



Enhancing Trust, Integrity and  
Efficiency in Research through  
next-level Reproducibility

# WP4 – Community driven design and piloting of reproducibility tools and practices

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# WP overview

- Objectives
  - *Use future studies to create optimal scenarios for the future of repro*
  - *Plan and design interventions that help stakeholders to explore costs and benefits of reproducibility*
  - *Prepare and run pilots for tool and practice to showcase, verify and evaluate them*
- List tasks in WP
  - *4.1 Future Studies (VUmc)*
  - *4.2 Requirement procedure and design (GESIS)*
  - *4.3 Pilot preparation activities (ARC)*
  - *4.4 Pilot implementation and assessment (VUmc)*

# WP overview

- Contributors
  - *KNOW, ARC, VUmc, AU, Pensoft, GESIS, UOXF, FLEMING, F1000*
- Running time (M3-M30)

# WP overview

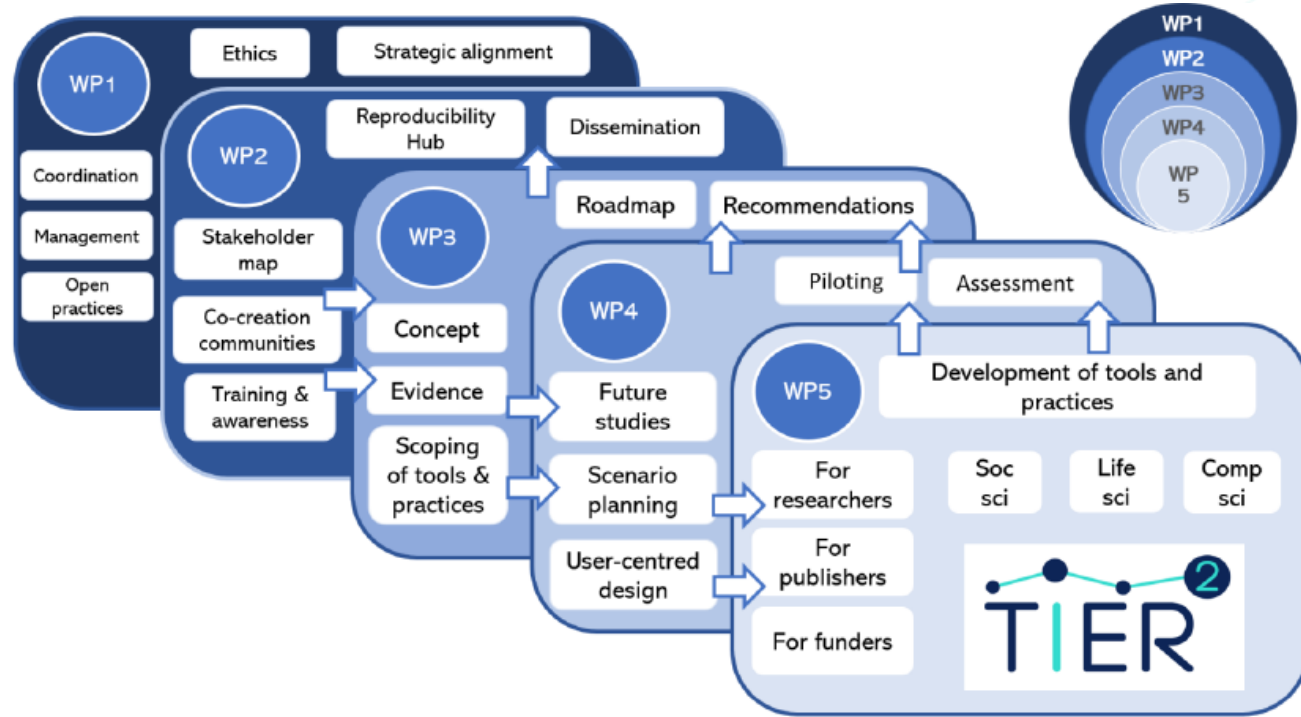


Figure 5. TIER2 PERT Chart

# Task 4.1 – Future Studies

- Task objectives
  - *Scope the ideal future of reproducibility for 5 different stakeholders in online workshops*
  - *Explore the roadmap towards these futures including limitations*
- Task main methods
  - *Scenario workshops*
  - *Use backcasting and transcend methods to explore the steps needed for the ideal future of reproducibility*
  - *Conduct FG and interviews to identify drivers and barriers of these scenarios*

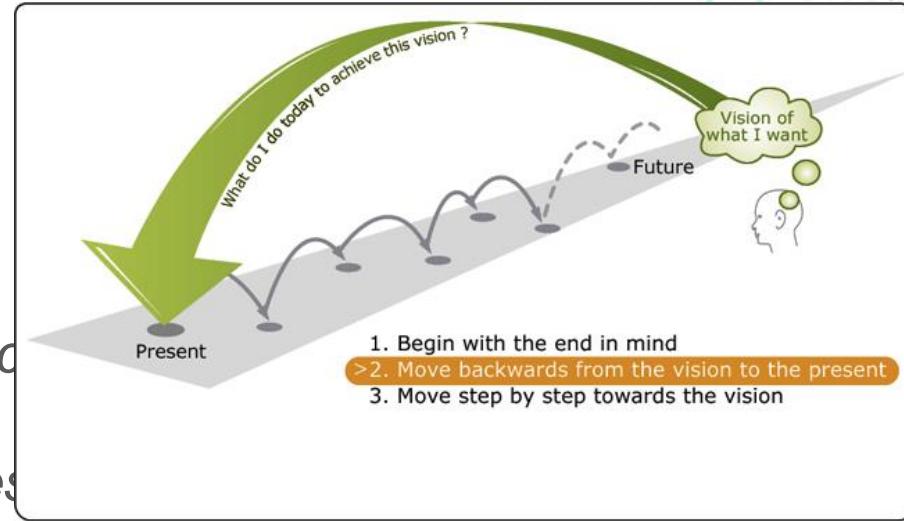
# Task 4.1 – Future Studies

- Task objectives

- *Scope the ideal future of reproducibility*
- *online workshops*
- *Explore the roadmap towards the future*

- Task main methods

- *Scenario workshops*
- *Use backcasting and transcend methods to explore the steps needed for the ideal future of reproducibility*
- *Transcend methods resolve conflicts/extremes between possible futures to create and articulate a more integrative vision*



# Task 4.1 – Timelines, Deliverables & Milestones

- Task timeline
  - *First year (deadline M9)*
  - *5 workshops in June*
  - *FG and interviews in September*
- Deliverables and Milestones
  - *D4.1 Future of reproducibility across contexts Report M9*
  - *MS4.1 Preregistration of protocol (M4)*

# Task 4.1 – Key challenges and immediate priorities

- Key challenges
  - *Recruitment for 5 online scenario workshops*
  - *Fast preliminary analysis*
- Immediate priorities
  - *Preregistration of research protocol*
  - *Planning of workshops in May/June*



## Task 4.1 – Interrelation with other tasks, WPs & partners

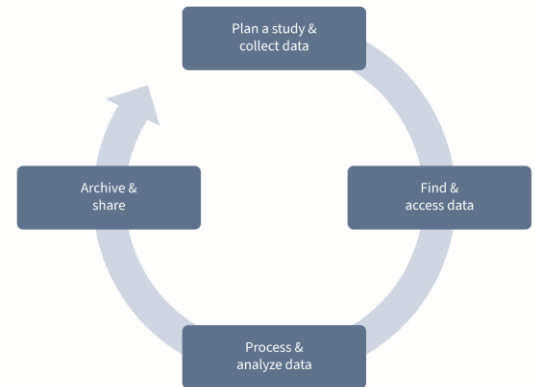
- *Involved: VUmc, KNOW, AU*
- *Interdependency with*
  - *the results of the literature review (input for the workshops)*
  - *Results will shape the tasks for the creation, design and piloting of our existing and created tools*
  - *Results will shape the recommendations (feasibility and limitations)*
- *Hurry? The results of the review are important. The recommendations are created in the final part of the project so results can be worked out.*

## Task 4.1 – Discussion points

- *Recruitment strategy for 5 different stakeholders. Tips and tricks*
- *Future studies is innovative but methods are diverse and differ between fields/studies. We are exploring*
- *What WPs are really going to incorporate these futures? How to collaborate best here?*

# Task 4.2 – Requirements procurement and design

- Task objectives
  - *Technical / Social **requirements** to increase reproducibility across all phases of research*
  - *i.e. Conceptualization → Assessment of a study*
    - *e.g. Reproducibility pathways for Social Scier~~*
      - *Data Collection*
      - *Data Access*
      - *Data Analysis*
      - *Data Archiving and Sharing*



# Task 4.2 – Requirements procurement and design

- Task main methods
  - Gather & Assess Community Requirements for reusability (enabling sharing and access) of:
    - Data
    - Processing Workflows
  - Produce Reproducibility
    - Checklists
    - Management Plans
    - Assessment Plans

## T4.2 Requirements procurement and design (M8-M30)

### Timelines, Deliverables & Milestones

- Task timeline

- First breakdown of timing of sub-tasks to reach the Task aims*

Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		D4.1			D4.2				D4.3		

- Deliverables and Milestones

- D4.1 Future reproducibility across epistemic contexts: Report on future studies/backcasting outcomes (VUmc, M9)*
- D4.2 Pilot implementation and assessment plans (GESIS, M18)*
- D4.3 Pilot implementation reflection report including assessment of efficacy & recommendations for future developments (VUmc, M30)*

# Task 4.2 – Key challenges and immediate priorities

- Key challenges
  - *Many / unreal / unclear requirements*
  - *Heterogenous group of participants*
  - **Context:** *Social Science, Computer Science, Life Science, Funders, Publishers*
  - **Eight** *pilot requirements and assessment plans (D4.2)*
- Immediate priorities
  - *Look into existing standard practices for reusability (data, methods)*
  - *Identify the Gap (uncovered requirements)*

## Task 4.2 – Interrelation with other tasks, WPs & partners

- *List any competencies, resources, or support you need from collaborators, coordinator, work package leader, etc. Especially list any interdependencies with other Tasks, where inputs from specific Tasks, deliverables, milestones are required, or where the outputs of your task feed into other activities (context, scope, features)*
- *3.1, Conceptual framework for reproducibility across contexts (Identification of key interventions) M8*
- *4.1, Priorities from the stakeholder community (Requirements & Assessment Plan) M9*
- *3.2 Inventory of existing tools and practices M12*
- *3.3 Synthesis and Recommendations **M36***

# Task 4.2 –Requirements procurement and design

## Discussion points

- *Outcomes*
  - *Checklists ( for Methods, Workflows)*
  - *Guidelines for Reproducibility Management Plans*
  - *Guidelines to Review (Data, Code)*
  - *Threaded publications*
  - *Models for publishing and review (data, methods)*



# Task 4.3 – Pilot preparation activities (ARC)

- Motivation
  - Although pilot partners actively participate in the co-design of tools & practices, **various factors can influence their involvement** in the respective activities.
    - Stakeholder-related (e.g., familiarity with tech, software stacks), inherent to the project work (e.g., missing features from components), unforeseen situations
- Task objectives
  - *To **facilitate piloting activities** for tools & practices **identifying & reducing the risks** that may influence them => **ensure successful planning & implementation.***
- Task main methods
  - ***Pre-registration of all methods** used for pilots*
  - ***Plan ahead** & take measures to reduce risks*
  - ***Design evaluation framework** for tools/practices (performance indicators)*

# lestones

		MS				D4.3	

to the **MS4.2**

.3 activities will

## M19

## M19

## M19

- ## M19

# Task 4.3 – Key challenges and immediate priorities

- Key challenges
  - **Heterogeneity** in (a) tools & practices and (b) pilot needs & competencies
  - **Lage number of partners** involved
- Immediate priorities (preparation work since official start at M13)
  - Cooperate with WP5 to:
    - Fine-grain the list of tools & practices
    - Identify relevant tech, useful documentation & contact points
  - Cooperate with pilot partners:
    - Fine-grain performance indicators
    - Identify needs & blocking points
  - Cooperate with WP2 to find how to connect with T2.3 (Reproducibility Hub)
  - Cooperate with WP3 to find how to connect with T3.3 (synthesis & recommendations)
    - Connection to tools & service inventory?

## Task 4.3 – Interrelation with other tasks, WPs & partners

- **Partners involved:** ARC (lead), Vumc
- **Connection to other tasks:**
  - T2.3 (Reproducibility Hub)
  - T3.3 (Synthesis & Recommendation)
  - T4.2 (Use-case definition)
  - T4.4 (Pilot implementation & assessment)
  - T5.1 (Practical tools & practices for researchers)
  - T5.2 (Practical tools & practices for publishers)
  - T5.3 (Practical tools & practices for funders)

## Task 4.3 – Discussion points

- Ticketing mechanism to collect questions, issues, requirements.
- Best way to communicate with other WPs

# Task 4.4 – Pilot implementation and assessment

- Task objectives
  - *Pilot actions involve use cases that apply our tools/practices*
  - *Evaluation activities of the tools (with the workflow of T4.3) to see what is (not) working in diverse epistemic contexts and what is needed for successful implementation*
- Task main methods
  - *More details table 5.*

## Task 4.4 – Pilot implementation and assessment

- Pilot 1: Checklists (KNOW)
- Pilot 2: RMPs (Reproducibility Management Plans)  
OpenAIRE
- Pilot 3: Reproducible workflows for researchers in 3 pilot contexts (ARC)
- Pilot 4: Workflows to review datasets and codes (UOXF)
- Pilot 5: Threaded linked publications for publishers and researchers (KNOW)
- Pilot 6: New models of publishing and review (KNOW)
- Pilot 7: Reproducibility Promotion plans for funders (VUmc)
- Pilot 8: Reproducibility Monitoring dashboard (for funders (ARC))

# Task 4.4 – Timelines, Deliverables & Milestones

- Task timeline
  - *M20-M30 VUmc [lead], KNOW, ARC, AU, PENSOFT, GESIS, UOXF, FLEMING, F1000)*
  - *Most partners involved in the task*
- Deliverables and Milestones
  - *D4.3 Pilot implementation reflection report including assessment of efficacy and recommendations (M30!)*
  - *MS4.2 Preregistration of methods for pilot implementation and assessment M18*
  - *M4.3 Update report on pilot implementation progress*



## Task 4.4 – Key challenges and immediate priorities

- Key challenges
  - *How to combine pilots with assessment activities*
  - *How to reach all these communities with our pilots*
  - *Inclusion of funders (now not in the call)*
  - *Close collaboration with WP5*
- Immediate priorities
  - *Community building in a lot of areas*

## Task 4.4 – Interrelation with other tasks, WPs & partners

- *Communities needed: active communities that are willing to participate*
- *Resources: Is everyone capable of conducting a pilot?*
- *Support: Structured feedback so all input can be collected and organised.*
- *We need workable tools that can be piloted from earlier work. Is this feasible?*
- *Task 3.3 is dependent on our pilots. (synthesis and recommendations)*

## Task 4.4 – Discussion points

- *Is it reasonable to start piloting in M20?*
- *How to coordinate all the pilot activities with so many partners involved?*
- *Would it be possible to create some sort of standardization of our 5 stakeholders.*
  - *I think a ReproPromotionPlan for all areas could be a wonderful product? Any other visions on this?*
  - *Any specific comments on the pilots?*

## Task 4 – General discussion points WP4

- *A lot of methods; review, cocreation, FGs, scenario workshops, Delphi (in 3.3), pilots and assessment. I feel that we sometimes overpromise and have a lot of outcomes. What will be our priority?*
- *How to deal with delays?*
- *Communication with our stakeholders. How to keep them involved and willing?*
- *How to communicate between WPs?*

# Thank you!