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Executive Summary

This deliverable reports on how the CATALYSE Community of Practice (CoP) was created during the first 18 months of the project.

The CATALYSE working model "Collect – Translate – Facilitate – Educate" was implemented by building a specific CoP on Food Safety innovations, easily accessible and open for the entire food ecosystem through the link: catalyse-cop.eu. Building on information gathered from stakeholders in Work Package (WP) 2, on the best practices of the consortium, the case studies for the cheese and dairy industry, and existing models of CoP operating in the food ecosystem, this deliverable reports how the CoP was established, and the operational model was developed.

The CoP served a two-fold purpose:

1) to gather feedback on their needs and ideas for capacity building resources and guidance materials created in other tasks of WP3, WP6, and WP7, and

2) to create a community related to food safety innovations, for the benefit of the CoP members.

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LIST OF ABBREVIATIONS

CLIL - Content and Language Integrated Learning

CoP – Community of Practice

SoPs - Standard Operating Procedures

U - Universal Design for Learning

UCP - Universidade Católica in Porto

WP - Work Package

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1. Introduction

This document reports on the rationale for developing the CATALYSE Community of Practice (CoP) website that integrates the principles of Content and Language Integrated Learning (CLIL) + Universal Design for Learning (U) [1]. It outlines the theoretical foundations of the CLIL+U model and provides principles to create an engaging and educational online community. Due to the broad pillars, those models can be applied to the creation of a CoP:

1. Establish common objectives: Define clear and shared goals for the community, based on members interests and needs.
2. Collaborative learning: Promote group projects, case studies, and interactive activities to facilitate collaborative learning.
3. Continuous evaluation: Monitor progress and effectiveness through regular evaluation and reflection activities.
4. Regular meetings: Determine the frequency and format of meetings (in-person, virtual, hybrid; frequency).

CATALYSE established a CoP to connect stakeholders from the complete value chain and promote exchange of ideas to create a more resilient, sustainable, and equitable community. The goal is to foster an environment where participants can collaboratively enhance their content knowledge within innovations in Food Safety. To that, an online CoP was designed around the CLIL+U model, focusing on innovations and resources (repository and educational materials) in food safety, divided into a minimum of six different topics (designated as chapters), designed based on information gathered from stakeholders in Work Package (WP) 2.

The CoP will serve as a hub for stakeholders (academia, industry, policymakers, civil society, and the general public) to come together and share their expertise, resources, and experiences.

2. Definition of a Community of Practice (CoP)

A CoP is a group of people who share a common interest or enthusiasm, a set of problems, or a passion for a subject, and who continuously communicate to expand their knowledge and competence in that field[2].

[1] Zehra Gabillon, « Revisiting CLIL: Background, Pedagogy, and Theoretical Underpinnings », Contextes et didactiques, 15 | 2020, URL : **http://journals.openedition.org/ced/1836;**

[2] Wenger, Etienne and Beverly Wenger-Trayner (2015). Introduction to communities of practice A brief overview of the concept and its uses. https://wenger-trayner.com/introduction-to-communities-of-practice/

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Three connected dimensions must be disclosed for a community of practice:

- **Domain:** A common area of interest defines its identity. Therefore, belonging to a CoP denotes a dedication to the field and, consequently, a common skill that sets members apart from others.
- **Community:** Members participate in cooperative activities and discussions, support each other, and exchange information while pursuing their interests in their field. A website is not a community of practice by itself – the members engagement is essential.
- **Practice:** Practitioners are those who belong to a community of practice. They build a common toolkit, stories, experiences, and methods for dealing with persistent issues: a common practice. Members of the community can create a shared repository for their profession by actively interacting with one another and sharing information and cases.

A CoP can be formal or informal and is usually organized around specific professional or academic areas of interest. Communities of practice may rely on face-to-face meetings as well as web-based collaborative environments to communicate, connect, and conduct community activities. Successful CoPs require *(i)* clear objectives, *(ii)* strong leadership, and *(iii)* active member engagement. CoPs thrive on a balance of structure and flexibility, allowing for guided activities and knowledge sharing. However, one bottleneck is that sometimes interaction between all members of the community can be rare. A summary of the success and failure factors is presented in the document Publications about CoPs models_v1_July2024.pdf, shared in the CATALYSE folder available for all consortium members.

3. Theoretical Approach of CLIL+U

The CLIL+U model combines Content and Language Integrated Learning (CLIL) with Universal Design for Learning (U) to create an inclusive, engaging, and effective educational environment. When applied to the creation of CoP, this model ensures that participants not only improve their knowledge but also benefit from a learning environment that is accessible and responsive to their needs.

CLIL has come a long way since its inception in the 1990s. CLIL is an educational approach where content and language learning are integrated. Participants learn a subject (such as food safety innovations) while simultaneously developing their language skills. CLIL aims to create naturalistic learning environments,

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provide tasks that promote cognitive engagement and creativity, allow collaborative knowledge building, promote dialogical interaction, and develop awareness of self and others [3].

On the other hand, the U principle focuses on how learners become engaged and remain motivated. This framework is designed for learning environments that are flexible and accommodating to all members, regardless of their abilities, backgrounds, or learning preferences.

Therefore, it has been proposed that having many engagement methods will help enhance and sustain motivation [4]. The information is presented in different ways to address the diverse needs of participants, allowing participants to demonstrate their knowledge and skills through various methods and offering diverse activities and materials to engage all participants and sustain their interest [3].

The CLIL+U approach has been operationalized within the CoP by:

- Integrating content and language learning to ensure that complex scientific information is presented clearly and practically for all stakeholders, including non-experts in food safety innovations.
- Applying those principles to promote accessibility through multiple formats (texts, visuals, videos, infographics) and interaction methods (forums, webinars, interviews).
- Structuring content by topics and sectors, providing contextualized resources relevant to each stakeholder group.
- Encouraging active participation through interactive features like forums and Q&A sections, fostering a collaborative learning environment.

4. Stakeholder Needs Assessment and Benchmarking

As a first step in planning the CATALYSE CoP, a comprehensive needs assessment was conducted to ensure that the platform design and content would address the real needs and preferences of its target users.

This process included three main steps (Figure 1): *(a)* benchmarking analysis of existing CoPs (Benchmarking CoPs_V2_Sep2024.pdf) and knowledge-sharing platforms in the food safety and broader agri-food sector, to identify best practices, common challenges, and effective engagement strategies. The

[3] Zehra Gabillon, « Revisiting CLIL: Background, Pedagogy, and Theoretical Underpinnings », Contextes et didactiques, 15 | 2020, URL : **http://journals.openedition.org/ced/1836;**

[4] Dempsey AMK, Lone M, Nolan YM, Hunt E. 2023. Universal design for learning in anatomy education of healthcare students: A scoping review. *Anat Sci Educ* 16: 10–26. **https://doi.org/10.1002/ase.2160**

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main conclusions are detailed in the document: Publications - how to implement CoP (Case Studies)_v1_August2024.pdf (both documents are available in the CATALYSE shared folder for use by the consortium members); *(b)* stakeholder engagement through online surveys and one-to-one interviews with key stakeholders for the main concerns of CoP and *(c)* gathering feedback about CoP structure through a series of 3 webinars.

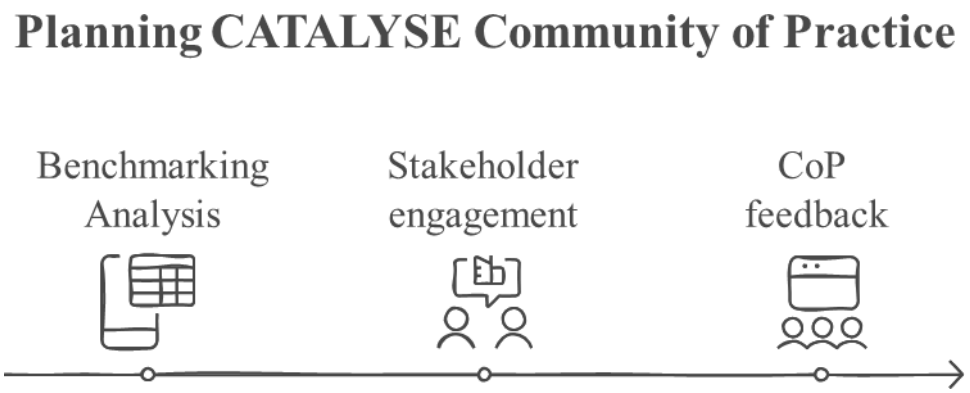

Figure 1. Main steps for the planning of CATALYSE Community of Practice.

A total of 113 online surveys and 85 one-to-one interviews were conducted with key stakeholders representing different segments of the Farm to Fork value chain. These activities aimed to gather qualitative insights into stakeholders' expectations, challenges, and preferred formats for accessing and sharing knowledge. As a result, five major concerns of stakeholders were identified (deliverable D2.2 Report of Stakeholder-Engagement Activities & Figure 2).

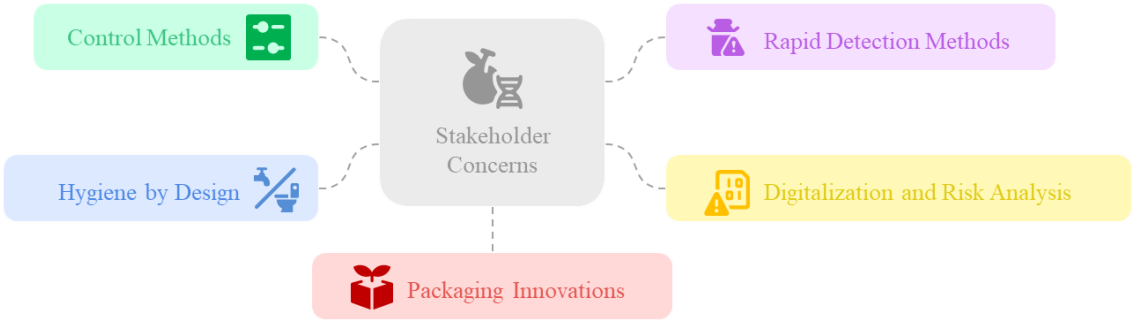

Figure 2. Five major concerns highlighted by the stakeholders in the needs assessment.

Three webinars with stakeholders were organized as opportunities for knowledge exchange and as interactive sessions to collect feedback and refine the CoP model and features accordingly. Six questions

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(Q1 to Q6) were raised, demonstrating that the stakeholders strongly demand practical, accessible, and up-to-date resources.

- **Q1: What are you looking for in the innovation, resources, and educational materials sections?**

Innovations:

There is a clear focus on information about emerging technologies, new methods, and trends in food safety and pathogen monitoring. Stakeholders value easy-to-understand materials that can be quickly implemented in daily practice, alongside regular updates on regulations and market-related developments, such as new startups and investment opportunities. The themes (possibility for CATALYSE CoP chapters) suggested during the sessions include rapid technologies for pathogen monitoring, new detection methods, food safety hazard updates, food safety in alternative proteins, new processing trends, and artificial intelligence (AI) methods.

Repository (resources):

The repository must be well-structured both for academia and industry. Stakeholders seek practical solutions like case studies, guidelines, and realistic Standard Operating Procedures (SoPs). Additionally, access to summaries with the key messages of scientific papers, reports, and regulatory updates from official authorities is highly prioritized. Content should be easily accessible, well-organized, digested, and focused on addressing current and specific needs in food safety. Infographics and summaries of information were specifically requested to simplify the search and learning process.

Educational Materials:

In education, stakeholders underline the importance of interactive formats such as short videos, infographics, and practical guides. They also want resources that provide different learning levels (beginner to advanced) and are practical for immediate use in the field. Training programs, such as mentorships and train-the-trainer sessions, are also seen as valuable. Most mentioned needs include updates on regulations, videos, infographics, best practices, visual materials, and information summaries. The Stakeholders needs were summarized in Table 1 and in Figure 3.

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Table 1. Summary of the attributes and features in the innovation, resources and educational materials sections of CATALYSE CoP. Each section outlines key aspects sought by the stakeholders

Section in CoP	Sub-sections	Stakeholder needs
Innovations	New Innovations and technologies	Innovations and updates, new tools, ideas, trends Startups list, new companies Market-ready innovations;
	Regulations and Guidelines	Regulation updates (strong need) Guidelines, Case studies, understanding new technologies, Easy-to-implement innovations
	Investors and Market information	Startups and companies list, Information on investors
Repository	Publications and Scientific Resources	New publications summaries, Abstracts/conclusions, Scientific papers, Datasets, White papers, Specific papers, Thesis Country authority reports, Cross-EU initiatives Alternative food safety data Industry reports
	Guides and Practical Solutions	Case studies, industrial guides, best practices Realistic SoPs, Risk assessment tools
	Accessibility and Focus	Division for academic and industry, High-quality education, Easy access to practical solutions, Focused on specific needs
Educational Materials	Formats and Types of Resources	Handbooks for dummies, Practical and quick guides, Fact sheets, Success stories, Webinars, SoPs <u>Visual materials:</u> Infographics, Short videos/videos tutorials Educational games
	Training and Support Programs	Training for trainers, Mentorship programs
	Depth and Levels of Content	Different levels of content (beginner, intermediate, advanced), Focus on producers' organizations

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Figure 3. Summary of the most frequently mentioned needs by stakeholders.

- **Q2: What format would be most effective for education resources/training programs?**

The analysis of stakeholder preferences for knowledge exchange platforms and initiatives indicated that hands-on, practical learning formats are the most valued (Figure 4).

- Hands-on courses were the top choice, with 24% of stakeholders indicating their preference for this format, highlighting a strong demand for direct, practical experience.
- Applied training sessions was the next option, with 21% of stakeholders valuing structured, "real-world" application of knowledge.
- Self-learning courses were selected by 19%, showing that while independent learning is important, stakeholders prefer structured support and interaction.
- On-site sessions, where participants can engage with content in person, garnered 16% of the preferences, further reinforcing the need for practical, face-to-face learning experiences.
- Webinars received 11% of the preferences, reflecting a moderate interest in online presentations and discussions, likely for their convenience and accessibility.
- Virtual or physical symposia in a classroom format ranked the lowest, with 9%, indicating a lesser preference for formal, lecture-style exchanges.

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In summary, stakeholders prioritize practical, applied learning formats - whether through hands-on courses or applied training - over more passive or formal knowledge exchange methods. This suggests a need to focus on interactive, experiential learning opportunities in future initiatives.

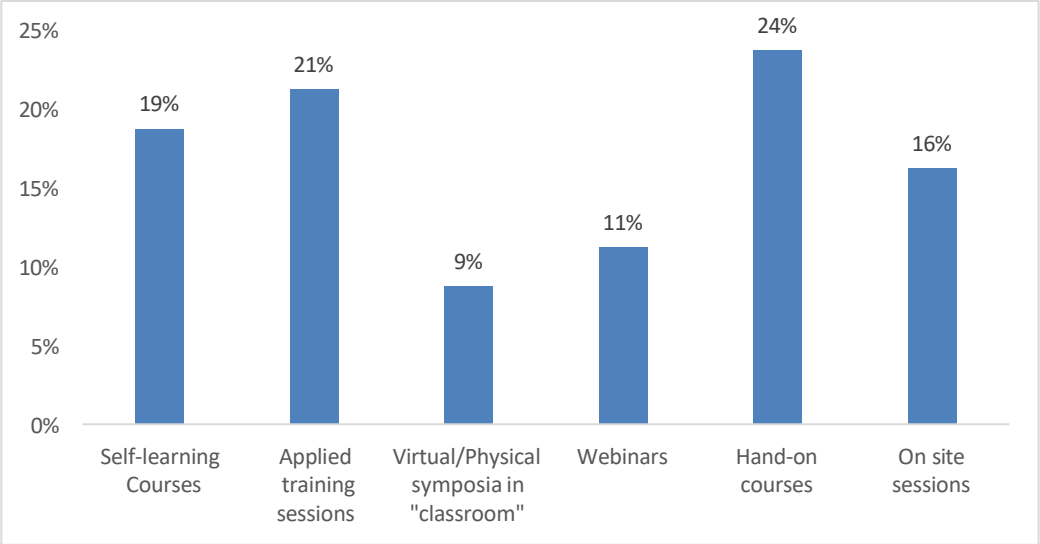

Figure 4. Stakeholder preferences for educational resources and training program formats. The analysis highlights that hands-on, practical learning formats are the most effective and preferred method for knowledge exchange across platforms and initiatives.

- **Q3: What topics would you like our CoP to focus on?**

The results demonstrated a clear interest in emerging technologies and innovative tools for improving food safety (Figure 5). These results can be useful for defining the Chapters of CoP:

- Artificial intelligence tools for improving food safety emerged as the most requested topic, with 26% of stakeholders expressing interest. This indicates a strong demand for advanced, data-driven solutions to enhance food safety practices.
- New technologies for hazard and risk prevention followed closely with 20%, emphasizing the need for innovation in mitigating risks within the food sector.
- Sources of contamination was chosen by 14% of stakeholders, reflecting a concern with understanding contamination risks throughout the food supply chain.
- Developments in monitoring and detecting hazards along the food chain were of interest to 10% of respondents, showing a continued focus on tracking and controlling food safety risks. New/alternative food matrices (e.g., insects, *in vitro* meat) also garnered 10% interest, indicating curiosity around emerging food sources.

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- Up-cycling food waste into valuable resources attracted 9% of preferences, suggesting some interest in sustainability and resource efficiency.
- Alternative preservation methods (7%) and new cleaning processes and hygiene procedures (5%) received the lowest interest, though they still reflect important aspects of modern food safety.

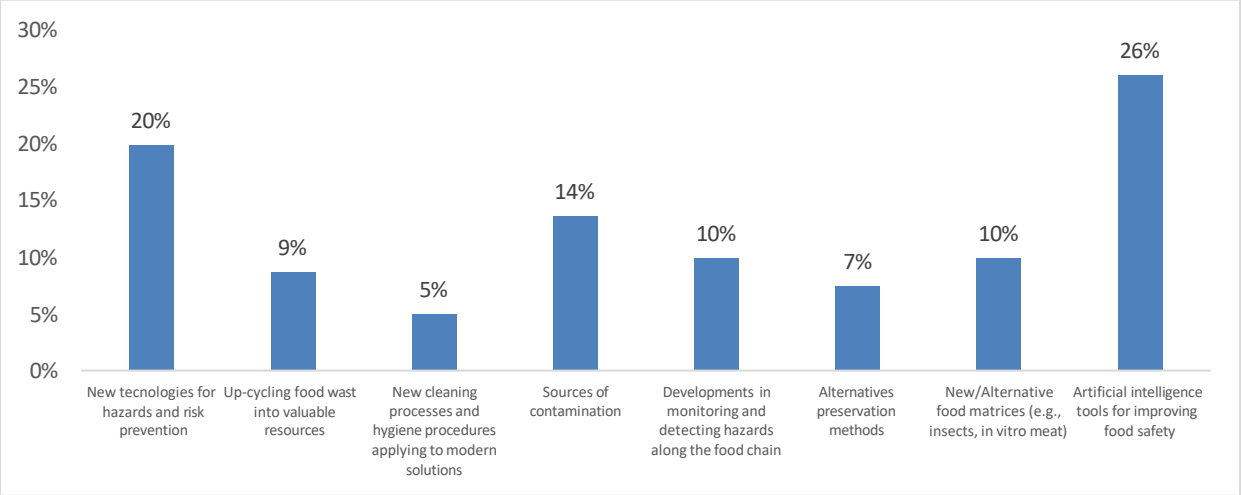

Figure 5. Preferred topics for the CoP focus areas. The results show a strong interest in emerging technologies and innovative tools aimed at enhancing food safety.

- **Q4: How would you like to interact within our CoP?**

The analysis of preferred interaction methods within the CoP highlights a strong interest in knowledge sharing and networking (Figure 6).

- The most preferred method of interaction is knowledge sharing through presentations, workshops, and webinars, chosen by 31% of stakeholders.
- Networking events came in second, with 24%, indicating a strong interest in building relationships and collaborating with other professionals in the field.
- Newsletters or email updates were selected by 20%, showing that many stakeholders value regular, easy-to-access updates on new developments, without requiring real-time participation.
- Less interactive methods like regular meetings and discussions (8%) and online forums (8%). Peer mentorship also attracted 8%, indicating a moderate interest in personalized learning and support from fellow professionals.

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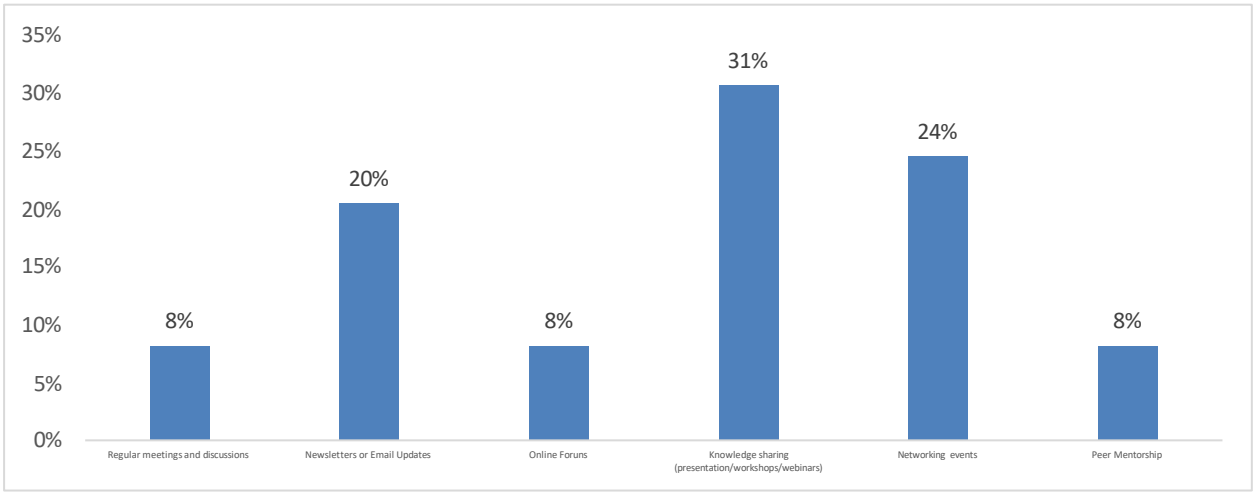

Figure 6. Preferred interaction methods within the CoP. The analysis reveals a strong interest in knowledge sharing and networking among participants.

- **Q5: How often should our CoP meetings/activities be scheduled?**

The analysis of stakeholder preferences for the frequency of CoP meetings and activities reveals a strong preference for quarterly interactions (3 months) – 47 % (Figure 7). Once every six months is the second most preferred option, chosen by 26%, suggesting that some stakeholders favor less frequent but still regular activities. 21% of respondents would like meetings to occur once a month, indicating that a smaller group seeks more frequent engagement. Only 5% prefer meetings to be held once a year, showing that annual interactions are insufficient for most participants.

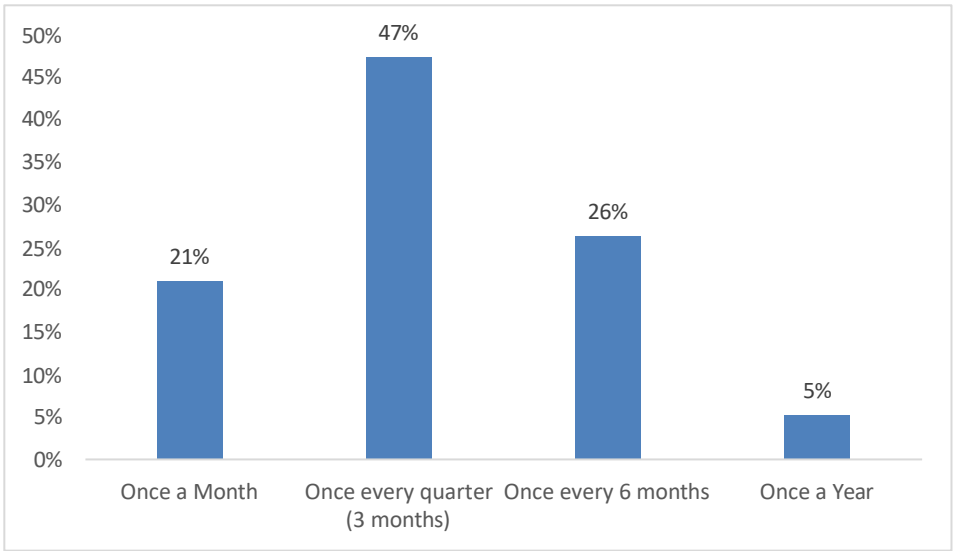

Figure 7. Stakeholder preferences for the scheduling frequency of CoP meetings and activities. The analysis shows a predominant preference for quarterly interactions (every 3 months), chosen by 47%.

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- **Q6: Which is the best approach that the CoP should adopt to reach out to the smallest of producers in the food industry?**

The analysis of suggested approaches for reaching small producers in the food industry highlights the importance of personalized engagement, collaboration with intermediaries, and direct outreach.

Table 2. Recommended approaches for the Community of Practice (CoP) to effectively engage small producers in the food industry. The analysis emphasizes the value of personalized engagement, collaboration with intermediaries, and direct outreach efforts

Approach	Details/Examples
Intermediaries	- Through distributors who regularly work with small producers - Using institutions with capillary systems - Involve industrial players in the CoP
Tailored Support & Personalization	- Personalize communication and resources - Use their language - Provide practical resources and tools
Direct Engagement	- In-house moments for learning - On-site visits and local community meetings - Presential (in-person) training
Collaboration with Local Organizations	- Contact local producers associations and work with producers organizations - Focus on promoting the best-fitting solution providers
Social media	- Social media campaigns

5. Structuring the CATALYSE CoP

5.1 CoP access and login

Access to the CoP can be made in two ways: either by visiting the official project website (https://thecatalyseproject.eu/; Figure 8) and clicking on the "Join Our Community of Practice" section, or by going directly to the dedicated CoP platform link https://catalyse-cop.eu/.

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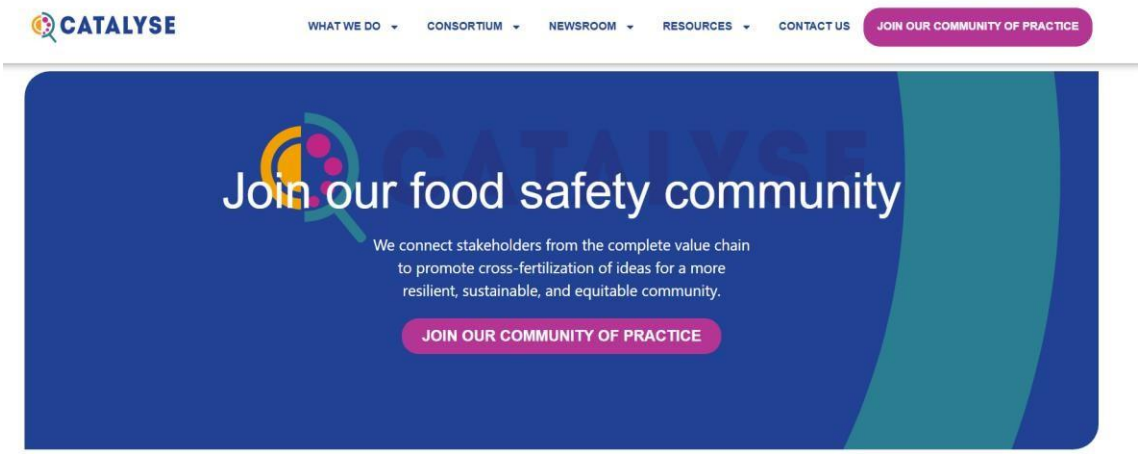

Figure 8. Official CATALYSE project website homepage (https://thecatalyseproject.eu/), where users can access the Community of Practice by clicking on the "Community of Practice" section.

Once on the platform (Figure 9A), users are asked to complete a short registration form (Figure 9 B; complete form is present in Annex A), which collects basic information about their background, professional profile, and areas of interest. The registration process is designed to be quick, user-friendly, and GDPR-compliant, ensuring data privacy while enabling a more effective and personalised CoP experience.

This initial step not only facilitates access but also enables the delivery of personalised content, fostering relevant interactions and meaningful connections within the community.

Once registered, users receive login credentials to access the full features of the CoP platform, including:

- Sector-specific knowledge areas about food safety innovations,
- Educational and scientific resources,
- Discussion forums,
- Events calendar and latest updates,
- Community space for interaction.

To access the CATALYSE CoP any subscription or membership fee is required, ensuring open and inclusive participation.

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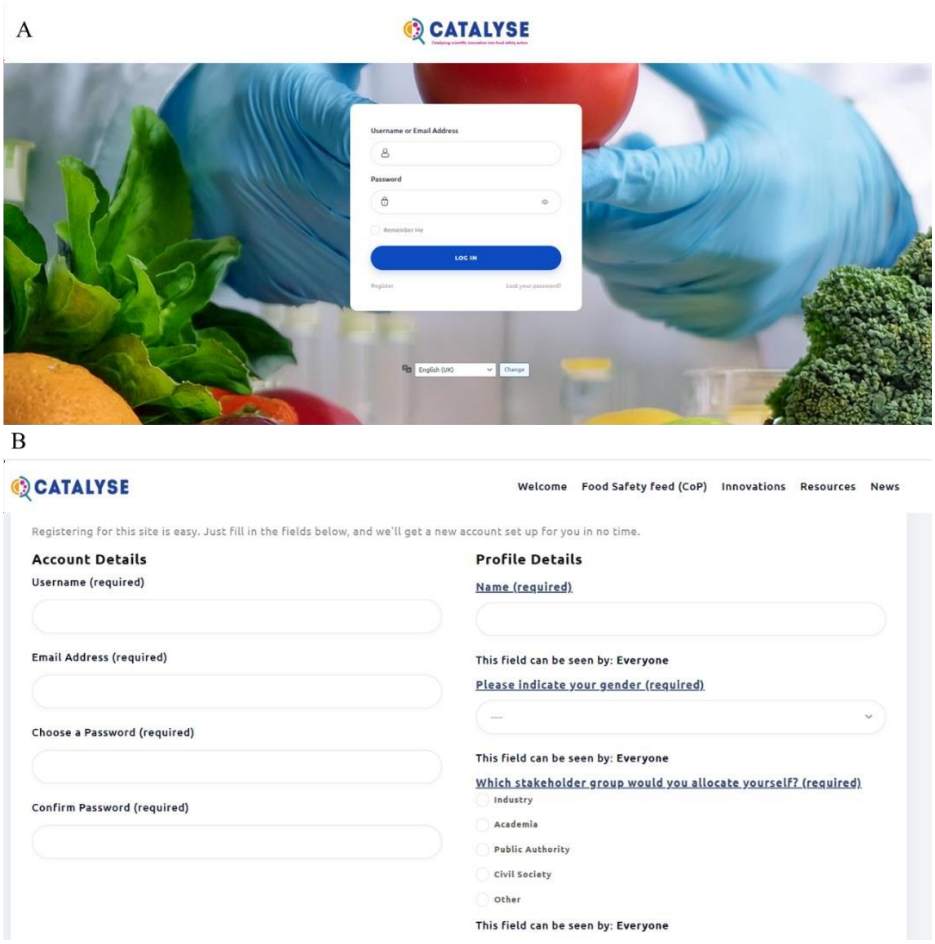

Figure 9. CATALYSE Community of Practice (CoP) platform interface. (A) Homepage where users can log in or register to access the CoP. (B) Registration section where users fill in basic information about their background, professional profile, and interests.

5.2 Welcome page

The CATALYSE CoP platform is designed to offer an intuitive and user-friendly overview and navigation experience, ensuring that all members can easily understand the community purpose and quickly access the different sections and thematic chapters.

The initial page (available before and after the login) starts with a brief introduction to the Catalyse CoP and the main advantages of being a member (Figure 10A & B):

- Networking: Members have the opportunity to connect with end-users, innovators, startups, spin-offs, industries, food authorities, and CATALYSE partners, expanding their professional network and opening up opportunities for collaboration.

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- Knowledge Sharing: Different thematic chapters will facilitate the knowledge transfer between all actors of the food system and the uptake of food safety knowledge and innovation. By sharing experiences and insights, CoP members can learn from one another, fostering a culture of continuous learning and improvement.
- Privileged access to recent news and innovative solutions: The CoP promotes the dissemination of updates and the adoption of innovative solutions and best practices in food safety, helping CoP members stay at the forefront of their field.
- Access to Resources: CoP members can access a searchable knowledge database and educational materials, providing a wealth of information in this field.
- Training Opportunities: The CoP promotes educational materials, training sessions, and other events, such as webinars, courses, or workshops.
- Sharing space among CoP members: job vacancies, announcements of seminars, events, etc.

Other features include (Figure 10 B):

- **"Share Invitations"**: Allows members to invite colleagues or other stakeholders who might be interested in joining the CoP, fostering community growth.
- **"Share a Publication"**: Enables members to contribute relevant publications, such as scientific articles, reports, or policy documents, enriching the CoP's knowledge base.
- **"Post an Event"**: Provides members with the possibility to announce and promote events they are organizing or find relevant to the community, supporting information exchange and networking.
- **"Join Events"**: Displays upcoming events published on the CoP platform, offering members detailed information and direct access to registration links.

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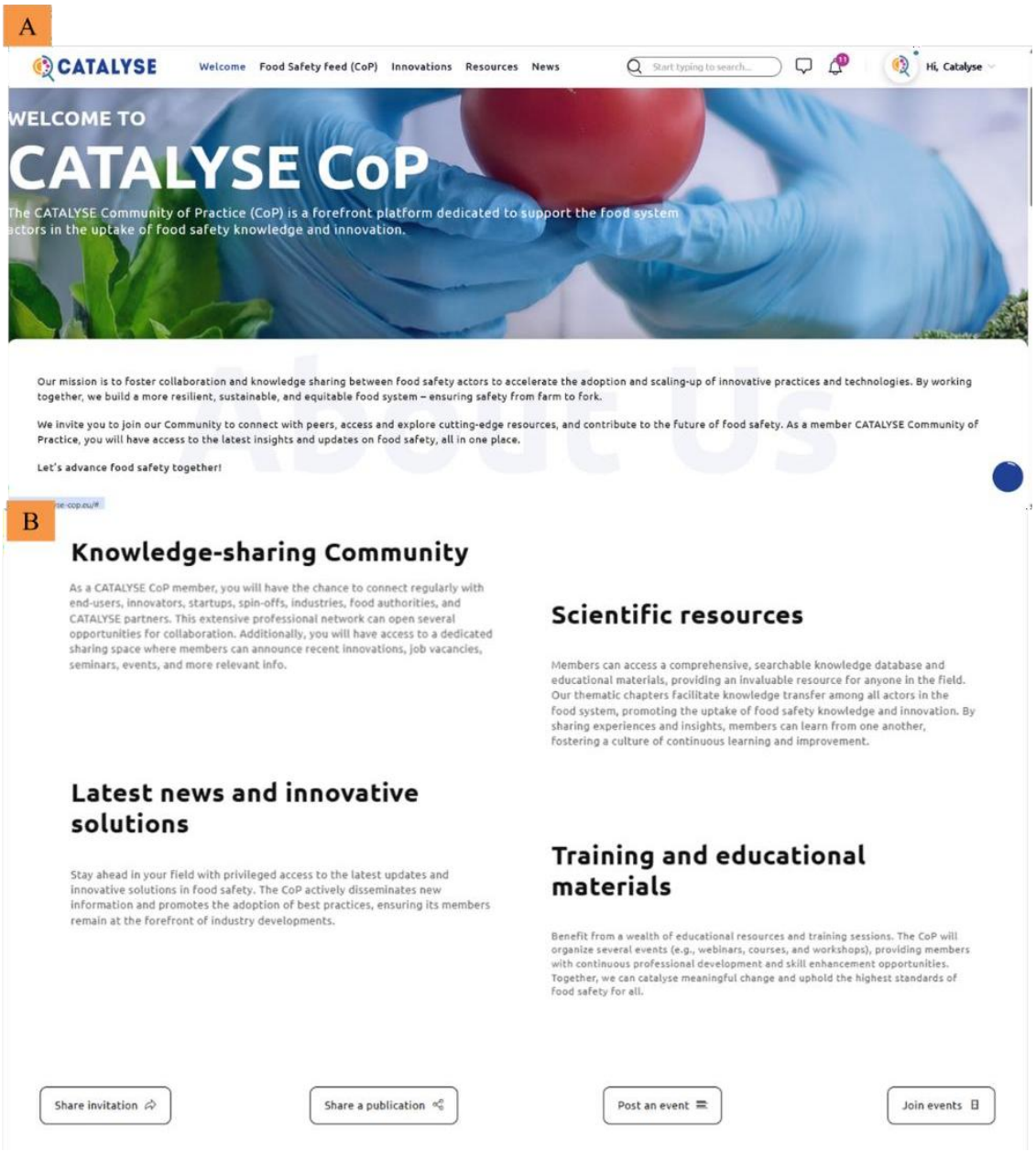

Figure 10. Welcome page of the CATALYSE Community of Practice (CoP). (A) Introduction section describing the purpose and scope of the CoP. (B) Overview advantages of be a member of the CoP and special features as share invitations, publish resources and post events.

5.3 Community: the interactive social hub

One of the central features of the CoP platform is the **"Community"** - an interactive hub designed to function as the platform's social core (Figure 11). Similar to a social media platform, this area fosters

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continuous engagement, visibility of member contributions, and active collaboration around innovation and food safety.

Within the Community Space, members can:

- Share ideas, questions, and experiences through posts visible to the entire community;
- Browse and engage with posts from others, promoting peer-to-peer learning and collective problem-solving;
- View member profiles to facilitate networking and identify potential collaborators;
- Stay up to date with upcoming events, with easy access to event details and registration;
- Follow ongoing discussions, explore trending topics, and participate in relevant debates.

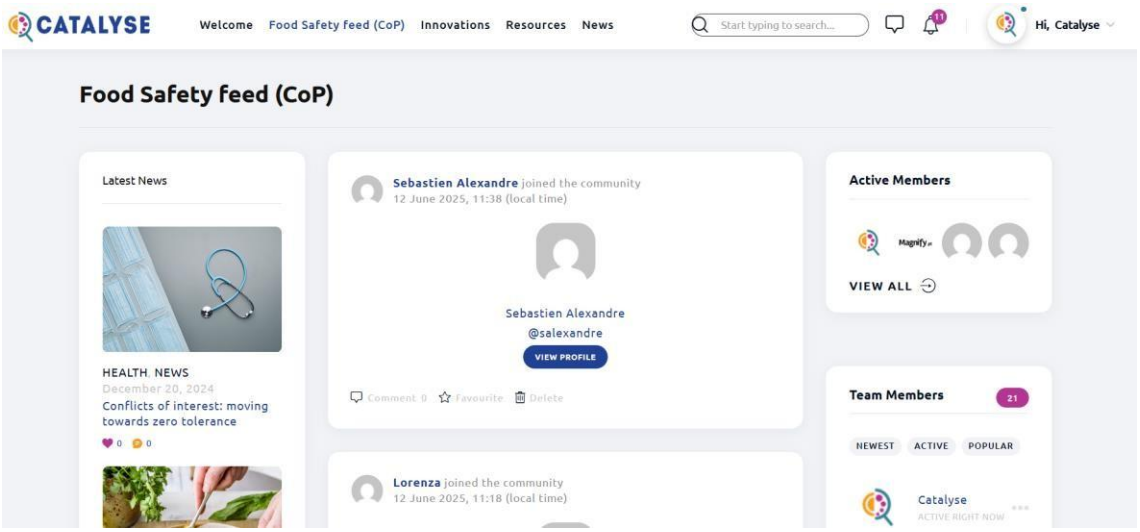

Figure 11. Overview of the Community Section in the CoP.

To enhance the stakeholders' interactions, the platform includes a dedicated discussion forum divided into 5 groups: conversations, job opportunities, events, partnerships, and new or ongoing projects (Figure 12). This space allows users to submit new relevant topics and openly raise questions to the community. All topics are searchable, and any registered member can contribute to the conversation. The forum will be moderated by CATALYSE administrators (to be defined in WP5 – Deployment of the CoP).

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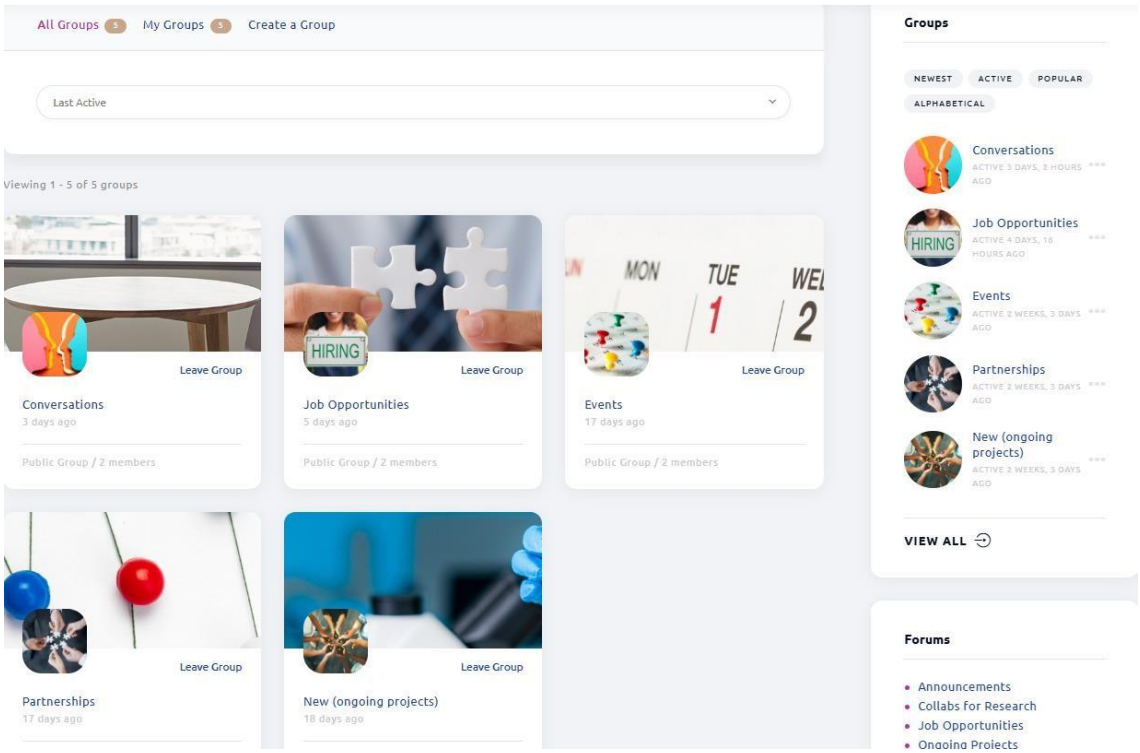

Figure 12. Discussion forum of the CATALYSE CoP, featuring five main thematic groups: Conversations, Job Opportunities, Events, Partnerships, and New or Ongoing Projects.

Additionally, the platform includes an internal messaging system (Figure 13), i.e., a real-time chat tool that supports various media types, emojis, and instant notifications. This feature enables direct communication between users, fostering quick exchanges and deeper connections.

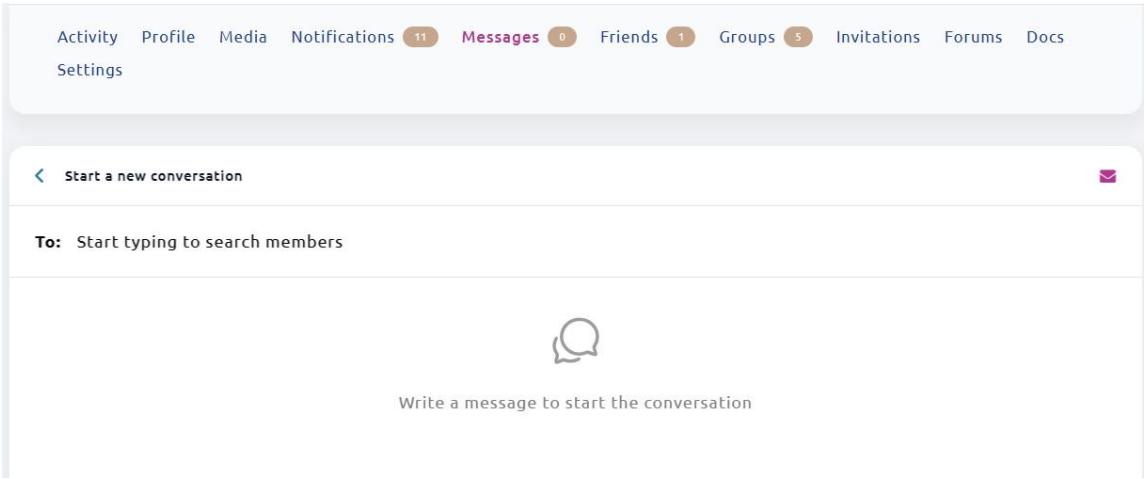

Figure 13. Message system allowing the members of CoP to communicate with private or public messages.

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5.4 Innovations

The CATALYSE CoP serves as a vehicle to promote interaction among stakeholders across the food system and to support the dissemination of relevant knowledge and innovations, and introduce contacts from start-up/spin-off that are already scaling up food safety innovations. Among the innovations showcased within the platform are food safety solutions and registered patents that align with the interests and needs of the community (Figure 14).

The CATALYSE designated contact points contacted innovators identified through the WP7 directly to encourage their participation in and contribution to the CoP. To date, 28 innovations have been included in the CoP. In addition, all CoP members are invited to share innovations they consider relevant to the project. This can be done by completing a Google Forms (Annex B) or contacting the CoP coordination team. This open channel ensures that the platform remains dynamic and inclusive with the latest developments in the field.

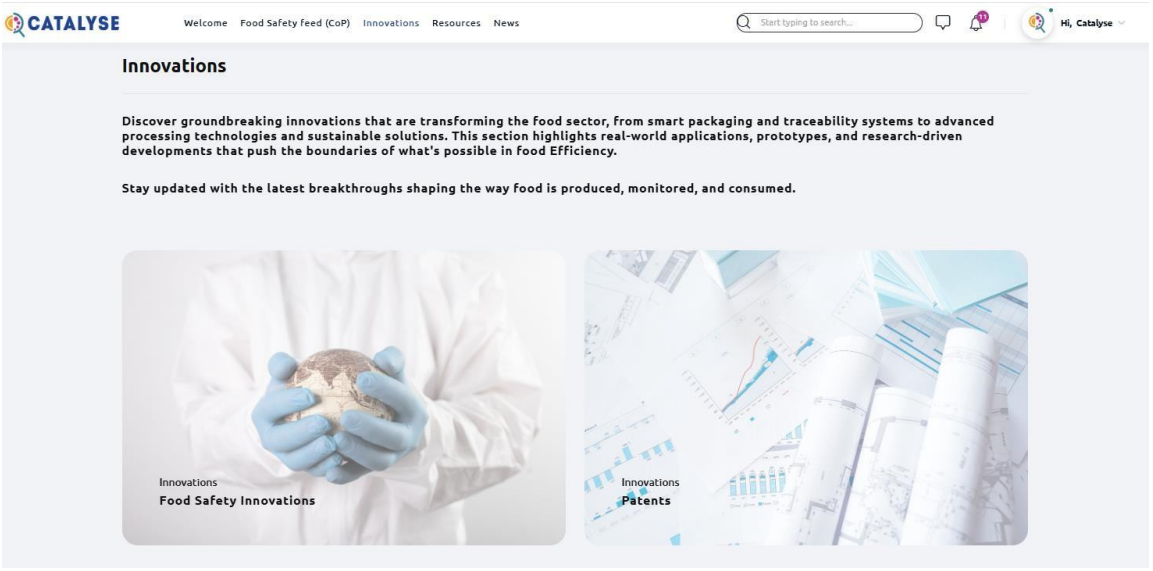

Figure 14. Interface view of the Food Safety Innovations and Patents section within the CATALYSE CoP platform.

The information (innovations & patents) is presented in a structured list format, featuring key sectors, the name of the innovation or company, and an illustrative image (Figure 15 A). CoP members can explore each entry in more detail, with access to additional information such as the food sector, field of application, date, innovation status, country of origin, target end-users, a summary of the innovation, and a direct link to access the full details (Figure 15 B).

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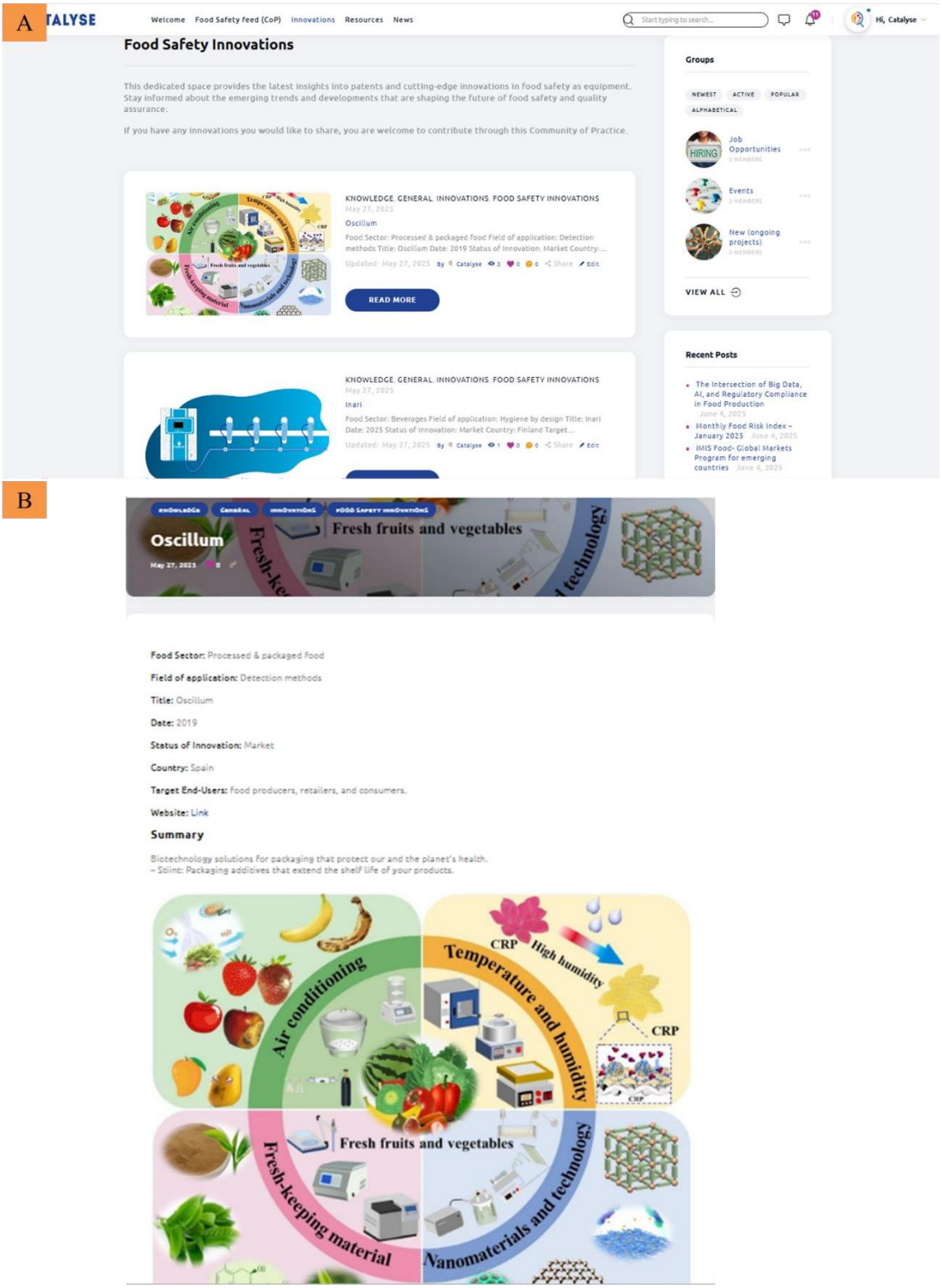

Figure 15. (A) Example of the innovations list on the CATALYSE CoP platform; (B) Example of the detailed view of the Oscillum innovation. This includes information on the food sector, field of application, date, innovation status, country of origin, target end-users, a summary of the innovation, and a direct link for full access.

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5.5 Resources

The Resources section of the CATALYSE CoP platform acts as a repository of pre-analysed knowledge, supporting learning in the field of food safety. It is divided into two main categories:

a) Publications

This section includes a collection of 186 relevant publications gathered by WP3 and project partners, to date (Figure 16 A). These materials include scientific articles, technical reports, and documents focusing on key topics such as detection methods.

The 72 resources related to the **Dairy and Cheese chapter** (WP4, deliverable 4.1 Model of Chapter on dairy & artisanal traditional cheese) were also included in this section:

- 9 Good Manufacturing Practices (GMPs)
- 13 Good Farming Practices (GFPs)
- 6 Good Hygiene Practices (GHPs)
- 9 innovative technologies (Inno-Tech)
- 23 fact sheets
- 12 magazines

Similar to the innovation part, the different publications are presented in a structured list format and CoP members can explore each entry in more detail (Figure 16 B).

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Figure 16. (A) Interface view of the Food Safety repository within the CATALYSE CoP platform. (B) Example of the detailed view of one publication. This includes information on the food sector, field of application, authors, year of publication, journal, summary of the publication, and a direct link for full access.

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b) Educational Materials

Developed in collaboration with WP6, to date, this section contains 70 educational resources, including webinars, online courses, short videos, tutorials, fact sheets, and e-books (Figure 17). These materials aim to translate scientific findings into accessible, practical tools that can be readily applied in professional contexts. In this section, the materials are organized by sector (e.g., Dairy & Cheese, Fish & Seafood, etc.). This categorization will also be applied to the repository and innovations sections, ensuring that users from each sector can more easily and intuitively find the materials most relevant to their interests and needs.

As with other sections of the platform, users can click on any item to view additional details and are provided with direct links to the source of the content. This ensures easy navigation and access to external learning platforms or reference materials.

The content in this section will be continuously updated based on project outputs and contributions of CoP members, ensuring the platform remains current and relevant.

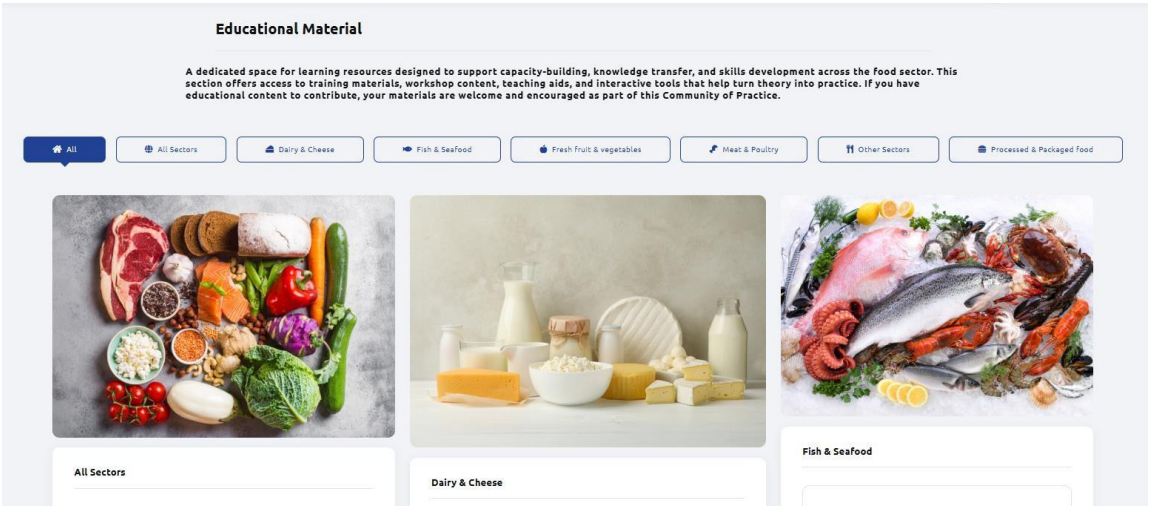

Figure 17. Interface view of the Food Safety Educational Materials within the CATALYSE CoP platform.

5.6 News

This space offers monthly updates on the latest developments in Health, Food Safety Management, Chemistry, Microbiology, and Digital Applications, in collaboration with WP8 and content shared via CATALYSE LinkedIn (Figure 18). By clicking on a news item of interest, users are redirected to the source, ensuring quick and easy access to the full news item.

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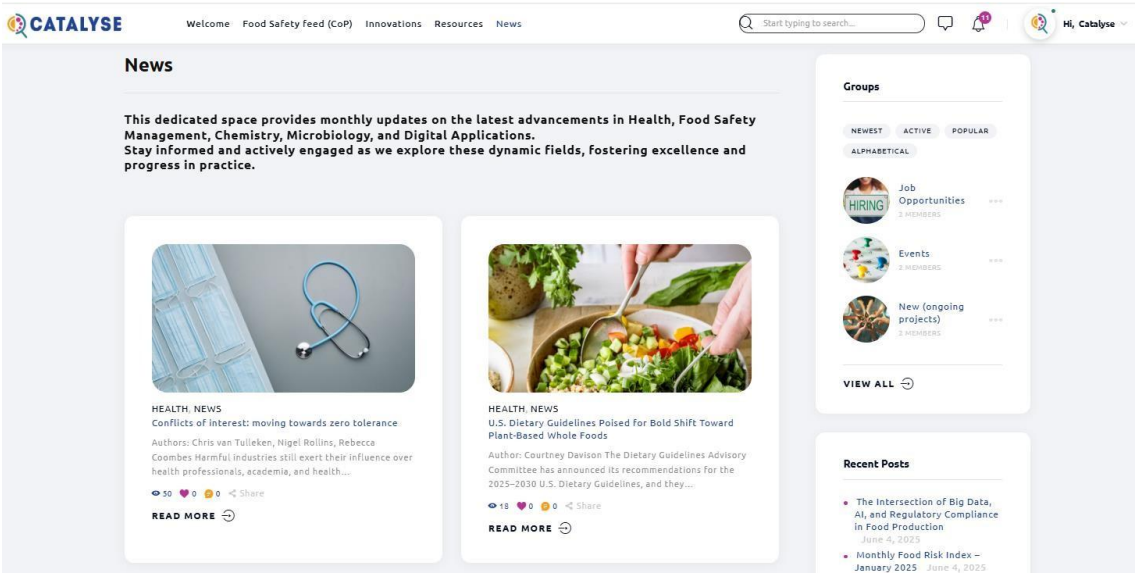

Figure 18. Interface view of the News within the CATALYSE CoP platform.

6. CoP Launch and test the 1st prototype

Following the initial design phase, information gathering, and structural setup of the CoP, the prototype of the CoP platform was officially launched on 5th June 2025, during an in-person event hosted at Universidade Católica in Porto (UCP), organized by UCP team aligned with WP5 tasks. The event Save the Date and agenda can be found in Annex C. Additionally, the invited speakers and innovators are available on the official CATALYSE website. The event brought approximately 120 participants, featured 15 speakers, and included 17 exhibitors. The program began with an introductory session dedicated to presenting the CATALYSE project and launching the CoP platform.

This first version of the CoP is now in a testing phase, being evaluated by CATALYSE partners as well as other interested stakeholders. The focus of this evaluation is to assess the platform user-friendliness and to determine whether it meets the key requirements for an active community and if it effectively disseminates information, innovations, and educational materials.

The project team maintains ongoing communication to ensure that all necessary adjustments are made efficiently. This collaborative approach aims to optimize the platform functionality and ensure it aligns with the expectations and needs of its users.

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7. Stakeholder Attraction Strategy

To attract and retain participants, the CoP employs a multi-channel engagement strategy, which includes:

- Outreach through project partners networks,
- Participation and/or organization of webinars, events, and workshops where CATALYSE partners promote the CoP and innovations/innovators in Food Safety,
- Social media publications (LinkedIn and X) and digital announcements using the CATALYSE website;
- Direct invitations (supported by the "Share Invitation" feature on the platform), and the possibility to share content from the CoP, which will increase the platform visibility.
- Follow up with interested members and the Stakeholder Board via email, highlighting recent updates to the CoP platform and newly uploaded content.

This model ensures that the CoP remains a growing and stakeholder-driven space, aligned with the goals of fostering innovation and collaboration in food safety across Europe.

8. CoP moderation

The CoP adopts a participatory model, allowing project partners and community members to actively contribute to content. This includes:

- Sharing publications (e.g., scientific articles, reports),
- Posting relevant events,
- Engaging in discussions and Q&A forums,
- Suggesting new topics, resources, or innovations.

Some sections of the platform allow users to comment and participate in ongoing discussions. To maintain the quality and relevance of the content, all contributions will be subject to moderation. This aimed to ensure that posts remain respectful, on-topic, and aligned with the objectives of the CoP.

While the specific moderation framework is still being finalized, it is anticipated that moderation will initially be carried out by members of the project consortium. In the future, this responsibility may be extended to volunteer moderators from the community, particularly those with relevant expertise, who are interested in supporting and guiding stakeholders in discussions related to their areas of knowledge.

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9. Evaluating the Effectiveness of the CoP

The improvement cycle of the CoP is designed as a continuous and iterative process, ensuring that the platform remains dynamic, relevant, and user-driven. This cycle includes several key components: tracking user engagement to understand how the platform is being used; gathering regular feedback from stakeholders to capture their evolving needs and preferences; analysing the collected data to identify patterns and areas for enhancement; implementing the necessary technical or structural improvements based on these insights; and updating content regularly to reflect the latest developments in food safety, innovation, and stakeholder interests (Figure 19). This structured approach ensures the CoP remains an effective, responsive, and valuable tool for the entire food system community.

Figure 19. Schematic representation of the CATALYSE CoP improvement cycle.

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9.1 Monitoring and Feedback

To ensure the CoP remains relevant and impactful, a structured monitoring and feedback strategy will be implemented:

- **User Engagement Metrics**: Key indicators such as registration numbers, active participation in forums, frequency of logins, content views, and resource accesses will be tracked to evaluate user involvement and platform usage patterns.
- **Feedback Mechanisms**: In this initial phase, periodic surveys and feedback forms will be distributed to CoP members to gather insights into user satisfaction, usability, and suggestions for improvement. Informal feedback and meetings will also be considered to get spontaneous user input.

9.2 Continuous Improvement

The CoP will follow a user-centered, iterative development model to ensure ongoing relevance and quality:

- **Iterative Design Approach**: Feedback and usage data will facilitate continuous platform enhancements - functional (e.g., usability improvements) and structural (e.g., layout or navigation updates) - to better meet the evolving needs of the community.
- **Content Updates**: Resources and materials will be regularly reviewed and updated to reflect the latest knowledge, trends, and stakeholder priorities. This ensures that the platform remains a reliable, up-to-date reference point for all users.

10. Conclusions

The development of the CATALYSE CoP has successfully achieved the objectives defined for this task using the CATALYSE working model "Collect – Translate – Facilitate – Educate," and leveraging the collective experience of project partners and input from stakeholders gathered during WP2. The CoP was designed and implemented as an open, accessible, and interactive digital space to promote knowledge exchange, innovation dissemination, and collaboration within the European food system, with a specific focus on food safety innovations.

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Following an initial phase of research/benchmarking, stakeholder consultation, and website design, the first version of the CoP platform was officially launched on 5th June 2025, during a public event hosted in UCP, in Porto.

The structure of the CoP was designed to enhance usability and content accessibility. We aim that all resources and innovations will be organized hierarchically: first by sector (e.g., cheese, dairy & alternatives; meat & poultry; fish & seafood; plant-based & alternative proteins; beverages, etc.), and then by specific chapters within each sector, aligned with the stakeholder engagement results (such as detection methods, hygiene by design, packaging, and digital tools). This dual-level organization ensures that users can access both specialized and transversal knowledge, supporting targeted learning and broader system-level understanding.

Despite these achievements, some challenges were found during the design and implementation. One of the main issues was how to ensure that the platform remains relevant and dynamic, responding to the needs of a highly diverse group of stakeholders. The management of users publications and content also required the development of clear moderation strategies to guarantee quality and avoid irrelevant or off-topic contributions. These moderation mechanisms are still being defined and, at least in the initial phase, will be carried out by project consortium members. In the future, the role of moderation may be extended to volunteers, especially those with expertise in relevant areas who wish to support peer learning within the CoP.

In the scope of WP5 (Deploy the CATALYSE CoP, starting in M18), the CoP will continue to evolve as new content is added, tools are made, new members join, and feedback is continuously received. The objective is to establish a long-term digital environment that facilitates knowledge transfer and fosters community engagement and collaboration across the food value chain. Now, the CoP has entered a phase of active testing by project partners and external stakeholders, who will be providing essential feedback on usability, relevance, and content coverage. Throughout this process, continuous improvement and functional adjustments will be made, until M36 of CATALYSE project.

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ANNEXES

Annex A. Community of Practice - Registration forms

Name

Email

Password

Please indicate your GENDER

- Male
- Female
- Other
- Prefer not to answer

Which stakeholder group would you allocate yourself?

- Industry
- Academia
- Public Authority
- Civil Society
- Other: *open field*

What is/are your professional affiliation(s)?

What food group do you primarily work with?

- Meat and Poultry
- Fish and Seafood
- Dairy
- Grain & Cereals
- Fresh Fruit & Vegetables
- Plant-based & Alternative protein
- Processed & packaged foods
- Ingredients
- Beverages
- Sugar & Sweeteners
- Other

What sector do/did you work in?

- Food composition
- Food Safety & Quality
- Food Additives and Processing aids (use, regulation)
- Food Labelling
- Product Formulation/ Development

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Product Manufacturing
Food Technology / Processing
Logistics/ Transport/ Distribution
Food Ingredients, products
Human Nutrition and Health
Nutritional education program
Food Processing, Equipment Cleaning & Sanitizing
Laboratory Analytical Methods – Microbiological
Animal Health and Welfare
Sustainability
Environment
Farm Management
Biotechnology
Food Economics
Food Marketing
Consumer Perceptions & Behaviors
Other : *open field*

Years of experience in the food sector

0-3
3-10
10-20
20+

What topics would you prioritize for the CoP?

Emerging risks
Food Safety Regulations and compliance
Food safety culture
New tools for monitoring and detecting hazards
Food microbiological analysis and techniques
Quality control in food production
Food fraud
Interpretation of hazards, risks, probability, severity
Sanitation and Hygiene Design in Food Processing
HACCP and process validation: Tools for monitoring and detecting hazards
Study of digital solutions and their potential in improving food safety
Food Labeling and Packaging Compliance
Processing Environment Monitoring
Allergen Management Best Practices (FAO/WHO Reports 2022)
New and alternative solutions/technologies for improving the final products
Quantitative Microbiological Risk Assessments (QMRA)
Qualitative Sampling and Testing: Methods & Statistics

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Quantitative Microbiology

Insurance and Food Safety

Horizon Scanning

Other: *open field*

Annex B. Innovations form

CATALYSE - Innovative solutions

As part of CATALYSE, we are establishing a Europe-wide community of practice (CoP) in a digital platform to facilitate interaction between different actors in the food sector (researchers, innovators, regulators) in the specific topic of innovative solutions and technologies in food safety. **As an innovator in food safety, we invite you to share your innovation or technology with our CoP. For this, we kindly ask you to complete this form with the pertinent details of your innovation and yourself, to be include in our platform.**

By joining this CoP, you will contribute to a collective effort to enhance food safety across Europe. Interested in joining us? Register here: ***http://catalyse-cop.eu/***

By filling the fields below, you consent to your personal data being processed by CATALYSE partners to keep you informed about the project and invite you to the Community of Practice, in compliance with GDRP rules. You can contact

1. Name of innovation

2. Brief description of innovation

3. Year

4. Food sector

- [ ] General/All
- [ ] Meat & Poultry
- [ ] Fish & Seafood
- [ ] Dairy & Cheese
- [ ] Grain & Cereals
- [ ] Fresh Fruit & Vegetables
- [ ] Plant-based & Alternative protein
- [ ] Processed & packaged food
- [ ] Beverages
- [ ] Other

5. Field of innovation

- [ ] Control measures
- [ ] Detection methods
- [ ] Hygiene by design
- [ ] Packaging innovations
- [ ] Food fraud
- [ ] Traceability
- [ ] Other

6. Status of innovation

- ◯ Idea
- ◯ Business Case
- ◯ Prototype
- ◯ Market

7. Any certification?

8. Description of the company/Startup

9. Contact of innovator (Name)

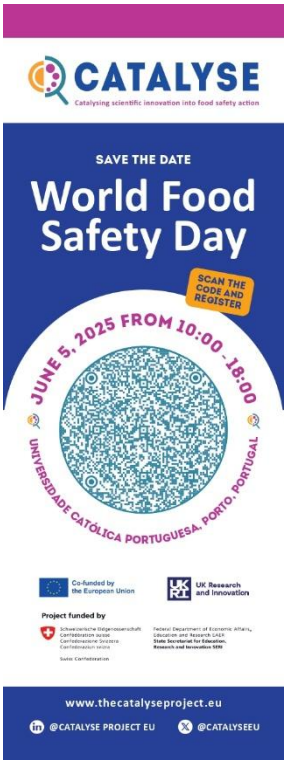
10. Country

11. Link to innovation (if applicable)

12. Can you share a presentation/video about the company/startup/innovation?

Annex C. CATALYSE Event Save the Date & Agenda

Bookmark-shaped flyers created to promote registration for CATALYSE CoP



CATALYSE World Food Safety Day

5th June 2025 | 10:00-18:00 | Porto, Portugal

1. 9:30 - 10:00 | **Reception and Registration**
2. 10:00 - 10:15 | **CATALYSE presentation** - *CATALYSE coordination*
3. 10:15 - 10:30 | **Community of Practice** - *CATALYSE WP4 team*
4. 10:30 - 11:00 | **Managing the impact of the Green Agenda on Food Safety** - *Roy Kirby*
5. 11:00 - 11:30 | **Food contaminants and risk management in Europe** - *Alejandro Rodarte*
6. 11:30 - 12:00 | **Advancing Predictive Microbiology in the Digitalization Era to Enhance Risk Assessment and Food Safety** - *Antonio Valero*
7. 12:00 - 12:15 | **AI in Microbiology Food Safety - A critical momentum** - *Spore.bio*
8. 12:15 - 12:30 | **Precis Salmonella – Rapid and Validated Method for Salmonella Detection in 48 Hours** - *ChemicalNor*
9. 12:30 - 14:00| **Networking lunch**
10. 14:00 - 14:30| **What can AI do for food safety?** - *Ákos Bernard Józwiak*
11. 14:30 - 14:45| **The Digitalization of Food Safety** - *Food in Tech*
12. 14:45 - 15:00| **Persistence of Microorganisms in Food Production Environment: How Sequencing can help in Identifying and Eradicate Contamination Sources** - *Gonçalo Almeida*
13. 15:00 - 15:15| **BlendHub**
14. 15:15 - 15:45| **How Genomics can help in providing healthier and safer food** - *João Carriço*
15. 15:45 - 16:30| **MATCHMAKING** – *fair + coffee break*
16. 16:30 - 16:45| **The Importance of Quality in the Food Industry and Tools for Analytical Process Contro** - *Silliker Portugal S. A. - MxNS Group*
17. 16:45 - 17:15| **How to Sell Food Safety** - *Nuno F. Soares*
18. 17:15 - 17:30| **LoopiX Patogen Detection in 90 minutes!** - *Christeyns*
19. 17:30 - 17:45| **Pioneering Safe Food : the future of Food safety for the common good** - *Association Pioneering Safe Food*
20. 17:45 - 18:00| **Closing**

CATALYSE

HISTORY OF CHANGES		
Version	**Publication date**	**Change**
1.0	30.06.2025	▪ Final version