CEITEC

Středoevropský technologický institut

BRNO | ČESKÁ REPUBLIKA

PREFEKT & CEITEC PhD school
Preparing International Grant Applications I.

Zlatuše Novotná, Veronika Mikitová, Renata Padrtová, Ladislav Čoček, Zdenka Žampachová, Daria Kucharova

Grant Office CEITEC MU

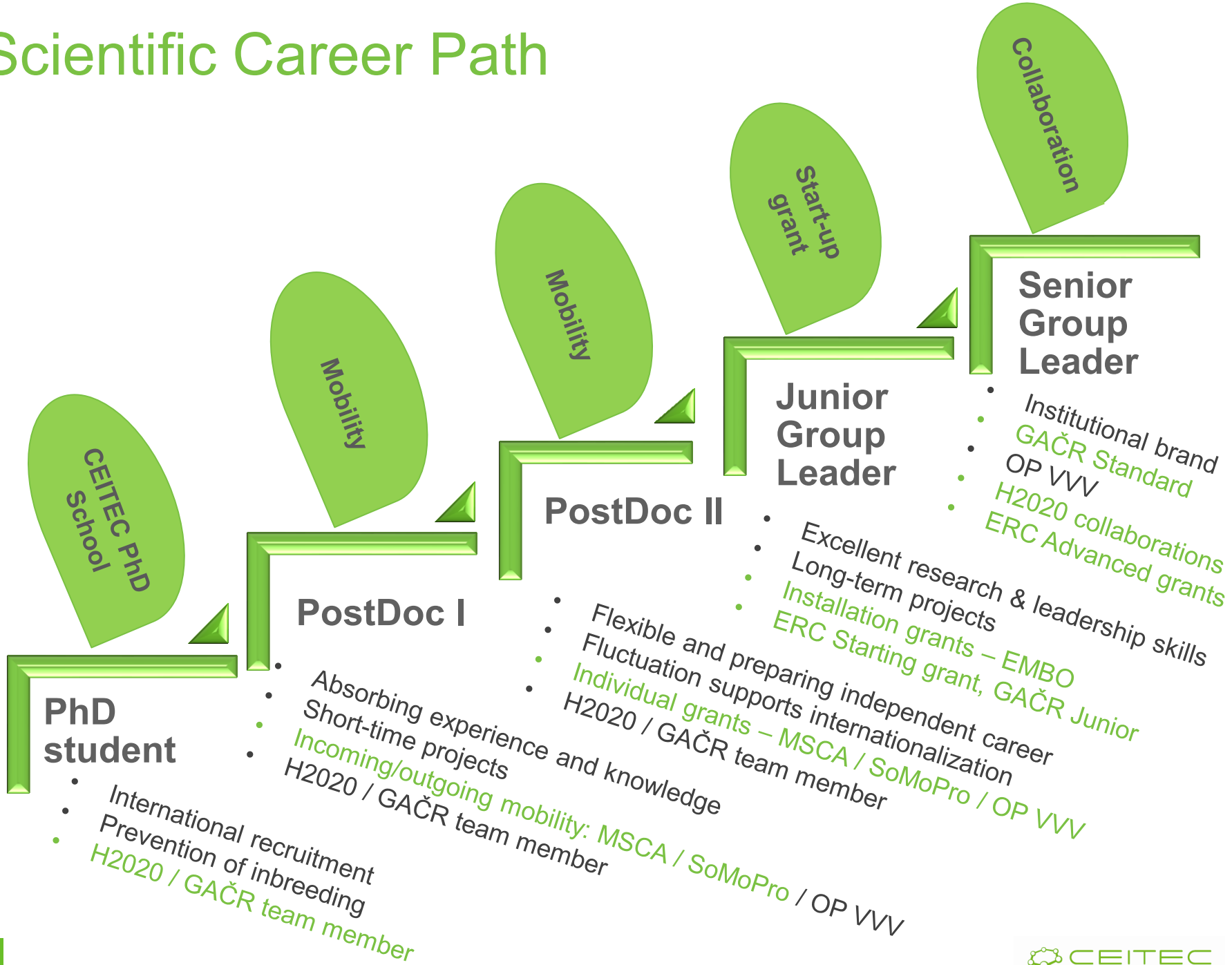
Brno, 15th April 2016

EVROPSKÁ UNIE
EVROPSKÝ FOND PRO REGIONÁLNÍ ROZVOJ
INVESTICE DO VAŠÍ BUDOUCNOSTI

2007–13
OP Výzkum a vývoj pro inovace

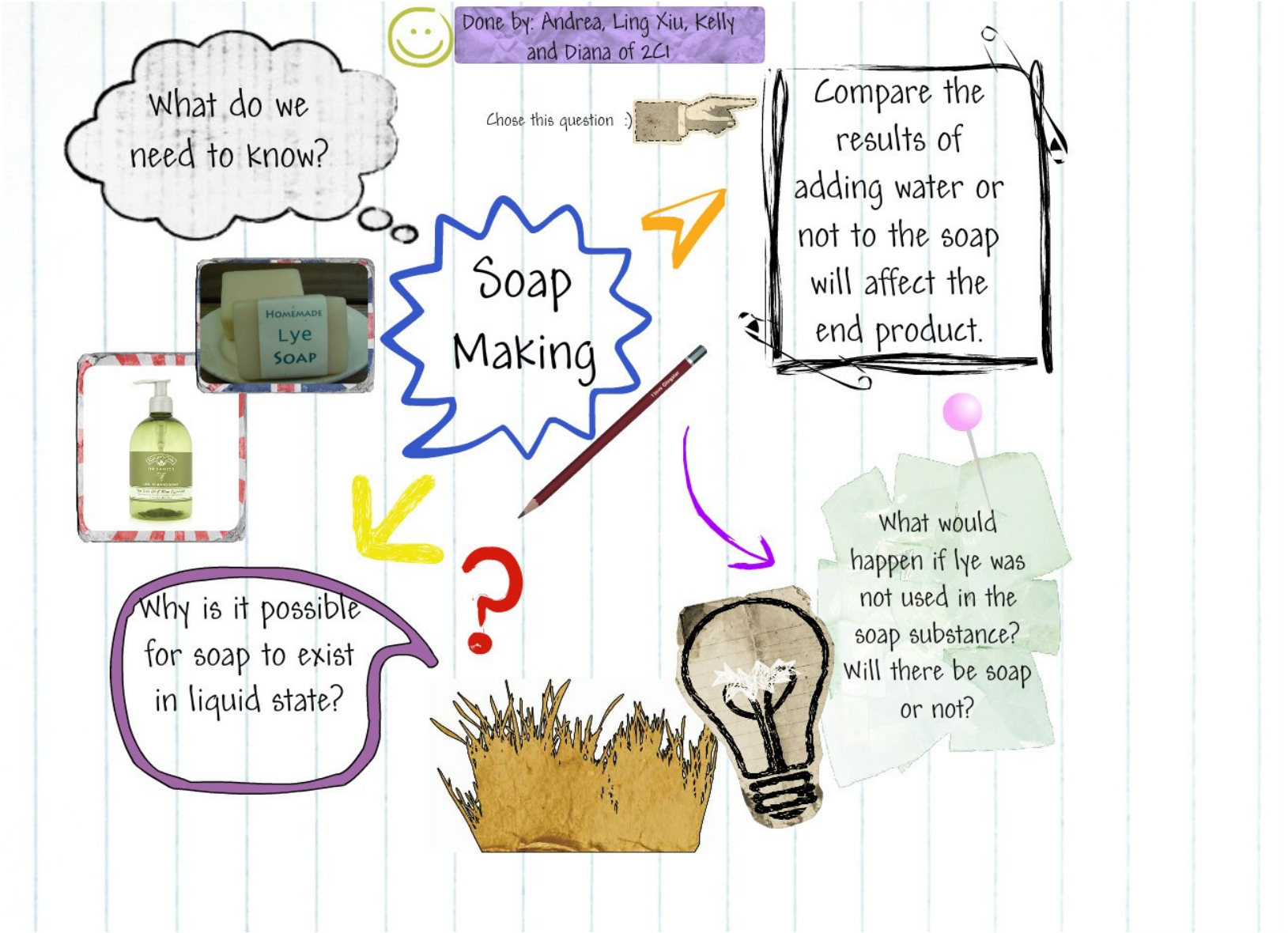
Content

Scientific Career Path



Project management – Introduction

What is a Project?



CEITEC

Project is…

- …a temporary endeavour undertaken to create a unique product, service or result.
  - Temporary = it has a defined beginning and end in time, and therefore defined scope and resources.
  - Unique = a planned piece of work that has a specific purpose (such as to find information or to make something new)
- Project vs. Operations

Project Management is…

- … the application of knowledge, skills and techniques to execute projects effectively and efficiently.
  - Projects must be expertly managed to deliver on-time, on-budget results

Project Manager is…

… the person assigned by the performing organization to lead the team that is responsible for achieving project objectives

- Knowledge
- Performance
- Personal approach

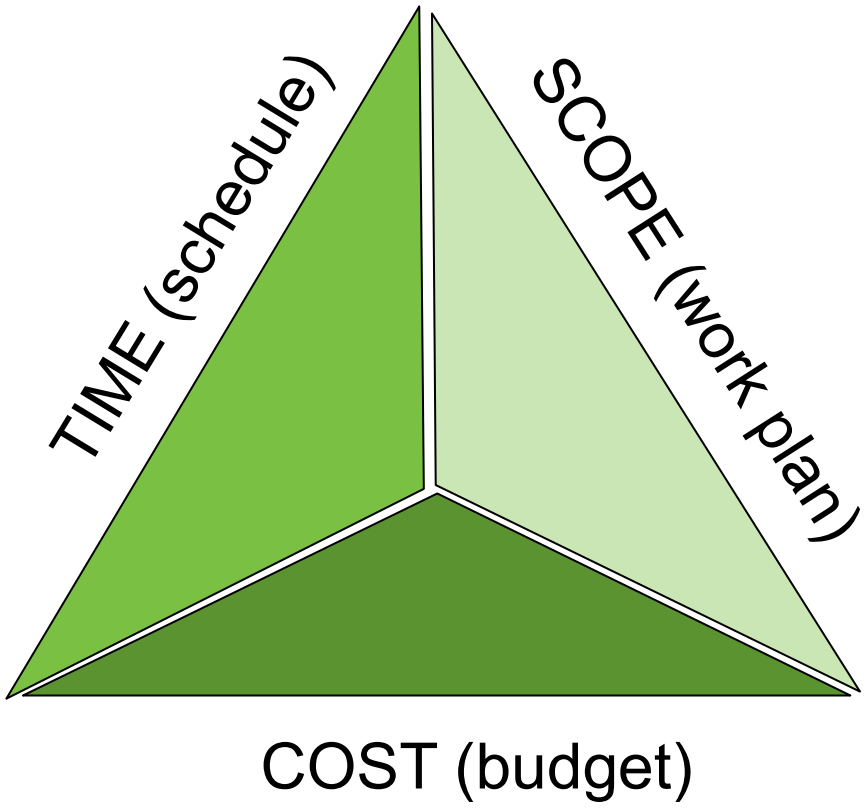
Reasons to start a project

- Market demand
- Strategic opportunity /business need
- Social need
- Environmental considerations
- Customer request
- Technological advantage
- Legal requirement
- … What about in academia and R&D?

7 Project constraints

- Budget
- Scope
- Schedule
- Quality
- Resources
- Risk
- Customer satisfaction (?)

Triple constraint



Priorities?

1. Add time
2. Limit scope
3. Put more money

Time management

- Understand the importance of basic project planning
- Develop scheduling skills
- Learn how to use several basic tools:
  - WBS (Work breakdown structure)
  - Resource allocation
  - Gantt charts

Time management principles

„Time is terrible resource to waste. And it is the most valuable resource in a project.“

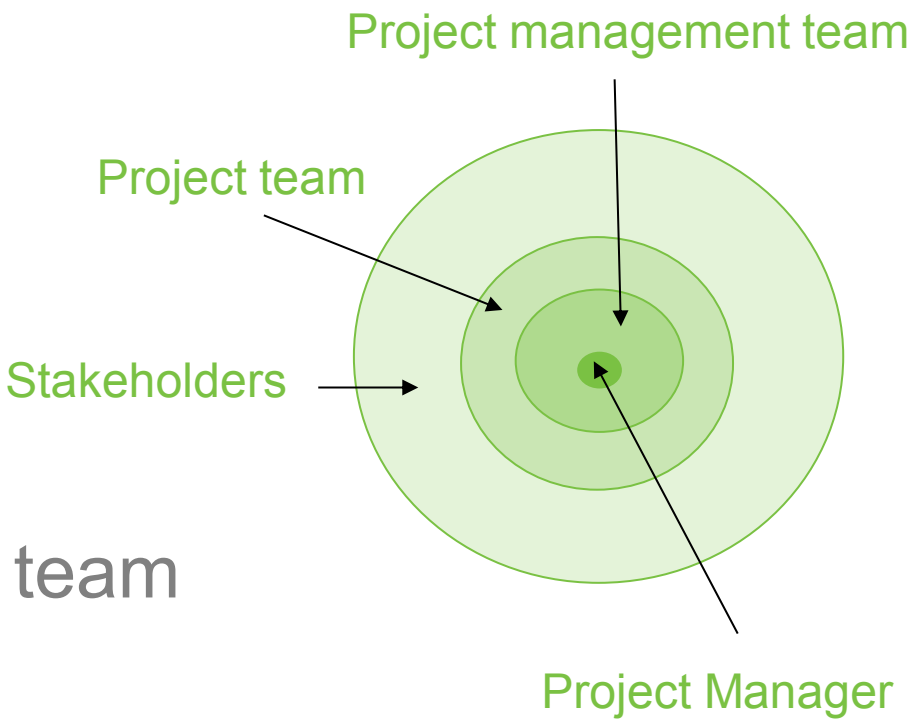
Projects have finite duration.

Managing a project requires awareness of 2 time frames:

1. The amount of effort a task will take (in time), e.g., 3 hours to write a report or 2 hours to cook lunch
2. The time span over which the activity will occur, e.g., the report will be done within a week, dinner will be ready at 6 o´clock

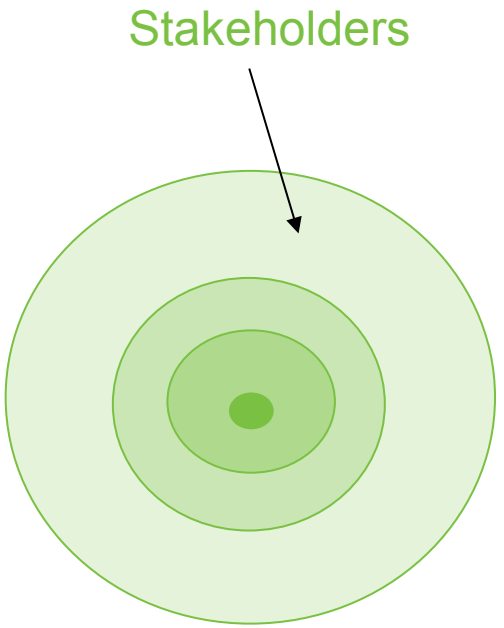
Project team

- Dedicated
- Part-time
- Project team
  - Project sponsor
  - Project management team
  - Project manager
  - User or customer representatives
  - Subcontractors and suppliers
  - Partners



Project Stakeholders

- … are people/organizations influenced or involved in the project.
- Key points
  - Who they are?
  - What interests they have?
  - How shall we deal with this?



Sponsor role

- … is customer (= grant provider) or member of senior management
- Provides financial resources for the project
- Appoints Project Manager
- Gathers support for the project, protects project
- Determines priorities
- Approves changes
- Accepts deliverables

Project Manager role

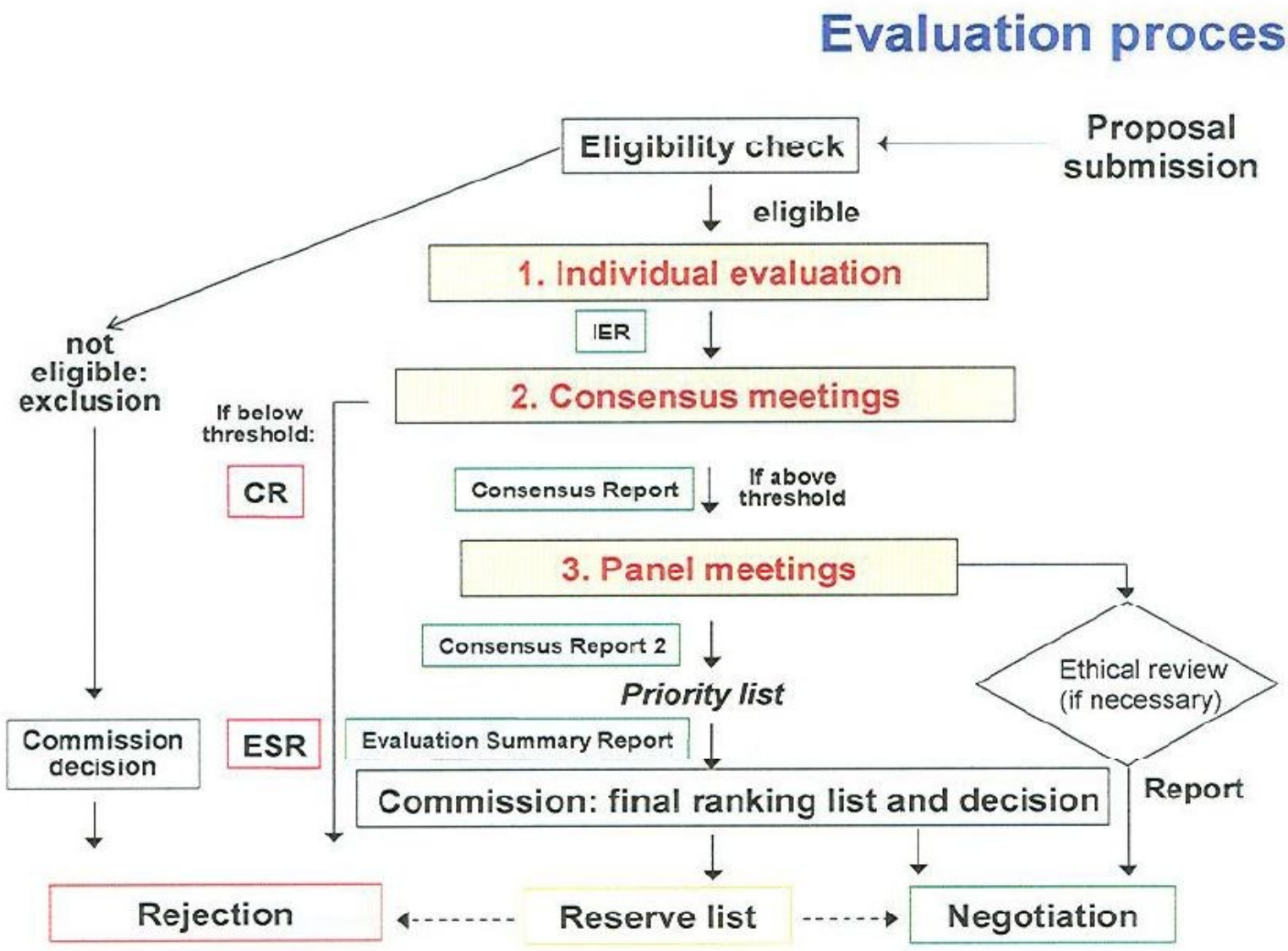
- Leads the team and is responsible for achieving project objectives
  - Helps write the project / the grant proposal
  - Influences project team and atmosphere
  - Manages interactions with key stakeholders
  - Leads planning the project
  - Manages project team
  - Monitors project work and proposes changes
  - Performs closing activities
- Is proactive, has authority and accountability

Project team role

- Project team completes the work of the project
  - Helps identify requirements, constraints and assumptions
  - Participates in activity planning and provides estimates
  - Does the work according to plan
  - Participates in meetings
  - Raises change request

Proposal Structure and Evaluation Criteria

Horizon 2020



CEITEC

Eligibility check

- To be considered admissible, a proposal must be:
  - submitted in the Electronic Submission System before the deadline given in the call conditions;
  - readable, accessible and printable.
- Incomplete proposals may be considered inadmissible. This includes the requested administrative data, the proposal description, and any supporting documents specified in the call.

	Eligibility conditions[5,6,7]
Research & innovation action	At least three legal entities. Each of the three shall be established in a different Member State or associated country. All three legal entities shall be independent of each other.
Innovation action	At least three legal entities. Each of the three shall be established in a different Member State or associated country. All three legal entities shall be independent of each other
Coordination & support action	At least one legal entity established in a Member State or associated country.

Evaluation – Process

- Forms of evaluation – remote or in-situ (in Brussels). In situ usually takes a week without the opportunity to contact the applicants, this usually covers both individual evaluation and consensus meeting; remote evaluation is usually individual, with consensus meeting later on in Brussels; sometimes, a hearing/interview is part of the evaluation (typically ERC)
- Evaluation process – starts with a briefing from EC (call objectives, work programme, call text, interpretation of evaluation criteria; „calibrating“ evaluators to minimize the risk of inconsistent evaluation)
- Individual part – at least 3 evaluator individually reviewing the same project, completing Individual Assessment Report (IAR), verbal and numerical scoring for each criterion
- Consensus meeting – all the 3 evaluators meet together and discuss the project jointly (ca. 0,5-1 h); the goal is to find consensus on verbal and numerical scoring of the project (not average, but consensus); in the end, one of the evaluators writes common position – Evaluation Summary Report (ESR)
- Moderator = EC representative – takes care of administration (appointing projects, gathering IAR), moderation of consensus meeting, control of evaluation quality (corelation between numerical scores and verbal comments), aims for consistency of „calibration“ of the three evaluators

Evaluation – Criteria

Excellence (50%) The following aspects will be taken into account, to the extent that the proposed work corresponds to the topic description in the work programme.	**Impact (30%)** The extent to which the outputs of the project should contribute at the European and/or International level to:	Quality and efficiency of the **implementation (20%)** The following aspects will be taken into account:
Clarity and pertinence of the objectives; Credibility of the proposed approach; **Soundness of the concept, including trans-disciplinary considerations, where relevant;** **Extent that proposed work is ambitious, has innovation potential, and is beyond the state of the art (e.g. groundbreaking objectives, novel concepts and approaches).**	**The expected impacts listed in the work programme under the relevant topic;** Enhancing innovation capacity and integration of new knowledge; Strengthening the competitiveness and growth of companies by developing innovations meeting the needs of European and global markets; and, where relevant, by delivering such innovations to the markets; Any other environmental and socially important impacts (not already covered above); Effectiveness of the proposed measures to exploit and disseminate the project results (including management of IPR), to communicate the project, and to manage research data where relevant.	Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources; Complementarity of the participants within the consortium (when relevant); Appropriateness of the management structures and procedures, including risk and innovation management.

Criteria may slightly vary according to type of action.

Evaluation – Criteria

- Criteria are general, interpretation may vary according to call (it is, however, possible, to deduce the interpretation from the call text – e.g. what impact is desirable)
- There are usually thresholds for the criteria (proposals not passing the threshold may not be financed) – usually 3 out of 5 for individual criteria and 10 out of 15 for the sum of scores; the criteria often have differing weights (excellence or impact the highest, according to focus on innovation)
- Marie Skłodowska-Curie Actions and ERC have slightly different evaluation procedure

For each criterion, your proposal will be given scores of 0 to 5 (half marks are possible), as follows:	
0	The proposal fails to address the criterion or cannot be assessed due to missing or incomplete information (unless the result of an 'obvious clerical error')
1 — Poor	The criterion is inadequately addressed or there are serious inherent weaknesses
2 — Fair	The proposal addresses the criterion well but with a number of shortcomings
3 — Good	The proposal addresses the criterion well but with a number of shortcomings
4 — Very good	The proposal addresses the criterion very well but with a small number of shortcomings
5 — Excellent	The proposal successfully addresses all relevant aspects of the criterion; any shortcomings are minor

Evaluation – interpretation of criteria

Proper interpretation of evaluation criteria is the key to success!

- Excellence
  - Originality of the idea, progress in state-of-the-art, ambition of the defined goals, work plan and its quality (logic behind the work packages)
- Impact
  - Dissemination of results, use of results (expected impact is always specified in the text of call/work programme), impact beyond the project participants (involvement of industry/users, extension towards other countries, …)
- Implementation
  - Management – governing structure of the project, quality of project participants and team as a whole (complementary expertise), budget (reasonably – no need to be over-modest, the key is reasoning, explanation)

Proposal Structure

- 1 – Excellence (Scientific part)
  - Aim and objectives
  - Background and significance
  - Preliminary studies
  - Research design
- 2 – Impact
- 3 – Implementation
  - Work plan
  - Project management
  - Budget

1 – Excellence (Scientific Part)

Scientific Part – Tips

- Make it short and simple = transmitting your message to others.
- How does it fit into the existing knowledge base?
- Write on target.
- Don´t make your hypothesis radical (cure of cancer…). Your hypothesis is a step up. Knowledge tends to be incremental!
- Address why it is a good question.
- What need does it fill for the granting agency?

a. Aim and objectives

- Specific and concrete
- Realistic and supported with your expertise
- Clearly and briefly described
- Justified
- Quantified
- Well timed and in line with defined project outcomes – linkage of objective with Project Plan (work packages)
- In line with the call, i.e. with what the funding agency expects

First 1-2 pages must attract evaluator´s interest!

29

b. Background and significance

- Sketch the background leading to the proposed grant, get straight to the point
- Focus and evaluate the current knowledge leading to the hypothesis
- Identify the gaps in current knowledge that your hypothesis is intended to fill
- State the „impact“ relevance of the proposed work
- Relate this section to the aim
- Include your work here showing your expertise and credibility

Key point where your experience and credibility should be shown.

30

c. Preliminary studies

- Important is to have some studies performed that support your hypothesis. Not studies that have nothing to do with the hypothesis!
- Crucial point to establish experience and credibility.
- References can be noted here if they are DIRECTLY relevant to the hypothesis.
- Think about your potential Intellectual Property (IP). Can you turn your research into a revenue stream???

Without asking yourself the question about IP you can lose a lot.

31

d. Research design 1/2

- Must correspond with the Aim and Objectives section – nothing more, nothing more complicated.
- Describe the research and procedures you will use
- How the data will be collected, analysed and interpreted?
- If introducing new methodology describe how it will be better than the „old“ methods
- Discuss potential difficulties and risks/obstacles /limitations and how they will be overcome.

  (Contingency plan is often completely missing!)

32

d. Research design 2/2

- Give a sequence and timetable for the work
- Describe work packages, outcomes, milestones …

  → Work Plan
- Hazard/ dangers for personnel and how they will be overcome
- Statistics that will be used
- Do you need collaborators, subcontractors,…? If so document their expertise and describe their function and relation to the aim.
- Ethical issues: animal and human experiments, supporting documentation accompanying the proposal.

The golden rule is KISS – keep it simple and stupid ☺!

33

Example of general project design

34

Background study on existing projects

- Cordis webpages, web databases, e.g. http://www.healthcompetence.eu

Consultation with the grant provider

- Is your topic the right one?
- What is expected from the grant provider?
- Does your proposal correspond to the call description?
- Do you understand the call correctly?
- *Information days and seminars, e-mail, phone calls, meeting in Brussels, …*

Consultation with the grant provider idealy before call official opening => smaller competition!

36

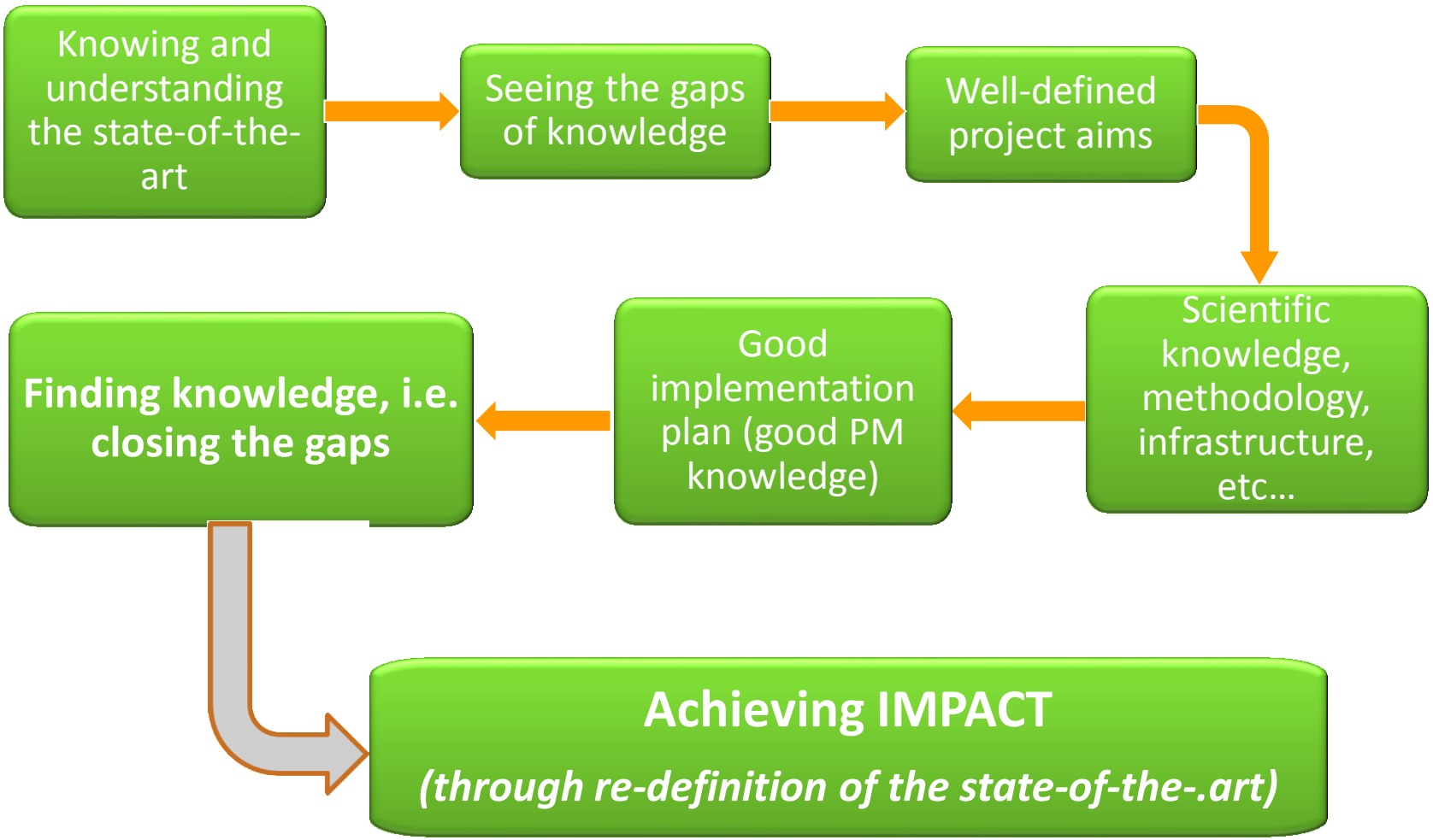
2 – Impact

Impact – what is it?

The key is answering the following questions:

- The scientific/societal impacts of the results
  - **What** will be the **results** of the project?
  - **What / Who** are the results for – target group?
  - What **differences** they can bring about / **why** are the results **needed**?

Impact throughout the project proposal



Impact in H2020 – evaluation

- IMPACT is one of 3 (up to 6) evaluation criteria
- The role of IMPACT has increased in H2020
- „Writing“ the IMPACT must be more elaborate than it used to be in FP7
- The weight of the criteria in the collaborative H2020 projects:
  - SCIENCE (50%, 3/5)
  - **IMPACT(30%, 3/5)**
  - IMPLEMENTATION (20%, 3/5)

Impact in example of H2020 call

SC1-PM-04–2016: Networking and optimising the use of population and patient cohorts at EU level

- **Specific Challenge:** Population cohorts are invaluable resources to obtain detailed description of individual biological variations in connection with a variety of environmental, pathogenic, occupational, societal, and lifestyle determinants that influence the onset and evolution of diseases. Europe currently has some of the most valuable population and patient cohorts, including well annotated clinical trial cohorts. However, the lack of integration of these cohorts hampers the optimal exploitation of these resources, essential to underpin and facilitate the development of stratified and personalised medicine9.
- **Scope:** Proposals should aim at maximizing the exploitation of cohorts by bringing together national and/or European cohorts with common scientific interests (e.g. across diseases, children, mothers, elderly, birth, gender, etc.), and by taking advantage of new technologies (e.g. ICT, social platforms, etc.) and new type of data (e.g. geographical, genetic, eHealth records, etc.). Based on those cohorts using a comprehensive integration strategy to facilitate hypothesis-driven research, data sharing, harmonisation and analysis, proposals should provide expanded resources and knowledge on health and disease determinants, onset and course of diseases (including aspects of co-morbidity and/or co-infections), clinical, public health and socio-economic research. Synergies with relevant existing European infrastructures and additional collaborations with relevant international initiatives are encouraged. Proposals should also engage with relevant international/national/regional authorities to ensure that findings are implemented and translated into health policy.
- The Commission considers that proposals requesting a contribution from the EU of between EUR 8 and 10 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

- **Expected Impact:** Expected impacts include one of or a combination of the following point(s):

1. Make major conceptual, methodological and analytical contributions towards integrative cohorts and their efficient exploitation.
2. Contribute to providing novel information on health maintenance, onset and course of diseases, or population stratification, with a view to tailor diagnosis or to optimise prevention and treatment.
3. Provide the evidence base for the development of policy strategies for prevention, early diagnosis, therapies, health economics as well as addressing health inequalities. Wherever relevant, evidence for economic evaluation of interventions should also be included.
4. Optimise the use of population cohorts in defining/improving clinical practice and public health policy.

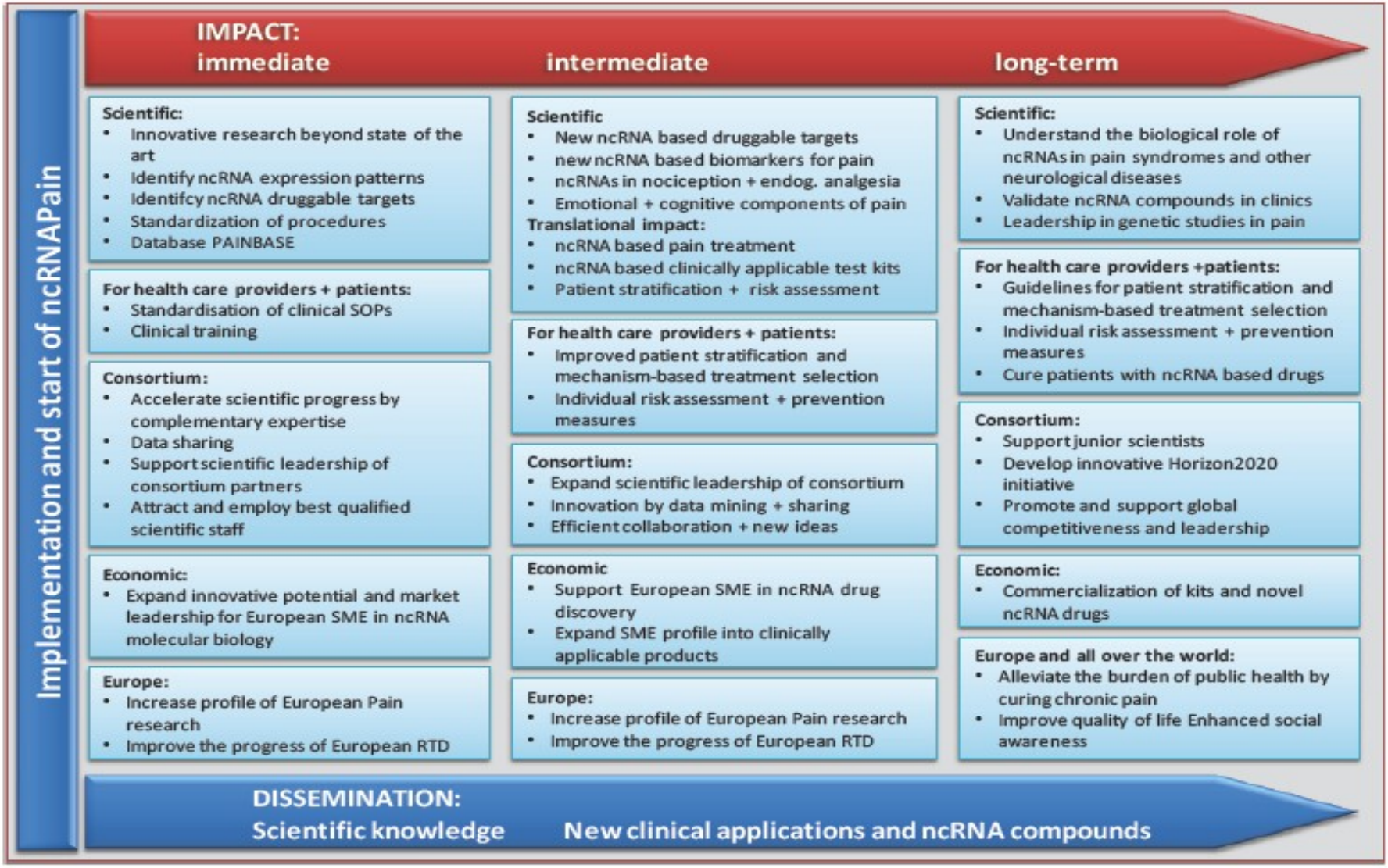
Impact in H2020 – how to approach it

- Consider Impact at the very beginning
- Consults relevant EU and H2020 policies and documents (GO CEITEC MU) – Work Programmes, Europe2020…
- Consider different dimensions of Impact
- Identify and exercise your influence on the Impact

Basic dimensions of IMPACT

- Stakeholders
  - (your) **scientific community** (all levels of it)
  - **Society** you (might) live in and its institutions
  - Your **funder**, i.e. the aims of the grant scheme/programme
- Time – immediate or short-term or long-term impact
- Control / Influence

Examples – Impact



CEITEC

Impact – measures to maximize it

- Good dissemination and exploitation plan
- Open Access – **mandatory** in H2020
- Open Data – voluntary, but **we should join!**
  - Insitituional **repositories**
  - **ZENODO repository** – supported by the EU, own webspace, both paper (including „ferey“ literature“ and connected data (http://zenodo.org/)

Example: Dissemination – communication target groups

	European Commision	Scientific (medical) community	Business / industry	Patients	General Public	Any other relevant specific group (NGOs, students, …)
Public website						
Intranet						
Flyer/leaflet						
Scientific publications						
Other article						
Interviews						
…						
…						
….						

Example of impact scheme

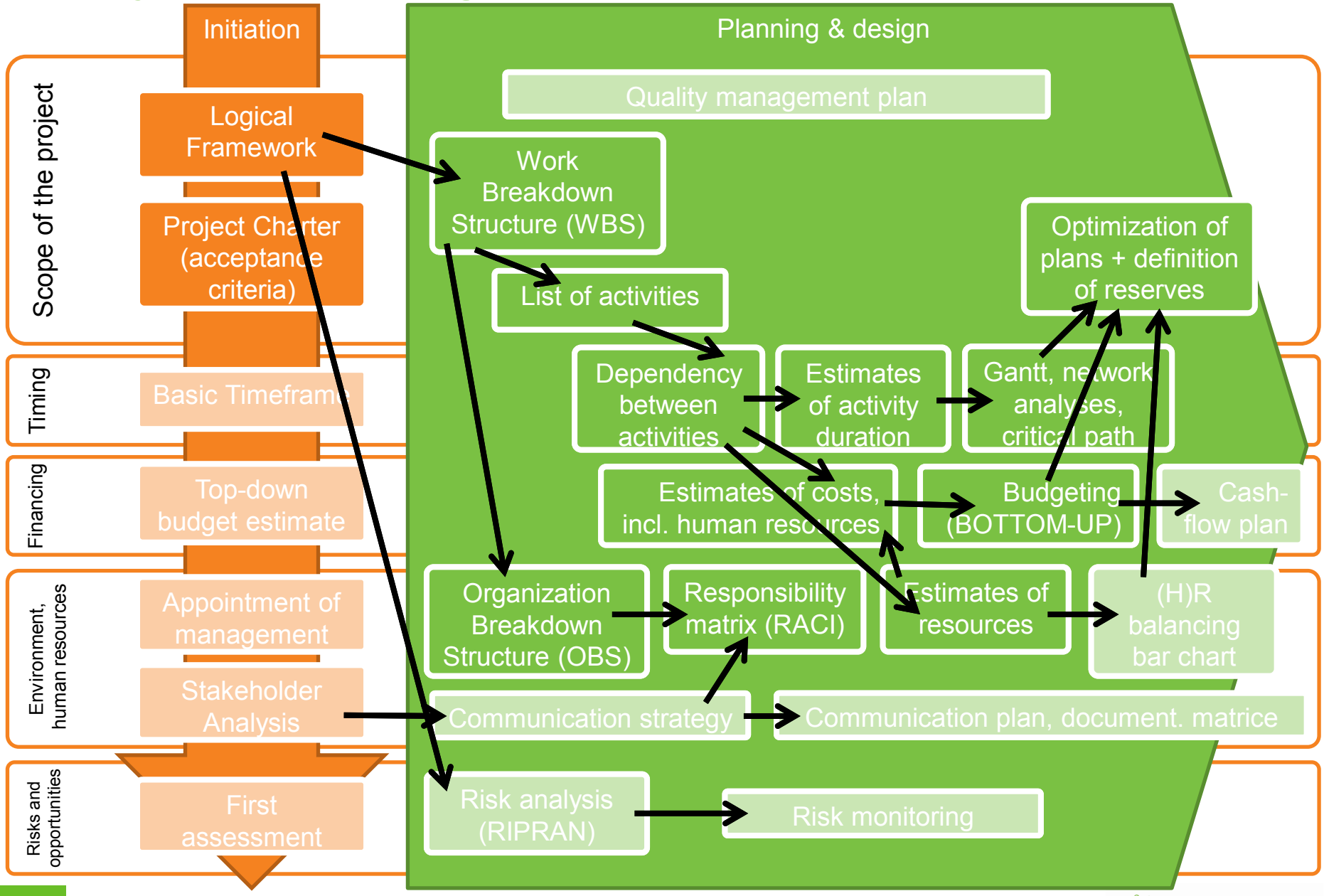
	Research community	Students	Industrial partners	General public	Policy makers
Scientific publications	• KPI increase – citations	• attracting talented and motivated students through top results	• presentation of applicable results		
Conferences (external)	• new collaborations • KPI increase – citations	• attracting talented and motivated students through interactions	• presentation of applicable results and interactions		• presenting value of international collaboration
Workshops, seminars, conferences (internal)	• new collaborations through invited speakers	• attracting talented and motivated students through interactions	• presentation of applicable results and interactions		• presenting value of international collaboration
Summer schools	• new collaborations through invited speakers	• attracting talented and motivated students through interactions			
Website	• occasional visits	• presentation of strong training programmes	• occasional visits	• occasional visits	
Newsletter	• strengthening profile – presentation of achievements	• presentation of strong training programmes	• highlighting application relevant achievements	• showing research relevance for society	
Press releases (media)	• strengthening profile – presentation of achievements	• strengthening profile – presentation of achievements	• strengthening profile – presentation of achievements	• showing research relevance for society	• presenting value of international collaboration • showing research relevance for society
Researchers' Nights		• attracting talented and motivated students through interactions		• popularization • presenting CZ as equal partner to old EU MS	
Open Days		• attracting talented and motivated students through interactions		• popularization • presenting CZ as equal partner to old EU MS	
Policy boards and committees			• raising support for academia-industry collaboration		• showing value of international collaboration • increasing awareness about societal relevant of research

Figure 16: Dissemination and communication of project achievements – measures and target groups

2.2.1 Dissemination and exploitation of results

3 – Implementation

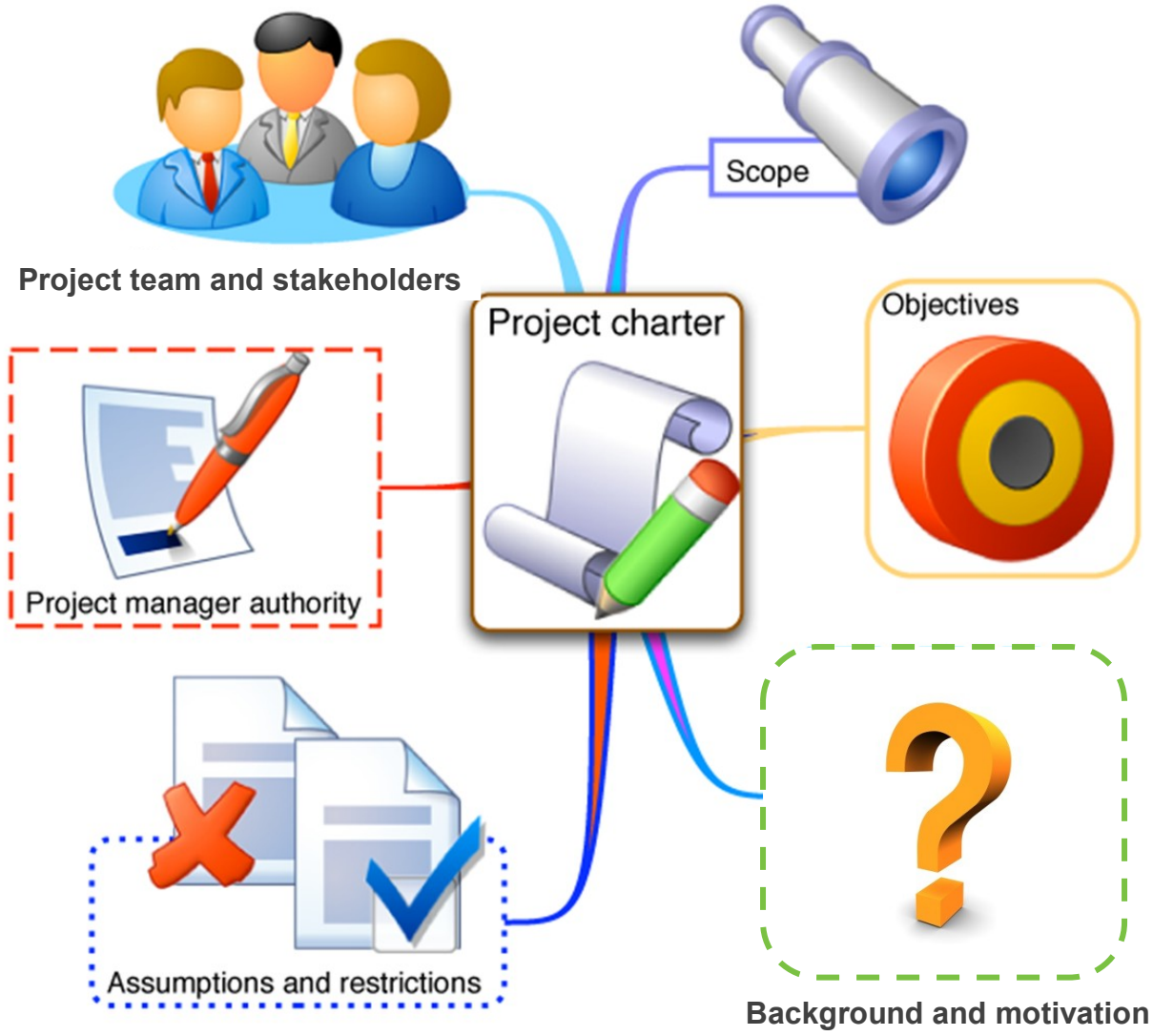
Project Planning Techniques and Tools



CEITEC

Work Plan

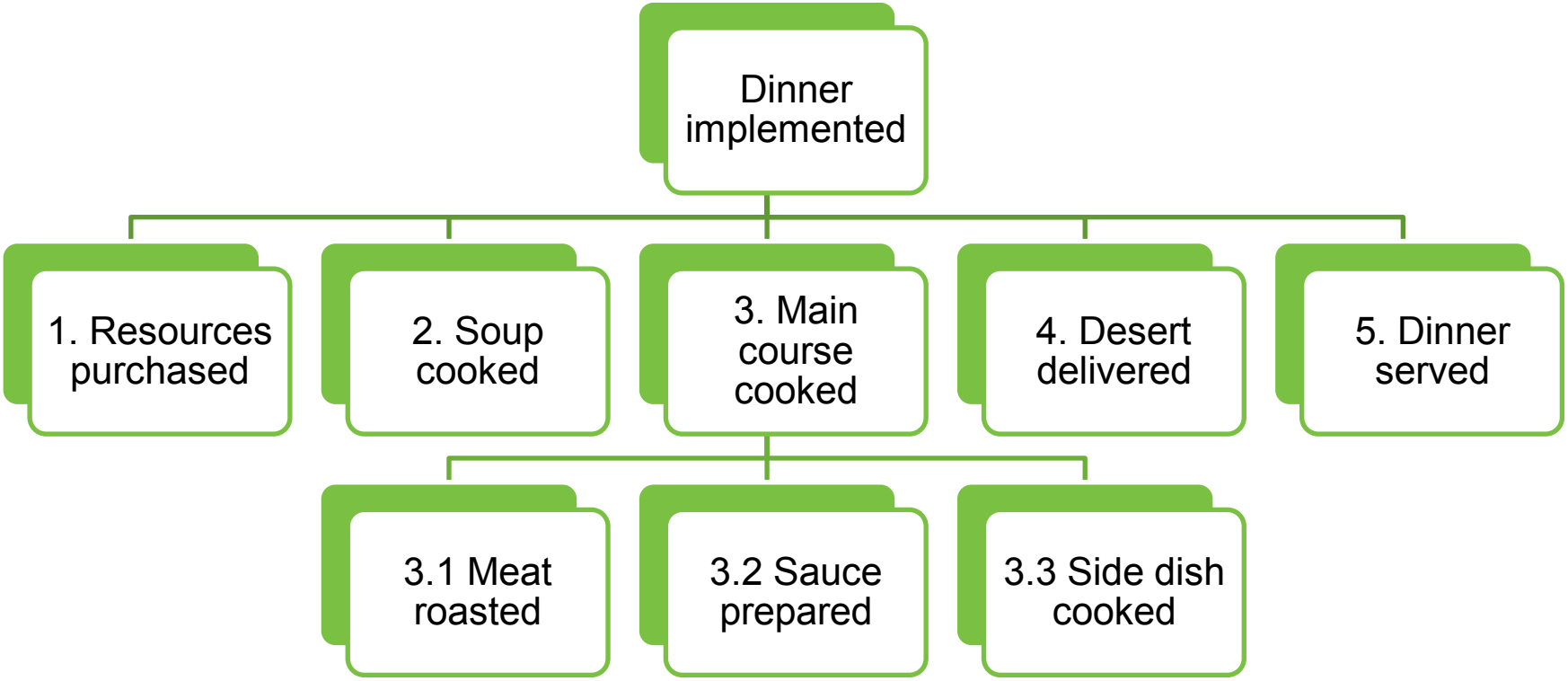
Project Charter



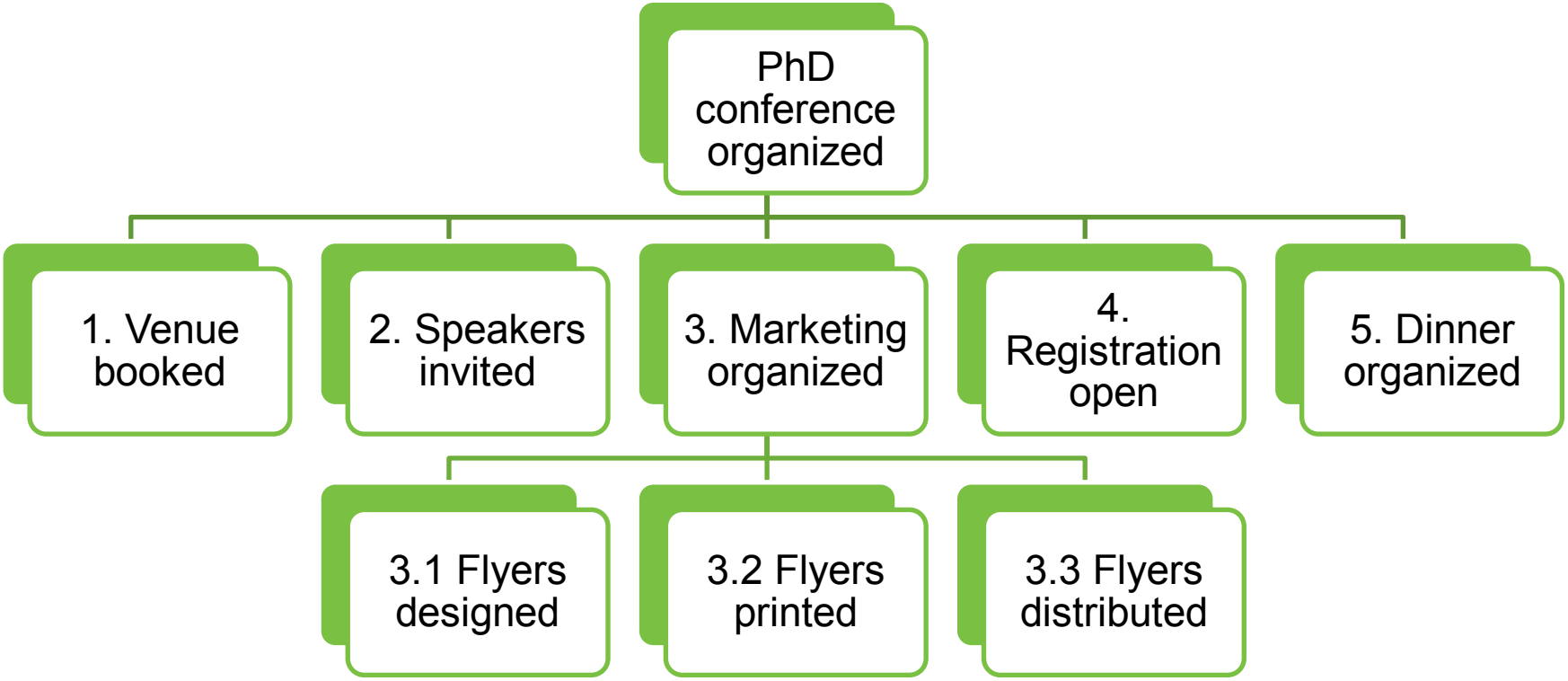
Work Breakdown Structure (WBS)

- WBS is a hierarchical decomposition of the total work scope on the project
- Developed in planning stage (based on logical framework)
- No pre-defined number of levels (usually 3-4)
- Responsibility for each box can be allocated to a single person
- The lowest level – Work Package
- Work Package is an output, not an activity

Work Breakdown Structure (WBS)



Work Breakdown Structure (WBS)



Work packages

- Work package is a set of activities required to produce a major project output (i.e. a tangible result, deliverable). It is characterized by effort and time and may cover a single task or several related tasks.

Work package No	Work package title	Type of activity	Lead participant No	Lead participant short name	Person-months (effort)	Start month (time)	End month (time)
WP1	Setting and activating the scene	SUPP	1	JIC	9.50	1	6
WP2	State-of-Play directory and analysis	SUPP	5	CBM	36.50	1	12
WP3	Mentoring and mutual learning	SUPP	4	AREA	39.75	6	24
WP4	Joint Action Plan towards integration	SUPP	2	MU	40.00	21	36
WP5	Dissemination & Information management	SUPP	4	AREA	22.25	1	36
WP6	Project coordination and assessment	MGT	1	JIC	13.50	1	36
				TOTAL	161.50		

Work package collaborative H2020 project

Workpackage number	**1**	**Start date or starting event**	Month
Workpackage title			
Participant number			
Short name of participant			
Person/months per participant			
Start month		**End month**	

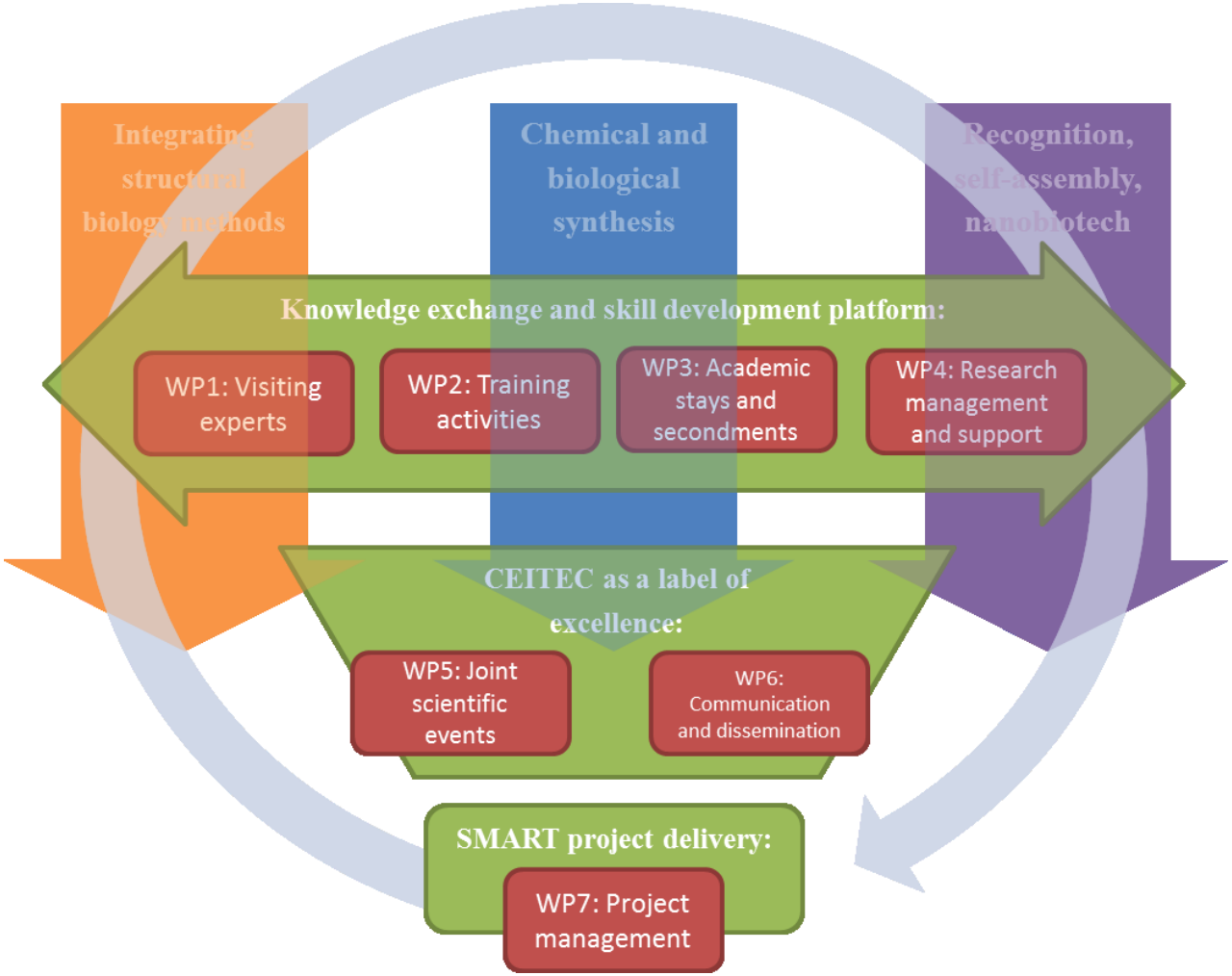
Objectives 1.
Description of work **Task 1.1:** **Task 1.2**

Deliverables: D1.1 D1.2

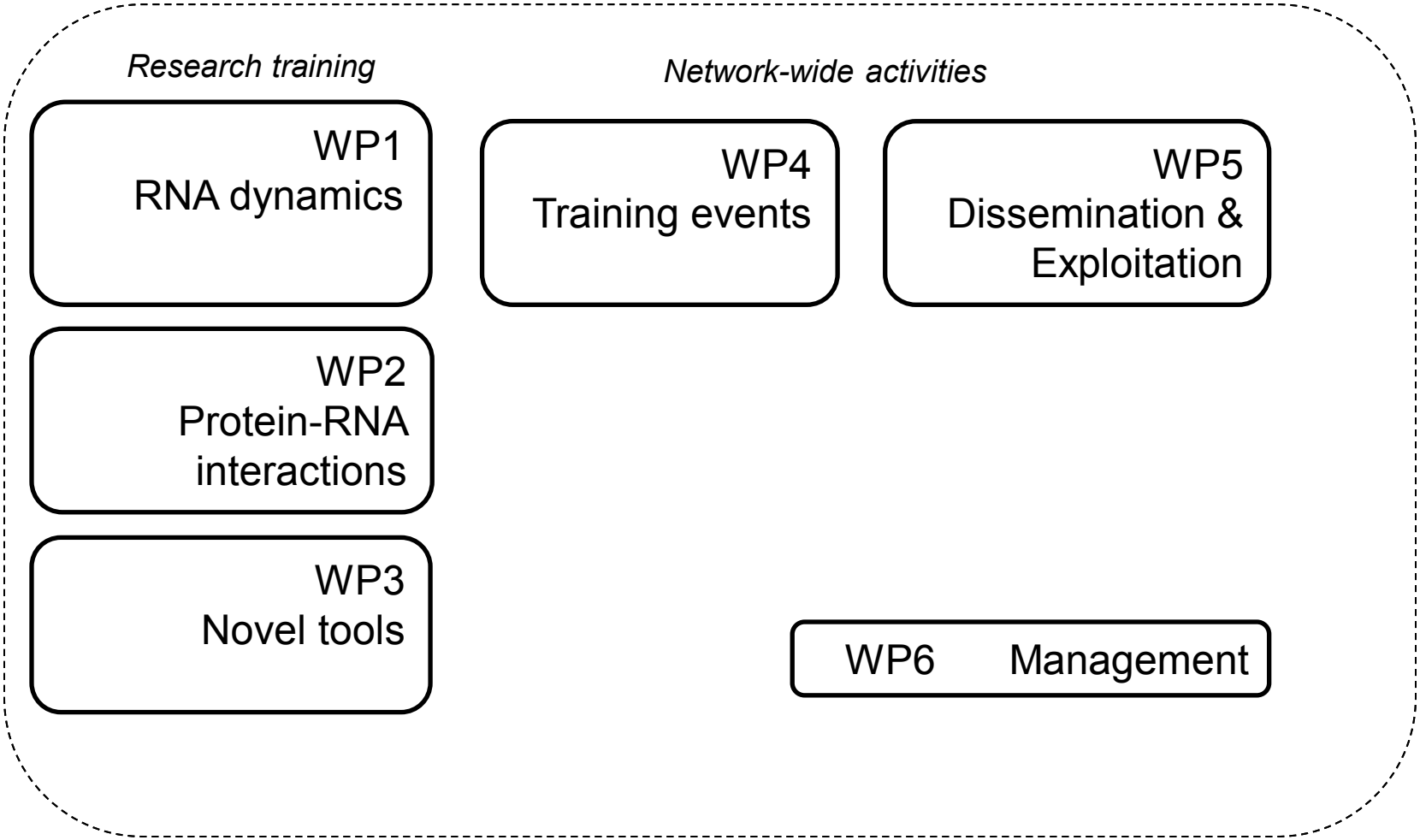
Milestones:
M1.1

M1.2

Work packages - Example

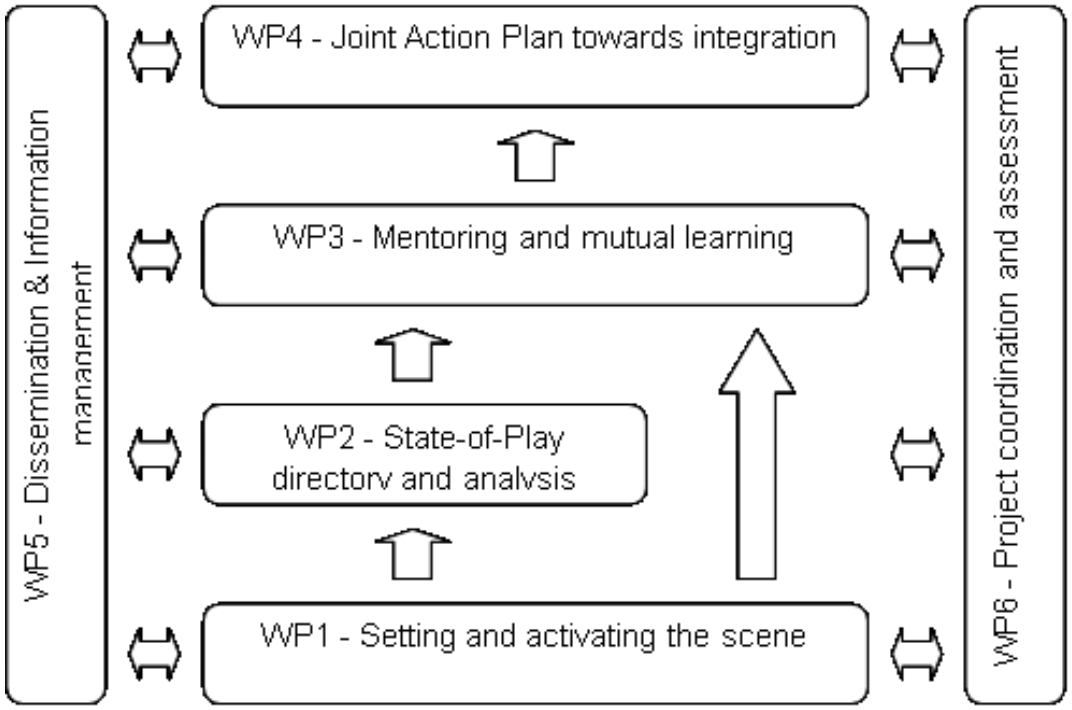


Work package - Example

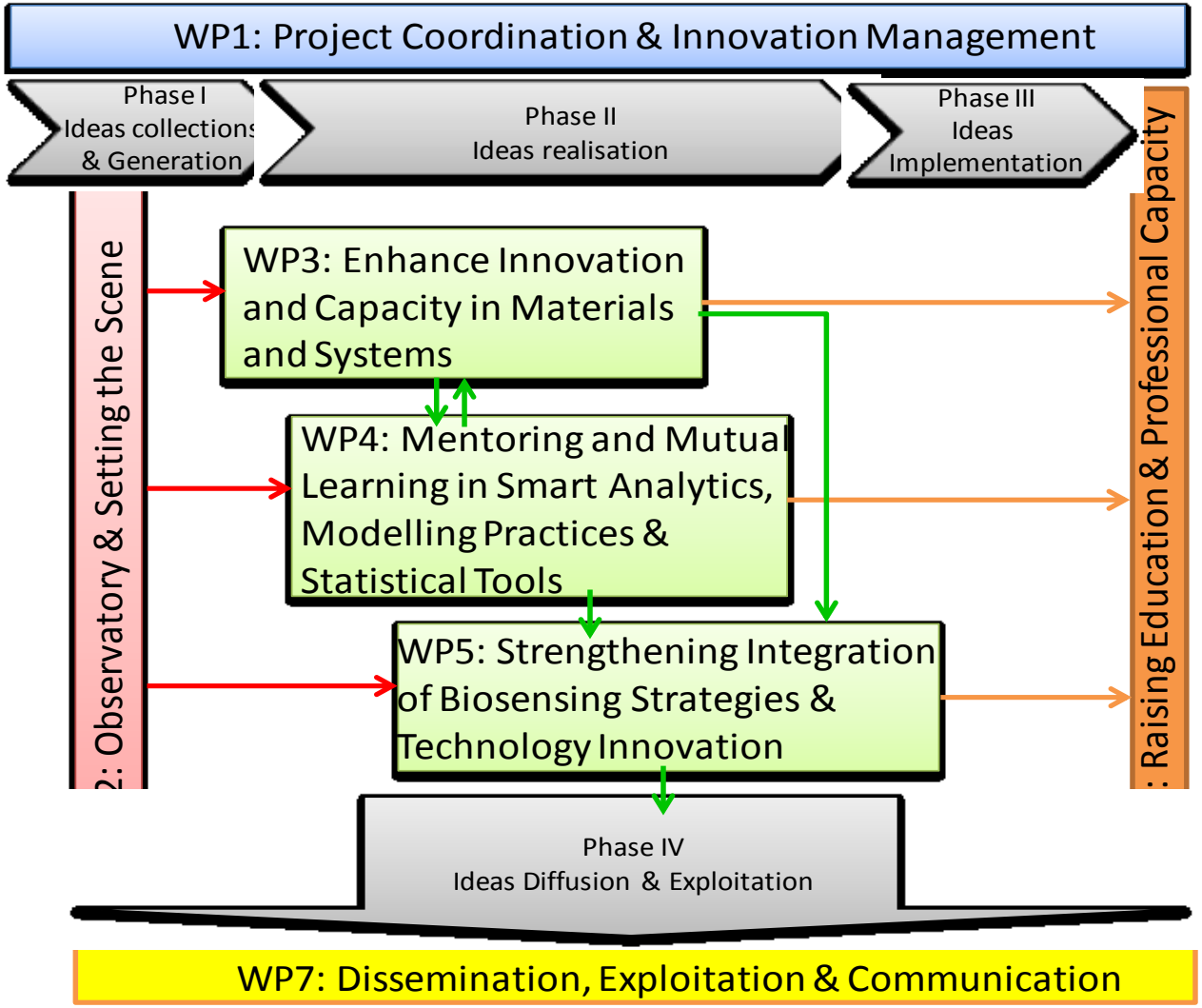


PERT chart

- Pert chart is a network diagrame which represents interdependencies between and among work packages



Another example of a PERT chart



Deliverable

- Deliverable is a tangible or intangible result of the project to be delivered and accepted by the customer / grant provider
- Deliverable differs from milestone: milestone is a measurement of progress towards an output whereas the deliverable is the result of the process
- Examples: report, document, server upgrade, functional design, prototype, web portal, knowledge base, publication, business plan, kick-off meeting minutes…

Example: List of Deliverables

Deliverable (number)	Deliverable name	Work package number	Short name of lead participant	Type	Dissemination level	Delivery date
D1.1	Mid-term report on expert visits	1	CEITEC	R	PU	M18
D1.2	Final report on expert visits	1	CEITEC	R	PU	M36
D2.1	Training plan	2	UJF	R	PU	M6
D2.2	Career development plans of jointly supervised PhD students	2	UJF	R	CO	M9
D2.3	Mid-term training report	2	UJF	R	PU	M18
D2.4	Final training report	2	UJF	R	PU	M36
D3.1	Secondment plan	3	UEA	R	PU	M6
D3.2	Mid-term secondment report	3	UEA	R	PU	M18
D3.3	Final secondment report	3	UEA	R	PU	M36
D4.1	Management knowledge transfer report	4	CEITEC	R	PU	M21
D5.1	Annual report on strategic events Year 1	5	CEITEC	R	PU	M12
D5.2	Annual report on strategic events Year 2	5	CEITEC	R	PU	M24
D5.3	Annual report on strategic events Year 3	5	CEITEC	R	PU	M36
D6.1	Communication, dissemination, and exploitation plan	6	UNIVIE	R	PU	M6
D6.2	Mid-term communication, dissemination, and exploitation report	6	UNIVIE	R	PU	M18
D6.3	Final communication, dissemination, and exploitation report	6	UNIVIE	R	PU	M36
D7.1	List of CEITEC MU publications for the last 3 years	7	CEITEC	R	PU	M3
D7.2	Periodic report	7	CEITEC	R	PU	M18
D7.3	Final report	7	CEITEC	R	PU	M36

[1] R: Document, report; DEC: Websites, patents filing, market studies, press & media actions, videos, etc.; OTHER: Software, technical diagram, etc. PU = Public, fully open, e.g. web; CO = Confidential, restricted under conditions set out in Model Grant Agreement; CI = Classified, information as referred to in Commission Decision 2001/844/EC.

Milestone

- Milestone is a measurement of progress towards an output. It is a decision point and control gate within the work plan
- Milestones are decisions influencing further progress of the project

List of Milestones

Milestone number	Milestone name	Related work package(s)	Estimated date	Means of verification
M1.1	Project started	WP1	M1	Kick-off Meeting
M1.2	Project running on schedule	WP1	M18	Mid-Review Meeting KPI Mid-Review
M2.1	TWINFUSYON Website operational	WP2	M3	Website running
M2.2	Collaborative platform and open network scheme establishment	WP2	M18	Database of organisations, industry, stakeholders with 500 inputs
M3.1	Schools/Workshops scheme on materials innovation running	WP3	M18	Event executed/ Statistic on participation available
M3.2	YOUNG research group running	WP3	M24	Group of at least 3 people with 2 submitted papers running
M4.1	Access to CEITEC core facilities enabled	WP4	M18	At least 3 applications activated through consortium
M4.2	Evaluation/Revision and implementation of best practices on analytics & modelling	WP4	24	Number of trainings executed and papers published/submitted on related subject
M5.1	Efficiency of secondments plan	WP5	M24	2/3 of secondments executed
M5.2	Decision on Materials/Technology Priorities and Strategies for Technology Implementation	WP5	M29	Good practices in optronic biosensing recommendations towards exploitation formulated
M6.1	Schools action plan running	WP6	13	1st/2nd Schools executed/ Statistic on participation available
M6.2	Mobility program running smoothly	WP6	18	A number of mobility actions executed and statistic on participation available
M6.3	Educational instruments working	WP6	15	e-Library and e-Lab running 500 access executed
M6.4	Schools program towards effective completition	WP6	M30	3rd-4th School executed/ Statistic on participation available
M7.1	Evaluation/Analysis of the stakeholder initiatives/groups networking with TWINFUSYON	WP7	12	50-100 stakeholder contacts and data included in database of WP2
M7.2	Evaluation/revision of dissemination/communication plan	WP7	18	Planned dissemination/communication events executed according to quantification criteria at pgs XXX

Template and example: List of Milestones

Table 3.2a: List of milestones

Milestone number	Milestone name	Related work package(s)	Estimated date[1]	Means of verification[2]

[1] Measured in months from the project start date (month 1)
[2] Show how you will confirm that the milestone has been attained. Refer to indicators if appropriate. For example: a laboratory prototype that is 'up and running'; software released and validated by a user group; field survey complete and data quality validated.

B 1.3.7 List of milestones and planning of reviews

List and schedule of milestones

Milestone no.	Milestone name	WPs no's.	Lead beneficiary	Delivery date from Annex I [1]	*Comments*
M1.1	SynBIOsis collaborative regional executive platform and open network scheme established	WP1	JIC	4	
M2.1	Analytical framework drafted	WP2	JIC	5	
M2.2	RTD directory created	WP2	CBM	9	
M2.3	SWOT including needs and complementarities identified, analyzed, compared and verified	WP2	CBM	11	
M3.1	Personal links between academia and industry established	WP3	MU	15	
M3.2	Exchange of personnel and study visits between academia and industry performed	WP3	CBM	20	
M3.3	Good practice recommendations towards integration on a trans-regional level formulated and verified	WP3	AREA	24	

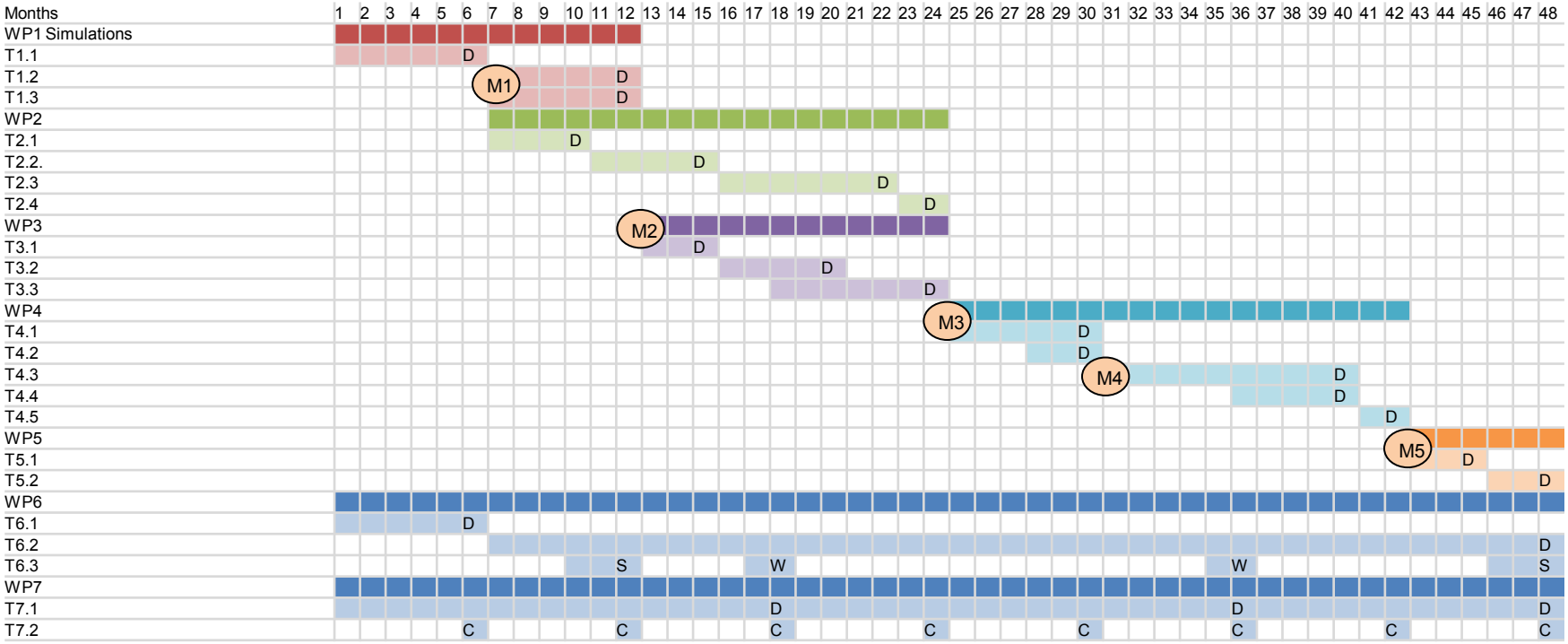
[1] Month in which the milestone will be achieved. Month 1 marking the start date of the project, and all delivery dates being relative to this start date.

Milestones - example

Milestone number	Milestone name	WP	Due month	Means of verification
MS1.1	Research groups identified	1	M3	List of research groups and lacking expertise authorized by the Steering Committee
MS1.2	Research group leaders identified	1	M9	Ranking list authorized by the Steering Committee
MS2.1	Jointly supervised/co-supervised PhD positions advertised	2	M9	PhD themes published on partner websites
MS3.1	Key application partners identified	3	M6	Three proposed strategic partners per research theme listed, list authorized by the Steering Committee
MS3.2	Phase 2 incorporated in regional S3 action plan	3	M12	Steering Committee informed by RIS JMK Research Working Group

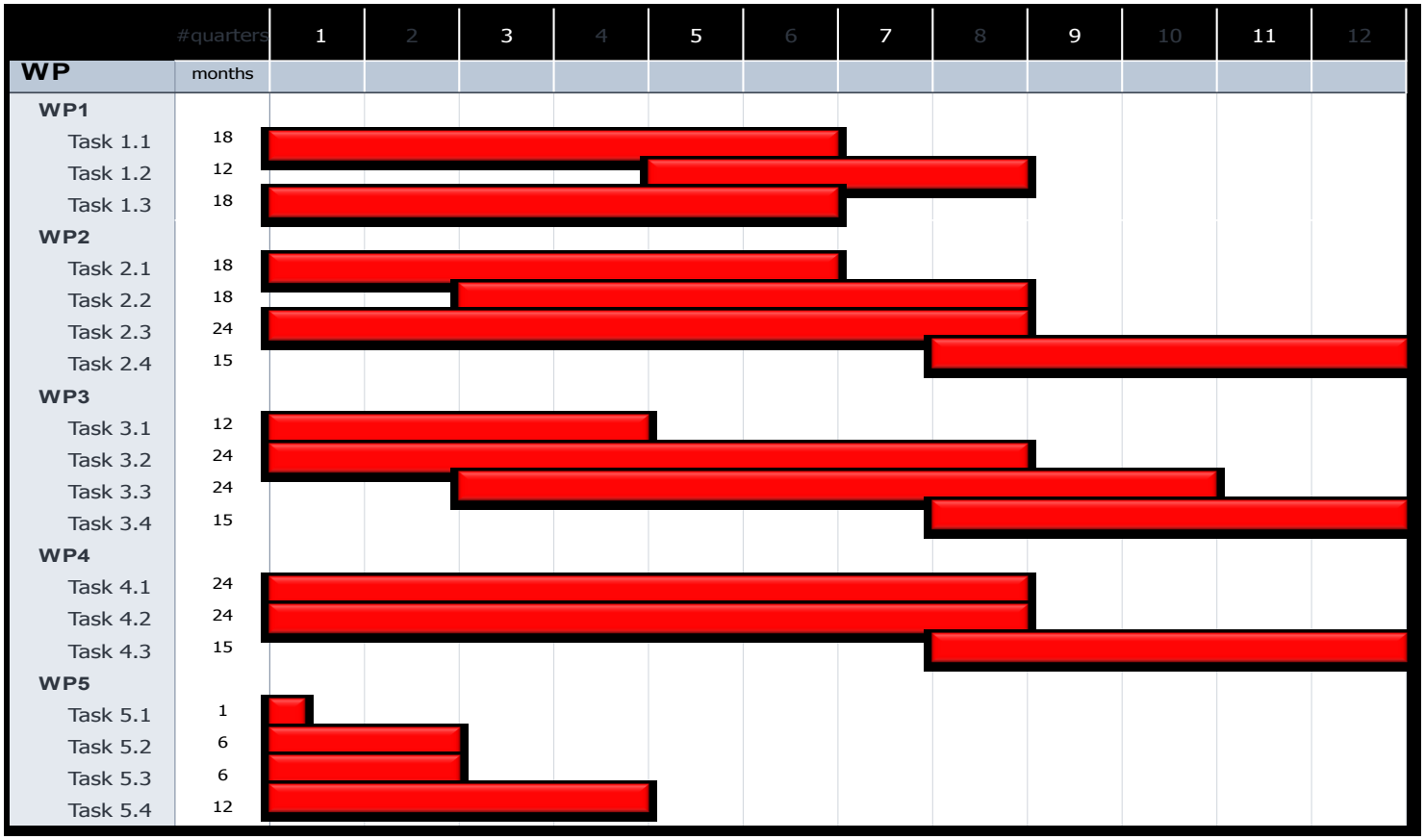
GANTT Chart – tasks and milestones

- Gantt chart is a graphical presentation of Project schedule. It describes timing of tasks and milestones.



CEITEC

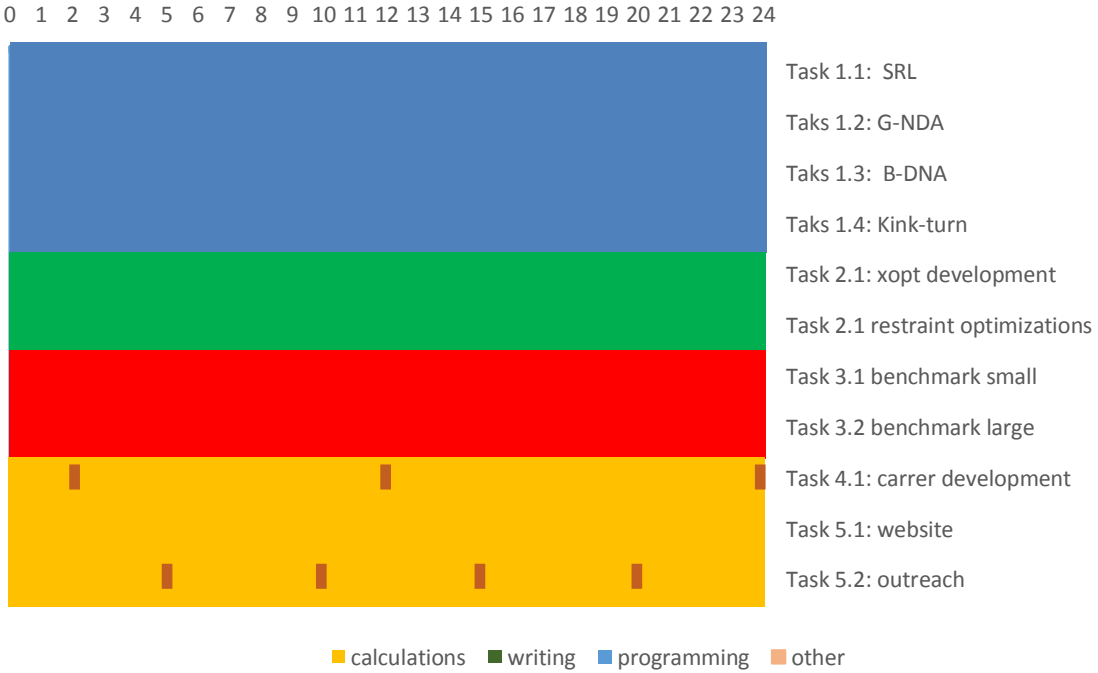
Gantt chart



Project: miRNA in CLL	year 1									year 2										year 3									
	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
specific aim 1	miR-150 function in BCR																																
specific aim 2							screening of miRNAs (BCR and adhesion)																												
specific aim 3							miR-150 in prognosis													prognostic significance of miRNAs													
manuscript writing																																	

CEITEC

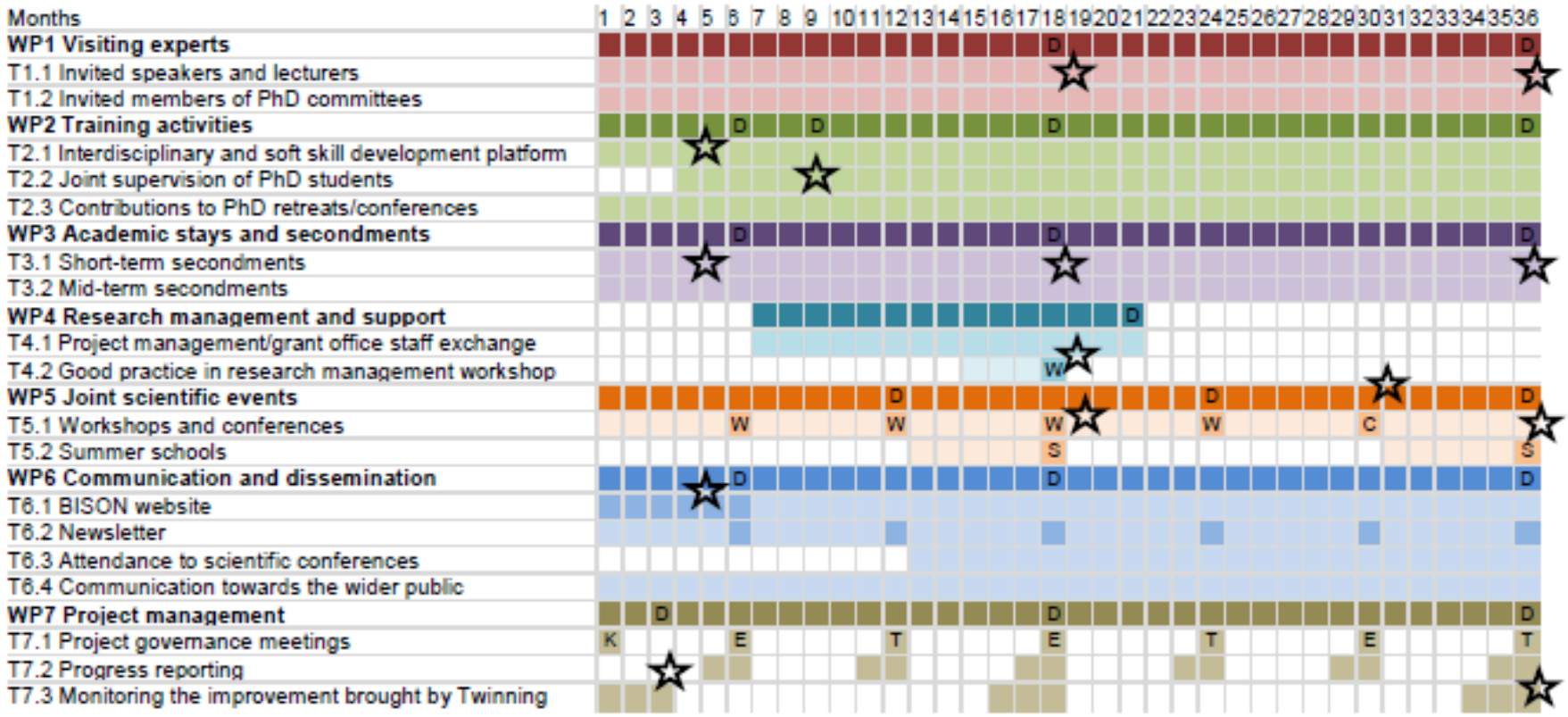
GANTT Chart - examples



RESEARCH ACTIVITY	YEAR 1	2	3
Aim 1. Structure determination of LRV RdRp			
Large scale LRV RdRP production	■	■	
Determination of RdRP crystallization conditions	■		
RdRP X-ray data collection and structure determination	■		
Determination of the structure of RdRP in complex with inhibitors		■	
Aim 2. Structural analysis of Leishmania cells under phagosome conditions			
Preparation of LRV+ and LRV- Leishmania cells	■	■	
Optimization of FIMB protocols for preparation of thin cells of Leishmania cells	■		
Cryo-EM of LRV virions in phagosome conditions		■	
Calculation of LRV virion particle reconstruction		■	
Cryo-ET of LRV-1 in phagosome conditions		■	
Aim 3. Structural insights into the dsRNA release from the LRV			
Large scale LRV-1 production			■
Optimization of protocols for vitrification of LRV on Cryo-EM grids			■
Cryo-EM data acquisition and 3D particle reconstruction and analysis			■
Cryo-ET data acquisition and 3D particle reconstruction and analysis			■

CEITEC

Gantt Chart Example



D – deliverable; W – workshop; C – conference; S – summer school; K – kick-off meeting; E – Executive Board meeting; T – Scientific Steering Committee meeting

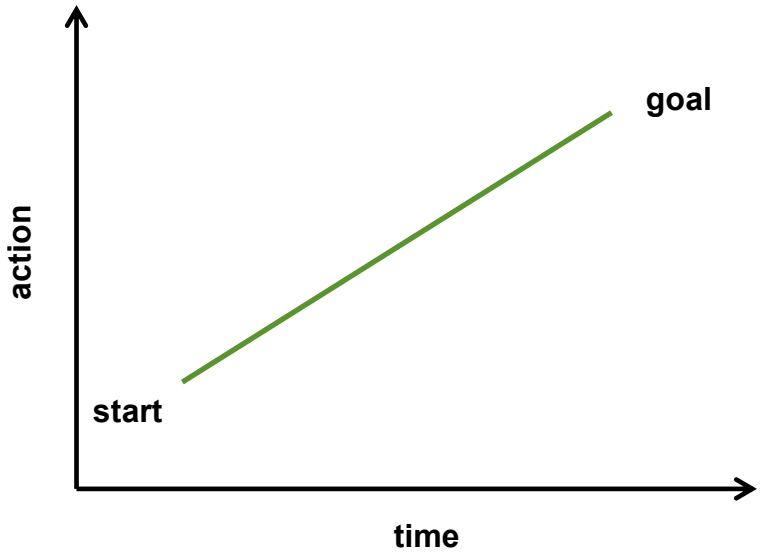
☆ - milestone

70

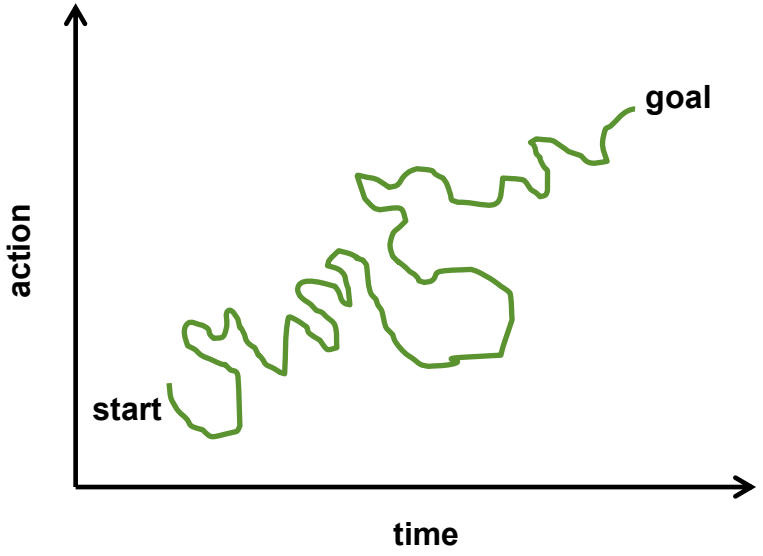
Project management

Time management principles

How we think projects evolves…



What the reality demonstrates



Q: Is time like a sail boat or a motor boat?
A: It´s more like a sail boat shifting in the wind

Scheduling

What do you manage?

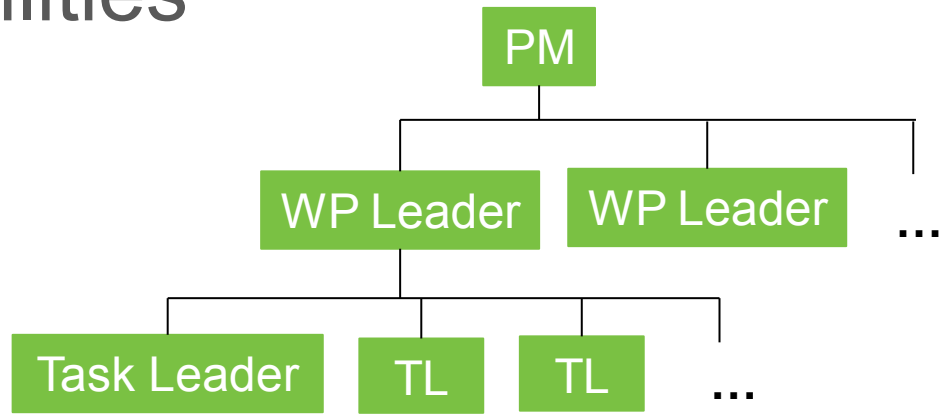
- You DO NOT manage time
- You DO manage your commitments

How to manage your commitments?

- Have list of tasks / activities
- Have list of deliverables
- Have list of milestones
- Have risks analysed
- Sequence activities considering logical relationships among them
- Estimate activities duration and add risk reserves

Planning – HR Management Plan

- Roles and responsibilities
  - Role
  - Authority
  - Responsibility
  - Competency



- Human Resource Plan
  - Project organization chart
  - RACI matrix

Work package	Brno team	Prague team	Vienna team
Sample preparation	A	R	R
Sample analyses	A	R	C
Conference organization	I	I	A,R

R – responsible
A – accountable
C – consulted
I – informed

Example

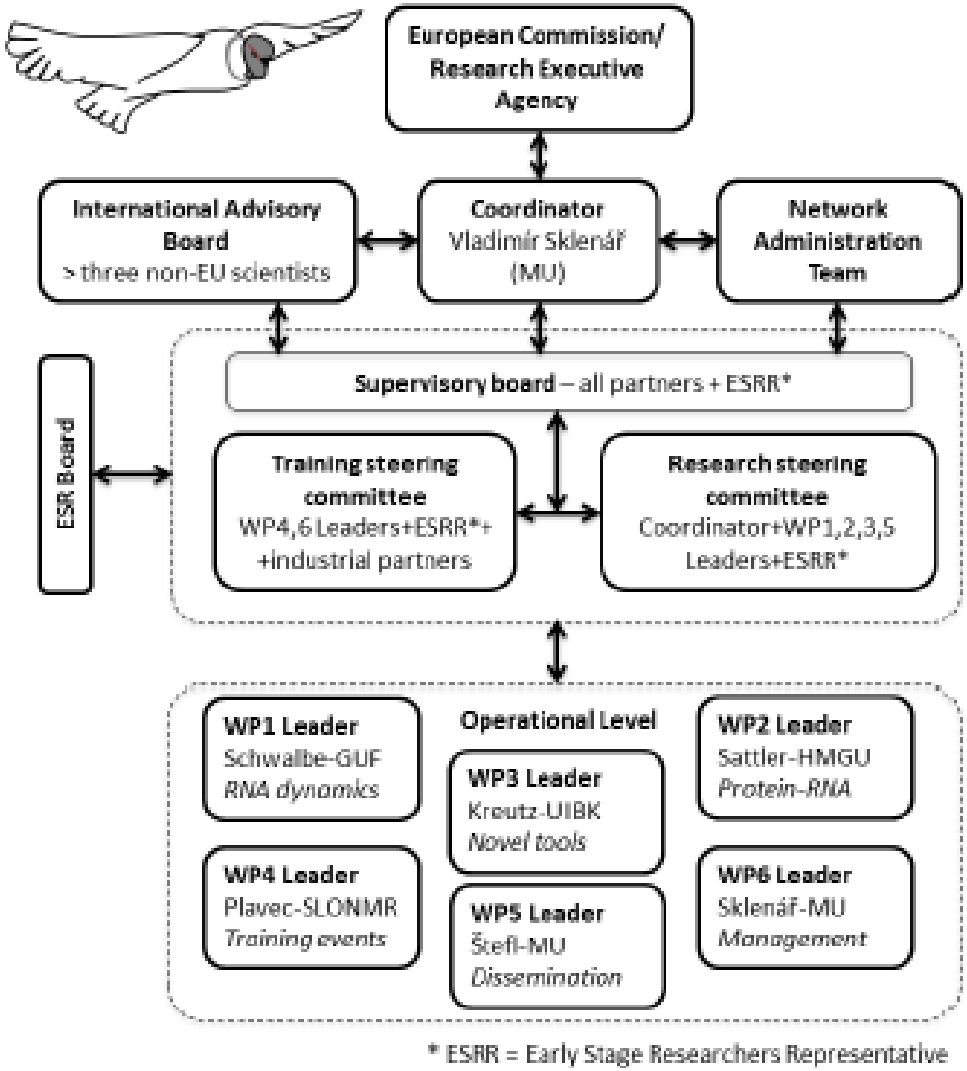


Figure 7: Organization of the CONDOR network

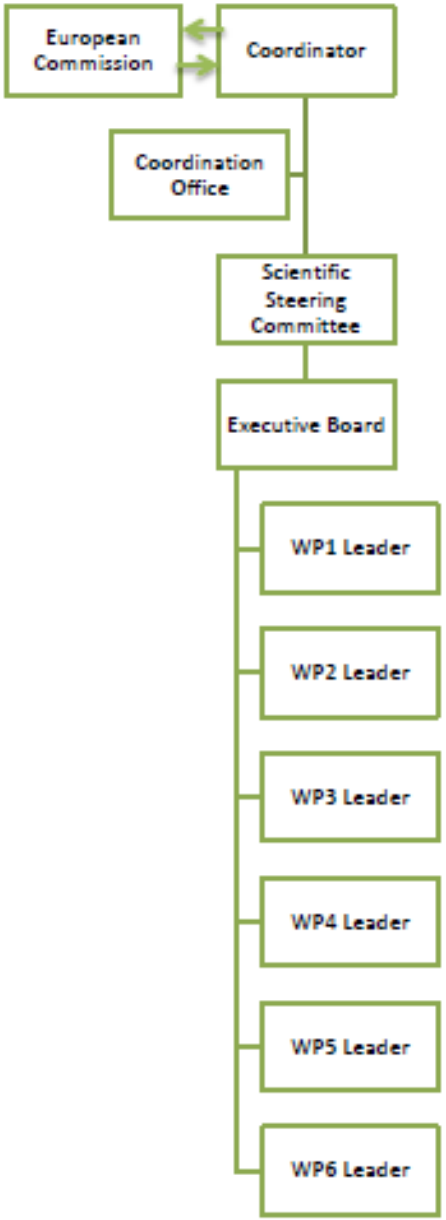


Figure 19: Project governance

Responsibility Matrix (RACI)

	Mom	Dad	Son	Daughter
Dinner implemented	A	R	R	R
1. Resources purchased	A	R	-	I
2. Soup cooked	A	R	I	R
3. Main course cooked	A	-	I	R
3.1 Meat roasted	R	A	C	R
3.2 Sauce prepared	R	A	C	R
3.3 Side dish cooked	R	A	-	-
4. Desert delivered	C	R	I	A
5. Dinner served	A	-	R	R

R – Responsible
A – Accountable (also approver or final approving authority)
C – Consulted (sometimes counsel)
I – Informed

Acquiring & Developing Project Team

- Pre-assignment
- Negotiation with
  - Key project team members,
  - other project teams,
  - external subjects, partners, contractors, suppliers,…

  based on multiple criteria like
  - availability, cost, experience, ability, knowledge, skills, attitude, international factors,…
- Considering virtual teams

Budget

Preliminary issues to be considered

ELIGIBILITY

- Are you **eligible?** Make sure your research **can be funded** by the funder in the **extent** you expect
- Funder can be supporting only:
  - Certain kinds of research (basic, applied, …)
  - …or fields of sciences
  - …or defined target groups (experienced researchers, woman, (new) EU-member countries researchers, …)
  - Specified types of organizations (SMEs, NGOs, …)

APPROPRIATENESS

- Is your research **in line with funder's intention?**
- Are the expected **impacts** of your research of any interest to the funder?

Practical issues to be considered

RESEARCH COSTS (RC) – the costs you need to implement your project

- Are your estimated **research costs (RC)** within what the funder can provide?
- What is the **structure** of your RC?
- Are all of the **RC categories eligible** fundable/eligible for funding?
- Do you need to budget **indirect costs** (overheads) and if so, are these eligible costs?
- Are there any other limitations regarding eligibility of the RC?

Planning the budget

Direct x Indirect costs

- **Direct costs** are specific costs **directly linked to the performance of the project** and which can therefore be directly booked to it ***(= accountancy)***
- Any cost declared by a beneficiary as a direct cost of the action must be **justified by supporting evidence** (showing the link to the action)

CONFUSED?

Just remember the **direct costs** are the money you need to budget to cover your research activities.

Planning the budget

- **Indirect costs** are costs not identifiable as specific costs directly linked to the performance of the project
- In practice, they are costs whose attribution to the specific project / action **cannot be** or has not been **measured directly**, but only by means of cost drivers or a proxy, which apportion the total indirect costs (overheads) among the different activities

CONFUSED?

Just remember the **indirect costs** are the costs related to „utility bills“ of your institution are a **percentage of the direct cost**

Planning the budget
COMMON BUDGET CATEGORIES

- **Personnel costs** – often a major part of the budget
- **Non-personnel cost**
  - Equipment, facilities
  - Services
  - Travelling costs
  - Other direct cost
  - Materials, consumables
  - Special categories such as inflation allowance or contingency reserve

Planning the budget
PERSONNEL COSTS

- Personnel costs = costs of the work on the projects
- You must figure out **WHO** you need to achieve your research objectives - **composition of your team**
- You must make a good **estimate of** how much **effort** you need to complete research activities (and defined tasks and work packages)
- You should calculate the effort as **FTEs** (full-time equivalents) or **person-months**

Planning the budget
PERSONNEL COSTS

AN EXAMPLE:

- Working on a project **ALL the time** means working **full-time = 1 FTE = 12 PMs/year**
- Then you need to **match the effort with** the team **positions**

Planning the budget
PERSONNEL COSTS

- Different pay rates for different positions
- The ranges of **pay rates** usually **defined** and there is a **salary cap**
- **Multiply** the number of **PMs** for individual positions **with the pay rates** for the positions and make a sum of it = **personnel budget**

CONFUSED?
Consults your **CEITEC** dedicated **project manager** and **Personal Deparment**

Budget – tips

- Make it realistic (this helps your credibility)
- Justify the personnel and their time incl. experts and subcontracting to be paid (services)
- Justify your time, justify everything. Be not too modest, count with reserves (EUR/CZ exchange rates...
- Consider risks, such as changes in prices in time
- Don´t be afraid of giving details – the budget is indicative. It cannot be increased, but costs can be shifted during negotiation.

Big budget is nothing wrong if properly justified.

87

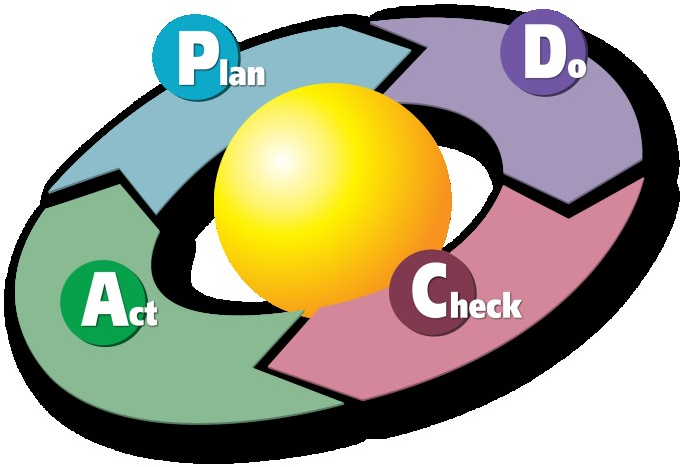
Budget – another example

A Slovakian researcher from Masaryk university applies for a collaborative project with US laboratory for 2 years. His project team consists of himself (FTE 0.2) and 2 PhD students (FTE 0.5 each). One student will visit US laboratory during 1st year and the other one in 2nd year, each for 3 weeks. They plan to use MRI Core Facility for 150hours of imaging (1h/74EUR). They do not need major investments into equipment, apart from two computers (2 x 1481 EUR) and one SW licence (2222 EUR). Costs of US partner are eligible and both institutions will sign an grant agreement with provider. They will disseminate results in 2 joint publications and on 2 international conferences and a one-day workshop at the MU (attendance expected: 50 persons). Project allows 20% indirect costs.

Running the Project on Day-to-Day Basis – Monitoring, reporting and control, Project closing

Day-to-day project management

- Implementing
- Monitoring and controlling the progress
- Reporting
- Change management
- Communication



Implementing

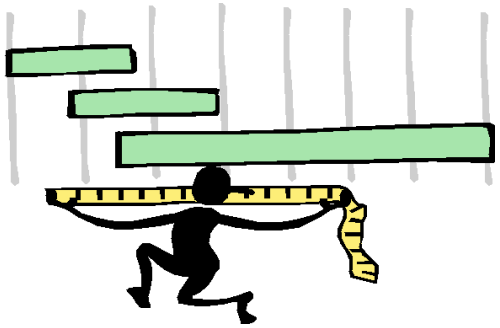
- During project implementation refer to:
  - Scope – Work plan
  - Time schedule – Gantt chart
  - Resources
  - Budget
  - Intermediate outcomes – Deliverables, Milestones
  - Risks

  - Team (roles and responsibilities)

Monitoring

- Regular collection and analyses of relevant information about the project implementation
- Comparison actual vs. planned performance
- Well structured projects are easier to monitor

Key questions for monitoring:



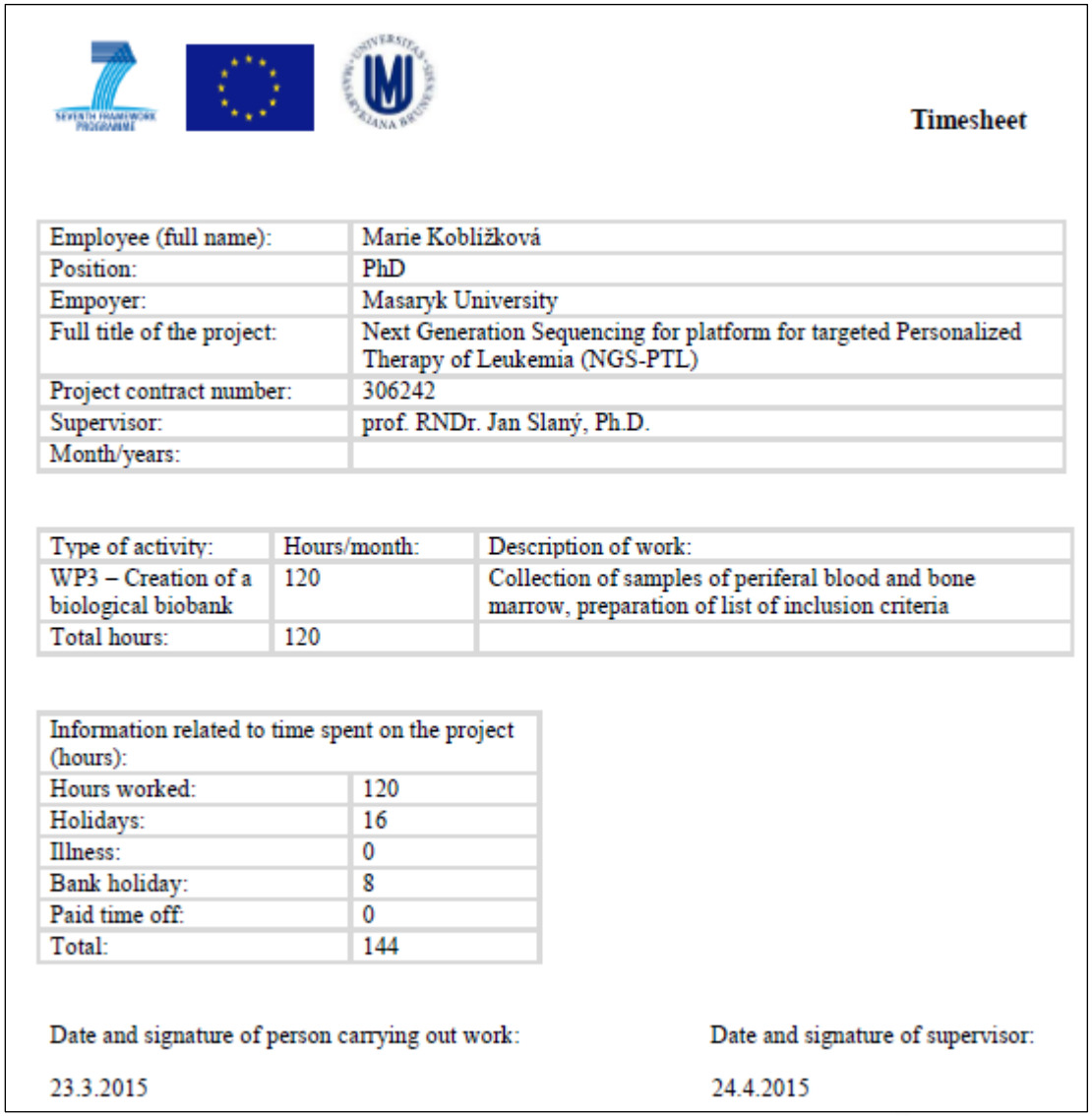
1. Do I have enough and appropriate resources?
2. Am I running in time on schedule?
   - Start and end dates for each activity
   - Dates when milestones are reached
3. Scope – quality of achieved progress

Reporting

- Effective analysis of the project (Progress Report or Final Report) which usually includes:
  - Financial and scientific part
  - Objectives that have been achieved, work completed during the period, evaluation of progress, changes requested and approved
  - Future plan, key steps and dates
- Include illustrations, charts and tables
- Hand your report on time

Timesheets

- Record of the amount of a researcher's time spent on the project



Timesheet

Employee (full name):	Marie Kobližková
Position:	PhD
Empoyer:	Masaryk University
Full title of the project:	Next Generation Sequencing for platform for targeted Personalized Therapy of Leukemia (NGS-PTL)
Project contract number:	306242
Supervisor:	prof. RNDr. Jan Slaný, Ph.D.
Month/years:	

Type of activity:	Hours/month:	Description of work:
WP3 – Creation of a biological biobank	120	Collection of samples of periferal blood and bone marrow, preparation of list of inclusion criteria
Total hours:	120	

Information related to time spent on the project (hours):	
Hours worked:	120
Holidays:	16
Illness:	0
Bank holiday:	8
Paid time off:	0
Total:	144

Date and signature of person carrying out work:

23.3.2015

Date and signature of supervisor:

24.4.2015

Change management

Change is possible if:

1) you justify the reasons – outline benefits
2) it is well communicated – good communication is important in overcoming resistance to change
3) you ask for it in time – do not imply the change until the funder approves it. Plan ahead, change approval may take even weeks.

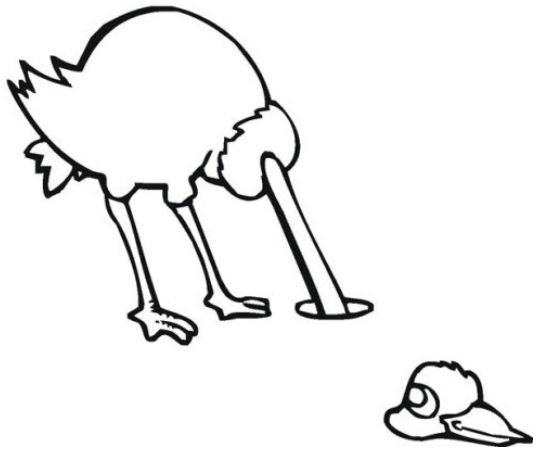
- Minor change – e.g. duration of one activity, minor financial changes
- Major change – e.g. project aim, duration of project, big shifts in cost categories etc.

Communication

- Good communication is essential to wellbeing of any project
  - Personal communication
  - E-mails
  - Publications
  - Website
  - Presentations
  - Project meetings
  - Communication plan – clearly assign key roles, responsibilities, their importance and preferred way of communication

Communication – common failings

- Unwillingness to communicate bad news
- Not asking for help when it's needed
- Poor communication channels
- Lack of honest communication



Closing a project

- A process of finalizing all activities across the project and to formally complete the project or phase.
  - Review all information (especially deliverables) to make sure that work is completed and objectives have been met
  - Actions to transfer project outcomes to next phase
  - Collect records, audit of success or failures, gather lessons learned and archive project information
  - Give recognition and reward to the team

Sources of information

- Jan Doležal, Pavel Máchal, Branislav Lacko a kol. - Projektový management podle IPMA, 2. aktualizované a doplněné vydání
- Roland Gareis: Happy Projects
- Orr Alan: Advanced project management,
- Rita Mulcahy, PMP, et al. – PMP® Exam Preparation, 8th edition
- Patzak G&Rattay G (2004): Projektmanagement - 4. Auflage Linde Verlag Wien
- Verzuh Eric (1999): The fast forward MBA in project management – John Wiley&Sons Inc.
- Young Trevor (2004): The handbook of project management
- Terri Morrison, Wayne Barker Stephen, Cole Rob (2009): Projektový management pro praxi; Co nejlepší projektoví manažeři vědí, říkají a dělají

CEITEC

Středoevropský technologický institut

BRNO | ČESKÁ REPUBLIKA

UNIVERSITAS MASARYKIANA BRUNENSIS

Thank you for your attention

EVROPSKÁ UNIE
EVROPSKÝ FOND PRO REGIONÁLNÍ ROZVOJ
INVESTICE DO VAŠÍ BUDOUCNOSTI

2007–13
OP Výzkum a vývoj pro inovace