foRMAtion

Lesson 2: Project Management Structure, Grant Agreement (GA) and Consortium Agreement (CA)

Keywords

- Governance components
- Project management processes
- Governance roles
- Team roles and styles
- Grant Agreement (GA)
- Consortium Agreement
- Provisions for project governance
- Decision making processes and models

Learning Objectives

⑧ ⑬

Scan for complete LOs

Go to the exercise

https://learningapps.org/watch?v=p6fxh3ww222

Starting a research project

Essentially, the project management and the **project governance framework** will set the pace with which the project should be developed and how all project participants (research, management team and stakeholders) will intervene.

They ways in which these sets of roles or governance bodies will interact within the project is normally detailed in the project management plan. Each project, depending on its needs and specificity, may define certain **rules and mechanisms** between the governance bodies to aid the **decision-making processes**.

Key governance components and project management process groups

During the project's lifecycle, project management governance has eight major components that are mandatory and must be studied and analysed for the project's success. These **eight components** occur between the initiation phase and the monitoring phase. Full knowledge of the project environment is required to make sure the project is aligned with the organization's governance structure.

These alignments must be the focal point *when defining the project **governance framework** [1], **roles and responsibilities** [2] and **stakeholder engagement** and communication [3]. The project manager needs to ensure the governance plan's implementation during the project and should assess the effectiveness of the plan implementation. When performing this project governance monitoring the project manager should ensure that there are adequate **meetings** [4], **reporting** [5], evaluation and **risk control** [6] **issue management**, assurance [7], and project management **control processes*** [8] (Alie, S. 2015). Figure 25 maps these eight project management process groups' components (project lifecycle phases).

1) **Governance Models** - definition of **key elements** needed for project governance. This definition should be based on the project's scope, timeline, complexity, risk, stakeholders and relevance to the organisation.

2) **Accountability and responsibilities** - the **definition** of these components is one of RMAs' the core tasks. The non-definition of these components may result in negative consequences and a lack of effectiveness in meeting planning, control processes, risk assessment and the communication plan. This definition isn't solely based on stating who's accountable for a certain aspect or activity of the project, but it's also stating who's responsible and who should be consulted/informed about each of the project activities and deliverables.

3) **Stakeholder engagement** - definition of all stakeholders involved, what their **interests and expectations** are and how the communication with them should occur. The stakeholder is anyone who can be **directly impacted** by the project deliverables (e.g.: the project team - scientific and financial team, funding agency and advisory board).

4) **Stakeholder communication** - definition of a **communication plan** based on the identified stakeholders and their interests. A good communication plan with stakeholders must detail how to deliver relevant, concise and on-time information to the stakeholders involved.

5) **Meeting and reporting** - definition of the right balance between meetings and reporting. The stakeholder must understand the **content of the communication and its periodicity**. The RMA should assure that communication with the stakeholders is brief, concise and on target.

6) **Risk and issue management** - definition of how risks should be **identified, classified and prioritized**. The lack of risk definition that could arise during project development may cause some setbacks and delay the application of the due adjustments; how you plan to handle the risk is more important than the risk itself!

7) **Assurance** - **definition of metrics** that can yield a view of the project's performance and ensure that risks are effectively managed. Some of the metrics include: the effectiveness of the change control and risk analysis process; the capability to monitor deviations in project scope, time, cost, schedule, and the quality assessment of the project plan.

8) **Project Management Control Process** - it's the simplest component to define, but the most challenging to implement since it demands ongoing checking and balancing. The monitoring and controlling process is based on all tasks and project-related metrics and **measures project performance** by comparison with the baseline scope, budget, time, and resources. The RMA should engage constantly in this procedure to ensure that corrective actions occur on time.

Figure 15 - The main governance components in a research project

As previously stated, the **project management governance framework** can be replicable in different projects, but it's not possible to define a unique framework. An organization should create a framework based on its objectives, culture, and own governance models (Bernardo, M. 2010; PMI, 2013), aligned with the organization's strategies and ethical principles (Bernardo, M. 2010), that cover the following core elements:

- **Roles and responsibilities;**
- **Decision-making processes and levels;**
- **Methodologies;**
- **Competences;**
- **Communication process;**
- **Controlling process.**

Project management roles and responsibilities

A project can have a different set of **governance roles** according to its specificity and needs, namely:

- The **Principal Investigator (project coordinator)** - is the **intermediary** between the project partners and the funding agency;
- **General Assembly** - assembly of all the partners which should include one representative of each **partner organisation** and be chaired by the principal investigator;
- **Executive Board** - **directs and monitors** the project's development, normally constituted by the principal investigator and other project members appointed by the General Assembly (e.g.: task leaders);
- **Advisory Board** - **external stakeholders** who have specific expertise regarding the project scope and periodically provide their views and opinions on the project;
- **Project Manager (RMA)** - assists the principal investigator in all the management and monitoring tasks of the project; is responsible for the **day-to-day management** tasks of the project, the organisation of meetings, coordination of the reporting, serving as a **helpdesk** for queries from the project partners.

Depending on the needs of the project, **other roles** might be appointed, such as:

- **Communication manager** - who is responsible for the management of all the **external communication** of the project's results and for promoting their **exploitation**;
- **laboratory manager** - who is responsible for the upkeeping of the laboratory and for guaranteeing the **appropriate conditions and the materials** needed for the project scientific team to develop their activities, etc.

Team roles

There are different approaches to **studying team roles**. One of the most recognized was developed in the 1970s by Meredith Belbin and colleagues at the Henley Management College. Here, based on **long-term psychometric tests and studies of business teams**, Belbin's group proposed the following definition of team roles as *a tendency to behave, contribute and interrelate with others in a particular way*.

Belbin proposes **nine team roles divided into three categories** (based on https://www.belbin.com/about/belbin-team-roles/):

1. **Resource Investigator**: uses his/her inquisitive nature to **find ideas** to bring back to the team.
    - **Strengths** - Outgoing, **enthusiastic**. Explores opportunities and develops contacts.
    - **Allowable weaknesses** - Might be **over-optimistic** and can lose interest once the initial enthusiasm has passed.

2. **Team Worker**: helps the team perform, using his/her **versatility** to identify the work required and complete it on behalf of the team.
    - **Strengths**: Co-operative, **perceptive** and diplomatic. Listens and averts friction.
    - **Allowable weaknesses**: Can be indecisive in topical situations and tends to **avoid confrontation**.

3. **Coordinator**: needed to focus on the team's objectives, draw out team members and **delegate work** appropriately.
    - **Strengths**: Mature, **confident**, identifies talent. Clarifies goals.
    - **Allowable weaknesses**: Be **manipulative** and might offload their share of the work.

4. **Plant:** tends to be highly creative and good at solving problems in **unconventional** ways.
    - **Strengths**: Creative, imaginative, **free-thinking**, generates ideas and solves difficult problems.
    - **Allowable weaknesses**: Might ignore incidentals and may be **too detached** to communicate effectively.

5. **Monitor Evaluator**: provides a logical eye, makes **impartial judgements** where required and weighs up the team's options in a dispassionate way.
    - **Strengths**: Sober, **strategic** and discerning. Sees all options and judges accurately.

- **Allowable weaknesses**: Sometimes lacks the drive and ability to inspire others and can be **overly critical**.

6. **Specialist**: brings **in-depth knowledge** of a key area to the team.
    - **Strengths**: Single-minded, **self-starting** and dedicated. Provides specialist knowledge and skills.
    - **Allowable weaknesses**: Tends to contribute on a **narrow front** and can dwell too much on technicalities.

7. **Shaper:** provides the necessary drive to ensure that the team keeps moving and does not lose focus or **momentum**.
    - **Strengths**: Challenging, dynamic, thrives on pressure. Has the **drive** and courage to overcome obstacles.
    - **Allowable weaknesses**: Can be **prone to provocation** and may sometimes offend people's feelings.

8. **Implementer**: able to plan a **workable strategy** and carry it out as efficiently as possible.
    - **Strengths**: Practical, reliable, **efficient**. Turns ideas into actions and organises work that needs to be done.
    - **Allowable weaknesses**: Can be a bit **inflexible** and slow to respond to new possibilities.

9. **Completer Finisher**: most effectively used at the end of tasks to polish and scrutinise the work for errors, subjecting it to the highest standards of **quality control**.
    - **Strengths**: Painstaking, **conscientious**, anxious. Searches out errors. Polishes and perfects.
    - **Allowable weaknesses**: Can be inclined to worry unduly, and **reluctant to delegate**.

Figure 26 – Belbin's team roles with regards to 'thinking', 'action' and 'people'
(Source: http://www.belbin-italy.com/rtefc8f.html?id=503)

Agreements and contracts

After drafting the project management plan and project governance framework it is time to start preparing the **legal documents** that will bind the project team and the EC/Funding agency. These legal documents are, for example, the **Grant Agreement (GA)** and the **Consortium Agreement (CA)**. Regarding the CA, the EC suggests that the CA must be negotiated between all project beneficiaries and finalised before the signature of the GA.

The grant agreement (GA)

The GA is a contract between the EC and beneficiaries of an EU-funded project. This document defines the **rights and obligations of the beneficiaries** and includes other information regarding the eligible costs, forms and periodicity of payments, requirements for use, preparation of project results and the requirements for the use of the EC emblem.

Following the approval of the proposal, the EC sends the ***Evaluation Summary Report,*** an invitation to prepare the grant agreement, to the Funding & Tenders Portal. At this stage, the EC essentially requests the beneficiaries to provide some **legal and administrative details** that weren't included in the original proposal.

EC-funded projects must be implemented according to the information which was included in the evaluated proposals; thus, the GAs must not differ significantly from the proposal, except for **required corrections and updates**, namely:

- in case in the period separating the project evaluation from the grant approval, an **ethical review** or **security scrutiny** occurred;
- when some details of the project **don't conform** with the applicable rules (e.g.: legal and financial rules);
- when there is the need to remove clerical errors or clear **inconsistencies**;
- when, under exceptional circumstances, a **participant is removed** from a consortium during the grant preparation phase.

As mentioned above, at this stage there is little room for changes, so the negotiation involved in this procedure is minimal. However, you have the chance to **correct any shortcomings identified by experts** in the *Evaluation Summary Report* if this revision process doesn't delay the grant agreement preparation beyond the deadlines. The signature of the GA takes place exclusively online, through the **Funding & Tenders Portal,** and this procedure must be completed **within 3 months** after the beginning of the grant agreement preparation.

Essentially, the GA's preparation is needed to:

- gather **legal, administrative and financial information** from the beneficiaries (project participants who sign the GA) and any third parties linked to any of the beneficiaries;
- ensure the Description of the Action (**Annex 1** of the GA) and the estimated budget/ lump sum breakdown (**Annex 2**) **match the proposal**;
- establish the **key features of the GA**, namely: project start date; reporting periods; amount of pre-funding payment; need for a consortium agreement (CA); ethical issues; third parties linked to any of the beneficiaries; in-kind contributions provided by third parties; subcontracting, etc. [the last four points are detailed only if applicable];
- verify the **financial capacity** of the **coordinator's organization** - verification is required when the funded amount is equal to or higher than 500, 000 EUR, unless the coordinator's organisation is: a public body; a higher or secondary education establishment; an international organisation; a legal entity whose participation is

guaranteed by a Member State or an associated Country or a private individual in receipt of a scholarship.

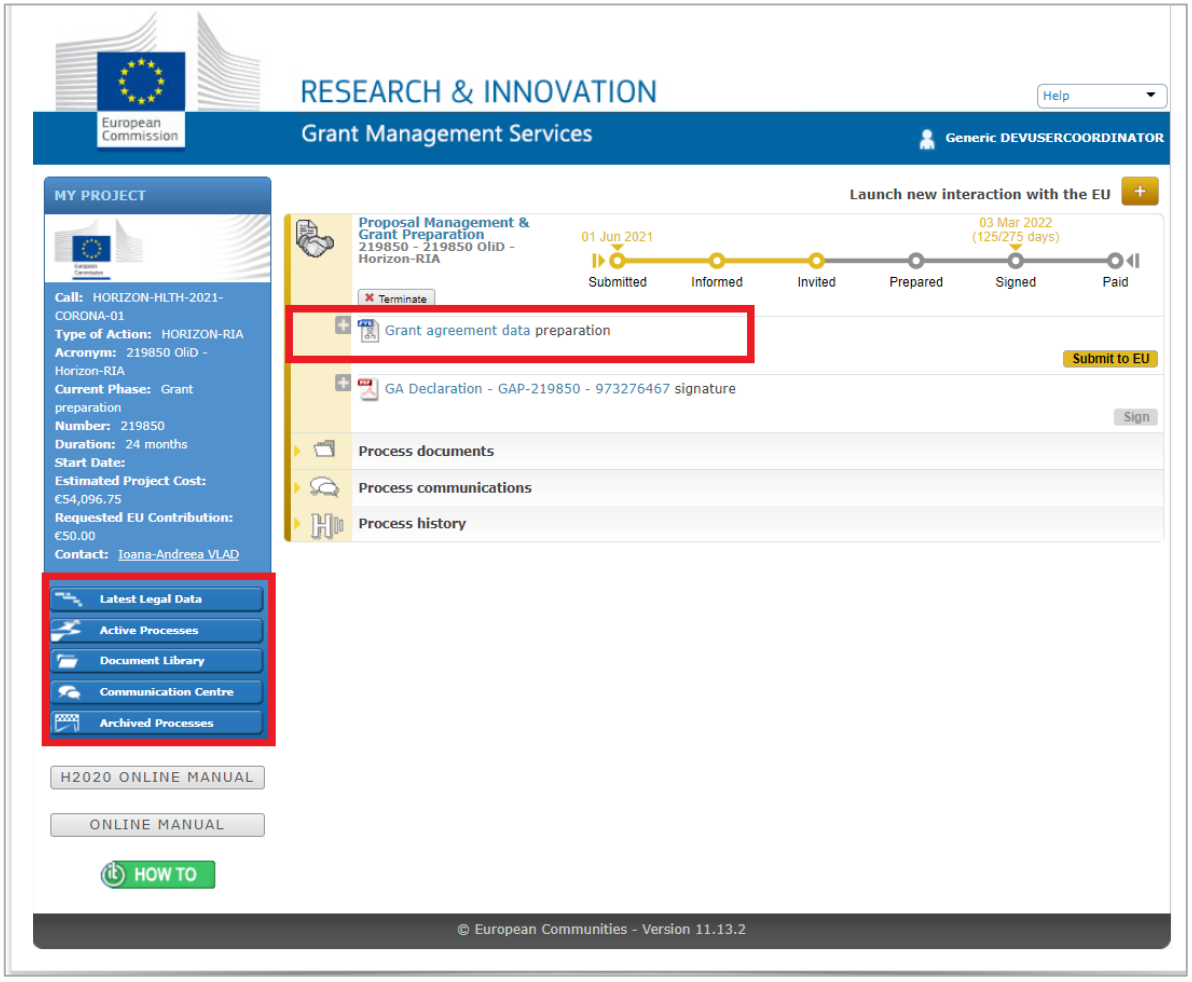

Figure 27 – Information about the GA preparation in the Funding and Tenders platform (Source: https://webgate.ec.europa.eu/funding-tenders-opportunities/display/IT/Proposal+Management+and+Grant+Preparation)

Consortium agreement (CA)

A CA is a **mandatory document** for multi-beneficiary H2020 projects and other national and international projects unless the call/work programme states otherwise. The consortium agreement should set the framework for the project implementation and the interaction between all project partners (coordinator's organisation, project coordinator/principal investigator, project manager, partner organisations) by defining all rights and obligations amongst them.

The European Commission (EC) advises on preparing the Consortium Agreement, or at least a draft version of this document, at the initiation phase, during the proposal preparation. Having an **early draft** will facilitate the discussion (and agreement) on important project aspects and sensible information.

The EC states that the **draft of the Consortium Agreement** should provide first thoughts on:

- project implementation and **distribution of tasks** amongst the beneficiaries (coordinator and partners);
- internal organisation and management of the consortium and **user rights** on the Funding & Tenders Portal;
- project **budget** and distribution of EU funding;
- additional rules on **rights and obligations** related to background and results;
- liability, indemnification, and **confidentiality arrangements** between beneficiaries;
- **boilerplate provisions**: duration, termination, communication, applicable law, settlement of internal disputes, etc.

At the grant preparation phase, the consortium must have produced and agreed on a **final version of the Consortium Agreement** that should be officialised before the coordinator's organisation signs the grant agreement. The Consortium Agreement allows the beneficiaries (coordinator and partners) to agree on any specific details that are not included in the grant agreement but are deemed necessary by the consortium to have it in writing (e.g.: organisation of work, intellectual property management, liability, future exploitation, and dissemination of results).

As previously stated, the EC procedure demands the preparation of a CA in almost every project. Although some information on how to draft this document is provided the EC does not endorse a specific CA model. A **specific working group** has been established with the aim of preparing a CA model specifically designed for H2020 projects. The working group includes the French National Association for Research and Technology, the European Association of Research and Technology Organisations, the European Liaison Office of the German Research Organisations, the League of European Research Universities, the Applied Research Organisation in Finland, the Centre for Innovation and Technology in North Rhine Westphalia, the Applied Research Organisation in Germany and the Helmholtz Association of German Research Centres.

This working group, commonly known as the **Development of a Simplified Consortium Agreement (DESCA) core group** created an agile and detailed model CA. This**DESCA model** contains various options and clauses to provide **maximum flexibility and** to allow for

adaptation of the CA to specific project needs. The DESCA model also includes several elucidation notes to guide RMAs without legal training and first-time participants in its compilation. The DESCA is regularly updated: the latest version is dated 2020 (DESCA, 2021).

The items normally included in a Consortium Agreement are:

- **Preamble** - sets the **scene and context** for the Consortium Agreement and references any previously reached agreements between the consortium partners;
- **Parties** - details the official name of each project beneficiary and may mention any interested parties bound to carry out some tasks during the project (**linked third parties**);
- **Definitions** - defines a list of **specific terms** to avoid misunderstandings regarding the extent of a specific right or obligation;
- **Internal organisation** – details **how the consortium will be governed** and managed; this section represents the largest part of the consortium agreement's contents. A project consortium normally involves beneficiaries from different Member States, with different languages and customs. **Facing this diversity** in an efficient way is of extreme importance for the proper management of the consortium and to achieve the project results paired with a successful dissemination and exploitation of these.

Provisions of project governance normally cover the following issues:

- structure, coordination and operation of the **management bodies** (e.g.: project steering committee, project quality committee);
- **roles and responsibilities** of these bodies;
- **voting rules**.

Some **additional provisions** may be detailed on this topic:

- frequency of **project meetings**;
- **communication and correspondence guidelines** between parties and with the management bodies;
- **follow- up and supervision** of the project - an internal **scientific and financial report** might be proposed to allow RMAs to actively monitor the project development throughout all partners;
- **rules** to be observed in case a partner wants to leave the consortium or if a new party wants to join after the start of the project.

Management and maintenance of user rights on the Funding & Tenders Portal

The Consortium Agreement should detail alle roles and Funding & Tenders Portal user rights related to project information and project management tasks for each of the beneficiaries (e.g.: filling in forms, uploading documents, submitting information, and signing documents). There should also be a detailed **provisions for certain scenarios** such as people leaving the project or changing roles in the project (or within their organisation) and applicants/beneficiaries wishing to end their involvement in the project before its expiry.

Project implementation

Definition of the **tasks' distribution** per beneficiary, including:

- tasks assigned to each party;
- project schedule;
- procedure to amend project clauses;
- conditions under which other actors/organisations (e.g. linked third parties, seconded persons or subcontractors) are brought into the project.

Project budget

- **Distribution,** by the project coordinator, of the payments received by the Commission/Agency; a **strategy to distribute funds** to the partners, namely making them available upon delivery of reports or deliverables, can be outlined. If a strategy is defined, the CA must include a clear definition of what must be submitted or fulfilled by partners in order to receive the funds and which percentage of the funds will be transferred. Also, it is a good practice to include, on the CA, the **bank account details** to which the funds must be sent;
- **Contributions** - the CA should address in detail the contributions made by each beneficiary and whether these are corresponded in cash or kind;
- **Receipts** - the CA should also tackle the potential implications of contributions and income received since, when these qualify as receipts, they will be considered at project level. If receipts are expected, the CA should set out how this aspect will be managed. Additionally, a beneficiary's income may mean that the project grant is reduced because of the **non-profit rule**.

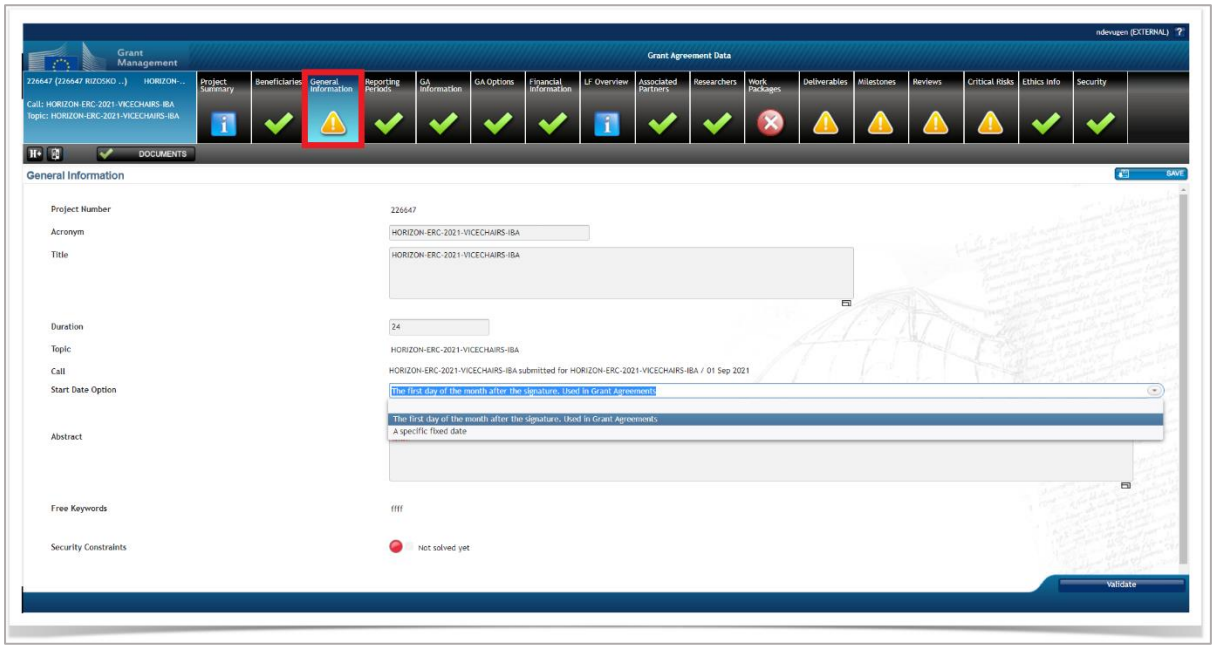

Figure 28 – General overview of a project on the Funding and Tenders Portal (source: https://webgate.ec.europa.eu/funding-tenders-opportunities/display/IT/Proposal+Management+and+Grant+Preparation)

Intellectual property rights (IPR) - Dissemination and exploitation of project results. The CA should define flexible and efficient rules to encourage and support cooperation between the beneficiaries with regards to intellectual property (IP).

Normally the following points are agreed on:

- **definition of the IP background** – setting the IP stage by defining project-relevant IPs and listing IPs already owned by beneficiaries on the CA signing date;
- **protection, dissemination and exploitation of results** - the CA should outline rules on how to identify, report, protect, disseminate and exploit project results. This topic is already regulated within the GA which establishes the requirement for any beneficiary to notify the other beneficiaries before disseminating project results, allowing for content reviews and, if appropriate, seeking the protection of the results through IPR;
- **management of joint ownership** - if two, or more, beneficiaries jointly produce results in the project and it is not possible to identify each beneficiary's contribution nor to separate the results to protect them, the beneficiaries will jointly own the results. The GA already states that joint owners should agree

(in writing) on the terms of their joint ownership, but this aspect should be detailed in the CA as well;

- **transfers of ownership** provisions;
- any additional rules on **access rights**;
- **management of third-party involvement** - if the involvement of other parties (non-beneficiaries of the project, including linked third parties) is needed to carry out the project or to exploit its results, the CA should explicitly mention this, especially if these other parties play a significant role.

Confidentiality obligations - definition of the conditions under which beneficiaries may disclose or use confidential information. To this effect, the CA should detail the following:

- a definition of what constitutes **confidential information**;
- confidentiality **obligations** (including their scope and duration);
- **penalties** for breach of confidentiality obligations (if necessary).

Liability, warranties and penalties - definition of each beneficiary's' liability for actions or omissions in the project. To this effect, the CA should cover the following:

- the **procedure** to be followed (e.g., for serving the party with a warning, allowing the notified party to object to the charge or to rectify the situation within a given timespan);
- **liability** for damage caused and the related **indemnification** (and possible limitations of liability, including *force majeure*);
- possible penalties for **non-compliance** (stipulating the terms of the penalties, e.g. amounts due, procedure for imposing a penalty and the interest due in case of late payment).

Rejection of costs, reduction of the grant, recoveries and damages

The Commission/Agency funding the project may **reject some of the costs declared** by the consortium or even **reduce the grant**. In these situations, the GA defines the ways in which financial responsibility is normally shared between the beneficiaries. However, if the financial responsibilities to be shared by the consortium differ from the ones defined on the GA, the CA should clearly **define financial responsibilities** to be applied. The same procedure should apply to regulate the damages each beneficiary is liable to cause to the Commission/Agency.

Boilerplate provisions – a set of **standard contractual provisions** included in agreements of all kinds, such as:

- start date and **duration** (i.e., entry into force and end, including early termination;
- methods for **resolving disputes** (in court, via arbitration or mediation);
- procedure for **amendments** (and the types of changes that require one);
- **contact points** for any correspondence;
- **law** applicable to the agreement.

RMAs' role in project management and decision-making processes

Whether they are defining the project management plan or the governance structure with the research team, advising on the grant agreement or acting as facilitators in the consortium agreement, **RMAs are involved (often as key players) in decision-making processes** which are crucial for the development of a research project. RMAs are often called to choose (or advise) from a set of alternatives; a choice which results in an action, a recommendation, or an opinion. To do so, RMAs must follow a series of sequential steps, from understanding the alternatives available to implementing the decision.

In this regard, different authors propose different rationales, for example:

1. **GOFER** (a model developed by the psychologist Leon Mann and his colleagues in the 1980s):
    - Goals clarification: survey values and objectives.
    - Options generation: consider a wide range of alternative actions.
    - Facts-finding: search for information.
    - consideration of Effects: weigh the positive and negative consequences of the options.
    - Review and implementation: plan how to review the options and implement them.
2. **DECIDE** (proposed by Kristina Guo in 2008)
    - Define the problem
    - Establish or Enumerate all the criteria (constraints)
    - Consider or Collect all the alternatives
    - Identify the best alternative

- Develop and implement a plan of action
- Evaluate and monitor the solution and examine feedback when necessary

We can recognize these steps also as **key activities and core skills of RMAs** and, specifically, of project managers.

There are several theories and **models about decision-making** that can be summarised in three main research perspectives:

- **Psychological**: examines individual decisions in the context of a set of needs, bibliographic references and values the individual has or seeks.
- **Cognitive**: involves an integrated feedback system between the individual/organization deciding, and the broader environment's reactions to those decisions.
- **Normative**: analyses the decision and decision-making based on the ability to communicate and share logic, using firm premises and conclusions to drive behaviour.

On a similar note, different **styles of decision-making** can also be identified.

Optimizing vs. Satisficing

As Herbert A. Simon acknowledges, decision-making is limited to the finite amount of information an individual has access to; thus, decision-making is constrained by the **limited** available information, the time at one's disposal and the mind's information-processing ability.

Two main decision-making styles were identified:

- **the satisfier**, who recognizes this necessary imperfection and prefers faster but less perfect decisions,
- **the maximizer,** who takes a long time trying to find the optimal choice.

For more information about the application of such perspective in the management context, the following article can be explored: The contribution of Herbert Simon to management and decision making.

Intuitive vs. Rational

Daniel Kahneman proposed that **two separate minds compete for influence** within each of us:

- **System 1** is automatic and intuitive, rapidly consolidating data and producing a decision almost immediately and
- **System 2**, requiring more effort and input, utilizing logic and rationale to make an explicit choice.

An article from MIT magazine can provide insights about this approach to strategic decisions: https://sloanreview.mit.edu/article/a-structured-approach-to-strategic-decisions/

Combinatorial vs. Positional

Proposed by Aron Katsenelinboigen based on how the **game of chess** is played and an individual's **relationship with uncertainty**. Defines two main decision-making styles:

- **the combinational style** is characterized by a very narrow, clearly defined, primarily material goal,
- **the positional style** involves performing semi-complete links between the initial step and the final outcome (as opposed to pursuing a concrete object). Each move from this type of player would maximize options as opposed to pursuing an outcome.

For more information see The concept of indeterminism and its applications: economics, social systems, ethics, artificial intelligence, and aesthetics.

RMAs and decision-making

Regarding the application of such perspectives in the **tasks and roles of an RMA**, we can highlight the following studies:

- The 2004 article Decision-making: Theory and practice provides a **literature review of the main theoretical models of decision-making**, especially applied to how senior managers make decisions in practice. This study shows that *attention to aspects such as the decision-making context, the nature of the decision-making processes, people's styles, the agendas of decision-makers, as well as the presentation of results, may significantly improve the impact of a decision support project*.

- The 2012 article Becoming Aware of the Unknown: Decision Making During the Implementation of a Strategic Initiative discusses the relevance of becoming aware of the **uncertainties** in the performance of decision-making by managers.

- The 2019 PLOS article Ten simple rules for providing optimal administrative support to research teams emphasises the importance of being **decisive**.

Bibliographic references

- Alie, S. S. (n.d.). Project governance: #1 critical success factor. *PMI® Global Congress 2015—North America*. https://www.pmi.org/learning/library/project-governance-critical-success-9945
- Andersen, J., Toom, K., Poli, S., & Miller, P. F. (2018). *Research management: Europe and beyond*. Academic Press, an imprint of Elsevier.
- Desca-agreement.eu. 2021. DESCA | DESCA 2020 Model Consortium Agreement. [online] Available at: <http://www.desca-agreement.eu/about-desca/> [Accessed 16 January 2021].
- *Directing change: a guide to governance of project management.* (2011). Association for Project Management.
- Frank Smits. (2018). *How to setup a good project governance structure* (p. 13). Initio Brussels. https://static1.squarespace.com/static/567bb0614bf118911ff0bedb/t/5b3a1dd72b6a2804222c2b13/1530535389236/Article_Frank_Smits.pdf
- Garrido, R., Trowbridge, C. A., & Tamura, N. (2019). Ten simple rules for providing optimal administrative support to research teams. *PLOS Computational Biology*, *15*(10), e1007292. https://doi.org/10.1371/journal.pcbi.1007292
- Guo, K. L. (2008). DECIDE: A Decision-Making Model for More Effective Decision Making by Health Care Managers. *The Health Care Manager*, *27*(2), 118–127. https://doi.org/10.1097/01.HCM.0000285046.27290.90
- Katsenelinboĭgen, A. (1997). *The concept of indeterminism and its applications: economics, social systems, ethics, artificial intelligence, and aesthetics*. Praeger.
- Klingebiel, R., & De Meyer, A. (2013). Becoming Aware of the Unknown: Decision Making During the Implementation of a Strategic Initiative. *Organization Science*, *24*(1), 133–153. https://doi.org/10.1287/orsc.1110.0726
- Mann, L. (1989). Becoming a better decision maker. *Australian Psychologist*, *24*(2), 141–155. https://doi.org/10.1080/00050068908259558
- Pomerol, Jean-Charles. (2002). *The contribution of Herbert Simon in management and decision making*. *16*, 221–249. https://www.researchgate.net/publication/290693410_The_contribution_of_Herbert_Simon_in_management_and_decision_making

- Project Management Institute (Ed.). (2013). *A guide to the project management body of knowledge (PMBOK guide)* (Fifth edition). Project Management Institute, Inc. https://repository.dinus.ac.id/docs/ajar/PMBOKGuide_5th_Ed.pdf
- Proposal Management and Grant Preparation - IT How To - Funding Tenders Opportunities. (n.d.). Retrieved 30 July 2022, from https://webgate.ec.europa.eu/funding-tenders-opportunities/display/IT/Proposal+Management+and+Grant+Preparation
- Sibony, D. K., Dan Lovallo, and Olivier. (n.d.). *A Structured Approach to Strategic Decisions*. MIT Sloan Management Review. Retrieved 11 January 2021, from https://sloanreview.mit.edu/article/a-structured-approach-to-strategic-decisions/
- *The Nine Belbin Team Roles*. (n.d.). Retrieved 11 January 2021, from https://www.belbin.com/about/belbin-team-roles/
- Turpin, S., & Marais, M. (2004). Decision-making: Theory and practice. *ORiON*, *20*(2). https://doi.org/10.5784/20-2-12