How to write a competitive MSCA PF proposal
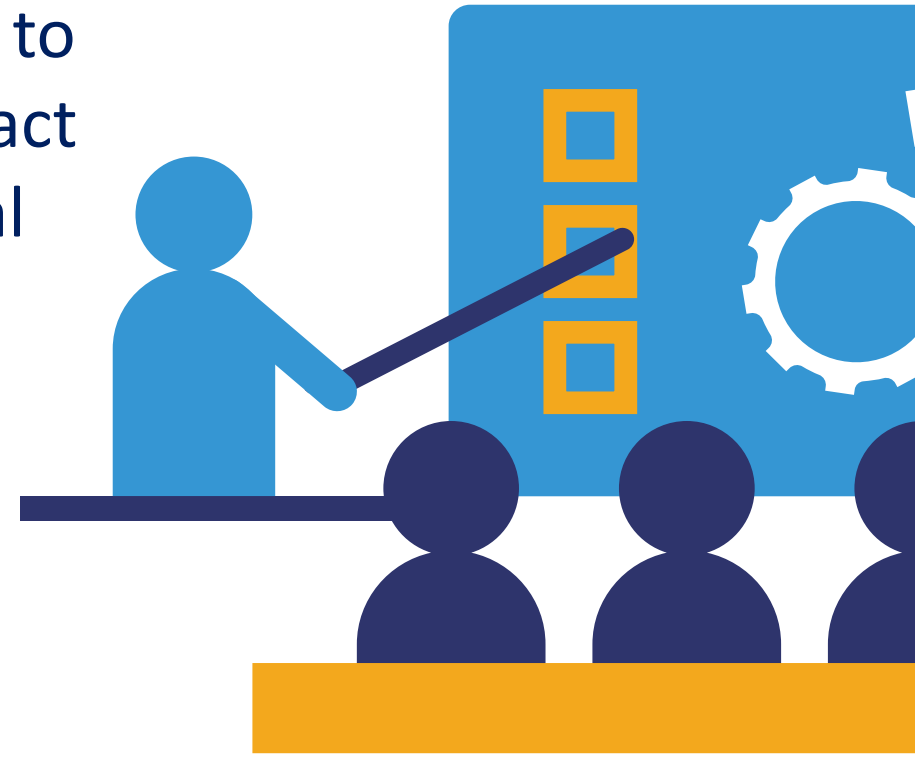
Dr Vicky Edkins

Associate Director, GrantCraft

Objectives

For you to…

① Understand what MSCA PF reviewers are looking for

② Know what the key messages are which need to be communicated within the Excellence, Impact and Implementation sections of your proposal

③ Have developed skills and knowledge to be able to write a competitive MSCA PF proposal

PF Percentiles - This table informs on the percentage of proposals with a given score or higher, per ranking list, also showing the funding ranges.

	MSCA-PF-2021: Cumulative percentage of proposals above threshold, with a given score or higher (funding range marked in green)															
Number of eligible proposals	1062 proposals	123 proposals	1052 proposals	896 proposals	1672 proposals	163 proposals	847 proposals	1624 proposals	65 proposals	9 proposals	70 proposals	119 proposals	119 proposals	13 proposals	69 proposals	344 proposals
Cut off score for funding*	92,8	92,0	92,8	93,6	94,4	92,4	92,2	93,6	92,0	83,8	95,0	95,8	95,8	92,0	94,2	92,8
Score equal to or above	EF-CHE	EF-ECO	EF-ENG	EF-ENV	EF-LIF	EF-MAT	EF-PHY	EF-SOC	GF-CHE	GF-ECO	GF-ENG	GF-ENV	GF-LIF	GF-MAT	GF-PHY	GF-SOC
100	0,38%	0,00%	1,05%	0,56%	0,66%	1,84%	0,12%	0,92%	1,54%	0,00%	1,43%	0,84%	0,00%	0,00%	0,00%	0,58%
99	1,41%	0,00%	1,43%	1,34%	1,50%	3,68%	0,71%	1,91%	1,54%	0,00%	2,86%	3,36%	2,52%	0,00%	1,45%	2,03%
98	3,39%	0,81%	3,23%	3,01%	3,95%	4,29%	2,01%	3,88%	1,54%	0,00%	8,57%	7,56%	5,04%	7,69%	1,45%	4,36%
97	5,08%	3,25%	4,75%	5,47%	6,22%	7,36%	2,72%	5,79%	3,08%	0,00%	10,00%	9,24%	10,08%	7,69%	2,90%	6,40%
96	7,53%	6,50%	6,75%	7,25%	9,15%	8,59%	4,13%	8,25%	6,15%	0,00%	14,29%	14,29%	15,13%	7,69%	2,90%	9,30%
95	9,23%	6,50%	9,32%	9,82%	11,96%	9,20%	6,73%	10,65%	6,15%	0,00%	15,71%	21,85%	18,49%	7,69%	7,25%	11,34%
94	11,02%	8,13%	11,60%	12,61%	15,31%	9,82%	9,21%	12,87%	7,69%	0,00%	18,57%	25,21%	21,85%	7,69%	17,39%	13,95%
93	13,65%	10,57%	13,50%	16,07%	19,08%	12,88%	11,92%	15,83%	13,85%	0,00%	24,29%	27,73%	26,89%	7,69%	23,19%	15,99%
92	16,10%	15,45%	15,68%	19,98%	22,13%	15,34%	14,76%	18,90%	16,92%	11,11%	30,00%	31,93%	31,09%	15,38%	27,54%	17,44%
91	18,83%	16,26%	18,54%	23,44%	24,58%	17,79%	18,06%	21,80%	24,62%	11,11%	32,86%	33,61%	32,77%	15,38%	36,23%	21,22%
90	20,90%	16,26%	20,44%	27,34%	27,63%	22,70%	21,61%	23,95%	30,77%	11,11%	37,14%	36,13%	35,29%	15,38%	43,48%	22,67%
89	23,73%	17,89%	22,43%	29,91%	31,04%	28,22%	25,62%	26,29%	33,85%	11,11%	38,57%	39,50%	39,50%	15,38%	46,38%	25,87%
88	26,18%	18,70%	24,81%	32,48%	33,79%	29,45%	29,16%	28,45%	36,92%	11,11%	40,00%	42,86%	43,70%	23,08%	50,72%	29,07%
87	28,15%	23,58%	27,47%	35,94%	36,78%	32,52%	32,35%	30,85%	38,46%	11,11%	41,43%	46,22%	44,54%	30,77%	50,72%	31,10%
86	31,73%	25,20%	30,42%	39,17%	39,29%	36,20%	34,12%	32,82%	40,00%	11,11%	45,71%	51,26%	45,38%	38,46%	52,17%	32,56%
85	34,46%	27,64%	32,70%	41,52%	41,93%	38,65%	38,72%	34,85%	44,62%	11,11%	48,57%	53,78%	47,90%	53,85%	60,87%	35,76%
84	37,29%	31,71%	34,89%	44,08%	45,16%	42,94%	42,15%	37,32%	50,77%	11,11%	51,43%	57,98%	49,58%	53,85%	62,32%	37,21%
83	40,30%	33,33%	36,88%	45,76%	47,73%	45,40%	45,57%	39,66%	52,31%	22,22%	55,71%	60,50%	52,94%	53,85%	66,67%	40,12%
82	44,16%	36,59%	39,26%	49,55%	50,30%	47,85%	49,23%	42,36%	56,92%	22,22%	57,14%	64,71%	54,62%	61,54%	66,67%	43,60%
81	46,89%	39,84%	42,21%	53,46%	53,23%	53,99%	52,54%	45,38%	60,00%	22,22%	57,14%	66,39%	62,18%	61,54%	68,12%	46,80%
80	49,62%	44,72%	43,82%	56,81%	55,68%	55,21%	55,73%	47,17%	60,00%	33,33%	58,57%	68,91%	68,07%	61,54%	72,46%	49,13%
79	52,92%	47,15%	47,15%	58,26%	58,37%	59,51%	58,80%	49,88%	60,00%	44,44%	62,86%	70,59%	69,75%	61,54%	73,91%	50,87%
78	56,03%	49,59%	48,95%	60,83%	61,18%	61,96%	61,39%	52,22%	60,00%	55,56%	64,29%	73,11%	70,59%	76,92%	75,36%	53,20%
77	59,23%	52,03%	50,86%	62,72%	64,35%	66,26%	64,58%	54,68%	63,08%	55,56%	67,14%	77,31%	73,95%	76,92%	79,71%	55,52%
76	62,24%	54,47%	52,95%	64,73%	67,17%	67,48%	66,71%	56,65%	64,62%	55,56%	71,43%	79,83%	75,63%	76,92%	81,16%	57,56%
75	63,75%	56,10%	55,13%	66,74%	69,20%	71,78%	68,71%	59,11%	64,62%	55,56%	72,86%	80,67%	76,47%	84,62%	82,61%	59,59%
74	65,82%	59,35%	57,32%	67,86%	70,93%	73,01%	70,96%	60,78%	69,23%	55,56%	74,29%	82,35%	77,31%	84,62%	82,61%	61,34%
73	67,89%	61,79%	59,41%	69,08%	72,19%	74,23%	73,67%	62,68%	70,77%	55,56%	78,57%	83,19%	79,83%	84,62%	84,06%	63,08%
72	69,77%	62,60%	61,69%	70,76%	73,86%	76,07%	75,80%	64,22%	72,31%	66,67%	80,00%	83,19%	81,51%	84,62%	86,96%	65,70%
71	71,94%	65,85%	63,78%	72,21%	75,42%	77,91%	77,69%	65,52%	75,38%	66,67%	81,43%	84,87%	84,03%	84,62%	88,41%	66,28%
70	74,11%	68,29%	65,40%	74,44%	77,27%	79,75%	79,46%	67,67%	76,92%	66,67%	82,86%	87,39%	85,71%	84,62%	88,41%	69,77%
Percentage of proposals below threshold (<70)	25,89%	31,71%	34,60%	25,56%	22,73%	20,25%	20,54%	32,33%	23,08%	33,33%	17,14%	12,61%	14,29%	15,38%	11,59%	30,23%

* your proposal can have the same score as the cut off score yet not be funded, due to additional priorities (as defined in Work Programme) and the ex-aequo ranking decisions by the Panel.

How to interpret this table
The percentage of proposals above the overall threshold and with a given score or higher is shown per ranking list. Green shows the funding range. Proposals below the overall threshold are shown separately and are not part of the cumulative total. For example: -in the EF-PHY ranking, 21,61% of all eligible proposals submitted in this ranking list scored 90 or higher. The funding cut off is 92,2. -in the GF-SOC ranking, 30,23% of all eligible proposals submitted in this ranking list scored less than the threshold (70) and were rejected.

What is the purpose of the MSCA PF?

"The goal of MSCA Postdoctoral Fellowships is to enhance the creative and innovative potential of researchers holding a PhD, wishing to acquire new skills through advanced training, international, interdisciplinary and inter-sectoral mobility."
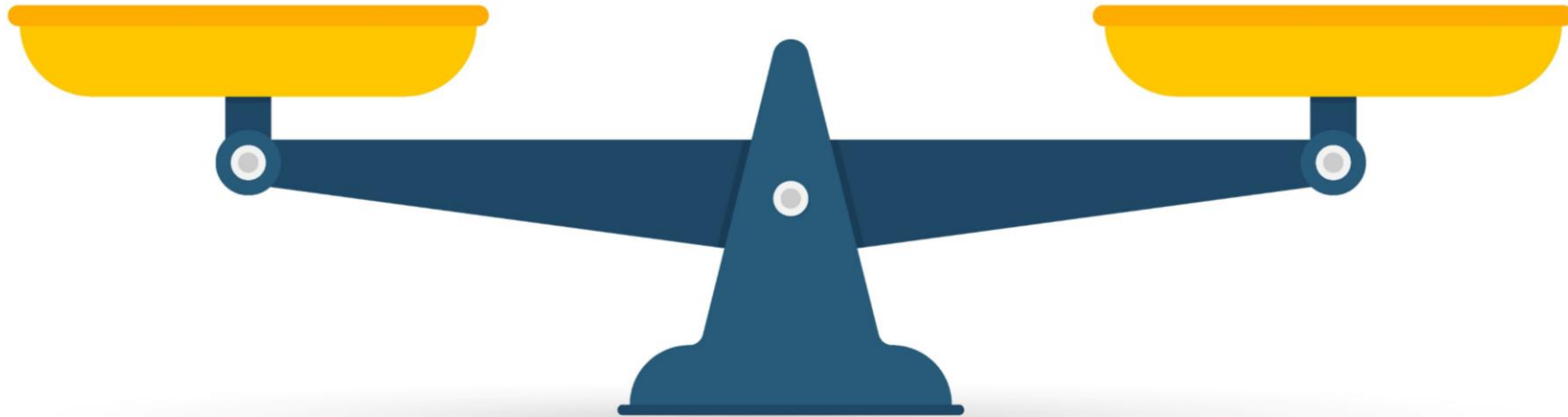
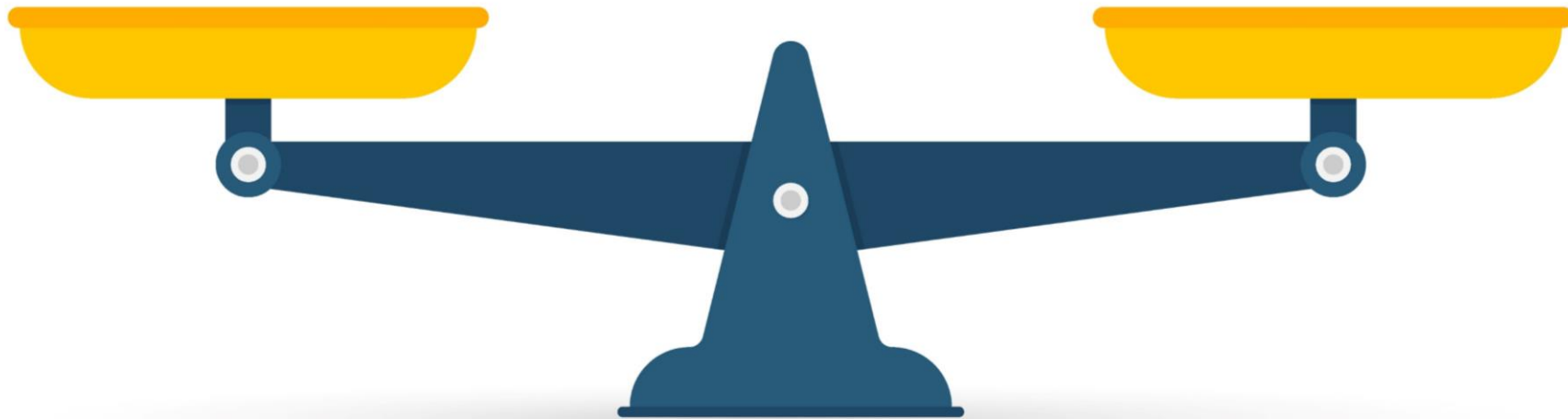# What is the purpose of the MSCA PF?

Excellent
research

What is the purpose of the MSCA PF?

Excellent research

Career development & training

What is the purpose of the MSCA PF?

Excellent research

Career development & training

Need to embed key messages throughout proposal

Embed key messages throughout

EXCELLENCE

IMPACT

IMPLEMENTATION

Abide by the rules

- Use the 2022 template
- Respect the page limits (B1 = 10 pages)
- Conform to margin sizes and fonts stipulated in guidance (margins = 15mm; font = Times New Roman 11pt)
- Font for tables and figures etc – no less than 8pt
- Page formatting is checked by European Research Executive Agency
- Tables are only for illustrating core text
- Do not include hyperlinks - they will be disregarded

Additional advice

- Work together – the best proposals are those that are written in consultation with the supervisor
- Start early and keep up the momentum
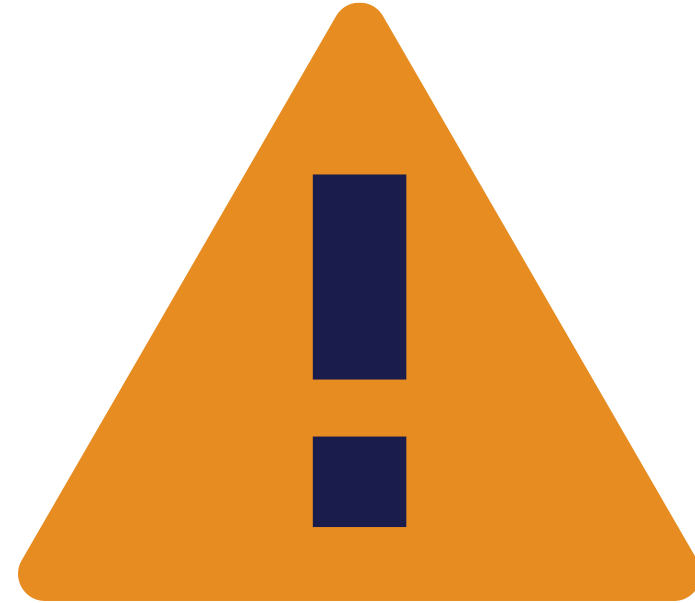
Structuring your proposal

- Use the sub-headings that are provided by the template
- Each numbered sub-heading given in the template requires that multiple elements and arguments are covered
- Add additional sub-headings to sign-post all of the detail that is asked for
- Be concise

Write for your audience

- Explain complex/ technical terminology
- Do not overuse acronyms
- Make it easy to read
- Short paragraphs and sentences
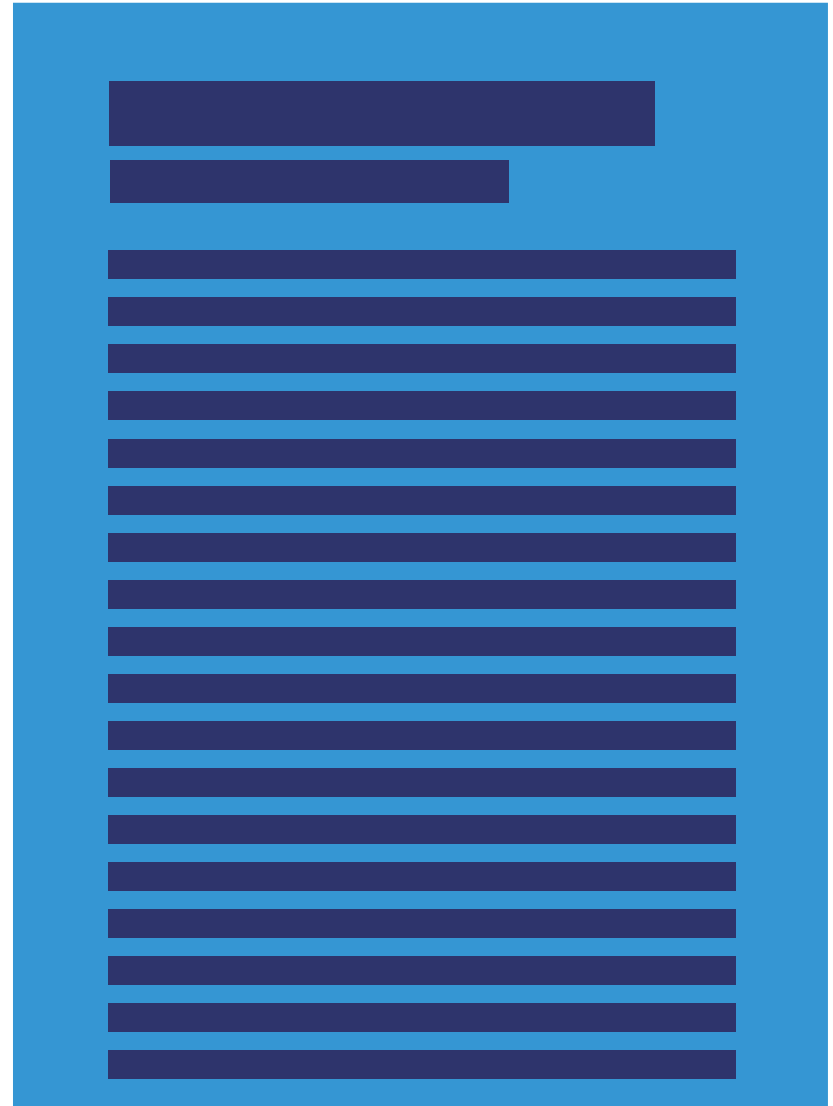
Excellence: Section 1

1.1. Quality and pertinence of the project's research and innovation objectives (and the extent to which they are ambitious, and go beyond the state of the art)

At a minimum, address the following aspects:

- Describe the quality and pertinence of the R&I objectives; are the objectives measurable and verifiable? Are they realistically achievable?
- Describe how your project goes beyond the state-of-the-art, and the extent to which the proposed work is ambitious
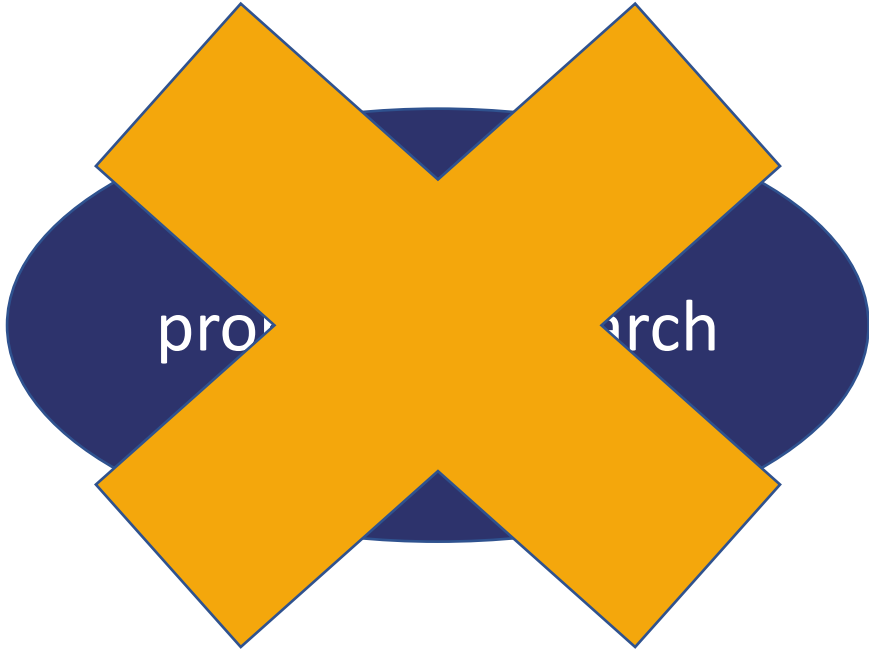
- This opening tells the reader what you are doing without any explanation of why they should care or why it is important.
- It is not particularly attention grabbing
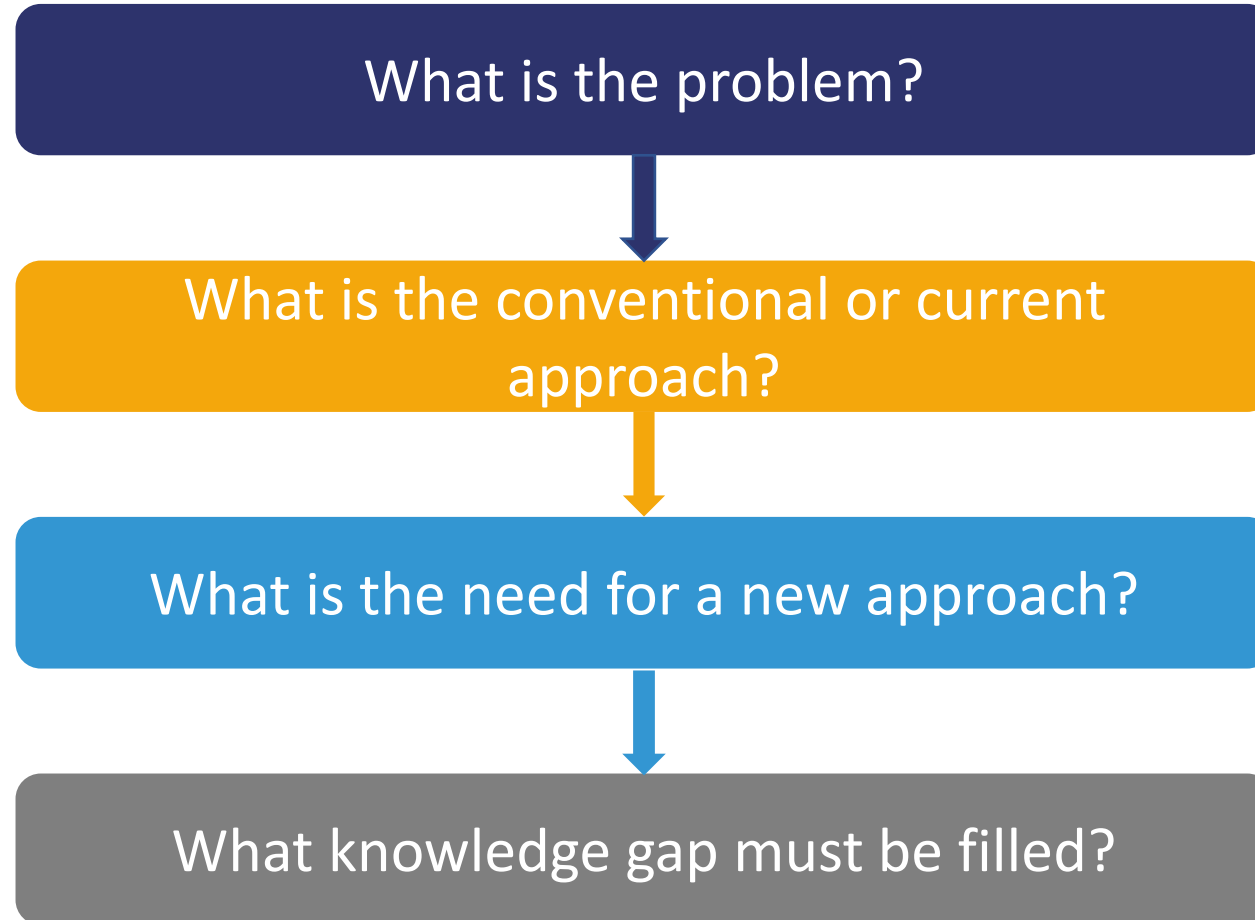
1.1.1 Introduction
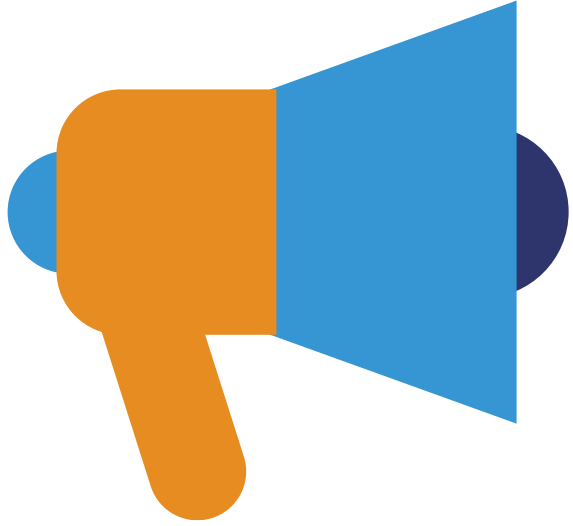
Provide a short introduction which:
- Gives the context and an overview of the rationale
- Set the scene for the rest of the proposal
- Grab the reviewers' attention...or not

First impressions count – the first page should be excited by your research and your potential as a researcher

Context and rationale

What is the problem?

What is the conventional or current approach?

What is the need for a new approach?

What knowledge gap must be filled?

Create a logical flow of argument

Need

Breast cancer kills X million people every year

The most common treatment option is…

However, this treatment has a number of problems…

Knowledge gap

To improve this treatment option, it is necessary to identify…

Create a logical flow of argument

- Pitch your introduction appropriately
- The reader is unlikely to be as expert as you
- It is likely that English will not be the reviewers' first language
- No jargon
- Define technical terms or explain terminology
- Back it up with evidence
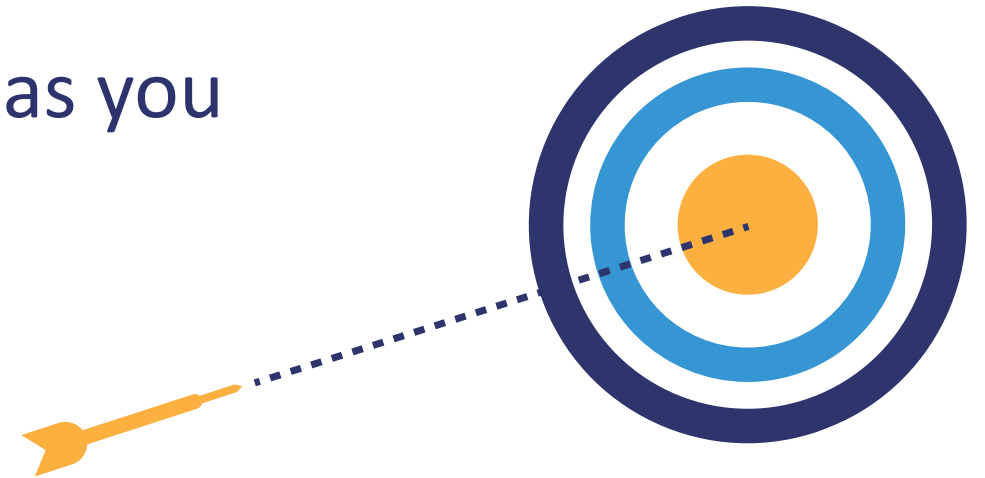
Exercise

Outline the context and rationale for your proposal in 4 bullet points. This will form the basis of your opening page.

- What is the real-world problem that your research will tackle?

- What is the conventional/current approach to dealing with or tackling this problem?

- What is wrong with current/conventional approach?

- What is the knowledge gap? (i.e. what knowledge would enable us to tackle the problem in a more effective/efficient way?)

1.1.2 Objectives

Over-arching objective

- A critical component of your proposal
- Tells the reader what the grand goal of your project is

Should have 2 components:

①   An overall project result – what your research will produce

②   Why you and the specified supervisor?

Examples of deliverables

- Demonstrate a new biofuel technology/process at lab/pilot/demonstrator scale

- Develop a new biodegradable packaging for foodstuffs

- Develop an evolutionary model describing how understanding of time evolved in humans and other species that share this trait

- Identify the causal mechanisms that increase risk of cancer metastasis in populations with genome xyz
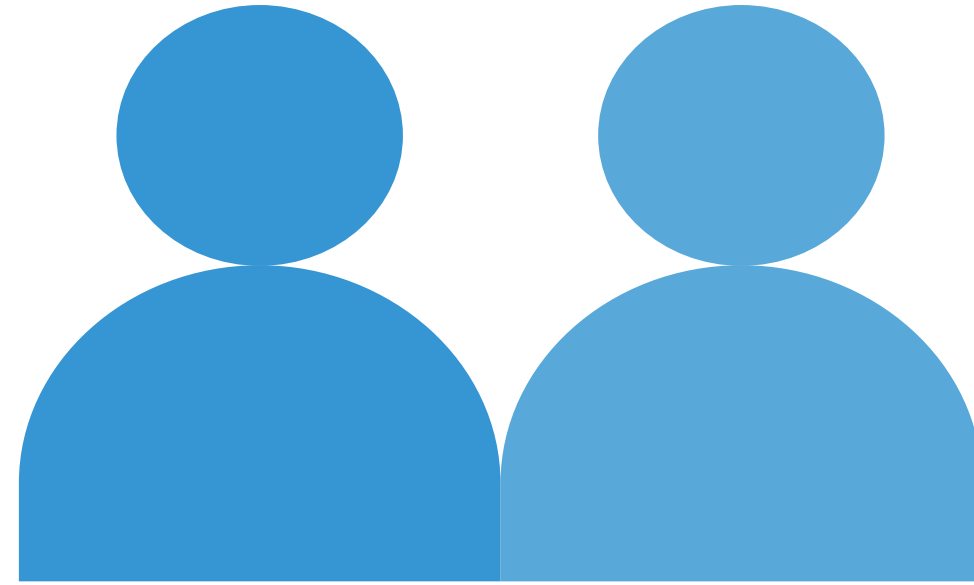
This is the funder's main return on investment

Why you and the specified supervisor?

②

- What knowledge and skills do you each bring?
- How are these complementary?

E.g: *...To achieve this, the project will bring together a researcher with expertise in XYZ with a supervisor with expertise in ABC*

Exercise

Following the flow of arguments that you created in the first exercise, create an overarching objective which includes

- A statement of the main deliverable
- A concise explanation of 'why this fellow and supervisor'

1.1.2 Objectives

Research objectives

These are the 'pieces' of the research which 'add-up' to fulfil the over-arching objective

Must be:

- Measurable and verifiable
- Realistically achievable

1.1.2 Objectives

Research objectives

Construct around three key components:

① **WHAT:** What will the result be (what will you achieve)?

② **HOW:** How will this be achieved? (be concise)

③ **WHY:** Why is this important in terms of the project?

Research objectives – example 1

① Identify the personality factors which contribute to experiences of social isolation among new mothers

② This will be achieved through a series of questionnaires and focus groups with…

③ In conjunction with the findings from RO2 and RO3, this will enable the mapping of contributory factors to social isolation (RO4) and the subsequent development of a toolkit for use by health visitors

Research objectives – example 2

①   Develop a refined filtration process for…

②   This process will then be incorporated into the existing SuperFiltrate technology (Obj 2) and tested (Obj 3)

③   This will be achieved through….

Research objectives

- ☐ Measurable
- ☐ Verifiable
- ☐ Realistic
- ☐ Achievable

Exercise

Construct a set of research objectives for your research. They should:

- Contain a statement of what, why and how
- 'Add up' to achieve the over-arching aim

1.1.3 The extent to which the project goes beyond the state of the art

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Common mistake is to treat this section as a literature review

What is known and what it is already possible to do will not justify the proposed research

1.1.3 The extent to which the project goes beyond the state of the art

Build on the justification for your research that began in the Introduction

Construct it around three key components:

① What is known/ what can be done

② What is not known/ cannot be done

③ Why it is important to fill the knowledge gap and how your research will do this

1.1.3 The extent to which the project goes beyond the state of the art

This section should:

- Build upon the justification for your research such that the reviewer can understand the need for the research objectives
- Demonstrate your knowledge of relevant research (including that in different disciplines/sectors)
- Position both researcher and supervisor within the state of the art
- Demonstrate and explain how your research will go beyond what is known/what is currently possible
- Demonstrate ambition (but not too much)

The next component of the template…

1.2 Soundness of the proposed methodology (including interdisciplinary approaches, consideration of the gender dimension and other diversity aspects if relevant for the research project, and the quality of open science practices, including sharing and management of research outputs and engagement of citizens, civil society and end users, where appropriate)

1.2.1 Overall methodology

1.2.2 Integration of methods and disciplines to pursue the objectives

1.2.3 Gender dimension and other diversity aspects

1.2.4 Open science practices

1.2.5 Research data management and management of other research outputs

The next component of the template…

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1.2.1 Overall methodology

1.2.2 Integration of methods and disciplines to pursue the objectives

1.2.3 Gender dimension and other diversity aspects

1.2.4 Open science practices

1.2.5 Research data management and management of other research outputs

1.2.4 Open science practices

Describe how appropriate open science practices are implemented as an integral part of the proposed methodology. Show how the choice of practices and their implementation is adapted to the nature of your work in a way that will increase the chances of the project delivering on its objectives.

If you believe that none of these practices are appropriate for your project, please provide a justification here

1.2.4 Open science practices

- Open science:
  Open cooperative work and systematic sharing of knowledge and tools, as early and widely as possible in the research process.

- Enables greater collaboration with other researchers and lets ordinary citizens engage in science.
  – increases awareness and trust.

1.2.4 Open science practices

**Stating that publications will be made open access is not sufficient**

- Produced results must be shared, made reusable, and be reproducible when possible.
- Open science principles advise that science be "as open as possible, as closed as necessary".
- An effective proposal needs to show open science principles at every stage of the research process.

1.2.4 Open science practices – what to include?

- Ensure reproducibility: E.g. make research design available
- Open access to research outputs
  - publications
  - Data
  - software
  - Models
  - Algorithms
  - workflows

Recommended rather than mandatory

- Responsible data management (FAIR principles) – brief explanation and refer to 1.2.5 for detail
- Open peer review
- Involve all relevant knowledge actors (e.g. citizens, end users)

1.2.4 Open science practices – what to include?

- Provide details –explain what you will do in relation to each of these elements
- Show how the choice of practices and their implementation is adapted to the nature of your work in a way that will increase the chances of the project delivering on its objectives
- Where open science practices are not possible, justify
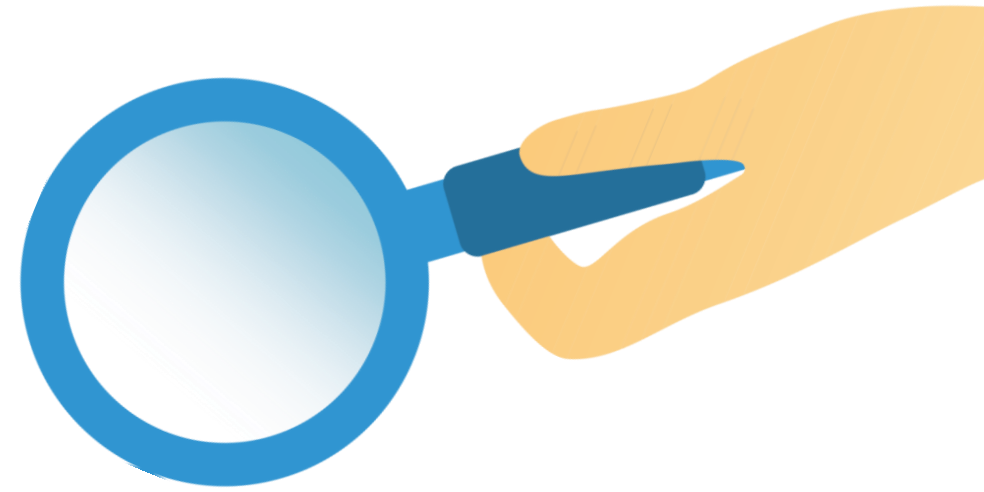
1.2.5 Research data management and management of other research outputs

Applicants generating/collecting data and/or other research outputs (except for publications) during the project must explain how the data will be managed in line with the FAIR principles (Findable, Accessible, Interoperable, Reusable)
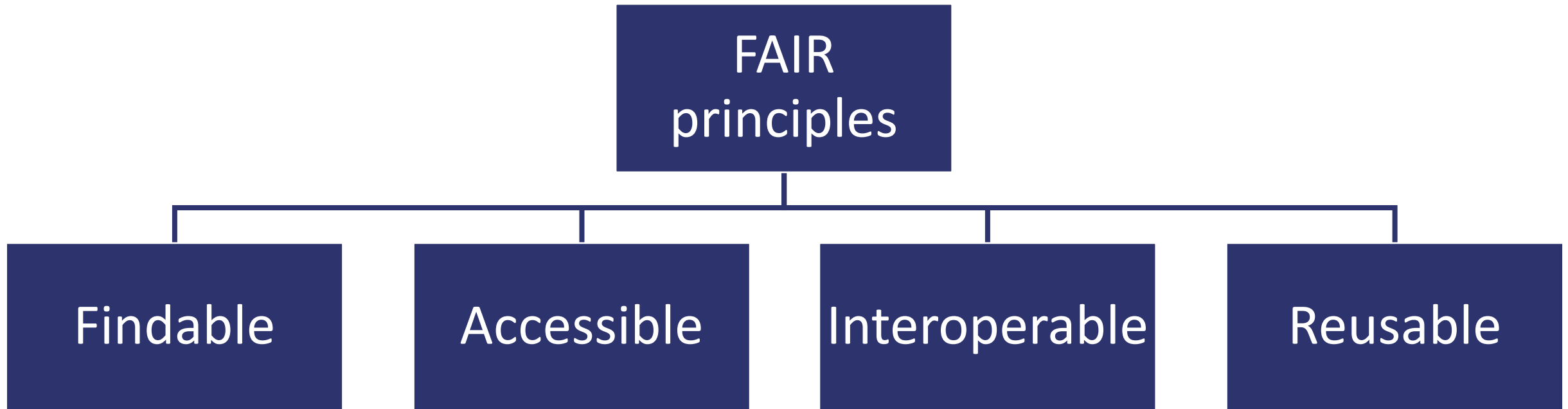
1.2.5 Research data management – definitions

Data: the content that can provide a description, measurement, or even a report related to your research.

Metadata: describes the relevant information on said data, giving more context for data users.

Data

Metadata

Filename: Yellowstone_Grizzly.jpg
Author: V.Edkins
Date: 4 May 2022
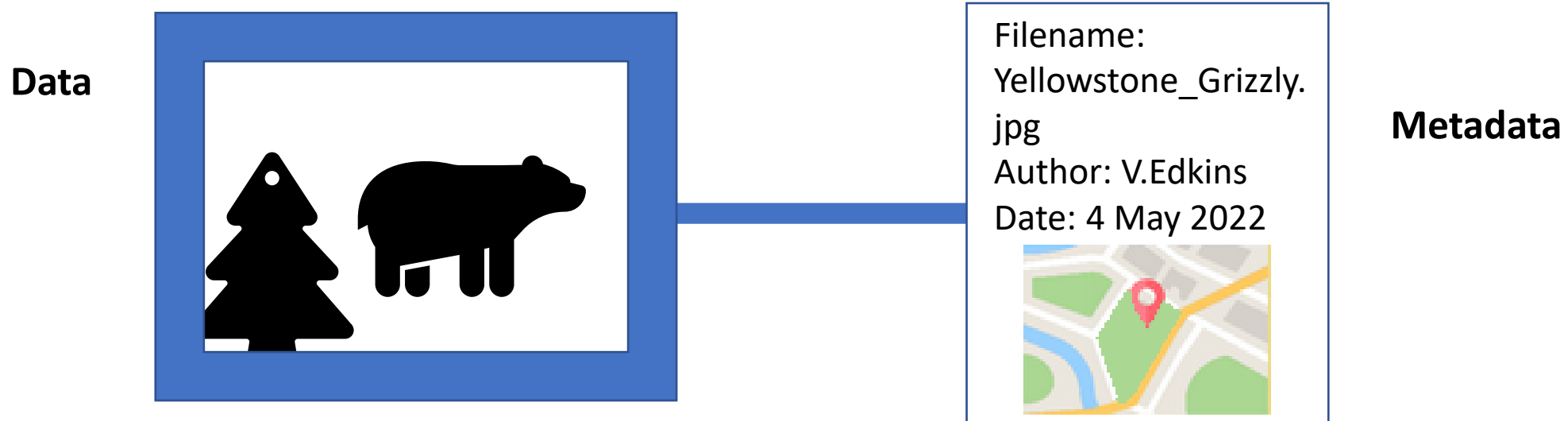
1.2.5 Research data management – FAIR principles

1.2.5 Research data management – FAIR principles

Findable

- Is your data easily identifiable and locatable, on a well-known searchable resource?

- Do you have appropriate metadata, clearly linked to the data and useful for understanding it?

- Understand your discipline's naming conventions, use clear version numbers, include useful keywords so others can locate your work.

1.2.5 Research data management – FAIR principles

'Findable' example:

A doctoral thesis in English Literature is stored on the home university's data repository. It receives:

- a unique URL where it can be accessed, and

- a persistent DOI (digital object identifier) that remains the same even if the URL changes. Example: 10.1234/EDI.012345

The thesis' entry in the repository includes rich metadata including name of the author, their adviser, the thesis abstract, the awarding institution, and relevant, searchable keywords.

1.2.5 Research data management – FAIR Principles

Accessible

- Anyone with a computer and an Internet connection should be able to access at least your metadata.

- How will your data be accessible? (e.g. deposited in a repository/online database)

- If certain datasets cannot be shared, or need to be shared under restrictions, explain why. Show legal and voluntary reasons separately

1.2.5 Research data management – FAIR principles

'Accessible' example:
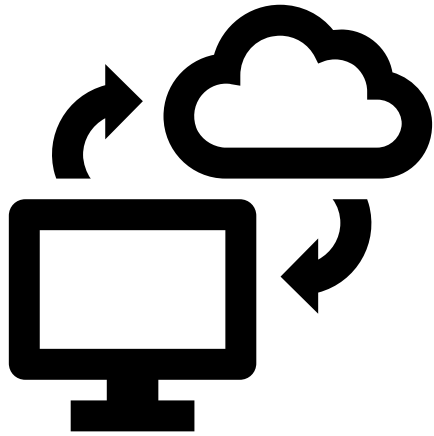
A researcher in Computer Science wants to store their dataset on the output of a new algorithm.

They can choose to store it on their home institution's repository, or a number of widely available repositories such as Open Science Framework or figshare. All of these examples assign a DOI and attach rich metadata.

The researcher wishes to embargo the data until their next project is complete. Therefore, the metadata clearly indicates that other researchers must contact the author directly to access the data, and provides up-to-date contact details.

1.2.5 Research data management – FAIR principles

Interoperable

- Does the data and metadata use a standardised language or format, so that it can be exchanged and re-used between researchers, institutions, organisation and countries?

- If you use new or uncommon vocabularies or formats, map them onto more commonly used formats.

- Data needs to be encoded in way that can be read on all applicable systems

1.2.5 Research data management – FAIR principles

'Interoperable' example:

A Social Science researcher has data on global social justice movements, made up of documentation and interview scripts, as well as large amounts of numeric data.

The raw data is held in Word (.doc) and Excel (.xls) documents.

For better interoperability between different operating systems, the researcher converts the text documents to PDF's (.pdf), and the numeric documents to a comma-separated values format (.csv)

1.2.5 Research data management – FAIR principles

Reusable

- The data used in the project should be useable by third parties, in particular after the end of the project. Explain any embargo for patents or publishing.

- Provide rich metadata to show how the data was created, transformed, or made "science-ready".

- The legal conditions under which the data can be used should be transparent to both humans and machines.

1.2.5 Research data management – FAIR principles

'Reusable' example:

A researcher in Climate Science wants to make their data on glacier size and sea temperature changes as widely usable as possible.

They provide rich metadata attached to the dataset that specifies where and when they made their measurements, and gives accurate provenance of the historical climate data they have compared it to.

They purchase an Open Database Content License, legible to humans and to computer searches, informing other parties that they are allowed any use of the contents of the research.

The next component of the template…

1.3. Quality of the supervision, training and of the two-way transfer of knowledge between the researcher and the host.

At a minimum, address the following aspects:

- Describe the qualifications and experience of the supervisor(s).
- Provide information regarding the supervisors' level of experience on the research topic proposed and their track record of work, including main international collaborations, as well as the level of experience in supervising/training, especially at advanced level (i.e. PhD and postdoctoral researchers).
- Planned training activities for the researcher (scientific aspects, management/organisation, horizontal and key transferrable skills…).
- For European Fellowships: two-way transfer of knowledge between the researcher and host organisation.
- For Global Fellowships: three-way transfer of knowledge between the researcher, host organisation, and associated partner for outgoing phase.
- Rationale and added-value of the non-academic placement (if applicable).

The next component of the template...

1.3. Quality of the supervision, training and of the two-way transfer of knowledge between the researcher and the host.

At a minimum, address the following aspects:

- Describe the qualifications and experience of the supervisor(s).
- Provide information regarding the supervisors' level of experience on the research topic proposed and their track record of work, including main international collaborations, as well as the level of experience in supervising/training, especially at advanced level (i.e. PhD and postdoctoral researchers).
- **Planned training activities for the researcher (scientific aspects, management/organisation, horizontal and key transferrable skills...).**
- **For European Fellowships: two-way transfer of knowledge between the researcher and host organisation.**
- **For Global Fellowships: three-way transfer of knowledge between the researcher, host organisation, and associated partner for outgoing phase.**
- **Rationale and added-value of the non-academic placement (if applicable).**

1.3 Training objectives (not essential)

- Help to ensure that you achieve a strong focus on training and development
- Enable cross-referencing (e.g. within training plan)
- Should be measurable
- Include both research specific and transferable skills
- Should be clearly linked to research objectives
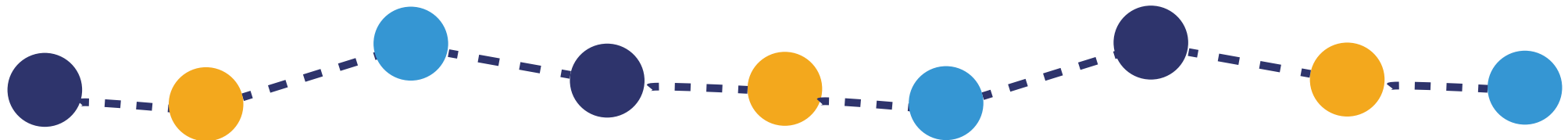
1.3 Training and knowledge transfer

Knowledge transfer to the fellow

Knowledge transfer to the host

1.3 Training and knowledge transfer to the fellow

Research skills and knowledge

Complementary and transferable skills

Think about all components of your project including secondments, short visits, placement, and mentoring

1.3 Training and knowledge transfer to the fellow

Research skills and knowledge

Link to training objectives if you have them

- Training through research
- Techniques or use of instruments?
- Experimental design
- Qualitative or quantitative methods?
- Open science and data management
- Is there an interdisciplinary or inter-sectoral component to the training?
- Secondments, short visits, or placement?

Explain HOW and WHO is involved

1.3 Training and knowledge transfer to the fellow

What additional courses and experiences will fellow undertake to enhance career potential?

Complementary and transferable skills

Link to training objectives if you have them

- Research and financial management
- Dissemination, communication and public engagement
- IP management
- Training dedicated to gender issues
- Ethical awareness
- Ethics in research
- People management/ leadership

Explain HOW and WHO is involved

1.3 Training and knowledge transfer to the fellow

- A career development plan should not be included in the proposal
- It will be a mandatory deliverable if successful (explain that one will be jointly established by fellow and supervisor)
- This plan will comprise training and career needs, including transferable skills
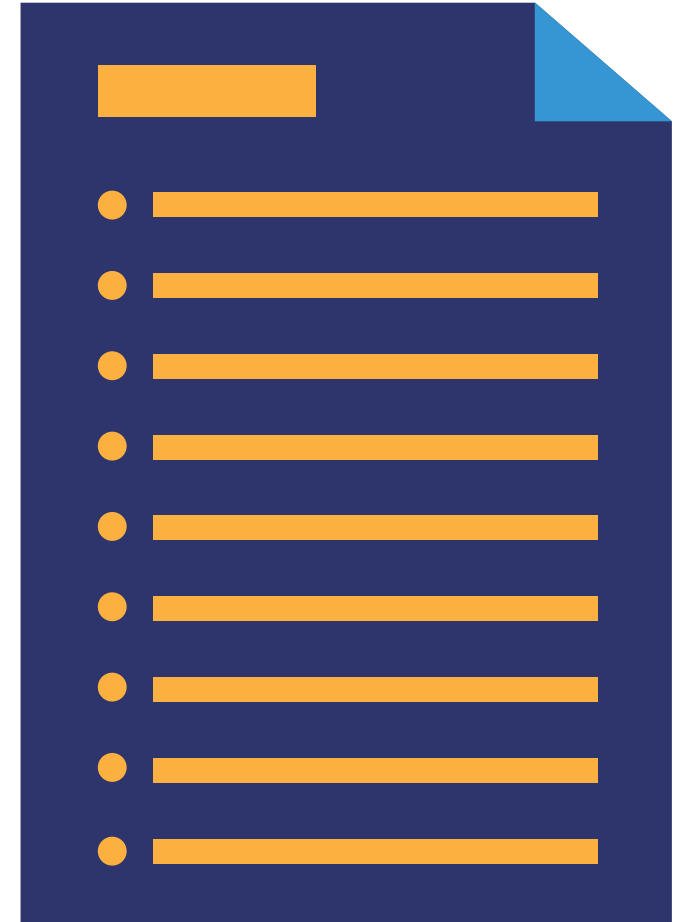
1.3 Knowledge transfer to the host

Host must also benefit from the fellowship

- What new knowledge and expertise will the fellow bring with them
- How will it be of benefit to the supervisor **and host research group?**
- How will knowledge be transferred to members of the host institution? Be specific
- Network of fellow will enable new links to be forged

Global Fellowships

Need to describe three-way transfer of knowledge

- Third country to researcher
- Researcher to associated third country partner in outgoing phase
- Researcher to MS/AC host in return phase

Exercise

Using a table such as that outlined below, produce an outline of the skills and knowledge to be obtained by the fellow

Training method	Who involved	Where it will take place	Interdisciplinary / intersectoral aspects	Associated training objective

This table can then be added to as you construct your project plan

End of the Excellence section...
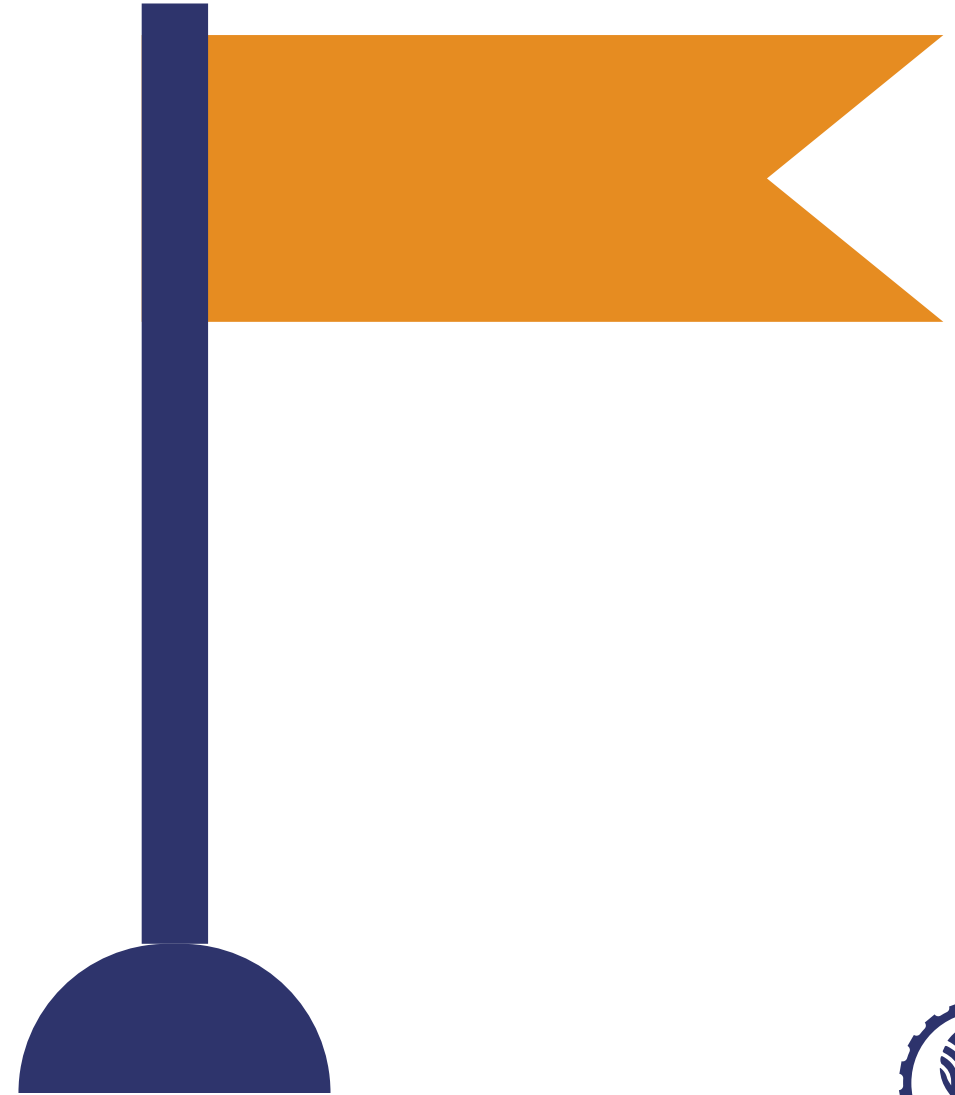
Impact: Section 2

2.1. Credibility of the measures to enhance the career perspectives and employability of the researcher and contribution to his/her skills development

At a minimum, address the following aspects:
- Expected skill development of the researcher
- Expected impact of the proposed research and training activities on the researcher's career perspectives inside and/or outside academia

2.1 Credibility of measures to enhance career perspectives and employability

2.1. Credibility of the measures to enhance the career perspectives and employability of the researcher and contribution to his/her skills development

2.1.1 Expected skill development of the researcher

2.1.2 Expected impact of the proposed research and training activities on the researcher's career perspectives inside and/or outside academia

2.1.1 Expected skill development

For every element of the training and knowledge exchange described in 1.3, identify the skills that will be developed.

It can be useful to identify the categories of skill. E.g.

Transferrable skills	Research-specific skills
• Verbal communication • Project management • Scientific writing • Outreach • IP management	• Programming • Archive use • Use of a particular technology/equipment • Specific methodologies

2.1.1 Expected skill development of the researcher

Already identified in 1.3

Activities	Skills developed
A1 – B1 English language courses	New language skills
- Day-to-day management of project under supervision (monitoring milestones, work packages etc) - Project management course (see Section 1.2)	Project management skills
- Preparation of journal articles and conference presentations (outlined in 2.2). - Engaging in communication and outreach activities (outlined in 2.2) - Attending the 'Communicating clearly' course at host institution	Enhanced ability to disseminate and communicate research to academic and non-academic audiences
- Attendance at JAVA programming course run by secondment institution - Use of JAVA to complete WP2	Enhanced JAVA programming skills and the knowledge to apply these skills to….

Exercise

Use the table that you developed for the Section 1.3 exercise.

Add a 'Skills developed' column and complete the table.

Skills developed	Training method	Who involved	Where it will take place	Interdisciplinary / intersectoral aspects	Associated training objective

2.1.2 Expected impact of the proposed research and training activities on the researcher's career perspectives inside and/or outside academia

What will all of this mean for the fellow's career prospects and employability?

- How will the skills make you competitive? Inside and outside academia
- What difference will the PF activities make to you and how will these set you apart (e.g. networks, ability to work outside of academia)
- Will the impacts be felt over the short-, medium-, or long-term?

2.1.2 Expected impact of the proposed research and training activities on the researcher's career perspectives inside and/or outside academia

Examples of impact:

- In a position to apply for next stage grants (e.g. ERC Starting Grant, consortium bids)
- Competitive in job market (in and outside academia) as a result of skills
- New collaborations, significant network
- Establishing own research group
- Ability to develop cutting edge technologies
- Ability to provide scientific support for policy makers (as a result of research excellence and networks)

The next component of the template

2.2. Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities.

At a minimum, address the following aspects:
- Plan for the dissemination and exploitation activities, including communication activities
- Strategy for the management of intellectual property, foreseen protection measures

Definitions

Dissemination
- Sharing research results with potential users – peers in the research field, industry, other commercial players and policymakers
- Contributing to the progress of science

Exploitation
- Use of the results for commercial purposes or in public policy making

Communication
- Promotion of the action and its results to multiple audiences (including media and the public)
- Possibly engaging in a two-way exchange

2.2 Suitability and quality of the measures to maximise expected outcomes and impacts

Plan for the dissemination and exploitation activities, including communication activities:

- Describe the planned measures to maximize the impact of your project by providing a first version of your 'plan for the dissemination and exploitation including communication activities'. Describe the dissemination, exploitation measures that are planned, and the target group(s) addressed (e.g. scientific community, end users
- In case your proposal is selected for funding, a more detailed Dissemination and Exploitation plan will need to be provided as a mandatory project deliverable during project implementation
- Regarding communication measures and public engagement strategy, the aim is to inform and reach out to society and show the activities performed, and the use and the benefits the project will have for citizens. Activities must be strategically planned, with clear objectives, start at the outset and continue through the lifetime of the project. The description of the communication activities needs to state the main messages as well as the tools and channels that will be used to reach out to each of the chosen target groups.
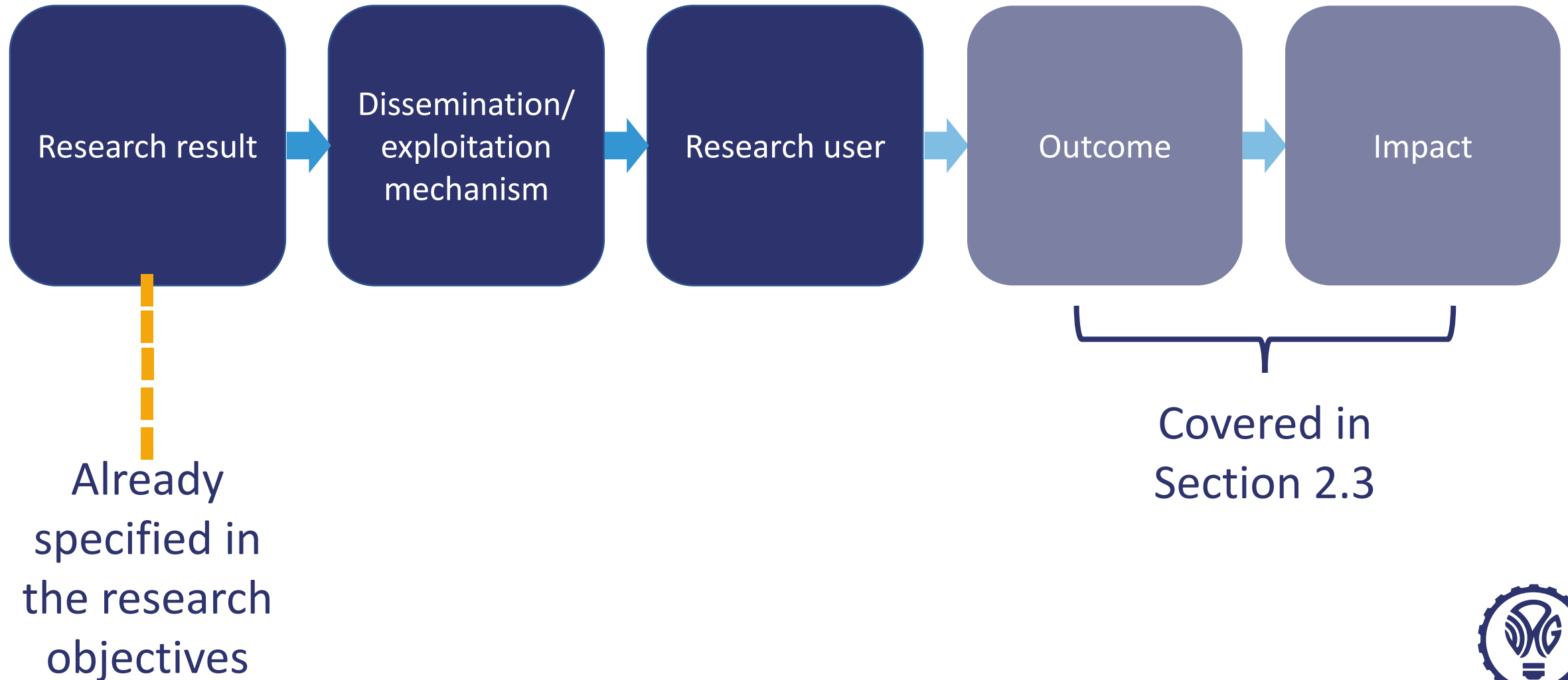
Use two sub-sections for this →

2.2.1 Planned dissemination and exploitation measures
2.2.2 Planned communication and public engagement measures

2.2.1 Planned dissemination and exploitation measures

A quick explanation of impact pathways first…

Preliminary explanation: Achieving impact

2.2.1 Planned dissemination and exploitation measures

Step 1: Identify the potential users of your results

Who are the potential users of your research?

- Fellow researchers (same field and other fields)
- Industry
- Business
- Public sector organisations
- Charities
- Patient organisations
- Regulatory bodies

Research result → Dissemination/ exploitation mechanism → Research user

2.2.1 Planned dissemination and exploitation measures

Step 2: What and how will you disseminate to each group?

Which of the research results produced (see objectives) will be of interest to which users?

What is the most effective way of disseminating these deliverables to each group?

- Journal article (open access)
- Conference presentation
- Report
- Talk/seminar
- Demonstration

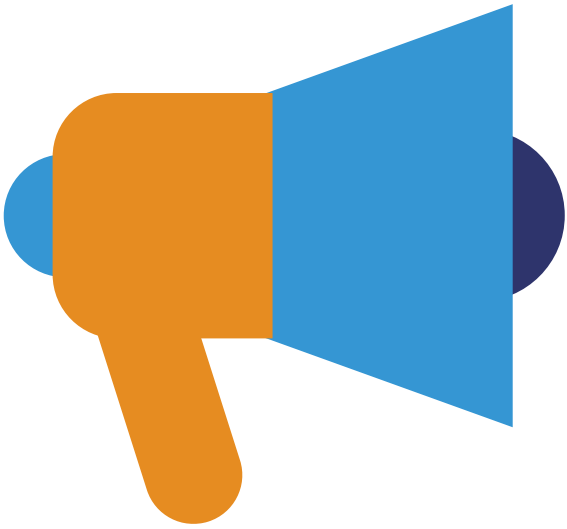| Research result | → | Dissemination/ exploitation mechanism | → | Research user |
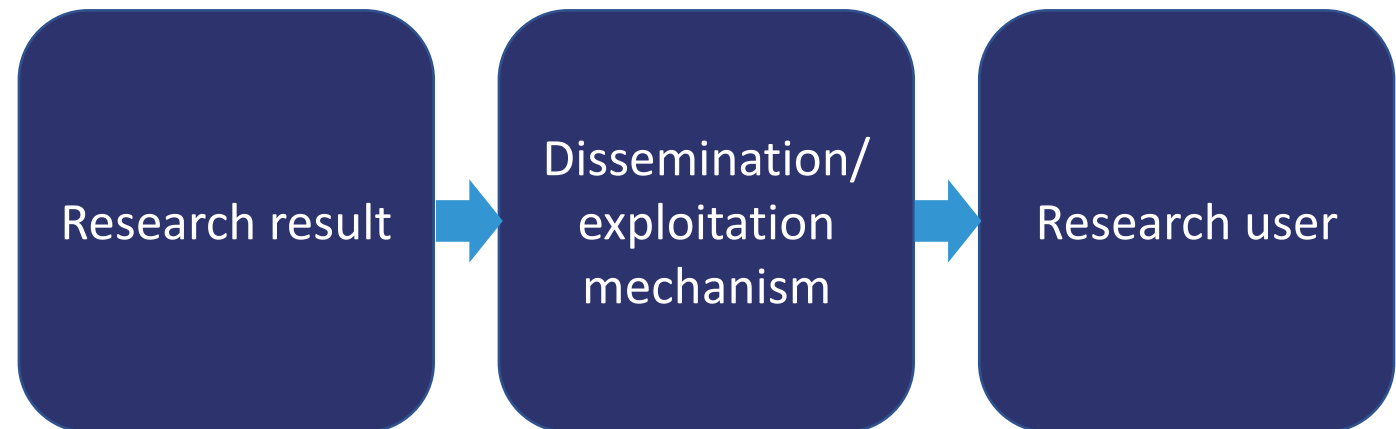
Exercise

- Complete steps 1 and 2 as outlined on the previous slides. (You will need to refer back to the objectives)
- You could use a table to carry out this task

Research results	Potential user	Method of dissemination	When?

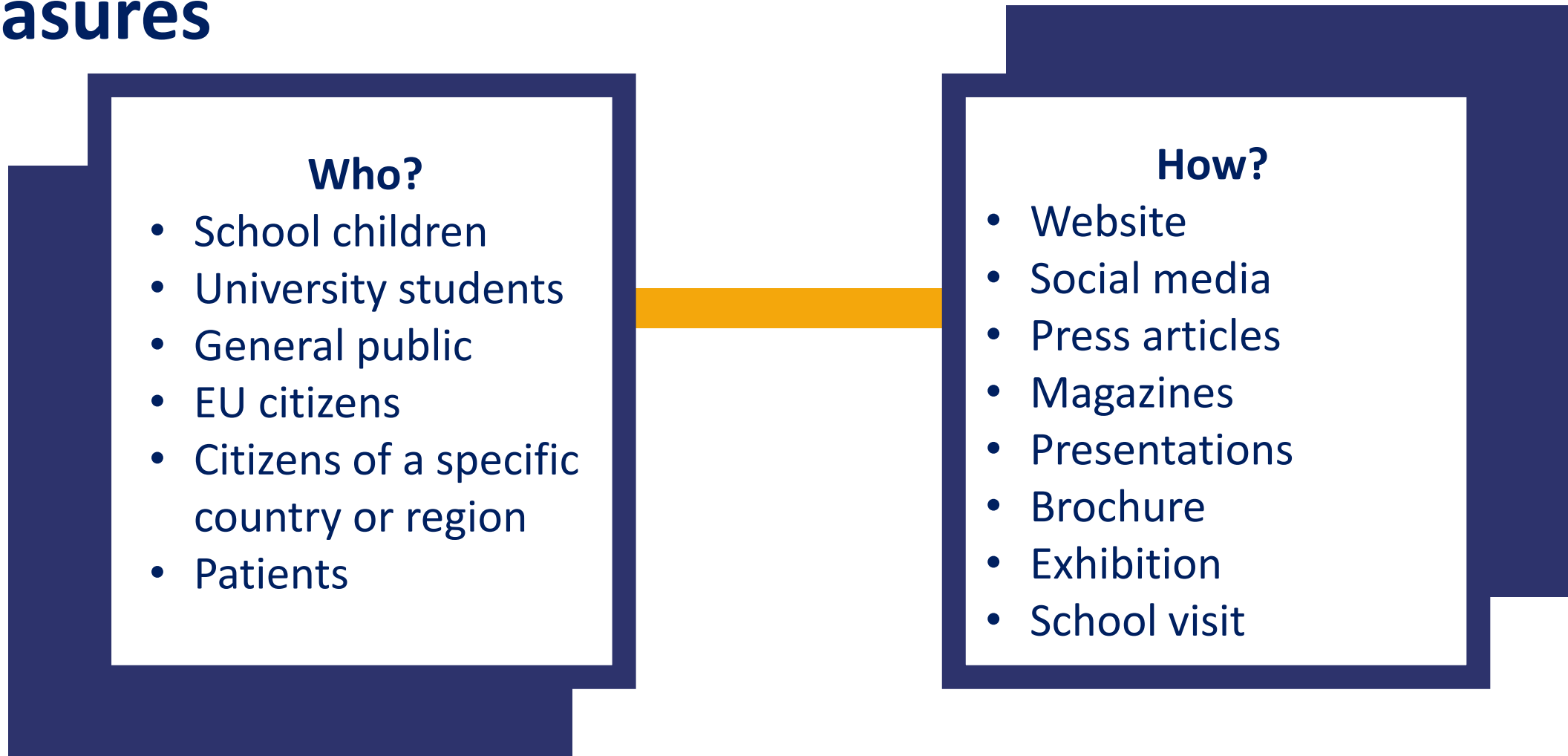# 2.2.2 Planned communication and public engagement measures

- Public engagement and outreach are critical
- Devise and describe your communication and public engagement plan
- Communication must be tailored to its target audience
- Messages should be pertinent to the target audience

2.2.2 Planned communication and public engagement measures

Who?
- School children
- University students
- General public
- EU citizens
- Citizens of a specific country or region
- Patients

How?
- Website
- Social media
- Press articles
- Magazines
- Presentations
- Brochure
- Exhibition
- School visit

Make it clear when the activities will take place – they should occur throughout the project

2.2.3 Management of intellectual property

Is there potential for your results to be exploited for commercial purposes or for use in policy making?

- Describe how intellectual property (IP) will be identified, managed, licensed and owned

- If there are no IP issues, make this clear stating that the results will be in the public domain
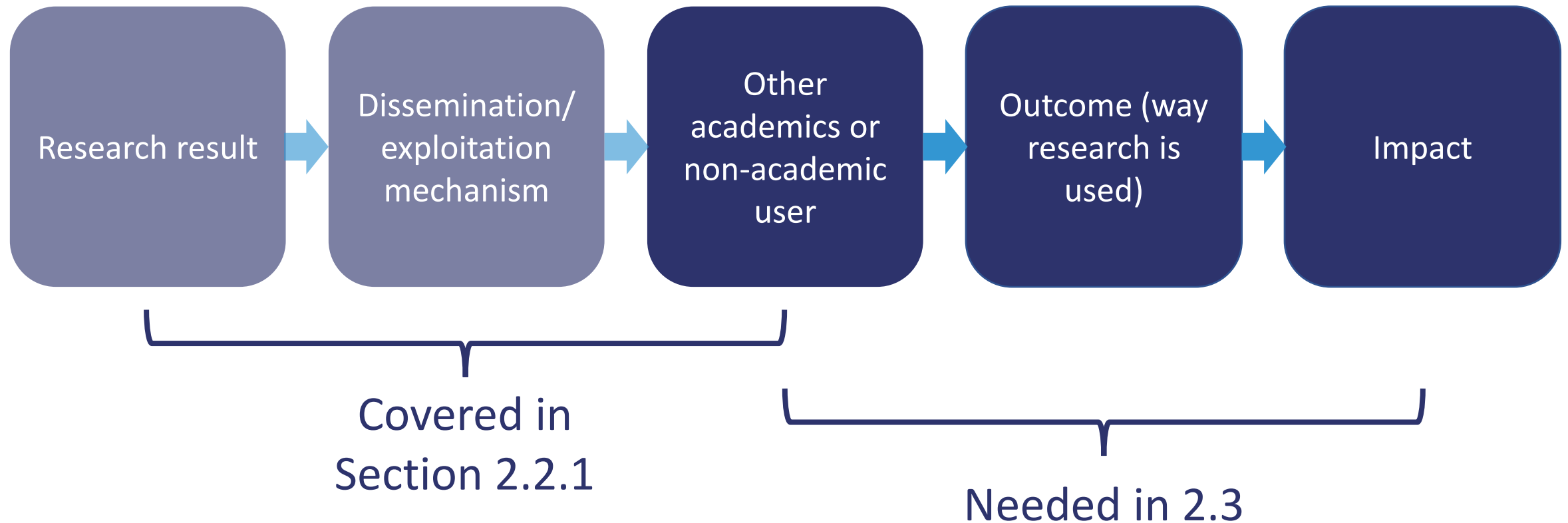
The next component of the template

2.3. The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts Provide a narrative explaining how the project's results are expected to make a difference in terms of impact, beyond the immediate scope and duration of the project. The narrative should include the components below, tailored to your project.
- Expected scientific impact(s)
- Expected economic/technological impact(s
- Expected societal impact(s)

Achieving impact

Research result → Dissemination/ exploitation mechanism → Other academics or non-academic user → Outcome (way research is used) → Impact

Covered in Section 2.2.1

Needed in 2.3

2.3 The magnitude and importance of the project's contribution to the expected scientific, societal and economic impact

Expected scientific impacts:

E.g. contributing to specific scientific advances, across and within disciplines, creating new knowledge, reinforcing scientific equipment and instruments, computing systems (i.e. research infrastructures)

Who will use the 'science'?	→	What will they use it for?	→	What difference will this make?
• Disciplines? • Research groups? • Researchers of what issues?		• Improving methodology? • Informing research practices or approaches? • Enabling research in other areas		• Efficiency • Accuracy • Enable other issues to be researched/ tackled

New database	Open access repository. Shared on website	Researchers in the field of X	Identifying the relationship between factors A and B	Increase efficiency of research (no new data collection needed)

2.3 The magnitude and importance of the project's contribution to the expected scientific, societal and economic impact

Expected economic/technological impacts:

E.g. bringing new products, services, business processes to the market, increasing efficiency, decreasing costs, increasing profits, contributing to standards' setting, etc

2.3 The magnitude and importance of the project's contribution to the expected scientific, societal and economic impact

Expected societal impacts:

E.g. decreasing CO_2 emissions, decreasing avoidable mortality, improving policies and decision-making, raising consumer awareness.

Who will use what you produce?	→	What will they use it for?	→	What difference will this make?
• Policy makers • Industry • Companies • Care providers • Charities • Educators • NGOs • Arts organisations		• Service improvement • Changed policy • Changed governance • New processes • Develop new products/medicines		• Improving health outcomes • Improved wellbeing • Environmental effects • Make things easier • Make things less expensive • The possible list here is very long

| Recommendations for communication health messages to the public	Online toolkit communicated via network	National health services	Improved communications	Better population health

2.3 Magnitude and importance of the project's contribution

- Only include such outcomes and impacts where your project would make a significant and direct contribution.
- Avoid describing very tenuous links to wider impacts.
- Give an indication of the magnitude and importance of the project's contribution to the expected outcomes and impacts, should the project be successful. Provide quantified estimates where possible and meaningful.

Magnitude: how widespread the outcomes and impacts are likely to be. For example, in terms of the size of the target group, or the proportion of that group, that should benefit over time

Importance: refers to the value of those benefits. For example, number of additional healthy life years; efficiency savings in energy supply.

End of the Impact section...
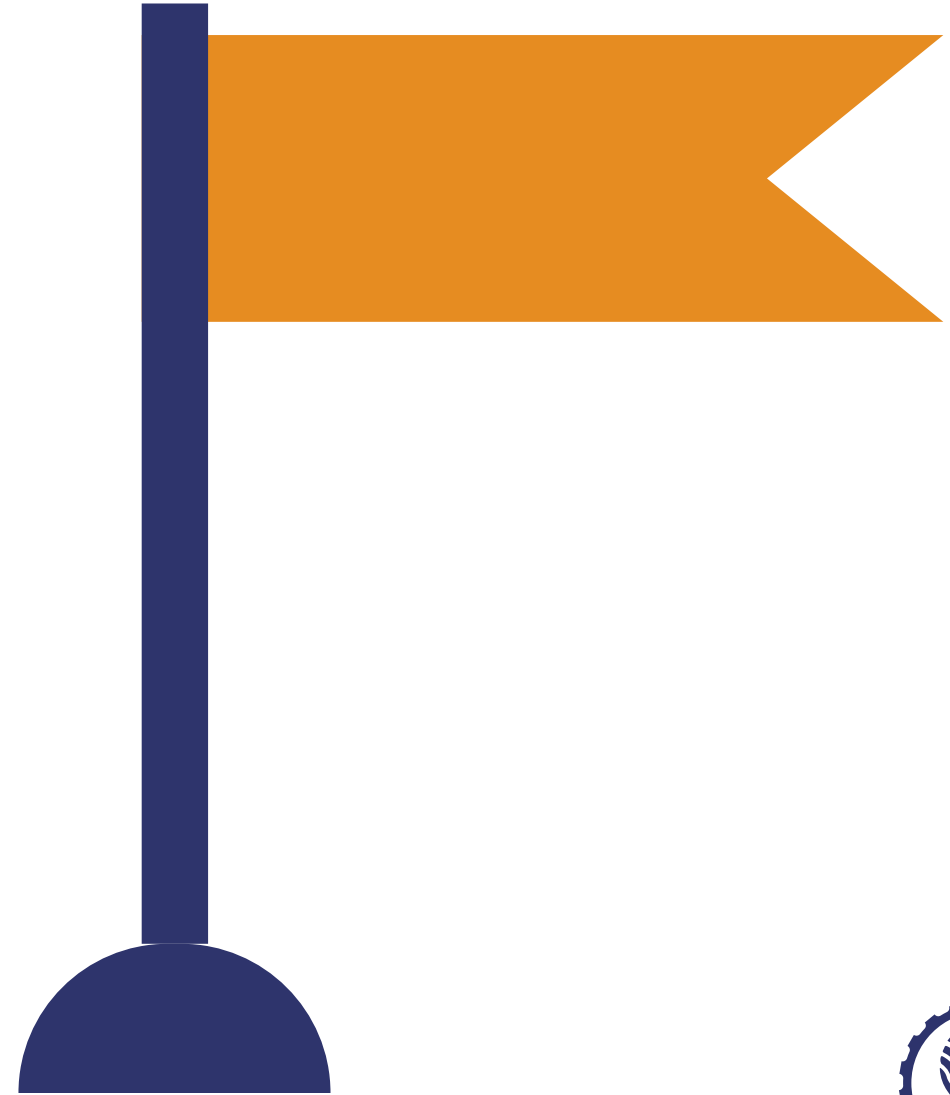
Implementation: Section 3

3.1. Quality and effectiveness of the work plan, assessment of risks and appropriateness of the effort assigned to work packages

At a minimum, address the following aspects:

- Brief presentation of the overall structure of the work plan, including deliverables and milestones
- Timing of the different work packages and their components
- Mechanisms in place to assess and mitigate risks (of research and/or administrative nature)

A Gantt chart must be included and should indicate the proposed Work Packages (WP), major deliverables, milestones, secondments, placements.

3.1 Quality and effectiveness of the work plan, assessment of risks and appropriateness of the effort assigned to work packages

3.1.1 Structure of the workplan

- Work plan should be comprised of a series of work packages (WPs)
- Either a one-to-one mapping between research objectives and WPs or a clear alternative
- Can use additional WPs for management, training, and dissemination, exploitation & communication

The workplan

| Over-arching objective			
Research objective 1	Research objective 2	Research objective 3	Research objective 4
Work package 1	Work package 2	Work package 3	Work package 4
Task 1.1 Task 1.2 Task 1.3	Task 2.1 Task 2.2 Task 2.3 Task 2.4	Task 3.1 Task 3.2	Task 4.1 Task 4.2 Task 4.3
Results 1.1, 1.2	Result 2.1	Results 3.1, 3.2	Result 4.1

3.1.1 Structure of the workplan

- Describe the tasks such that a reviewer can
  - ➤ Determine that you have a clear plan in place for what you will do
  - ➤ Assess the robustness and effectiveness of the workplan to achieve the objective

- Build in secondments, visits and placement as necessary and explain what you will do in each case

- Justify allocation of time & resources (this could become a separate sub-section or can be presented alongside the task information)

- Make clear what the milestones are and when they will occur

- Specify the deliverables to be produced and when these are expected

Definitions: Milestones
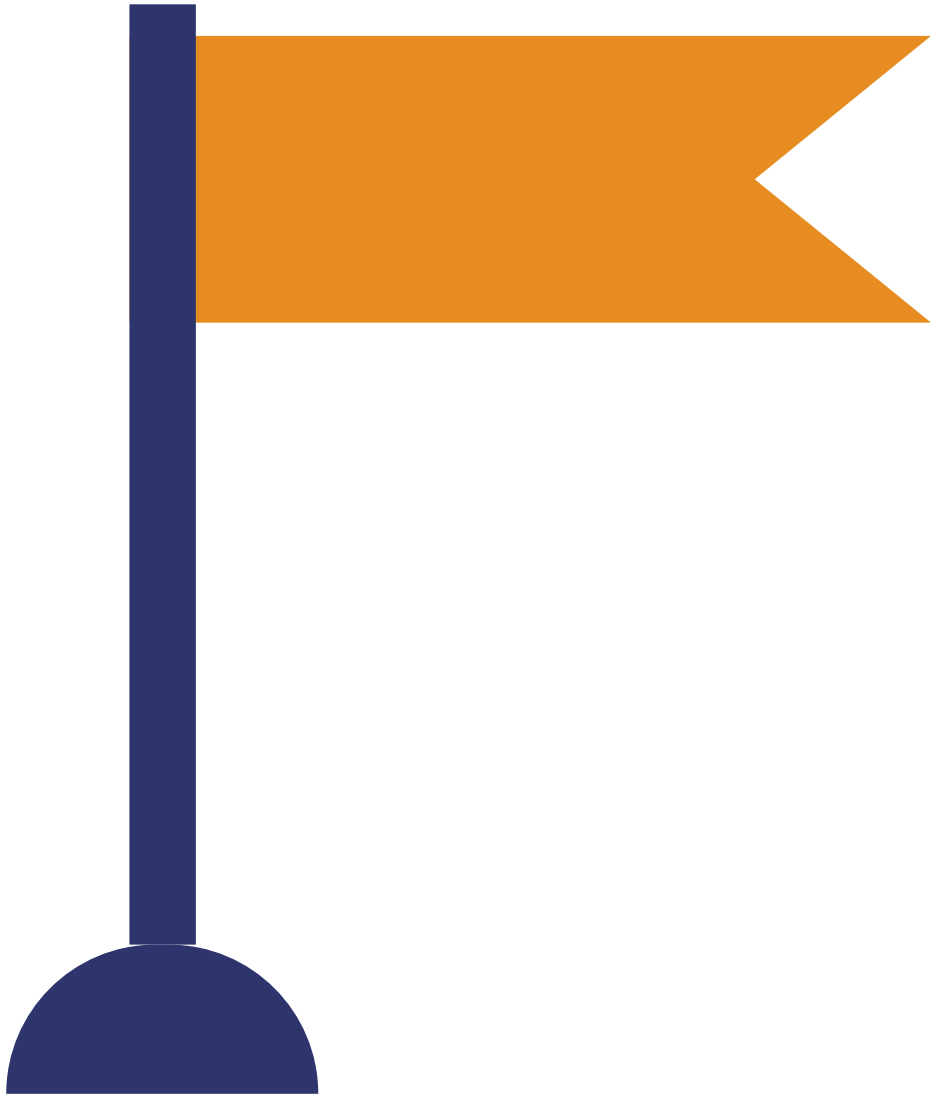
Milestone = control points in the action that help to chart progress

They may:

- Correspond to the completion of a key deliverables allowing the next phase of work to begin.
- Be required at intermediary points so that if problems arise, corrective measures can be taken.
- A critical decision point (where the future path of research is determined).

Gantt chart

Must include:

- WP titles
- Results
- Deliverables
- Milestones
- Secondments
- Placements
- Major training events
- Dissemination, exploitation and communication activities

Schedule should be in terms of number of months elapsed since start of action

Gantt chart

	Month																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
WP1							M1	R1	R2															
WP2										M2			R3											
WP3																	M3		R4					
WP4																							R5	R6
WP6 Training	D6.1	Tr1	Tr2		Tr3				Tr4				D6.2	Tr5	Tr6				Tr7		Tr8			
WP7 Communication & dissemination			D7.1							O1	O2				O3		O4		O5				O6	O7

WP: Work package

R: Result

D: Deliverable

M: Milestone

O: Output

Tr: Training activity

Exercise

- Think about the mapping of your research objectives to work packages – does a straightforward mapping work in your case?
- Construct a diagram such as that below for your project

Research objective 1	Research objective 2	Research objective 3	Research objective 4
Work package 1	Work package 2	Work package 3	Work package 4
Task 1.1 Task 1.2 Task 1.3	Task 2.1 Task 2.2 Task 2.3 Task 2.4	Task 3.1 Task 3.2	Task 4.1 Task 4.2 Task 4.3

Risk assessment

- Specify the research and administrative risks which might endanger the attainment of the objectives
- Include the contingency plans to mitigate risks

Risk	Likelihood (high/medium/low)	Impact (high/medium/low)	Mitigation/contingency

Risk Matrix
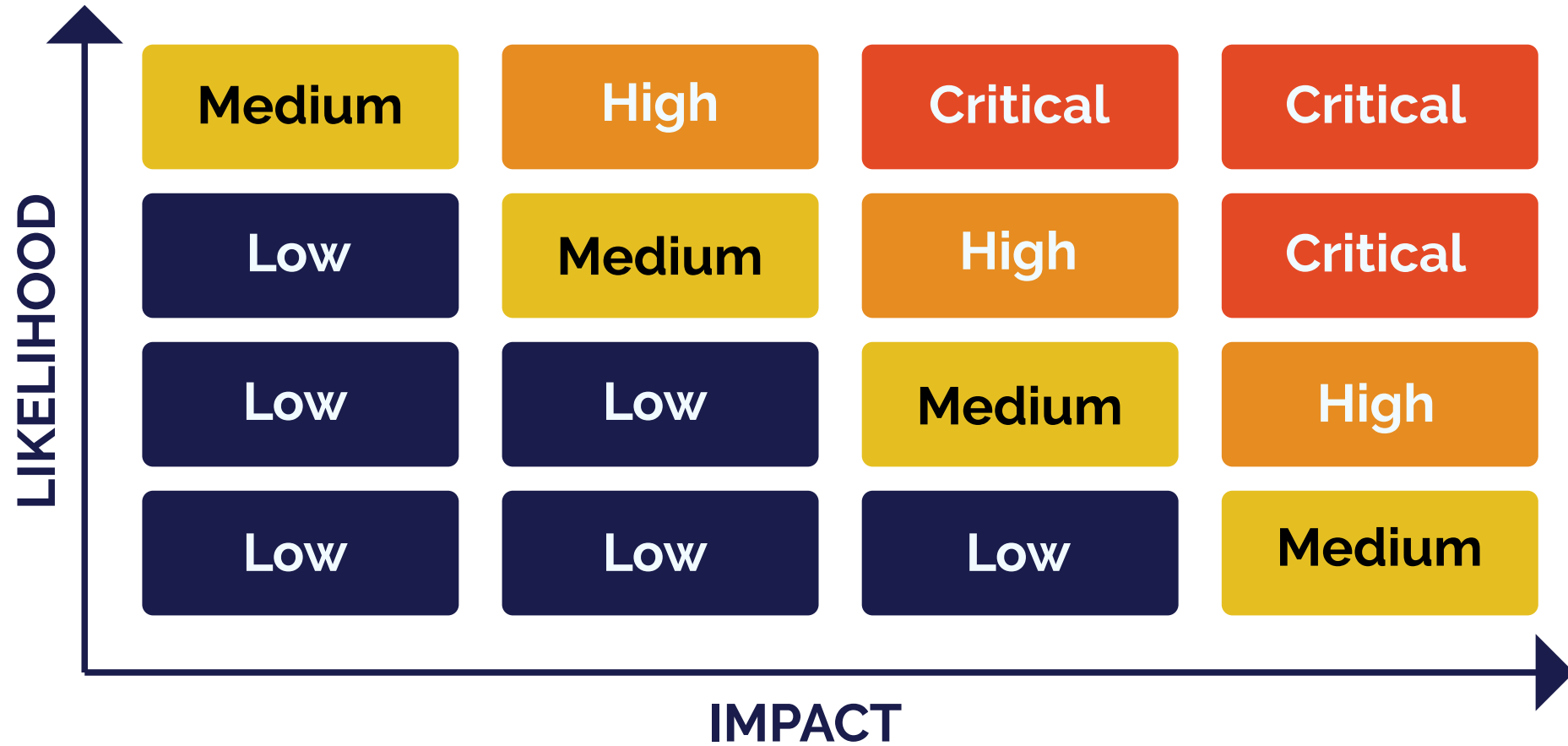
The next component of the template

3.2. Quality and capacity of the host institutions and participating organisations, including hosting arrangements

At a minimum, address the following aspects:

- Hosting arrangements, including integration in the team/institution and support services available to the researcher.
- Quality and capacity of the participating organisations, including infrastructure, logistics and facilities should be outlined in Part B-2 Section 5 ("Capacity of the Participating Organisations")

3.2 Quality and capacity of the host institutions and participating organisations, including hosting arrangements

- Supervision arrangements (frequency, purpose)
- Integration into team and institution (e.g. research group meetings)
- Mentors?
- Support available e.g. with outreach, communications, IT
- Other facilitates and provisions (e.g. International Office, HR Services)

End of the Implementation section...

Key points

- ❑ Follow the template and the guidance closely
- ❑ Remember that your reviewers are unlikely to be specialists
- ❑ 10 pages – be concise but detail is needed
- ❑ Proposal writing should be a partnership – fellow and supervisor should both participate

Many thanks for attending and participating

For further information:

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