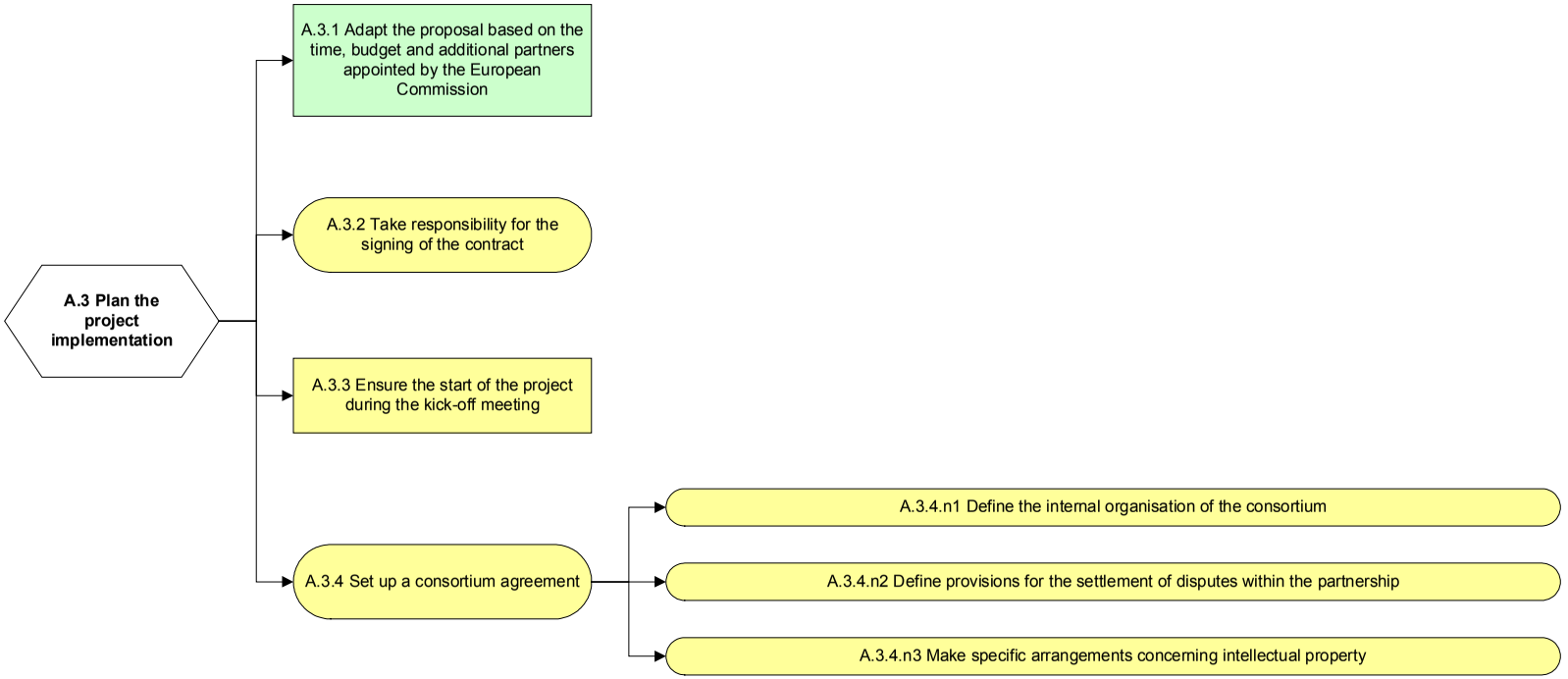

A.2 Elaborate a project proposal
A.2.3 Manage the organisational aspects of the project
A.2.4 Determine time-planning and budget for the realisation of the project
A.2.4.n1 Define a schedule for the disbursement of the grant
A.2.4.n2 Determine the method of calculation of the Community financial distribution
A.2.5 Edit the final proposal
A.2.5.n1 Define the objectives of the network
A.2.5.n2 Define an outline joint programme of activities for the whole duration of the contract
A.2.5.n3 Describe the role of the participants, the deliverables, the ethical provisions and the management and organisation structure
A.2.5.n4 Define a detailed joint programme of activities for an 18 months period, and relevant performance indications



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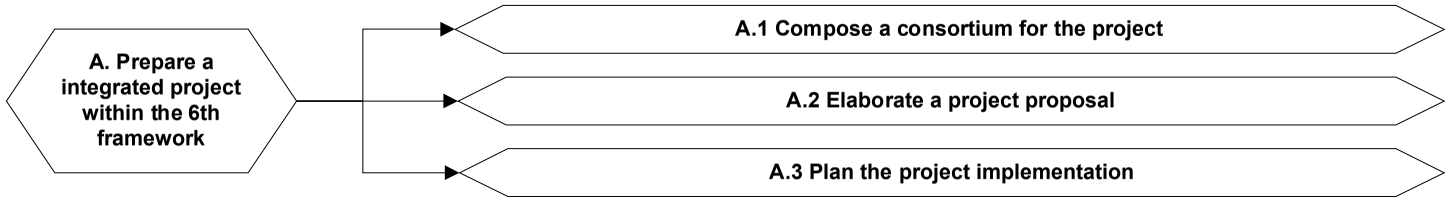
Annex 3: Flowchart of Additional Tasks for the Preparation Phase of an Integrated Project



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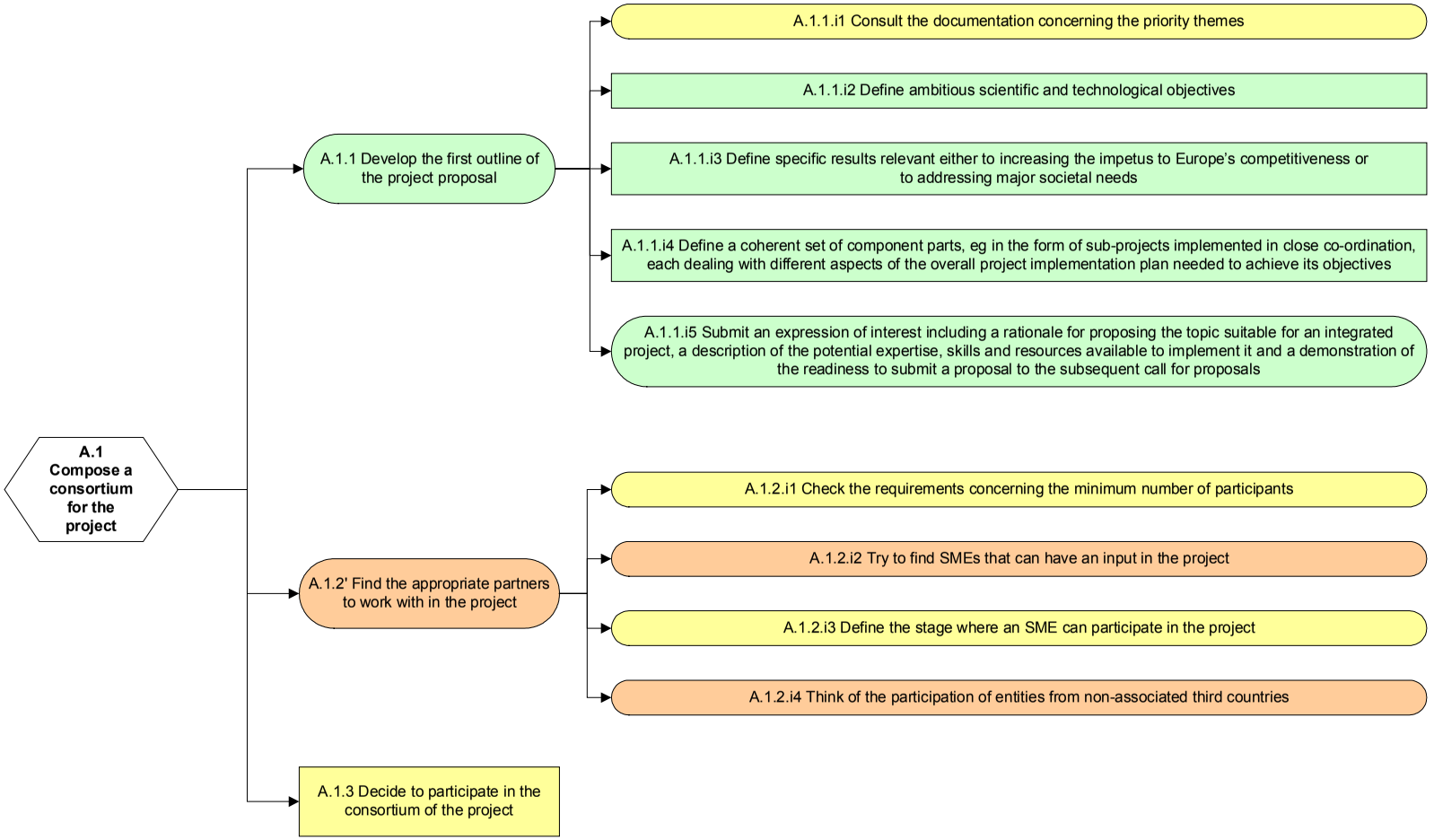
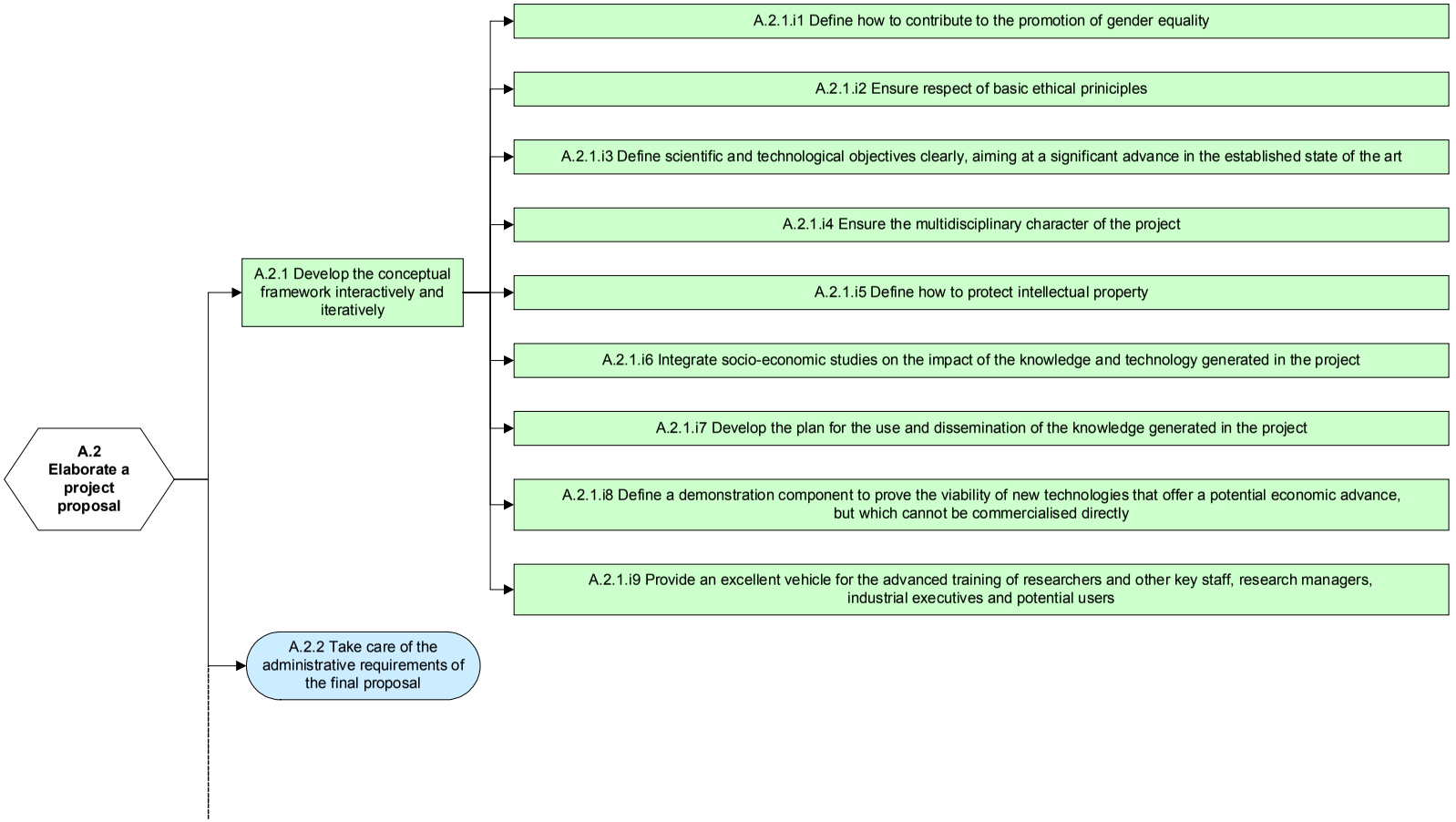

A.1 Compose a consortium for the project
A.1.1 Develop the first outline of the project proposal
A.1.1.i1 Consult the documentation concerning the priority themes
A.1.1.i2 Define ambitious scientific and technological objectives
A.1.1.i3 Define specific results relevant either to increasing the impetus to Europe's competitiveness or to addressing major societal needs
A.1.1.i4 Define a coherent set of component parts, eg in the form of sub-projects implemented in close co-ordination, each dealing with different aspects of the overall project implementation plan needed to achieve its objectives
A.1.1.i5 Submit an expression of interest including a rationale for proposing the topic suitable for an integrated project, a description of the potential expertise, skills and resources available to implement it and a demonstration of the readiness to submit a proposal to the subsequent call for proposals
A.1.2' Find the appropriate partners to work with in the project
A.1.2.i1 Check the requirements concerning the minimum number of participants
A.1.2.i2 Try to find SMEs that can have an input in the project
A.1.2.i3 Define the stage where an SME can participate in the project
A.1.2.i4 Think of the participation of entities from non-associated third countries
A.1.3 Decide to participate in the consortium of the project



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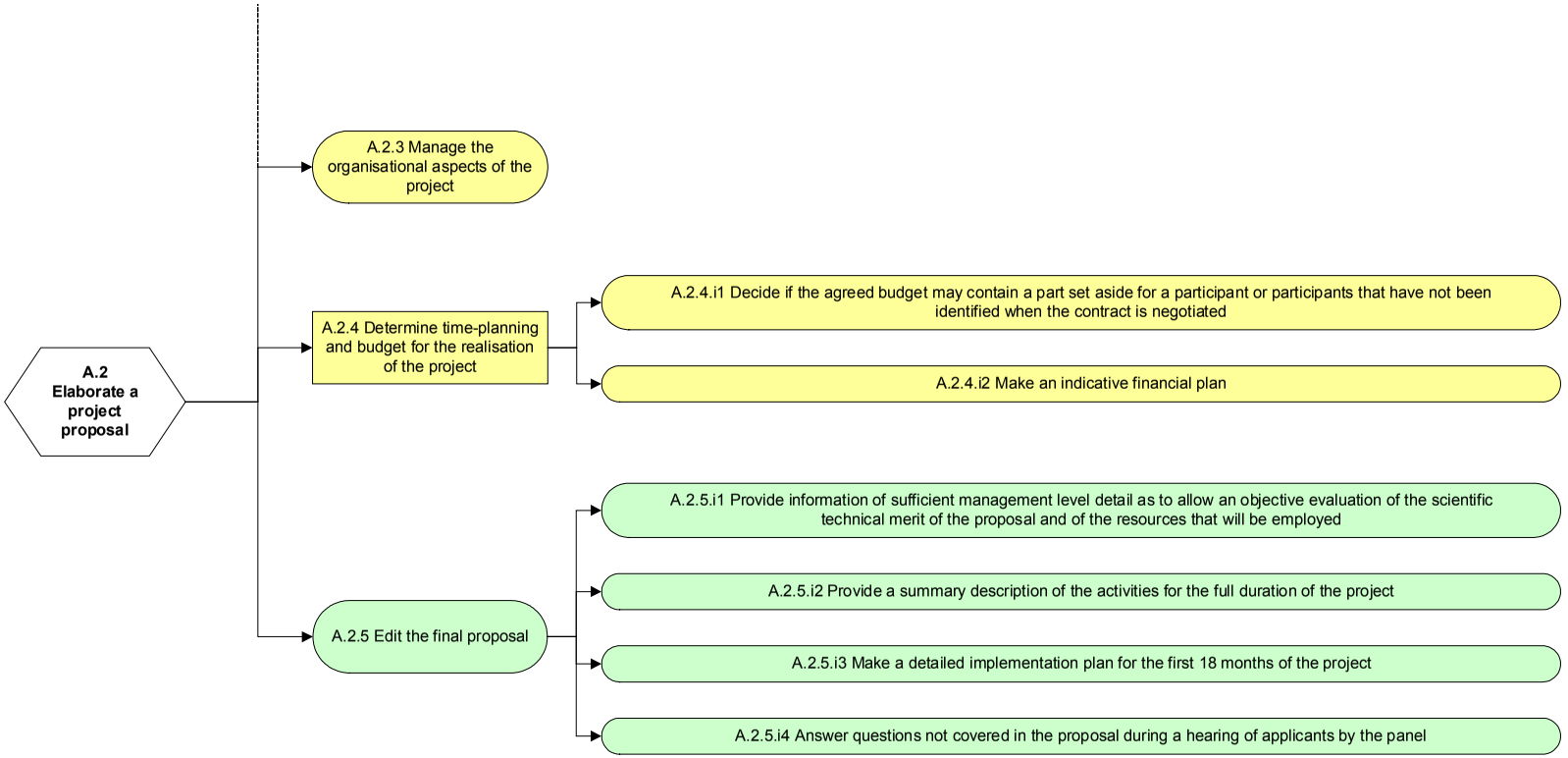
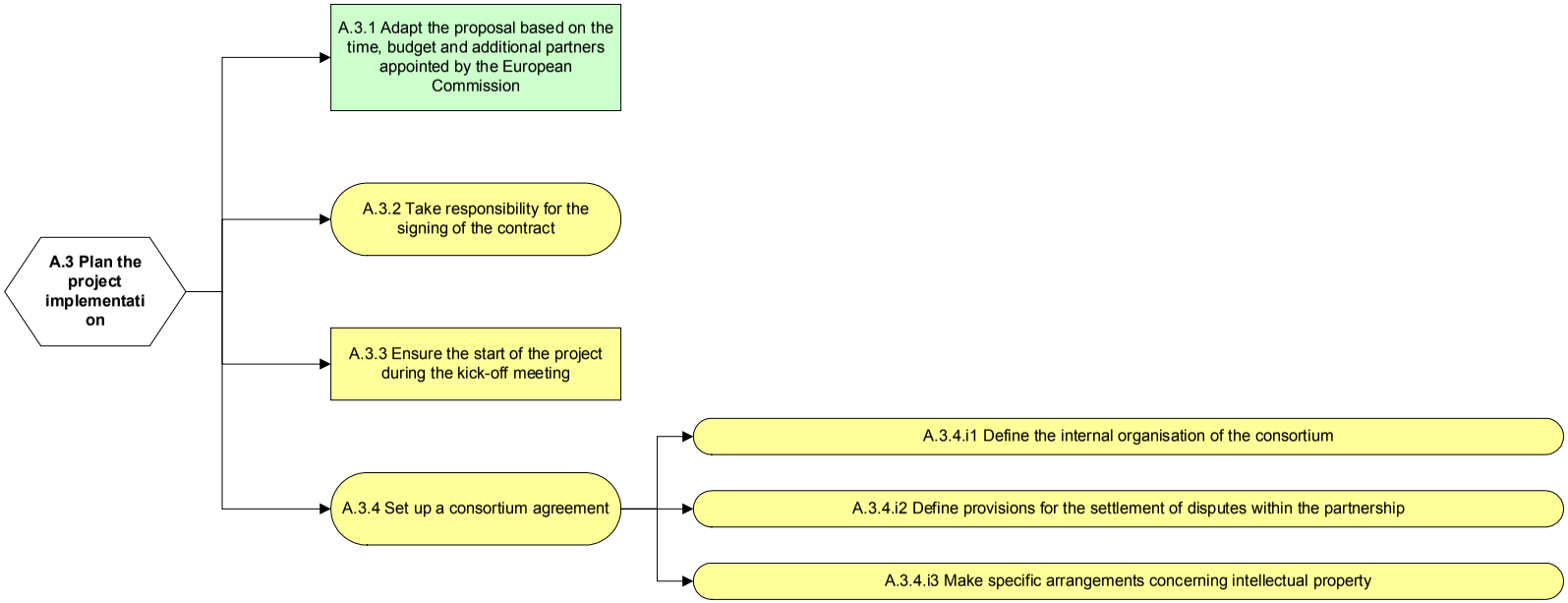

A.2
Elaborate a project proposal
A.2.3 Manage the organisational aspects of the project
A.2.4 Determine time-planning and budget for the realisation of the project
A.2.4.i1 Decide if the agreed budget may contain a part set aside for a participant or participants that have not been identified when the contract is negotiated
A.2.4.i2 Make an indicative financial plan
A.2.5 Edit the final proposal
A.2.5.i1 Provide information of sufficient management level detail as to allow an objective evaluation of the scientific technical merit of the proposal and of the resources that will be employed
A.2.5.i2 Provide a summary description of the activities for the full duration of the project
A.2.5.i3 Make a detailed implementation plan for the first 18 months of the project
A.2.5.i4 Answer questions not covered in the proposal during a hearing of applicants by the panel



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