



MINKA

Governance model

Version 1.0



VERSION LOG

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Context

MINKA represents an innovative approach to the concept of a citizen observatory. It serves a dual role as a research infrastructure for citizen science and as a digital hub for communities engaged in public participation in scientific research. Back in 2022, it was officially established as an initiative by the EMBIMOS research group, led by Jaume Piera, and is based at the Institute of Marine Sciences of the Spanish Research Council in Barcelona, Spain. Now, thanks to a partnership with the SME Quanta Labs, they form the dynamic executive arm of MINKA.

MINKA was born out of a deep desire for citizen science that co-creates relevant and timely knowledge. It aims to generate knowledge that addresses global needs while fostering action within local realities. We aspire to be the digital space for "A community co-creating knowledge for action." And today, that action becomes tangible through the measurement of the Sustainable Development Goals (SDGs). MINKA strives to make a meaningful contribution towards these goals, empowering individuals, and communities to take proactive steps for collecting and sharing data that contribute to a more sustainable future.

The present document outlines the MINKA governance model, summarizing the key aspects of who, when, where, and how decisions are made to effectively operate MINKA. It presents our mission and principles, underscoring our commitment to the community we serve. Additionally, the document elucidates our structure, roles, and functions, which are designed to ensure transparency and smooth operations within MINKA.

We are a community focused on promoting and expanding citizen science. Together, we strive to ignite a spark of impactful change through collaborative knowledge creation, bridging the gap between research and action. Guided by our governance model, we navigate this exciting journey of supporting the shape of a better world through citizen science and the pursuit of sustainable development.



MINKA mission

Our mission is to empower citizen science communities, fostering the co-creation of relevant knowledge and driving action for a sustainable future through data collection and sharing.

MINKA vision

Our vision is to be at the forefront of citizen science technology, revolutionizing access to long-term participatory infrastructures through our pioneering platform.

MINKA Principles

Our decisions, long-term vision, and daily actions are guided by our four foundational principles. Like sturdy pillars, these principles uphold our mission as a citizen observatory and reflect our unwavering commitment to the citizen science community. Together, we strive to provide a reliable platform, fostering collaboration and delivering meaningful results.

- › **Openness:** MINKA embraces an open approach, encouraging the free flow of information and ideas among its community members.
- › **Transparency:** MINKA ensures transparency by providing clear and accessible information about its processes, data handling, and decision-making.
- › **Collaboration:** MINKA promotes collaboration by fostering an environment that encourages active participation, knowledge sharing, and collective problem-solving.
- › **Acknowledgement:** MINKA recognizes and appreciates the contributions of its citizen scientists, giving credit and acknowledging their valuable input and efforts in the pursuit of sustainable development.



MINKA governance model

The MINKA governance model embraces the inclusion of diverse stakeholders, aiming to represent all five helixes¹ and foster an interdisciplinary perspective within citizen science infrastructures. At its core, the model consists of two key components: the MINKA panel and MINKA nodes. The MINKA panel serves as a platform for strategic alliances, inviting participation from academia, civil society, industry, and government, ensuring a diverse and comprehensive thematic outlook from the five helixes. On the other hand, MINKA nodes represent a territorial viewpoint, engaging individuals and communities who utilize the platform to address and drive actions in specific ecosystems, municipalities, or regions. Together, the executive board and coordination team form the operational backbone of this alliance, working in unison to uphold the principles and objectives of MINKA's governance model.

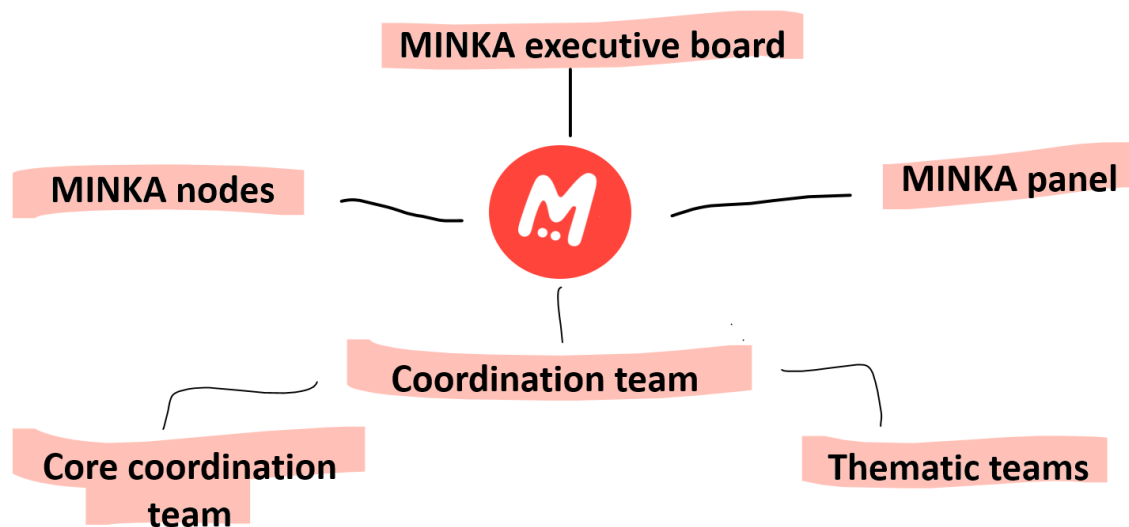


Figure 1. MINKA governance model. Foundational structure for the strategic and operational management of the MINKA citizen observatory.

¹ The quintuple innovation helix framework represents the interactions between academia, industry, government, public, and environment in a knowledge economy, emphasizing their interconnectedness and role in innovation.



Executive board

The executive board plays a pivotal role as the strategic body of MINKA. It consists of the leader of the EMBIMOS research group at ICM-CSIC and the representative from the SME Quanta Labs. This board is entrusted with the responsibility of defining the strategic direction of MINKA, ensuring that it effectively fulfils its roles as a research infrastructure, a digital hub for communities, and ultimately as a citizen observatory. Through their expertise and vision, the executive board shapes the operational framework of MINKA, driving its mission to empower citizen science and facilitate impactful engagement with scientific research.

Panel

The MINKA panel serves as a thematic body that advises and guides the platform's operations, bringing together expertise from academia, civil society, industry, government, and the MINKA ambassador. With open communication and close collaboration with the executive board, the MINKA panel contributes to the formulation of strategic directions for MINKA, ensuring a comprehensive and sector-specific outlook.

Nodes

MINKA nodes play a distributed and multi-faceted role within the MINKA platform. They bring a valuable territorial perspective, drawing from their experience in implementing MINKA at the local level to address specific problems or interests. Additionally, MINKA nodes can take on a dual identity, functioning both as territorial entities and distributed technological nodes. They connect to the technological core of MINKA while maintaining their independence to operate the platform. This unique combination allows MINKA nodes to contribute their own developments to the MINKA community, expanding both technologically and in terms of community engagement. By embracing their diverse identities, MINKA nodes actively contribute to the growth and impact of the platform, empowering local communities and fostering collaborative citizen science initiatives.



Coordination team

The coordination team plays a crucial role in ensuring the smooth daily operations of the platform, aligning them with the strategic vision defined by the executive board. This interdisciplinary team brings together expertise in technological proficiency, engagement strategies, training, environmental and biodiversity knowledge, administrative and management skills, governance, and data management. They possess the necessary skills to operate a research infrastructure effectively. The coordination team is structured into four thematic teams: Information Technologies, Communication & Engagement, Governance and Transfer of Knowledge, and Content Assessment. Additionally, there is a coordinating axis that harmonizes the actions across the teams, facilitating seamless collaboration and efficient coordination within MINKA.

Decision flow

The MINKA decision flow encompasses the process and types of decisions taken within each instance of the governance model. Each instance, such as the executive board, panel, nodes, and coordination team, bears decision-making responsibilities that align with their respective roles in the platform. The **executive board** convenes periodic meetings to create and validate the platform's strategic plan, ensuring decisions are made through a consensus-based approach. They deliberate on resource allocation and determine the pathways that the platform takes, while also approving the action plan proposed by the coordination team. Additionally, the executive board plays a crucial role in decision-making regarding intellectual property management.

The **coordination team** is entrusted with the task of making day-to-day decisions to ensure the seamless functioning of the platform. Their decision-making process is guided by the approved action plan and the overarching strategic plan of MINKA. The **core team and thematic teams** have decision-making authority within their specific areas of expertise, addressing strategic needs identified by the platform. As for the **nodes**, they possess a certain degree of autonomy in decision-making, particularly concerning their own operations. However, any modifications to the core infrastructure necessitate a negotiation process with the executive board to ensure alignment with the platform's goals and objectives.

The **panel**, serving as an advisory body to MINKA, assumes a vital role in the decision-making process. It advises on matters related to the strategic plan and fundamental aspects of the platform. The panel, comprised of diverse stakeholders, contributes valuable insights and



recommendations to shape the overall direction of MINKA. Their expertise and perspectives help inform key decisions that influence the platform's development and impact.

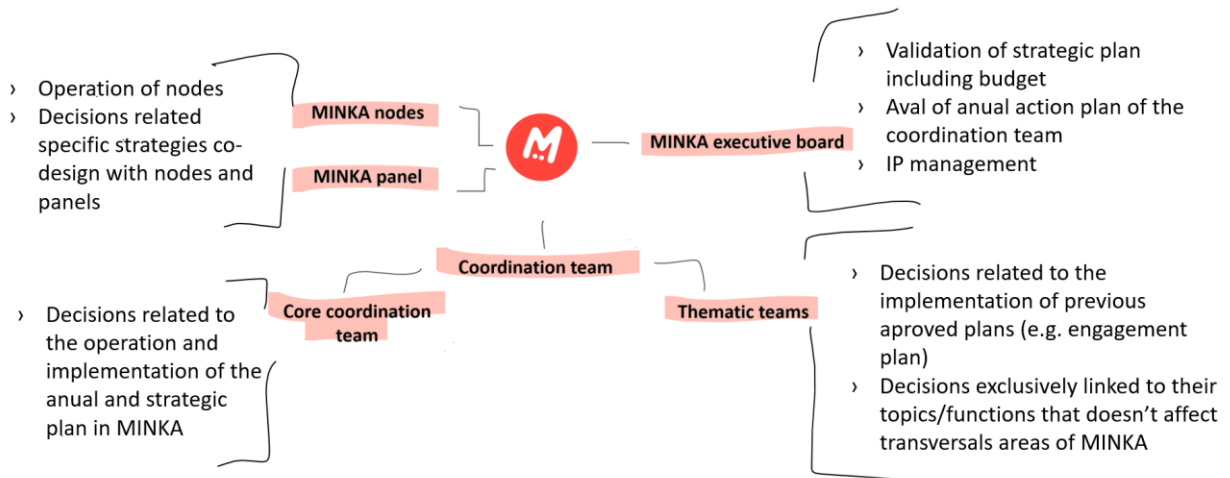


Figure 2. MINKA decision flow. Quick overview of the types of decisions handled by each instance of the governance model.

Roles and responsibilities

Within the **coordination team**, specific roles and responsibilities are defined to ensure a comprehensive and well-coordinated operation of the platform. These roles are designed to be complementary, working together to provide a seamless functioning of MINKA. Each team member has a clearly defined scope of work, enabling efficient collaboration within the team and ensuring timely responsiveness to user needs.

The coordination team consists of individuals with diverse expertise, including technological proficiency, community engagement, training, environmental and biodiversity knowledge, administrative and management skills, governance expertise, and data management capabilities. Each team member brings their unique skill set to contribute to the overall functioning of the research infrastructure.

This well-structured approach allows for effective decision-making, streamlined processes, and optimal utilization of resources. The coordination team acts as a cohesive unit, working towards the common goal of supporting the operation of MINKA and meeting the evolving needs of its users.



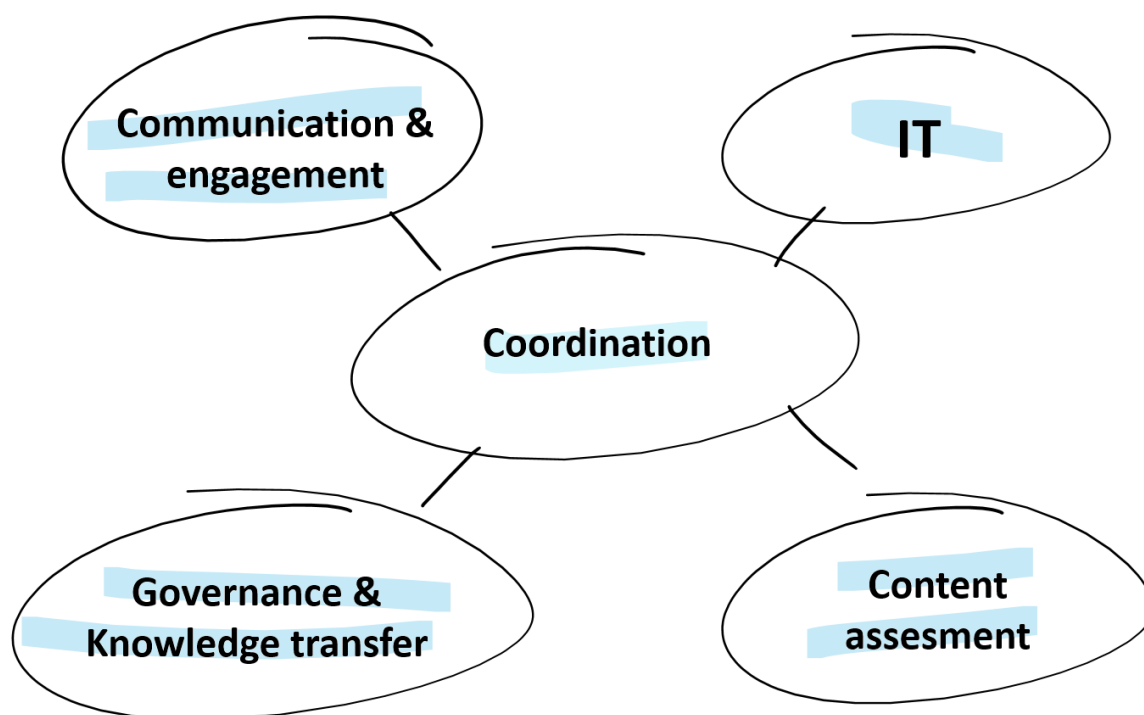


Figure 3. MINKA coordination team. Structure of the coordination team with four thematic axes essential for managing a research infrastructure.

Coordination

Ensuring the success and sustainability of MINKA, by providing leadership, guidance, and support to all stakeholders involved.

- › **Planning and organizing:** including defining the goals and objectives, designing the structure and processes, and establishing the rules and guidelines for participation.
- › **Evaluation and monitoring:** evaluate the performance of MINKA and monitors its impact on the environment and the community. Use this feedback to improve MINKA and adjust as needed.
- › **Reporting and accountability:** reports on the progress and outcomes of MINKA to stakeholders, including funders, policymakers, and the public. Communicate MINKA findings and advocate for changes in policies and practices to address environmental/sustainability issues.

Information Technologies

Developing and maintaining MINKA technology infrastructure, as well as managing the data and supporting the needs of the users and stakeholders

- › **Developing and maintaining the technology platform:** keep functioning the MINKA technology platform. This includes the website, mobile app, and other digital tools used to collect and analyze data.
- › **Data management:** manage the data collected through MINKA, ensuring that follows the FAIR principles (Findable, Accessible, Interoperable and Reusable). Create data visualizations and reports to communicate the findings to stakeholders.
- › **Technical support:** provide technical support to MINKA participants and stakeholders. This includes answering questions, troubleshooting issues, and providing training.
- › **User experience design:** design the user interface and user experience to make MINKA intuitive and easy to use. This can include testing and refining the design based on feedback from users.
- › **Data analysis and modelling:** use data analysis and modelling tools to identify patterns, trends, and insights from the data collected through MINKA. This can inform decision-making and help stakeholders develop strategies to address environmental issues.

Content assessment

Ensuring the quality, accuracy, and diversity of content within MINKA, helping to promote effective communication and collaboration among participants.

- › **Reviewing content:** review the observations submitted by participants to ensure that it is relevant to the goals of the system and meets any specific requirements or guidelines.
- › **Collaborative assessing of accuracy:** verify the accuracy of the observations with the MINKA community, which may include checking multiple resources to ensure they are correct.
- › **Collaborative evaluating quality:** evaluate the quality of the observations with the MINKA community, including its clarity, coherence, and persuasiveness, to ensure that it is effective and engaging.
- › **Identifying bias:** identify any potential bias in the observations, whether intentional or unintentional, and work to mitigate its effects.



- › **Providing support:** provide support to participants, answering questions and providing guidance to ensure they understand how MINKA works.
- › **Building capacity:** planning and implementing education and training to stakeholders to build their knowledge and capacity to participate effectively in MINKA. This can include workshops on data collection, data curation or other topics required by the community and build in coordination with the content assessment team.
- › **Providing feedback:** provide feedback to the MINKA users, highlighting any areas that require improvement or clarification and suggesting ways to enhance the content's effectiveness.

Communication & Engagement

Promoting effective communication and collaboration within MINKA, ensuring that participants are informed and engaged throughout the process.

- › **Developing communication strategies:** develop communication strategies to engage with the participants and stakeholders of MINKA, ensuring that all relevant information is effectively communicated to them.
- › **Creating engagement plans:** create plans to promote participation in MINKA, identifying opportunities for engagement and developing methods to encourage participation.
- › **Managing communication channels:** manage various communication channels such as email, social media, or webinars to ensure that participants are informed of any updates or changes to MINKA.
- › **Evaluating communication effectiveness:** evaluate the effectiveness of the communication strategies and engagement plans to determine whether they are meeting their objectives and adjust them as necessary.

Governance & Knowledge transfer

Facilitate effective decision-making processes that involve diverse stakeholders, ensuring that MINKA operates effectively, transparently, and in the best interests of all stakeholders.

- › **Developing policies and procedures:** define the policies and procedures for decision-making and governance within MINKA. This can involve creating guidelines for how decisions are made, how conflicts are resolved, and how information is shared.
- › **Ensuring transparency and accountability:** develop mechanisms for monitoring and reporting on decisions and actions taken within MINKA, and for ensuring that stakeholders have access to relevant information. Promote transparency in MINKA,



providing clear and open communication with participants about how decisions are made and how their input is being used.

- › **Monitoring compliance:** oversee adherence with any rules or regulations governing the content submission process, ensuring that all content meets legal and ethical standards.
- › **Facilitating collaboration:** promote connections among participants, encouraging the sharing of ideas and feedback, and ensuring that all voices are heard. Organize meetings, workshops, and other events to bring stakeholders together and promote dialogue.
- › **Facilitation and mediation:** enable the interactions and discussions among participants, ensuring that all voices are heard and that conflicts are resolved in a constructive manner. They may also mediate disputes between stakeholders and help to identify common ground and shared interests.



Key documentation

The coordination team of MINKA generates various types of documentation to support the platform's operations and ensure a user-friendly experience. Strategic documents such as the strategic plan, annual action plan, and annual report provide a roadmap for achieving MINKA's goals and monitoring progress. Technical documentation, including training materials, instructions, and manuals, helps users navigate and effectively utilize the platform. An important aspect of the documentation is the description of the quality assessment process for content, ensuring the reliability and relevance of the information shared within MINKA.

In terms of the technological component, the Infrastructure Plan outlines the key components and infrastructure requirements necessary for seamless platform functionality. Communication and dissemination materials, such as the Image Usage Manual, guide participants on how to effectively engage with MINKA, including guidelines and principles for participation. Additionally, policies, terms of use, and community guidelines are provided to ensure ethical and responsible behaviour within the platform, fostering a safe and inclusive environment for all users.

Coordination	<ul style="list-style-type: none"> › Strategic plan › Annual action plan › Annual report
Content assesment	<ul style="list-style-type: none"> › Users manual and guidelines › Assesment of contents and quality guideline › Training plan
Information Technology	<ul style="list-style-type: none"> › Technology infrastructure plan
Communication & engagement	<ul style="list-style-type: none"> › Communication strategy › Engagement plan › Manual of identity
Governance & Transfer of knowledge	<ul style="list-style-type: none"> › Governance model › Community guidelines › Data privacy and Terms of use › Knowledge transfer strategy

