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The Agile Research Guide

Insights from an EU project to transform your research

Document Information

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Contents

Notes for the reader

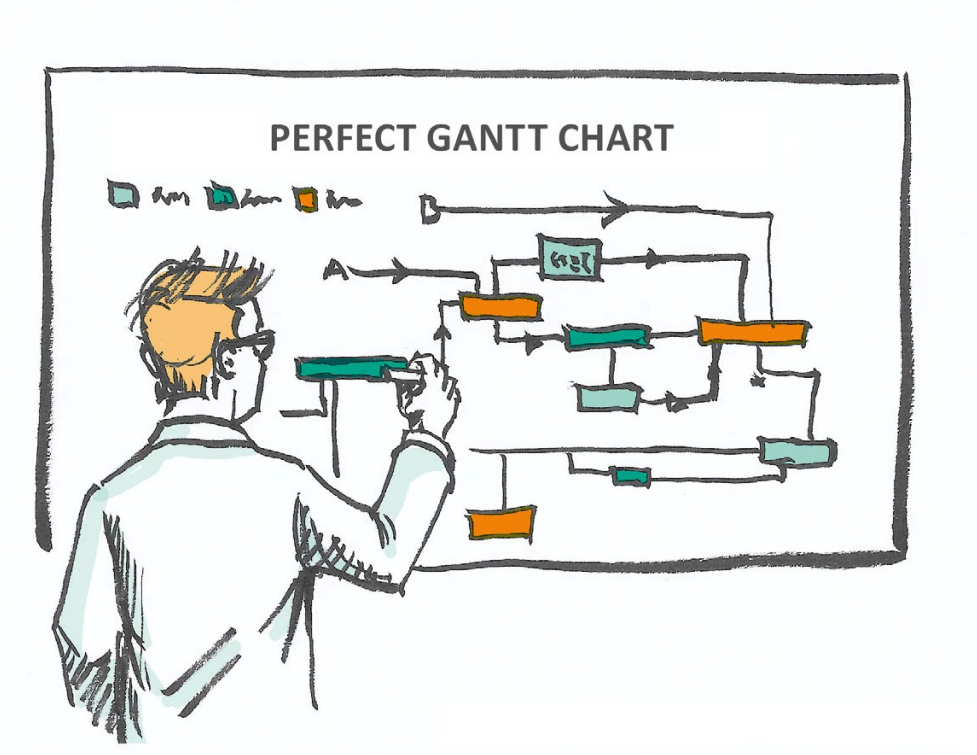
This guide draws on lessons learned from the EU-funded INTERLACE project, a project to strengthen urban ecosystem restoration in the European Union and Latin America. The guide offers both inspiration and practical advice for incorporating agile practices into research and innovation projects.

If you're looking to create research workflows that are adaptable, user-focused, and accountable, this guide is your starting point. It will help you utilise agile principles to design processes that not only respond to change, but thrive on it!

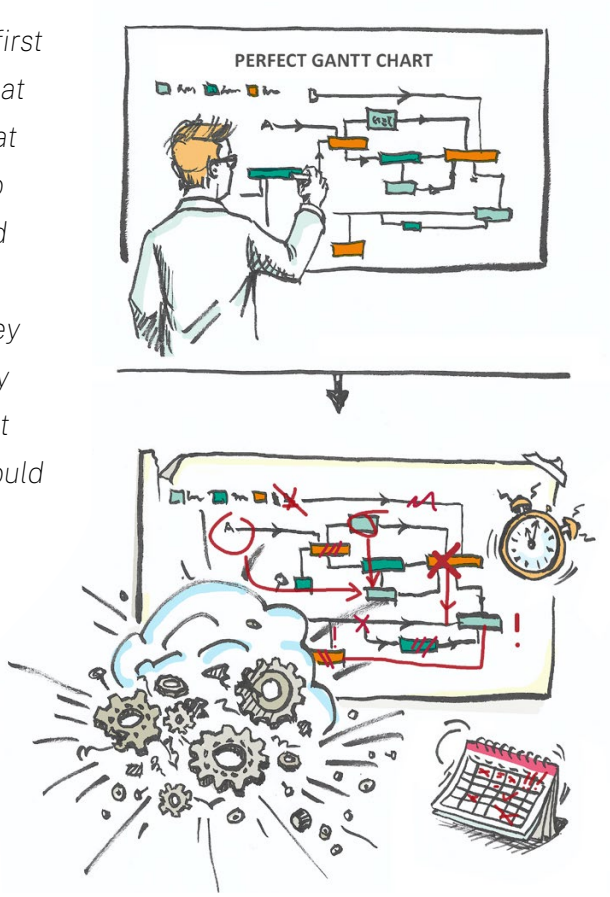
Stay tuned for the release of our Agile Research online Module, your roadmap to more flexible, impactful, and user-centered research. It will provide you with a comprehensive framework, including agile principles, practical tools, and monitoring strategies to support your transition to agile project management.

Added value of working agile

Nothing ages faster than a detailed project plan



"When you hear what happened, it sounds at first as if it makes sense: the people at Lockheed sat down before they bid on the contract, looked at the requirements, and started planning how to build a system that would do all that. They had lots of intelligent people working for months, figuring out what needed to be done. Then they spent more months planning how to do it. They produced beautiful charts with everything that needed to be accomplished and the time it would take to complete each and every task. Then, with careful colour selection, they showed each piece of the project cascading down to the next like a waterfall. These charts are called Gantt charts, after Henry Gantt, who developed them. With the advent of personal computers in the 1980s making it easy to create these intricate charts — and to make them really complex — they have become works of art. Every single step in a project is laid out in detail. Every milestone. Every delivery date. These charts truly are impressive to behold. ***The only problem with them is that they are always, always wrong.****"*



Jeff Sutherland,
author of 'The Art of Doing Twice the Work in Half the Time'

Sound familiar? The same observation triggered us to reflect on how we work in user-centered research projects that bring together numerous researchers and stakeholders with diverse interests, backgrounds and working methods. Each project output is described in advance and put into a Gantt-like chart. And when the project starts, reality hits every single time. Usually because we all tend to plan too optimistically (a phenomenon known as 'planning fallacy'), but also because stakeholders end up needing different outputs, or new insights, learnings and windows of opportunity arise that require adapting project planning and outputs.
Pre-established and detailed output descriptions and deadlines make this desired, and-we would argue-necessary flexibility quite hard. And all of it often comes at the cost of user relevance and impact. Another nice report collecting dust? Another cool tool in the toolbox graveyard?

Most of you may have experienced this yourself, while feeling somewhat powerless to change the process and its outcome. We observed for example that experienced project leaders already build in some manner of flexibility by purposefully including output (or deliverable) descriptions that leave some room for interpretation, e.g. by including longer timespans for outputs or by focussing on process descriptions over output descriptions. Yet currently, project management approaches within research are as diverse as the research topics themselves. Coordinating partners are left to set-up their own unique approach to management according to their preference, skills and experience. Linear Gantt-like planning approaches are still the norm, with clear forward looking timeplans, predefined outputs and milestone lists.

At the same time, we have seen a shift over the past decades in Europe from predominantly academic research initiatives towards hybrid academic and user or applied research initiatives. This transformation also calls for faster paced and iterative projects, requiring additional interactions with end-users and a larger diversity of output formats (over traditional A1 publications), focusing more on practicability and applicability. Therefore, it is perhaps not so surprising that these new projects, operating in the context of fast moving political and policy agendas and constantly evolving insights, are less compatible with the linear project planning approaches mentioned previously. For example, the long delay between planning during the project proposal stage, the actual project launch and the delivery of the first project outputs, may confront research teams with new realities rendering these outputs less relevant or miss out on opportunities to contribute to newly emerged policy needs.

We argue that unpredictability is inherent to research projects and requires building in flexibility in a structural manner, to be able to respond to changing user needs and new insights gained during the research process. Such structural flexibility can ensure enough room to innovate and produce end-user relevant outputs.

Over the past years, some key innovations have been made in the EU research and innovation programme in that regard. For example, the multi-actor approach emphasises co-creation and co-ownership of results, the lump-sum approach stimulates faster output release and reduces administrative complexity. Yet to achieve structural flexibility at project level, we believe it should become engrained in every aspect of the project development. And that requires a change of mindset, and also some tools to help achieve that change in practice.

What agile brings to the table

An agile approach is built around four foundational values and twelve supporting principles captured in the 'Agile Manifesto'[1]. These four key values are:

Individuals and interactions over processes and tools

Working product over comprehensive documentation

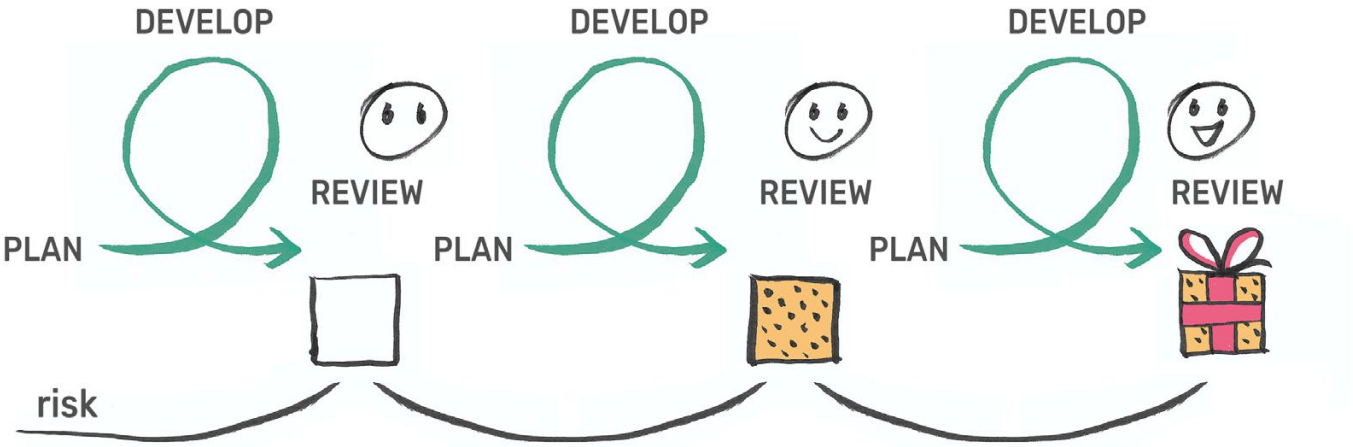
Customer and end-user collaboration over contract negotiation

Responding to change over following a plan

We implemented agile values and principles in the INTERLACE project, a four-year EU-funded initiative focused on urban ecosystem restoration. We used agile workflows to enhance stakeholder collaboration and ensure that outputs met their needs. By adopting iterative approaches and embracing change, the project aimed to improve our ability to deliver outputs that were relevant, legitimate, and impactful.

So-called '**agile approaches**' are a valuable tool for accomplishing structural flexibility within research projects in practice. Developed in the software industry in 2001, such approaches have since then been percolating for many years already in many-mostly private-sectors, but are not yet common in the research field. This gap inspired us to work in a more iterative manner within the INTERLACE project to achieve the flexibility and end-user driven outputs we were striving for. It set us on a pathway to change our way of planning and developing outputs, placing end-users and their needs at the heart of the project. For example, we wanted to increase the frequency of end-user reviews for our outputs, moving away from traditional approaches where there is typically only one draft review before releasing an output (see the top of the figure below). This draft review is sometimes followed by a quality review conducted by the funder (e.g. the periodic EU reviews in Horizon Europe programs). However, this approach increases the risk of having little resources left after the final review to implement necessary revisions. Also these reviews often do not include potential end-users.

[1] https://agilemanifesto.org/



To address this, we involved end-users earlier in the development process by regularly submitting intermediary outputs (co-defined with them) for faster adaptation and correction. This approach also enabled us to communicate any resulting changes from the predefined contractual deliverables to the funding agency in a timely and transparent manner.

We think agile project management offers a promising approach, it emphasises flexibility, iterative development, and continuous feedback. By breaking the development process into smaller, manageable cycles or “sprints,” teams can adapt quickly to changing and evolving needs, integrate user input at every stage of the development process and deliver more effective, user-centred results. It can also improve accountability towards funding agencies and towards stakeholders in co-creation processes.

Here we share with you our agile journey, and some key insights and lessons learned.

The INTERLACE agile journey

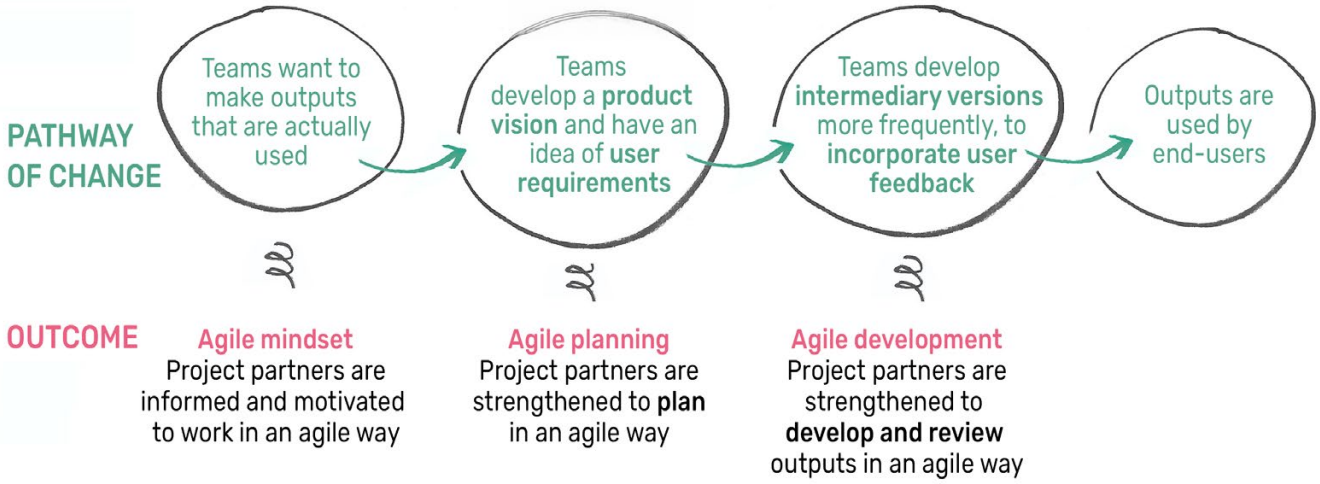
The INTERLACE project represents the first time an agile approach was applied in a non-IT HORIZON Europe research and innovation project, in this case involving multiple cities on different continents. Implementing an agile approach was an experiment and part of the research: the goal was to try it out, learn from it and push the process as far as possible in order to understand its added value. It took a lot of learning, adapting, and being 'agile' on a daily basis.

Sounds good, but how to start? How do we mobilise a large consortium, with partners from various countries, disciplines and with different agendas and missions? Partners who are also mostly unfamiliar with agile ways of working. We anticipated it would require more than creating guidance and support, it would involve building a shared ambition and commitment to adhere to agile values and principles. In essence, we would need to create and nurture an **agile mindset**, to persuade project partners of the added value. This would then encourage and strengthen them to plan and develop in an agile way.

Agile planning was then accomplished by creating product visions[2] for each output, and getting a first notion of user requirements. **Agile development** was achieved by developing intermediary outputs more frequently, in order to incorporate user feedback early on and more importantly, to change course when output contents or formats were found to lack end-user relevance. All with the final goal of developing outputs that are actually used.

In short, our aim was to evolve from an agile mindset, adhering to agile values and principles, towards actually applying these in practice. To track our progress towards this agile transformation, we developed a pathway of change, which formed the backbone of our agile approach.

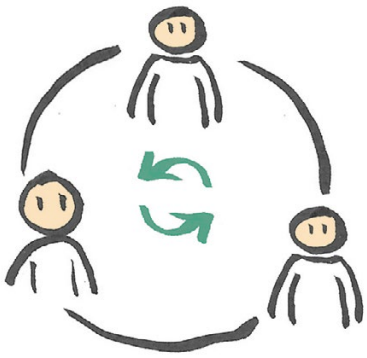
[2] A product vision in an agile workflow describes what the end product should look like. It clearly states what problems the product aims to resolve or what ambitions it aims to achieve. It helps to inspire and motivate people and supports the discussion with users on product requirements.



We've summarized some of the key insights and lessons learned during that journey in the next section.

Key insights and lessons learned

This section presents our key insights and lessons learned from INTERLACE on applying an agile approach in a research project. If you want to delve more into the practical or technical aspects of this project experience, please see "Start your own agile journey...". We discuss here how to foster agile teamwork, how to place end-users at the heart of your project, provide some concrete examples of how agile impacts project outputs and discuss some challenges we faced and provide tips to overcome them. Finally we look back and discuss what we would have done differently, and list a few open questions that still puzzle us.



1. Fostering agile teamwork

Good working teams are essential to any project, and are at the center of agile frameworks. Ideally teams are cross functional (consisting of diverse skills), self-organized, share responsibilities to achieve quality, problem solving, aiming for continuous improvement, foster psychological safety, etc. This may be overwhelming: How to put all this in place? We felt it all starts with 'The Heart of Agile'[3] and the appropriation of its core values. And then it's also about attitudes that we like to nurture, creating a fertile ground for teams to operate in.

Finally it's about setting the level of ambition for your team and project, perhaps starting with a few key outputs or having a full agile approach for the project (see also section 6).

Read on to find a few of our lessons learned regarding the heart of agile, the importance of mentorship and the inclusion of newcomers, about attitudes and also about doubts.

"Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done."

Agile principle n°5

[3] The Heart of Agile (https://heartofagile.com/), Alistair Cockburn, Humans and Technology Technical Report 2016.01

Focus on 'The Heart of Agile', not on processes or tools

Adhere strongly to the first key value of working agile: "Individuals and interactions over processes and tools". An agile toolbox can be provided, but leave it to the teams to pick and choose what works best for them. Allow enough flexibility to adopt their own working methods or tools, and keep focussing on what matters most: listening to users and incorporating their feedback, at frequent stages throughout the project.

INTERLACE-experience:

At the start of INTERLACE, we had ambitious plans on how to keep track of the agile development using tools that we felt would be useful for the teams in the consortium. Yet, the 'top down' suggestion of certain tools or formats was a step too far and felt too rigid among some of the project partners. A common pitfall! We adapted by focussing on what teams were already using and inspiring teams by organizing more peer-to-peer exchanges.

Nurture attitudes

Understanding what "agile" is, what the values and principles are and what methodologies and tools can be used to implement it, will not bring agility to a project or team. An authentic agile approach can only occur when everyone involved demonstrates and fosters certain behaviours and attitudes: being open minded to change, user focussed, transparent, collaborative, embracing failure and success, etc.

INTERLACE-experience:

There is no cookbook to support these attitudes in practice. Yet a strong collaboration from the start onwards with the coordinating team, the agile team and the project officer (the funding agency) was important.
A lot of effort was also made to create an 'agile mindset' among the INTERLACE consortium members, by means of early discussions during the proposal development, an agile guidance document, webinars, videos,etc. Some tools, such as making a product vision, are helpful to align individual and team expectations regarding attitudes as well. We spiced things up with games to learn about agile in a fun way. There are many games to choose from, like the Ball Point Game or the Agile Clock.

Yet not all the INTERLACE teams and outputs were actively engaged in the agile process. We followed agile principle 5 which is to 'build projects around motivated individuals', and focussed on supporting motivated teams. They will inspire others to join as well.

Ball point game - Introducing agile in a fun way

© Ivan Gajos (Oppla)

Integrate agile mentorship into teams

An ‘agile mentor’ is an agile coach providing support in implementing the agile workflow. Make the agile mentor part of the development team, to provide continuous guidance and support. This will require a greater time investment, but will lead to better adherence to agile principles, thus leading to better results.

Alternatively, a ‘train the trainer’ approach can be put into place, where someone from the development team is assigned the role of ‘agile mentor’ and is trained at the start of the project (assign budget and time in the proposal stage).

INTERLACE-experience:

Three agile mentors provided on-demand support. This was effective in some cases, but less so in others. Teams are busy and do not always think of contacting their agile mentor. A more solid foundation for agile mentorship in the project structure is recommended. Clear communication early on about the added value and potential support that can be provided by utilising these mentors can help project partners to engage more with the mentorship offers.

Better ‘agile’ onboarding for newcomers

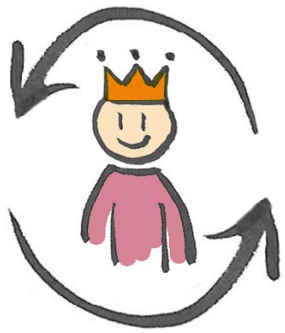
Complex research projects with large multi-partner consortia, tend to have frequent staff turn-overs. Political changes in administrations for example, can lead to substantial personnel replacements. New project members may struggle to understand the project’s complexity, let alone a non-traditional agile approach. Consider creating an easily accessible onboarding process or documentation for newcomers.

INTERLACE-experience:

Agile refreshers and recorded webinars were organized, providing opportunities for newcomers to join in. We also pro-actively reached out to newcomers.

Integrating newcomers is a challenge for any international project with teams located in several countries. In the end, teams should be empowered to ensure newcomers find their way in the project, including the agile approach and lingo.

2. Placing end-users at the heart



In applied or action-oriented research projects, scientific papers and conference abstracts are not the only measures of success. Much more attention is paid towards creating actionable research outputs. For many scientists who were previously primarily working in academic settings, this increasingly has become a new reality. To aim for increased impact, projects now need to adapt their way of working and place end-users at the heart of their output development. For example, Research and Innovation projects funded by the Horizon Europe programme now require defining target audiences in a dissemination and exploitation strategy, and often have to implement a multi-actor approach.

An agile approach is useful here as it helps to define target audiences and end-users for each output, and also enables strong end-user collaboration and satisfaction. We share three important lessons learned in our effort to put end-users at the heart of the project.

"Our highest priority is to satisfy the end-user through the early and continuous delivery of valuable intermediary outputs."

Agile principle n°1

Identify your end-users and their needs

It is not always clear who the actual end-users are at the start of a project Identifying the actual end-user profiles is therefore a key step and sufficient attention should be given to define these profiles as accurately as possible, and where necessary segment different user types.

Another important point to take into account is that user needs are not static: they evolve based on changes in the working environment, or through new insights resulting from testing prototypes. Users may initially not even be aware of a need before being exposed to innovative concepts, information and solutions. This highlights the importance of using an iterative process to stay in tune with user needs.

INTERLACE-experience:

The final call text for the INTERLACE project contained the first expression of user needs, acting as a kind of proxy. To ensure actual user involvement during the course of the

project, a number of users were included in the consortium (e.g. city administrations and city networks).

Each output development in INTERLACE started with a product vision exercise, including user identification.

In multi-disciplinary projects such as INTERLACE, many outputs are interdependent on each other. This means a research team in the consortium may end up being the users of another research' teams output. Identifying the needs of the internal users helped with interdependency management.

👁 Prioritise early development and feedback mechanisms

Starting output development early and reserving more time to include feedback loops with end-users significantly improves the development process. Yet it requires adapting your timeline with that of your end-users, which in practice requires building in more flexibility. This 'timeline flexibility' can be achieved by planning longer timespans for project outputs.

Project Milestones can be redefined as intermediary versions to be validated by stakeholders, to nudge development teams to match their timelines.

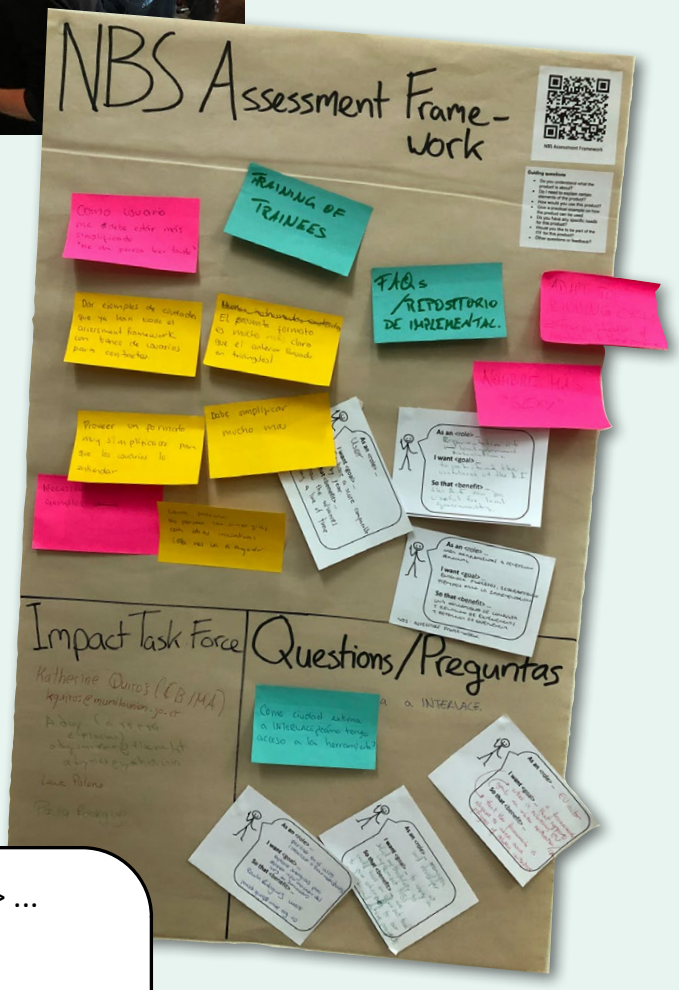
INTERLACE-experience:

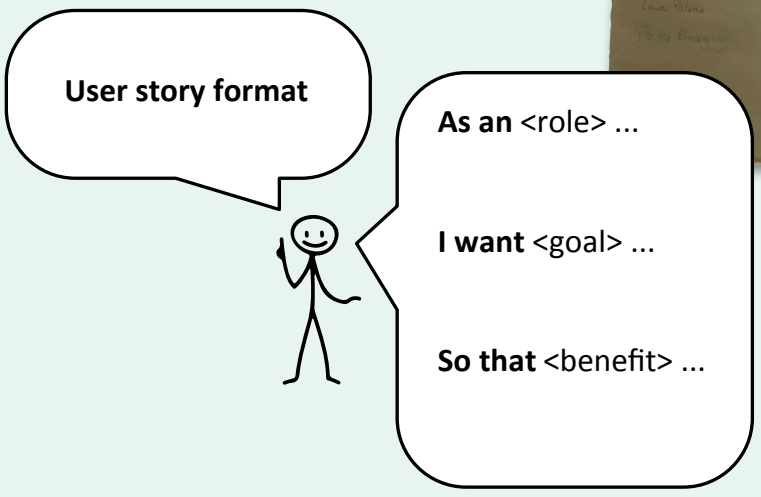
The INTERLACE agile framework includes a minimum of three feedback loops: one for the product vision and two for intermediate output versions.

During the consortium meetings, 'product markets' were organized where scientists and city partners could exchange on the outputs developed in the project. User feedback was collected by means of user stories or guiding questions.

Additional online feedback meetings during the course of the project complemented this approach.

Collecting feedback during a 'product market', using the user story format.



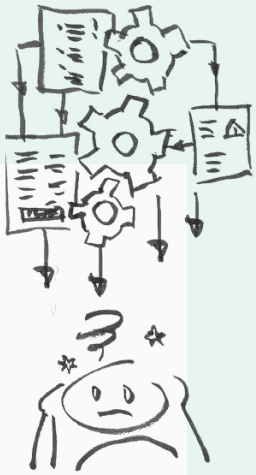


Collaboration between project and end-users

In general, an agile approach implies a new practice for end-users that requires more interaction and change never comes easy. Local needs, contexts, and implementation rhythms vary significantly among end-users. As a result, the availability of end-users may be limited and difficult to predict.

With the above in mind:

- Keep the initial agile approach simple!
- Create a clear output overview (which outputs will be developed during the project) for all end-users involved, as soon as possible at the start of the project, to avoid end-users getting lost or overloaded. This allows end-users to express their interest, or link to ongoing processes they are involved in.
- Ensure that intermediate outputs are interesting for end-users.
- Include end-users in the development process (co-create) when it is opportune.



INTERLACE-experience:

At certain stages of the project (especially at the beginning), too many processes started up simultaneously, which created a content overload for end-users in the project's partner cities. Due to the timing of certain outputs, partner cities were overwhelmed with demands. These bottlenecks were overcome by organising regular City Focal Point meetings (monthly to bi-monthly) and appointing a duo-team to maintain the meeting agenda and coordinate project-city interactions.

At the start of the project, it was unclear whether the agile approach was intended for cities or only 'internal' scientific partners. As cities were envisioned to be involved in the research process from the start, it would have been best to inform them separately and explain what an agile approach entails. Allow ample time for this.

Some cities perceived an agile process as demanding, with insufficient time and capacity to adequately identify their stakeholders, or include reflections or interactions with them.

Agile methodologies have enabled cities to collaborate more closely with project beneficiaries, leading to various co-design initiatives. The INTERLACE project established an **Impact Task Force (ITF)** to support development teams and facilitate user engagement, although sustaining user interest throughout the project lifecycle remains challenging. A smaller, well-supported group of engaged users is generally more effective than a larger, voluntary group that may lose interest over time.

3. Added value-output examples

To illustrate the added value of working agile, and the real-world impact such an approach can have, a few outputs created during the INTERLACE project are highlighted below.

OUTPUT 1: Urban Governance Atlas

Output description

The Urban Governance Atlas (UGA) is a collection of more than 250 good practice policy instruments supporting nature-based solutions and ecosystem restoration. Users can search the online database by filtering on the type of instrument, region, challenges addressed etc. and learn more on what made the instruments successful, lessons learned in their design and implementation and their approaches to governance.

Visit the Urban Governance Atlas.

Added value of working agile

- The compilation of the Atlas followed a full de-centralised approach, open to wider stakeholders and potential users, both for the identification of cases as for the actual filling out of the entries. This resulted in a more diverse set of instruments.
- More methodological flexibility on selecting the cities or cases, resulting in being open to whoever wanted to contribute.
- Online publication of a beta version allowed for early user uptake and integrating feedback.

Lessons learned

- Plan more time for revisions: the initial timeline was too tight for these iterations.
- Be as prepared and specific when you organise feedback loops. Find a good balance between providing too much content and having a good basis for discussion.
- The involvement of the Impact Task Force (ITF) was useful, although sometimes challenging to keep participants motivated, especially when external to the project. The ITF-approach could have benefitted from more external expert input (outside of the project).
- Explore the role of expert networks or task forces (e.g. the NbS Task Forces, EIP-AGRI Operational Groups, etc.) that could support the iterative process of consulting with end-users.

OUTPUT 2: NbS Assessment framework

Output description

A guide outlining strategies for the planning, designing and monitoring of Nature-based Solutions, aiming at addressing urban environmental and societal challenges.

It features a stepwise modular approach adaptable to various urban settings:

1. Decision Framing Module
2. Co-creation Module
3. Planning Module
4. Design Module
5. Monitoring Module

It also introduces a dynamic agile framework to create tailored assessment systems to local contexts and planning cycles. Download the Guidelines to urban transformations.

Added value of working agile

- An agile approach resonates well with applied research, using co-creation processes working closely with stakeholders. It was part of the initial design to develop the framework.
- Working in iterative cycles became more explicit and conscious, using a first version to test and learn, to adapt the second version.
- A prototype was developed and shared with a wider audience to gather feedback. It was also tested in different case studies, resulting in an output tailored to users.
- A clear protocol for reflection and learning was put in place, which became part of the final output.
- The agile approach helped to be clear on the roles and expectations from users.

Lessons learned

- The modular approach proved to be easily compatible with agile.
- The agile approach is very robust and complete, but the cities did not always have time to fully implement it. Reflections and interactions with stakeholders demand more time and effort which is not always available.
- Start timely with the process of capturing lessons learned, in a more systematic way.

OUTPUT 3: City Impulse Papers

Output description

The City Impulse Papers are the strategy papers of the seven INTERLACE partner cities, which were developed in close cooperation with local stakeholders in Europe and Latin America. These papers highlight tailor-made strategies for nature-based solutions (NbS), including the revitalisation of urban parks in Chemnitz and the development of a search engine for funding for green infrastructure projects in Kraków Metropolitan Area. The aim is to effectively address the unique challenges of each city, such as climate change, biodiversity loss and social inequality and to provide an impulse to the city that still has impact when the INTERLACE project has already ended.

Added value of working agile

- The production of the City Impulse Papers followed a fully decentralised approach, i.e. each city identified its own target audience for the 'impulse', as well as its own format and content.
- Several feedback loops were implemented with the development team of each City Impulse Paper, as well as with the target end-users and other stakeholders - in the local language.
- Draft versions were shared and commented on so that feedback could be incorporated at each stage of the process.

Lessons learned

- Meeting both the needs of a research project and the local needs of the cities involved in 'real life' can be challenging.
- The agile approach allowed space for the individual needs of the participating cities to be met.
- Cities and local authorities are not used to working in an agile way, either with end users or with research organisations. The project has given them the space to test and learn.

4. Challenges and how to overcome them

Agile is a journey

When asking project partners about their thoughts on working agile or their personal experience on applying an agile workflow, they expressed a lot of doubts:

"I'm not sure if I'm working agile, but I have incorporated the agile thinking"

"I don't know if we are following the recipe of the (agile) guidance, but we are having interactions to improve and reflect on the process."

"We have a very anarchal, pragmatic interpretation of the agile framework and make use of it where it fits."

"I feel we are doing a lot of things following the agile approach. But I'm not sure if we are doing it right, or if we need more structure, or if we need more planning etc."

We acknowledged this learning curve, but it is crucial to emphasise that working agile is a continuous journey: if you grasp the core value/benefit of agile, you can incorporate what you feel comfortable with. Then this can be elevated to a higher level, step by step.

The dependency bottleneck

Complex projects with multiple outputs that require for example digitalization and software development (including frequent user feedback on these developments), face the risk of becoming overly dependent on this development. In such cases, cross-functional agile teams, including a dedicated software developer, can help the team respond more swiftly. Where possible, build in safeguards for these dependencies, already from the proposal phase.

Working with agile product visions also helps to identify internal end-users early, such as project partners or teams who depend on your task.

INTERLACE-experience:

Several outputs of the project required software development, for example the Urban Governance Atlas, the Cities Talk Nature Showcase (online 'barometer', an assessment instrument to depict city engagement), the City NbS Tool, a distance learning course and the online collaboration platform (INTERLACE Hub and Product Lab). All software development was dependent on a single project partner. The project's complexity and numerous diverse expectations at the partner and city levels, resulted in some bottlenecks. This risk could have been evaluated at the proposal stage.

Ready, set, collaborate: ensure platforms are ready from the start

If you decide to use a digital online collaboration platform to showcase outputs, streamline user feedback, or allow testing of prototypes, make sure these are ready from the start of the agile process. Joining a new online platform and learning how to use it presents its own set of challenges. Expecting people to change their working habits in the middle of a project is too much to ask.

The INTERLACE Product Lab

© Oppla

The Product Lab idea originated during the course of the INTERLACE project as a means to communicate with end-users over ongoing product developments. It was imagined as an online platform that provides centralised coordination and an overview of all outputs developed during the project, including user stories and timelines for output iterations and user feedback rounds. It gave end-users access to an online comment interface, to test and evaluate intermediate outputs. The Product Lab aimed to open up cooperation publicly: anyone with an interest in the outputs which were being developed, could sign up and get involved. The INTERLACE project developed a prototype of such a Product Lab, as part of the INTERACE Hub, the project collaboration platform. It contained a public overview of products under development, and allowed for external users to express interest and join the development process. The prototype was developed late in the project and faced issues with adoption. It served however as inspiration for the Oppla groups service on the Oppla platform, the EU Repository of Nature-Based Solutions (https://oppla.eu). This service allows users to create a dedicated space on Oppla and customise it, including workspaces for co-developing solutions or collaborating on tasks, discussions groups for sharing and learning, toolboxes of resources for solving a problem.

5. The power of hindsight: What would we do differently?

Working agile implies leaving sufficient room for reflection. For example, each output development cycle ideally includes a team retrospective, to evaluate what works well, what should be changed or improved, etc. We conducted a more in depth retrospective after piloting an agile approach in the INTERLACE project, and share a few things we would do differently next time.

"At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behaviour accordingly."

Agile principle n°12

Engage end-users/stakeholders at the proposal stage

Involving end-users as early as the proposal stage and ensuring their buy-in can lead to more relevant and impactful outputs. We suggest organising a product vision exercise during the proposal stage to gain a sense of user needs and expectations. If the proposal process includes various stages, the first stage could focus on researchers developing a first vision for outputs or project outputs, which is validated during the second stage via an end-user consultation.

Build in learning more strongly via retrospectives

Agile retrospectives (or moments of reflection to learn and incorporate user feedback) were part of the suggested output development cycle. In practice however, such moments got lost in the daily grind of carrying out the research project. Making retrospectives part of the project's task descriptions (e.g. dedicated reflection workshops initiated by an agile mentor, ideally following after end-user consultations) and overall timeline of the project could lead to stronger embedment of adaptive behaviour, based on learnings and user feedback.

Develop a 'Project Manifesto'

Similarly to the Agile Manifesto, we would collaborate with the entire consortium to co-create a project-specific manifesto at the very start of the project (e.g. during the kick-off meeting). This manifesto would clearly define what 'agile' means for the project, setting out the agile principles and values for the project. A 'signing ceremony' could add an official touch. The co-creation

of such a manifesto could ensure a better common understanding and buy-in from everyone involved in the project (researchers as well as city partners), and act as a commitment to adhere to agile values and principles.

Looking past metrics: Less focus on indicators

Although a comprehensive monitoring and evaluation approach was in place, including a pathway of change with specified activities, outputs and outcomes, the focus on metrics and indicators occasionally threw us off course. We encountered several challenges with the 'conventional' monitoring and evaluation process, which required adaptation throughout the project. Scoring peoples' agile way of working, and using traffic light systems provide valuable status updates and can raise alerts, but they can also demotivate or drive people into defensive mode. To monitor and evaluate a transformative 'agile' process, a **reflexive monitoring**[4] approach may be more appropriate. A dynamic learning agenda, linked to the agile retrospectives could be explored as an option.

A more unconventional approach perhaps?

But what if we could break away from the common structure of research and innovation projects, with project partners being responsible for specific tasks and budgets earmarked for those tasks. Just imagine if there would be no (or less) task or budget attributions to individuals (or organisations) leading to teams working in silos. Task leads would become output leads, in charge of assembling and coordinating an interdisciplinary and cross-organizational development team within a consortium of partners, with the skills and knowledge required to create a given output. Developing a first product vision and intermediary version, can highlight the required expertise more clearly. During project execution, the involvement of end-users or stakeholders will help to define the ultimate outcome.

The initial output (or deliverable) descriptions become first versions of product visions, yet do not per se reflect the ultimate output as product visions will evolve through end-user feedback. Some budget is earmarked for new output demands emerging from new needs and insights during the project. Milestones become feedback sessions for intermediary outputs of key project outputs. Maybe in the future, some EU research calls could be tagged as "open for agile development" with less strict expectations on Gantt like planning charts and output (or deliverable) descriptions, and more emphasis on building robust and accountable processes to foster user-oriented output development.

[4] Reflexive Monitoring in Action (RMA) is an interactive methodology to encourage reflection and learning within actor groups that seek to contribute to system change in order to deal with complex problems. This approach builds on the assumption that recurrent collective reflection on a current system of interest (barriers as well as opportunities) helps to stimulate collective learning and to design and adapt targeted systemic interventions (Van Mierlo et al., 2010).

6. Open questions that still puzzle us

Next to the lessons learned from applying an agile approach in a research project, there are still some outstanding questions that warrant further attention in the future. There are no one-size-fits-all answers for them, yet they merit some attention early on.

Full agile adoption vs. key output focus: What's best?

There are good arguments to opt for a full agile adoption in the project: the goal is to get everyone on board, to create an agile mindset among all project partners. With this shared understanding, all output development is approached in an agile way. Project ambitions can remain high, without giving the feeling that it is 'optional'. This would require having all partners on board from the proposal stage onwards.

On the other hand, the above remains a significant effort, and depending on project duration and resources, it may be preferable to select key outputs which best fit an agile approach. Where would an agile approach be most effective or beneficial? Where would it have the greatest added value?

INTERLACE-experience:

Initially all outputs were considered for an agile approach. This then shifted to an 'agile light' vs 'agile advanced' approach focussing on key outputs. This terminology sparked controversy, with the risk of dismissing the initial agile goals. We moved away from this approach and focussed on the essentials: 'are you working agile or not'. This avoided certain teams settling for 'light' too easily from the start.

The project funding and monitoring frameworks can be restrictive to an agile approach, not always allowing the necessary flexibility. As a result, the emphasis in the INTERLACE project was on 'having outputs developed in an agile way' rather than 'having a full agile adoption in the project'.

Also, to inform and get everyone to adhere to agile values and principles requires an initial time investment. Especially since agile is not a well known approach among academia. It is a challenge to develop the agile capacity and knowledge of all partners, and at the same time ask them to apply agile on all levels.

👁 Addressing agile scepticism: Is total buy-in essential?

When introducing something new, resistance is unavoidable. The question is how to navigate this, and whether or not everyone needs to be on board.

For a successful agile application, your project coordinator, project officer or funding agent representative, and key output developers need to be on board as early as the proposal stage. Buy-in of all project partners involved in agile output development, is essential, as it will determine the allocated budget and time, and responsibilities of everyone involved.

ⓘ Keep an eye out for a very smooth acceptance of an agile approach: this may indicate that the consequences are not totally clear!

ⓘ Keep an eye out for 'agile washing': you don't want everyone claiming to know or practise agile without providing any proof or measurable results.

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INTERLACE-experience:

Unique to this project, was the early buy-in and deep conviction of the masterminds behind the project, that an agile approach could make a significant difference for the end-results and impact. There was a willingness to assign significant budget and time to incorporate the agile approach at the heart of the project structure.

At the start, some city partners had difficulties with grasping the project, the concrete outputs, their role and the role of agile. In their day-to-day operations it was an extra time investment, but the approach definitely sparked their interest and engagement.

Having an EU project officer and project coordinator open and enthusiastic about experimenting with an agile approach, was invaluable to the success of the project. But what made the INTERLACE project unique, was the way the agile approach was promoted and embraced within the consortium. This made the project successful at all levels.

INTERLACE

RESTORING URBAN ECOSYSTEMS
RECUPERANDO ECOSISTEMAS URBANOS

INTERLACE is a four year project that will empower and equip European and Latin American cities to restore urban ecosystems, resulting in more liveable, resilient and inclusive cities that benefit people and nature.

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INTERLACE es un proyecto de cuatro años que busca empoderar y apoyar ciudades de Europa y América Latina en la restauración de ecosistemas urbanos, resultando en ciudades más vivibles, inclusivas y resilientes para el beneficio de la gente y la naturaleza.

Project Partners

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