ÚOCHB AV ČR
IOCB PRAGUE

MSCA PF @ IOCB

Image: gearingroles.eu

With thanks to Jakub Zeman (MUNI) for background materials.

Project Office | 1 June 2022

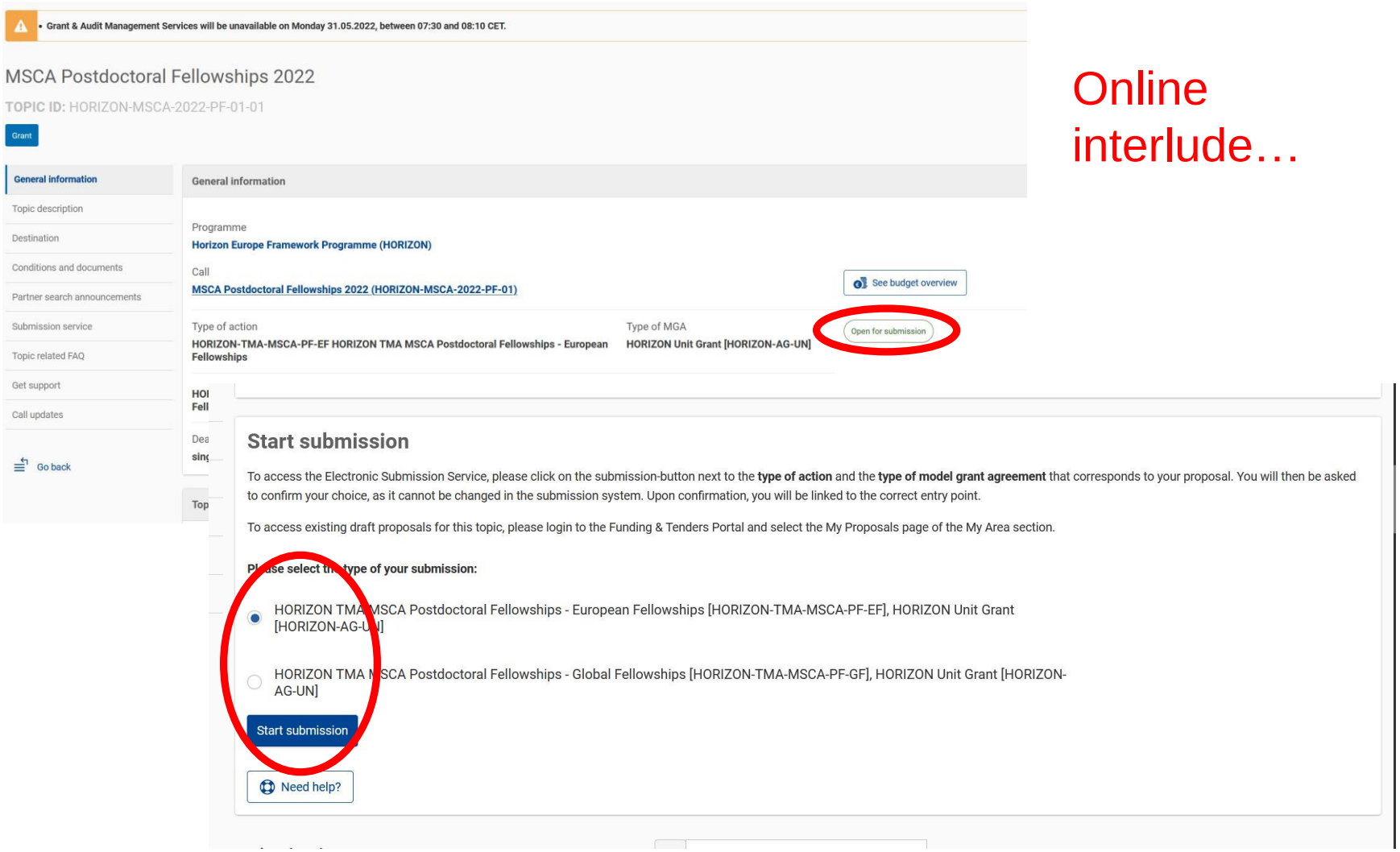
MSCA PF – the basics

- **Individual research project**: researcher and senior colleague as supervisor
- Recipients: **postdocs** (must have defended thesis, max 8 years after PhD), useful to gain research experience abroad or to return to home country after research abroad
- Should involve **international, interdisciplinary and intersectoral** cooperation
- Two-way knowledge transfer **researcher – host**: research stay should be beneficial
- Focus on training in **both** scientific skills and transferable skills
- Optional **secondment**, optional **non-academic placement** at the end of fellowship
- **Dissemination** and **communication** integral part of project

MSCA PF – new for 2022

- Proposals evaluated at less than 70% **cannot be resubmitted** in the next call (same researcher, same host institution)
- 2021: max 8 years full time research experience from PhD, PhD must be defended by the deadline

MSCA PF – Funding and Tenders Portal



Online interlude…

Activity: who can help you with proposal preparation?

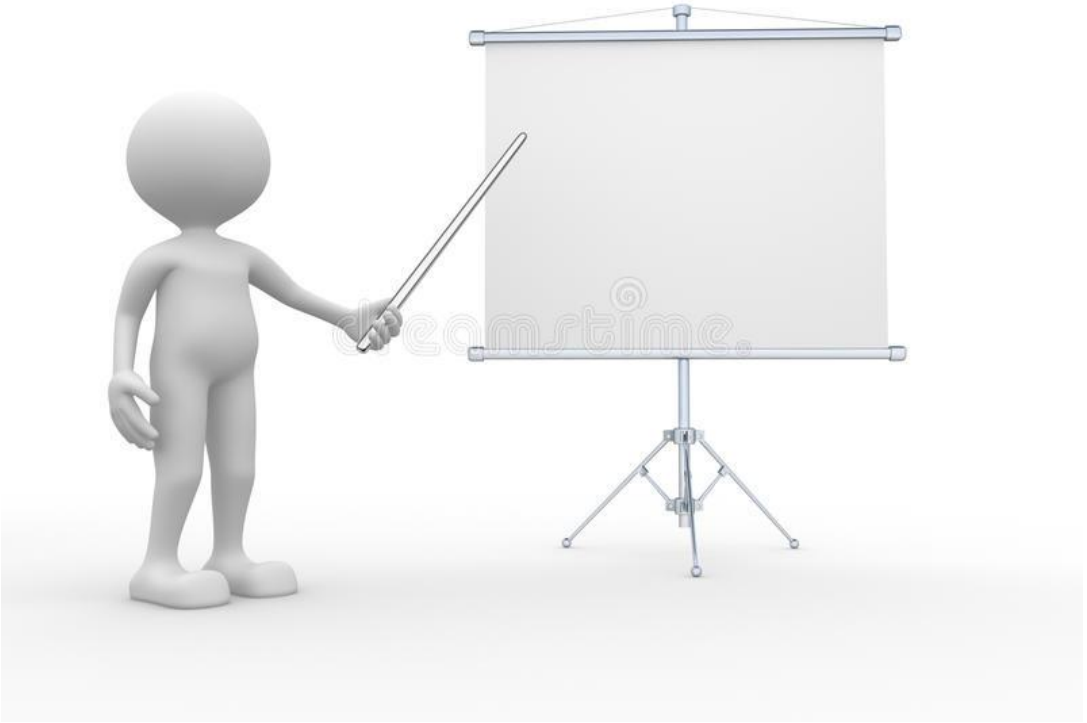
- List as many people (and their roles) as you can who might be able to help you
- Start with logical options… (map your networks)…
- …but include also unlikely ones, use your imagination!
- How specifically can they be helpful - what can they do for you?
- What aspects of your proposal could they possibly “improve”?
- How “accessible” are they? How can you approach them?
- How can you “manage” them?

Credit: Jakub Zeman

c.15-20 min

MSCA PF – CV structure

- What are the key parts of the academic CV?



MSCA PF – CV structure

CV of the researcher (indicative length: 5 pages)
Any information provided in Parts A and B of the proposal should be fully consistent. Always mention full dates (using format: dd/mm/yyyy). The CV should include the standard academic and research record. Any research career gaps and/or unconventional paths should be clearly explained.

At a minimum, the CV should contain:
a) The name of the researcher;
b) Professional experience (most recent first, with exact dates in format dd/mm/yyyy);
c) Education, including PhD award date (most recent first, with exact dates in format: dd/mm/yyyy).

MSCA PF – CV structure

The CV should include information on:
Publications in peer-reviewed scientific journals, peer-reviewed conference proceedings, and/or monographs (they are expected to be open access either published or through repositories) and **other outputs such as data, software, algorithms significant for your research path** (they are expected to be open access in appropriate repositories to the extent possible; they should be accompanied by a very short qualitative assessment of their scientific significance and **not by the Journal Impact Factor**);
Invited presentations to internationally established conferences and/or international advanced schools;
Organisation of international conferences, including membership in the steering and/or programme committee;
Research expeditions led by the researcher;
Granted **patent(s)**;
Examples of **participation in industrial innovation**;
Prizes and Awards;
Funding received so far;
Supervising and mentoring activities;
Other items of interest.

Example…

Activity: CV swap

- Swap CV and comment on which parts of the structure are missing in colleague's CV

c.15 min

- Homework: modify CV according to the required structure

Credit: posterlounge

Activity – State of the Art

- What is the current State of the Art (SOTA) in the field? Where is the boundary between the SOTA and your research project?

Activity: State of the Art

Who defines the state of the art in your field? Do you know the key labs in the relevant field?

Make a scheme (mind map) of the leading labs (are you sure you know them "all"?
Is the hosting lab there? Where exactly?
Assess their acknowledged relevance, order them
Can you identify any links between you/your PI and the best labs in the field?
*Which ones do you **like**?*
What is the character of relations among the labs? (Competition in terms of hypothesis/theories, in terms of pursuing the same line; collaboration, etc…)
*Do the same for the **leading hypothesis/theories***
Think about the SOTA dynamically – recent developments and pace of changes, factors of change – any implications for your research idea?
Any collaborations, or recent convergences / divergences, interplays

Credit: Jakub Zeman

20 min

Objectives & Work-packages

S.M.A.R.T. principle – **S**pecific – **M**easurable – **A**chievable – **R**ealistic -**T**imed

Objectives = shorter term actions to achieve an overall goal

Overall goal = the „big challenge“; the groundbreaking idea
Several specific objectives = the „core“ of your proposal

Work-package (WP) = to define the steps (tasks) necessary for completion of the work
Task - activity that needs to be accomplished within a defined period of time
Number of WPs? – relation of objectives and WPs should be clear
(ideally – 1 objective = 1WP)

Activity: Objectives and project structure

- *Define the overall goal of the project*
- *Define specific objectives (not more than 3)*
- *Define Work-packages and their relation to the objectives*
- *Try to go one level down and define at least some „tasks“ of the WPs*
- *This scheme might be well used in section 3., and the information for drawing of your Gantt chart*

?

15-20 min

Credit: Jakub Zeman

Gantt Chart

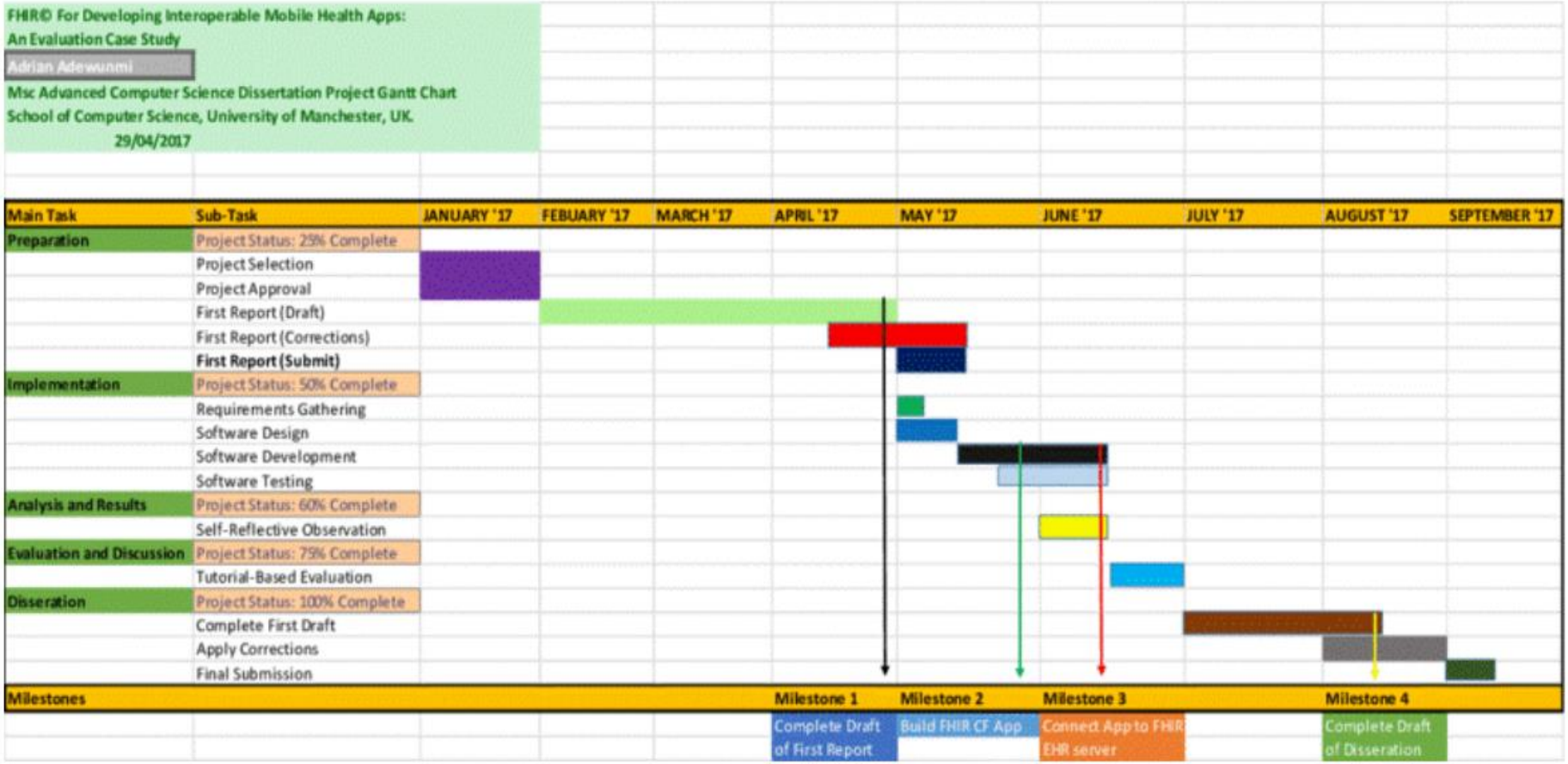
What is Gantt Chart?

- timeline of project activities
- useful in planning a project and defining the sequence of WPs, tasks, deliverables, milestones

Research GCH – basic structure:

- Work packages
  - recommendation: 1 WP for management and transferable skills, 1 WP for dissemination & communication
- Tasks
- **Milestones** = checkpoints in the project, help to chart progress throughout the course of the project
- **Deliverables** = outcomes of project that is produced during the project's course (publications, conference/lectures, public outreach activities)

Gantt Chart for preparing MSc thesis



Source: researchgate.net

Activity/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	T1.1 Code compilation and testing		M1	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	T1.2 [redacted]based methods	1	2						M2	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	T1.3. Multireference methods	1	2										M3	13	14	15	16	17	18	19	20	21	22	23	24
WP2	T2.1. Workflow optimization				M4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	T2.2. Production [redacted]work	1	2	3	4						M5	11	12	13	14	15	16	17	18	19	20	21	22	23	24
WP3	T3.1. [redacted]calculations and analysis	1	2	3	4	5	6	7	8							M6	16	17	18	19	20	21	22	23	24
WP4	T4.1. [redacted]description of QI	1	2	3	4	5	6	7	8	9	10	11	12												M7
WP5	T5.1. High-throughput screening	1	2	3	4	5	6	7	8	9	10								M8	19	20	21	22	23	24
	T5.2. Follow-up on most interesting systems	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18						M9
WP6 Management		P	M1							P												P			
WP7 Dissemination activities				C1			O1	O2				O3			C2			C3	O1	O2		L			
Publications		1	2	3	4	5	6	7	8	9	10	11	D1	13	14	D2	16	17	18	19	20	21	22	23	D3,D4

• *Deliverables: Publications:* Project results will be disseminated in four publications in high-impact journals: **D1** (resulting from **WP1**) in month 12; **D3** (**WP2** and **WP3**) in month 15, **D3** (**WP4**) and **D4** (**WP5**) in month 24. *Conferences and lectures.* [redacted] in June 2022 (**C1**); in winter 2023-2024, he will give a lecture (**L**) at the Institute of Organic Chemistry and Biochemistry of the CAS (Czechia); he will participate in a computational chemistry-oriented conference (**C2**, after completing **D1**), and the *Harnessing the Power of Data* ACS meeting (**C3**) in August 2023. *Public outreach:* (a) [redacted] will participate in the *European Researchers' Night* (**O1**, September) and *Oxfordshire Science Festival* (**O2**, October) events, as well school visits organized by the host institution (**O3**); (b) He will write a popular science article on ring currents and energy delocalization (**O4**). *Management*: Proposals for computational resources will be submitted by month 2 (included in **M1**). Technical reports will be written every six months, oral presentations will be given every four months. A Personal Career Development Plan (**P**; see section *1.3.2*) will be created in month 1, and revisited in months 9 and 21. The work plan is summarized in the Gantt chart.

Homework

Abstract – prepare abstract of your intended project and send to projectoffice@uochb.cas.cz

Gantt chart – prepare draft for next session (14th June) so we can work with it there

(CV – updated version can be commented by us individually)

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Thank you for your attention.