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INTEGER

INTERCONNECTING 4 HELIX INNOVATION ECOSYSTEMS IN EUROPEAN REGIONS

D3.3 Report on main features of the 3 Regional Innovation Ecosystem Models

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EXECUTIVE SUMMARY

This report analyses innovation ecosystems in Catalonia, Hamburg, and Krakow, offering insights for the INTEGER project aimed at improving EU innovation ecosystems. The report emphasises the unique elements of each region's ecosystem and how the INTEGER project aligns with their goals. It introduces concepts like the 'Col·laber' and Col·laborathons to foster collaboration. By connecting these regional findings within the INTEGER project, the integration seeks to benefit both business and social-oriented innovations, contributing to the enhancement of regional innovation ecosystems. The report highlights the importance of interregional study visits in connecting actors from quadruple Helix areas and fostering cooperation for the INTEGER project's further development.

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TABLE OF CONTENTS

EXECUTIVE SUMMARY **4**
LIST OF FIGURES **6**
LIST OF TABLES **6**
SYMBOLS, ABBREVIATIONS AND ACRONYMS **7**
1 INTRODUCTION **8**
1.1 BACKGROUND AND AIM 8
1.2 STRUCTURE OF THE DELIVERABLE 8
1.3 METHODS 8
1.4 SYNERGIES WITH OTHER TASKS AND DELIVERABLES 9
2 CATALONIA CASE STUDY **10**
2.1 CATALONIA STUDY VISIT AGENDA 11
2.2 MAIN CONTRIBUTIONS FROM THE CO-CREATION WORKSHOPS DONE IN CATALONIA 12
2.2.1 Fostering an Innovative Ageing Ecosystem Co-Creation and 4 Helix Collaboration *12*
2.2.2 Elevating Co-Creation on Pollution & Health Cities *13*
2.2.3 Social Impact Landscape in Nutrition and Healthy Living *15*
3 KRAKOW CASE STUDY **16**
3.1 INTRODUCTION KRAKOW ECONOMIC CAPITAL 16
3.2 KRAKOW STARTUP ECOSYSTEM 17
3.3 KRAKOW CASE STUDY 17
3.3.1 Krakow Study Visit Agenda *18*
3.3.2 The main challenges for quadruple Helix collaborations in Krakow *21*
3.3.3 Conclusions *21*
4 HAMBURG CASE STUDY **23**
4.1 INTRODUCTION HAMBURG ECONOMIC CAPITAL 23
4.2 HAMBURG STUDY VISIT 23
4.2.1 Agenda *23*
4.2.2 Selection of different projects visited *24*
4.2.2.1 Optimedis 24
4.2.2.2 The Sustainable Health Working Group 25
4.2.2.3 UKE (University Hospital Eppendorf) 25
4.2.2.4 Phillips Health Innovation Port 25
4.2.3 Conclusions *26*
5 CONCLUSIONS **28**
REFERENCES **29**

LIST OF FIGURES

IMAGE 1. CATALONIA INTEGER STUDY VISIT. 10
IMAGE 2. CATALONIA INTEGER STUDY VISIT ATTENDEES. 12
IMAGE 3. KRAKOW INTEGER STUDY VISIT. 17
IMAGE 4. KRAKOW ECONOMIC CAPITAL DATA. 17
IMAGE 5. HAMBURG INTEGER STUDY VISIT. 24

LIST OF TABLES

TABLE 1. THE MAIN CHALLENGES FOR QUADRUPLE HELIX COLLABORATIONS IN KRAKOW. 21

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SYMBOLS, ABBREVIATIONS AND ACRONYMS

D	Deliverable
DoA	Description of Action
EU	European Union
INTEGER	Interconnecting 4 Helix Innovation Ecosystems in European Regions
T	Task
WP	Work-Package

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1 INTRODUCTION

1.1 Background and aim

The "*Report on main features of the 3 regional Innovation Ecosystem Models Catalonia, Hamburg and Krakow study cases*" identifies key aspects observed in the three regional innovation ecosystems where the INTEGER project is unfolding: Catalonia, Krakow, and Hamburg.

The INTEGER project aims to enhance EU innovation ecosystems, bringing together actors from the quadruple helix and the different types of innovations (social, business and technology driven) There are a number of innovations that are being implemented by the project that aligns with the goals of these regions:

a) the INTEGER 4 Helix Col·laboratory model,

b) the INTEGER EU Col·laboratory on Health and Wellbeing launched during the international conference (ENoLL Open Living Lab Days (20-23 September),

c) introducing the role of the 'Col·laber' or 'Col·laboratory manager' and

d) developing three regional Col·laborathons.

The main aim of this report is to offer valuable findings from different unique contexts in the three European participating regions that help us dive into lessons learned and comparisons for understanding how the INTEGER innovations can contribute to making these ecosystems more robust, sustainable, inclusive, and integrated.

The report highlights various elements of the three respective innovation ecosystems. It seeks to address specific challenges and leverages the strengths of each ecosystem while promoting social innovation integration.

The regional study cases within the INTEGER project show how that the innovations undergoing in the regions align with and contribute to the broader goals of enhancing regional innovation ecosystems. The effort of linking diverse types of quadruple helix actors aims to create win-win scenarios for both business and social-oriented innovations, ultimately benefiting the European regions involved.

In total, three interregional study visits have taken place within the INTEGER project to know, exchange and learn first-hand with key social, digital business innovators and facilitators or promoters of Catalonia (15.02.2023), Krakow (28/29.03.2023) and Hamburg (30/31.03.2023). The study visits served as the first networking of the actors from the quadruple Helices in the regions and helped to collect ideas, identify challenges, and problems for cooperation with each other. The lessons learned fed the subsequent tasks and further implementation of the INTEGER project.

1.2 Structure of the deliverable

As stated above, the report delves into the three visits conducted under the framework of the INTEGER project. Firstly, it explores the Catalonia case, followed by the visit to Krakow and lastly, the Hamburg visit study. Each section provides an overview of the contextual data, highlights the discussions and cases presented in each setting and summarises the key takeaways. The

report concludes with global insights drawn from these visits and includes a list of the references used throughout the document.

1.3 Methods

The methodology employed in crafting this deliverable primarily revolved around on-site visits and meticulous observations in the three distinct contexts which are based on a number of sources: notes taken by the project partners, audiovisual records, auto-ethnographic record which have been then collected by the responsible team of the task. Our approach has predominantly featured:

- on site workshop, debate sessions and co-creation techniques, and
- knowledge exchange through the project digital platform, which has been designed to facilitate a profound exploration of diverse experiences and foster the exchange of valuable insights and challenges.

In line with the core project objective, prioritising knowledge co-creation with stakeholders is pivotal to collaboratively devise solutions that yield benefits for all involved parties.

1.4 Synergies with other tasks and deliverables

The 3rd INTEGER' Work Package focuses on using regional Innovation Ecosystems as Col·laboratory Testbeds to achieve specific goals. It aims to generate co-creation arenas for nurturing competences and values within the INTEGER intra-regional col·laboratories, reinforcing strengths and opportunities at the city and regional levels (including rural and remote areas in the case of Catalonia) and developing innovative skills across the EU INTEGER community. This process also involves addressing weaknesses identified in WP2 by learning from and co-evolving with other European regions. In this context, the relevance of D3.3, the "Report on main features of the 3 regional Innovation Ecosystem Models," is particularly significant. This report involves on-site visits to deepen the study cases, providing valuable insights and context for understanding how the INTEGER innovations can contribute to strengthening and integrating these ecosystems while fostering economic, social, and digital innovation skills across Europe. These visits have served as a pivotal step in aligning the goals of the INTEGER project with the specific challenges and opportunities presented by each region.

2 Catalonia Case Study



Image 1. Catalonia INTEGER Study Visit.

On the 14th and 15th of February 2023, a two-day Kick off meeting was held in Barcelona between the different European partners of the INTEGER project. On February 15th, local organisations from the Catalonia Health and Welfare Col·laboratory, who previously showed interest in the project, were invited. Some of them have signed the adhesion document.

Catalonia's health sector stands as a pivotal and innovative industry, contributing significantly to the region's economic strength. Remarkably, it accounts for nearly 9% of Catalonia's GDP, illustrating its profound impact on the local economy. According to the 2022 Catalonian BioRegion Report, a collaborative effort led by Biocat, Catalonian Bio & HealthTech and ACCIÓ, the life sciences sector alone represents a substantial 8.7% of Catalonia's GDP. This thriving sector is home to over 1,350 companies, which collectively export more than 53% of Spain's health and life sciences products. Impressively, more than 247,000 individuals are employed within this sector, constituting 7% of the working population. In the year 2022, health startups in Catalonia raised a noteworthy 445 million euros in investment.

ACCIÓ's data underscores the region's entrepreneurial spirit, with over 2,000 startups currently operating in Catalonia. This number reflects a 6.3% increase from the previous year, indicating the growth and vibrancy of the startup ecosystem. In 2022, Catalonian startups secured a total of 1,653 million euros in investment, marking a 4.3% increase from the previous year and setting a historic record, as per ACCIÓ's analysis based on the Dealroom database.

When analysed from a sectoral perspective, health emerges as a dominant force within the Catalonian startup landscape, constituting 16% of all startups. Other prominent sectors include business services and software (12%), ICT and mobile technology (6%), food (5%) and finance (5%). This diversified entrepreneurial ecosystem underscores Catalonia's position as a hub for innovation and economic growth, with the health sector leading the way.

2.1 Catalonia Study Visit Agenda

Below the agenda for the study visit in Catalonia:

14:45. Arrival and check-in

15:00. **Institutional welcome**. At i2Cat Foundation by Toñi Caro, INTEGER Coordinator.

1. Catalonia Health Department. Ana Bocio. Deputy General Manager Health Promotion. Public Health Responsible.
2. Catalonia Col·laboratori Health & Wellbeing. Rafel Nualart . DST (Digital Society Research area). i2Cat Foundation.
3. Hamburg Government. Kai Schnackenberg.
4. Jagiellonian University, Jolanta Perek-Białas.

15:30. **Co-creation Session 1**

16:00. **Inspiring thematic case presentations:**

1. Ageing. Senior Lab. Lluís Pallejà from Reus Ciutat Sàvia.
2. Pollution & healthy cities. Marta Rofin. Bax & Company. Healthy Urban Generator.
3. Nutrition. Rosina Malagrida, head of the Living Lab for Health at IrsiCaixa .
4. Social/Labor inclusion. Citizenship Project for Young People. Issa Malick from AEMA Foundation.
5. Physical exercise. Biwel app. Oriol Aragay. Biwel.

16:30. **Networking Coffee Break!**

16:50. **Co-creation Session 2:**

- Sharing experiences and personal cases.
- Expectations and 'win-wins'.

17:45. **Wrap Up**

17:55. **Next steps & closing**

18.00. **Networking Coffee break for a future wellbeing!**

Questions for co-creation session 2: Sharing experiences and personal cases.

- What is your own specific and concrete added value or know how.
- What type of unique product(s) or service(s) do you have?
- Identify potential or existing Minimum Viable Product and/or Services (specially within the social innovation spectrum).

Expectations and win-win definitions:

- Indicate governance challenges for the 4-helix collaboration.
- How do you envisage INTEGER supporting your regional quadruple ecosystem to bring closer and quicker Minimum Viable Products or Services to the market and society.

2.2 Main Contributions from the Co-creation Workshops done in Catalonia

During INTEGER's visit to Catalonia, more than 50 persons participated in a series of workshops conducted to co-create ideas with diverse stakeholders across a range of crucial topics, including physical exercise, labour inclusion, nutrition and healthy living, pollution and health in cities and ageing.

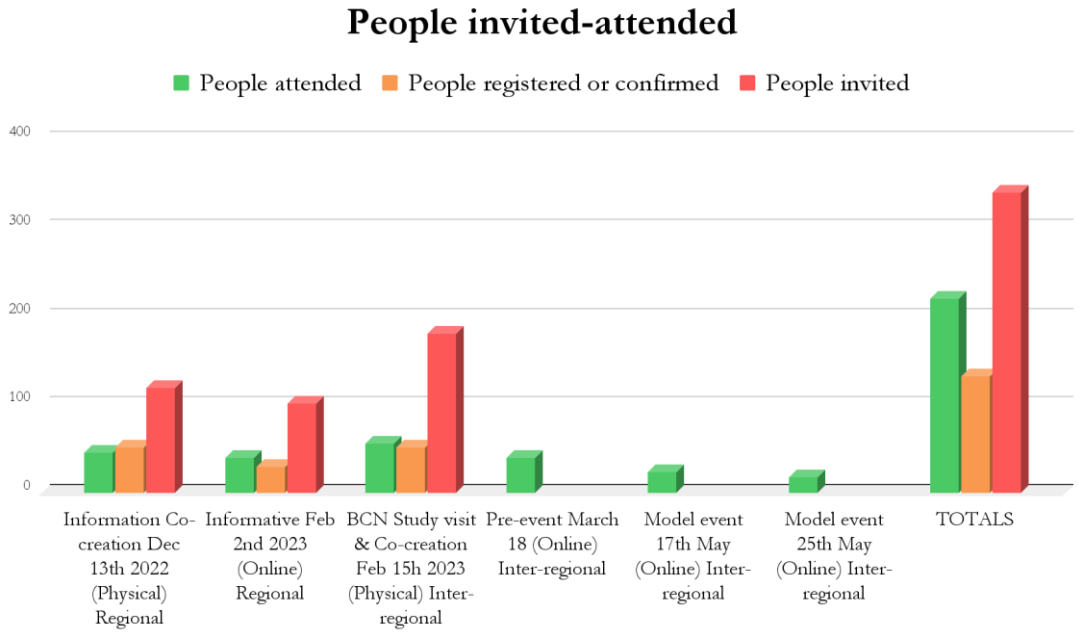


Image 2. Catalonia INTEGER Study Visit Attendees.

In terms of participation, extensive efforts were made to reach out to potential participants for the initial events, resulting in 339 invitations extended to prospective co-creation event attendees. The outcome was positive, with over half of the invitees, a total of 134 individuals, ultimately took part in at least one of the six events. All agents invited were already members of the Catalonian Col·laboratory on Health and Wellbeing launched in April 2021 (Caro, 2023, 2011)[1].

These workshops served as platforms for collaborative responses to the challenges posed by these critical issues. The following parts showcase the primary ideas that emerged from a selection of these workshops:

2.2.1 Fostering an innovative ageing ecosystem co-creation and 4 Helix Collaboration

The Ageing Co-Creation Workshop served as a turning point gathering, bringing together stakeholders from diverse backgrounds and expertise, all united by the shared goal of transforming the health and wellbeing landscape from different angles, types of initiatives and

[1] Caro-González, A. (2023). Towards a More Inclusive triple transition and Quadruple Helix Innovation Ecosystems: the case of the Catalonian Col·laboratori on Health and Wellbeing Within the INTEGER Project. Slovenský národopis, 71 (3), 209–226

sectors. Several key takeaways from the workshop resonate with the principles of innovation ecosystems and the 4 Helix collaboration model:

1. **Identifying Common objectives and ideas:** The workshop laid the foundation for fostering an innovative health and wellbeing ecosystem by identifying common objectives and ideas. This shared vision is the cornerstone of effective collaboration, with each helix—academia, industry, government, and society—contributing its unique expertise.

2. **Listening and mutual understanding:** Effective collaboration thrives on active listening and mutual understanding. In the context of a health and wellbeing innovation ecosystem, this means acknowledging and respecting the perspectives and concerns of each stakeholder, fostering a culture of open dialogue and exchange.

3. **Consolidating communication channels:** Building strong communication platforms is essential to maintain active engagement across the four helices. These common spaces serve as a hub for sharing insights, updates, and opportunities for collaboration, further strengthening the interconnected ecosystem.

4. **Clarifying collaboration interests and outcomes:** The study visit emphasised the significance of clarifying the initial interests by all participants and the expected outputs resulting from the collaboration. In an innovative ecosystem, these outcomes extend beyond immediate results to encompass societal and long-term impacts, highlighting the holistic nature of the complexity of health and wellbeing challenges.

5. **Finding the "middle way":** The common motivations and interests of stakeholders from the four helices represent the "middle way" that drives innovation. This consensus is crucial for aligning diverse objectives and values in the pursuit of innovative solutions to address the complexities of health and wellbeing.

6. **Adaptability, sustainability, and medium/long-term social impact Bonds:** The need for adaptability among different partners and agents is essential for addressing the evolving nature of health and wellbeing dynamics. Social impact bonds and similar mechanisms provide financial support to initiatives that deliver meaningful social impact.

7. **Transfer of products and services:** In the context of an innovative ageing ecosystem, exploring opportunities for the transfer of products and services between stakeholders is paramount. This includes identifying funding mechanisms to support these ventures.

8. **International networking for innovation:** The study visit recognised the value of international networking in fostering innovation. Collaboration on a European/international scale enables the exchange of innovative ideas and the development of cutting-edge products and solutions that can benefit societies worldwide.

9. **Common interests and resources:** The pursuit of common interests and the pooling of resources are fundamental principles in the 4 Helix model. Col·labers work collectively to leverage shared resources and achieve mutually beneficial outcomes.

10. **Alternative financing search:** Although there were no investors present, the need to explore alternative financing sources for social innovations was emphasised. Ideas

began to be gathered to work in this direction both in the model event and in anticipation of the regional Col·laborathons, thus fostering a proactive discussion on how to secure the necessary financial support to put innovative initiatives into practice and ensure they are sustainable.

In summary, the Catalonian Study Visit not only provided a platform for collaboration but also exemplified the principles of innovation ecosystems and the 4 Helix model. By identifying common objectives, listening, and understanding each other and clarifying collaboration outputs, stakeholders could collectively address the intricate challenges of ageing. The focus extends beyond immediate results, stressing the importance of long-term societal impacts. As stakeholders across academia, industry, government, and society come together, the quadruple helix approach can drive innovative solutions, foster adaptability, and secure the resources necessary to enhance active and healthy ageing. The ultimate aim is to break the direct link between ageing and fragility, promoting early disease detection and effective treatment and fostering integrated care that bridges health and social aspects—a testament to the power of 4 Helix collaboration in addressing the complexities of ageing.

2.2.2 Elevating co-creation on pollution & health cities

The Pollution & Health Cities Co-Creation Workshop delivered a wealth of insights that not only reflect the principles of an innovation ecosystem but also highlight the significance of the 4 Helix collaboration model. Here's a closer look at some critical takeaways:

1. **INTEGER as "The Bridge":** INTEGER stands as the bridge that connects all stakeholders, helices and transcends barriers. As an essential link in the innovation ecosystem, it plays a pivotal role in facilitating collaboration and driving collective action.
2. **Depoliticising mechanisms:** A key challenge identified was the need for mechanisms to depoliticise processes. In an effective innovation ecosystem, political agendas should be set aside in favour of common objectives and collaborative solutions.
3. **Shared/common budgets:** A fundamental aspect of the 4 Helix model is the pursuit of shared and common budgets, with the aim to enhance collaborative efforts and help overcome budget-related barriers.
4. **Counting social benefits:** Determining how to quantify and account for social benefits is essential in an innovation ecosystem. Accurately assessing the impact of collaborative initiatives on society as a whole is a crucial goal.
5. **Avoiding silos:** A common challenge discussed was the tendency to work in silos, often neglecting broader societal considerations. An effective innovation ecosystem encourages holistic thinking and cross-disciplinary collaboration.
6. **Polarisation challenges:** Overcoming polarisation is vital in fostering an ecosystem where diverse stakeholders can collaborate effectively. Avoiding silos and promoting positive, constructive discussions is key to this goal.
7. **Alignment with positive discussions:** Political alignment with constructive discussions and common social business goals is crucial. Ensuring that political agendas support and align with the broader objectives of the ecosystem enhances collaboration.

8. **Public procurement:** Aligning public procurement processes with coherent criteria that consider indirect citizen benefits, such as health and climate objectives, is vital to advance environmental and societal goals.
9. **Transversal goals:** Identifying and defining transversal goals in specific health fields was highlighted as a need. A lack of common objectives and shared visions can impede progress in an innovation ecosystem.
10. **Open tools:** Accessibility to open tools and resources at public sites is an essential element in creating an inclusive and open innovation ecosystem.
11. **Measuring social return on investment (SROI):** Accurately defining the return on investment for both citizens and companies is crucial to ensure that collaborative initiatives are effective and benefit all parties.
12. **Long-Term thinking:** The workshop recognised that political cycles are often too short to deploy long-term projects successfully. An effective innovation ecosystem prioritises and plans for long-term sustainability.
13. **Competencies among organisations:** Promoting competencies and capabilities among organisations is integral to ensuring a thriving innovation ecosystem.
14. **Joined-Up budgets:** Integrating shared budgets is a significant enabler of collaborative projects and streamlined processes in a 4 Helix model.
15. **Leveraging research centres:** Collaborating with research centres, such as ISGlobal, to address the specific research needs that can contribute to an innovative and health-focused ecosystem. ISGlobal in Barcelona is a prominent research centre formed from collaborations with the Hospital Clínic, Parc de Salut MAR, and universities such as the University of Barcelona and Pompeu Fabra University. Its focus is on generating scientific knowledge, promoting an innovative and health-centric ecosystem.

In conclusion, the pollution & health cities co-creation workshop underscored the central role of INTEGER in bridging stakeholders, helices and overcoming barriers to foster a cleaner and healthier urban environment. The principles of the 4 Helix collaboration model were evident throughout the discussions, highlighting the importance of aligned objectives, common budgets, depoliticized processes, and the measurement of social benefits. By addressing these key takeaways, INTEGER can further enhance its role in an innovation ecosystem, driving collaboration and collective action for the betterment of our cities and our shared well-being.

2.2.3 Social impact landscape in nutrition and healthy living

The nutrition and healthy living co-creation session delved into the realm of social impact, offering profound insights that align with the principles of an innovation ecosystem and the 4 Helix collaboration model. Here are key takeaways discussed:

1. **Defining social impact:** The session posed a fundamental question: What does social impact mean? It became evident that the concept of social impact is nuanced and multifaceted, reflecting the diverse ways projects can contribute to societal well-being.
2. **Social benefit vs. social Focus:** Participants explored whether any project providing a social benefit could be deemed a social impact project, or if the label is reserved solely

for projects with a distinct social focus. This nuanced distinction underscores the importance of clarity and intention.

3. **Merging social-driven and business-driven approaches:** The session emphasised the need for mechanisms capable of merging social-driven and business-driven perspectives. Effective solutions often arise when these two approaches align, particularly when viewed through the lens of the patient experience.

4. **Social design and personal traits:** A critical aspect of an innovative ecosystem is social design, which considers the vast diversity of personal traits, needs and preferences. Personalization is a key element in driving social impact.

5. **Involving a variety of stakeholders:** Successful social impact initiatives necessitate the involvement of a wide array of stakeholders, creating a multi-stakeholder collaboration. This diverse input ensures holistic solutions that address the varied facets of the challenge.

6. **Companies with new values:** Modern companies, especially those fostering innovation, are no longer solely profit-driven; they actively seek to address social needs and issues. This shift reflects an evolution towards more holistic corporate values.

7. **Government and university roles:** Innovation structures emerging from government and universities are pivotal in promoting the innovation ecosystem. They serve as foundational pillars, connecting universities, companies, citizens, and public administrations in a unified effort.

8. **Educational and outreach programmes:** These programs play a vital role in nurturing an innovative ecosystem by educating and engaging the next generation of innovators. They also facilitate outreach to a broader audience, ensuring that innovation reaches all corners of society.

In conclusion, the Nutrition and Healthy Living Co-Creation Session not only underscored the intricacies of social impact but also revealed the potential for innovation and collaboration in this vital area. By considering the diverse and personalised needs of individuals, involving a wide spectrum of stakeholders, and aligning social and business-driven objectives, we envisaged the possibilities of harnessing the power of the 4 Helix collaboration model to drive societal impact.

Furthermore, the session highlighted the pivotal roles of government, universities, and educational programmes in fostering more innovative and vibrant ecosystems. As we navigate the complex landscape of nutrition and healthy living, these insights will serve as guiding principles in our journey towards improved well-being for all.

3 Krakow Case Study



Image 3. Krakow INTEGER Study Visit.

3.1 Introduction Krakow economic capital

Krakow has established as a top innovation hub in Poland, drawing attention from across the country and beyond. With an impressive presence of over 500 technology companies, the city is at the forefront of technological advancement and innovation. These companies drive progress, research, and development in various tech-related fields. To support its burgeoning tech ecosystem, Krakow boasts a substantial workforce of approximately 50,000 IT employees. This talented and skilled pool of professionals contributes to the city's reputation as a hub for IT and tech-related industries.

In addition to its workforce, Krakow also nurtures the next generation of tech leaders with approximately 9,000 students specialising in IT-related fields (as there are many of universities in the region, which are the great source of knowledge so needed in developing new ideas). This focus on education ensures a steady influx of fresh talent and innovative ideas into the local tech landscape. Krakow's dedication to fostering innovation is evident through its vibrant events scene. The city hosts more than 750 events each year, providing opportunities for networking, knowledge exchange and collaboration within the tech community.

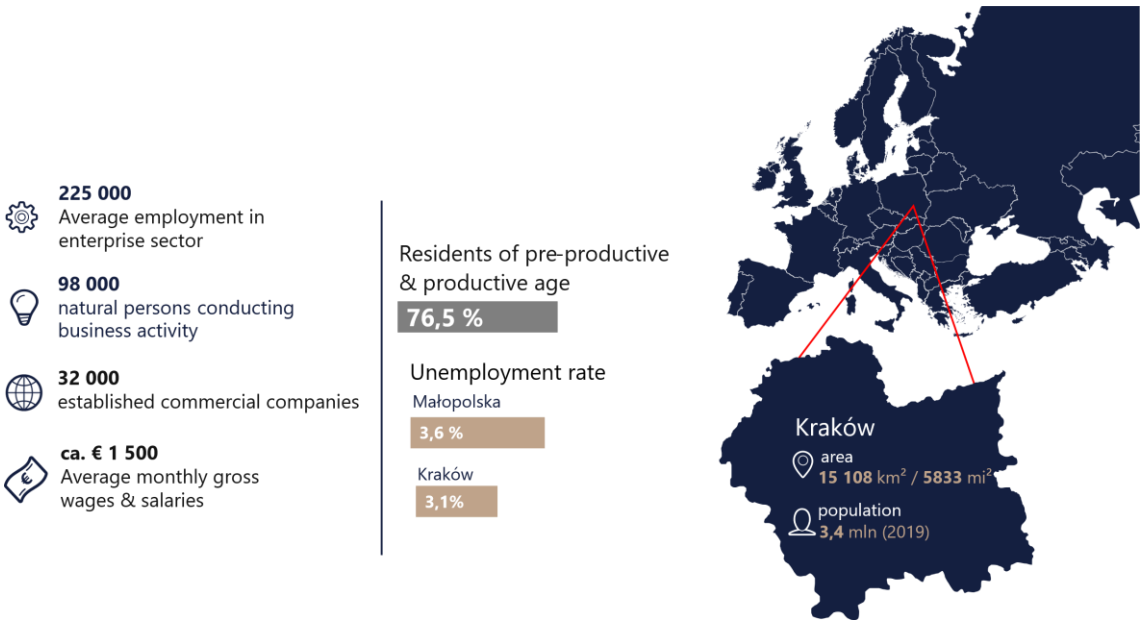


Image 4. Krakow economic capital data.

Furthermore, Krakow supports tech startups and emerging businesses through a network of more than 30 incubators and co-working spaces. These spaces serve as breeding grounds for innovation, offering resources, mentorship, and a collaborative environment for aspiring entrepreneurs. In summary, Krakow's status as a top innovation hub in Poland is underscored by its thriving tech ecosystem, encompassing a multitude of technology companies, a substantial IT workforce, a strong educational foundation, a bustling events calendar and a supportive infrastructure for startups and emerging businesses. This makes Krakow a prime destination for tech enthusiasts, entrepreneurs and professionals looking to engage with the dynamic world of innovation.

3.2 Krakow Startup Ecosystem

Krakow Technology Park, with a remarkable 25-year presence in the industry, stands as a leading business support organisation and a cornerstone in the technology landscape. Functioning as a one-stop-shop for technology companies, it serves as a European Digital Innovation Hub, fostering collaboration between public administration, academia, and the private sector. With robust incubation and acceleration programs, a cutting-edge robotic showroom, and a dedicated team of 70 employees, the park has made its mark through 20 impactful projects, both on a national and international scale. Its impressive network includes over 400 large industrial companies, more than 300 startup alumni from their incubation and acceleration programs, over 100 Tech SMEs as tenants and support from more than 35 seed funds and business angel investors, solidifying its position as a driving force in the tech and innovation ecosystem.

3.3 Krakow Case Study

During our two-day visit to Krakow, we delved into various cases, focusing on the latest innovations in elderly care and well-being.

First day of the study visit in Krakow started from the meeting at the Jagiellonian University, Col. Novum building where partners, participants and invited guests came to learn about the project and share their experience of how innovations are supported in Małopolska. The presentations of university and particularly the Center of Evaluation and Public Policies Analysis, Krakow's Technological Park as partners from Poland were first shown, with a few aspects to clarify by partners. Later the Center for Technology Transfer CITTRU supporting innovators was presented explaining innovations which are already commercialised, as well how the Center organises the ecosystem linking academia and business (examples were from health, medicine). At the end of this session a description on how the public institution, which is under the dependency of the Regional Government, called Marshal Office, the Regional Center of Social Policy in Krakow is already over many years promoting and boosting many social innovations and examples presented show simple solutions with use of technology which can have an impact on the quality of life of persons with disabilities. After the presentation, it was noticed that the perception that such institutions can contribute to social innovation development and transfer to market is not visible.

The agenda included the following objectives:

1. Identification of best practices and lessons learned.
2. Facilitating connections among different models to break down silos.
3. Identifying common challenges and obstacles faced by social innovators in integrating their initiatives.
4. Exploring collaborative synergies within the 4H framework.

These objectives were addressed through a series of workshops involving approximately 25 participants. The workshops were moderated discussions. The participants worked in smaller groups and there was a forum summary after each round. The summaries were recorded for later preparation of the summaries.

On the second day of the study visit, which took place on March 29th, our focus shifted to a deeper comprehensive exploration of the well-being and health ecosystem. The agenda comprised initiatives and businesses driven by both social and technology innovators. The primary goals of this day were as follows:

- Presenting a variety of solutions in the health and well-being sector that have been developed in the region through the collaboration of social and digital innovators.
- Establishing a robust bridge between stakeholders representing the 3H (health, happiness, and humanity) and 4H sectors.
- Visualising a joint governance and business collaboration model for both social and digital innovators.

KPT, as a business support organisation specialising in creating a common space for stakeholders to thrive their business plans (by organising hackathons, acceleration programmes and co-creation sessions addressing local or regional challenges), extended an invitation to participants representing various 4H organisations. These stakeholders included social innovators, technology-driven innovators, public sector organisations, clusters, business support organisations and NGOs.

The second day was divided into two parts: presentations of innovative solutions and a co-creation workshop session. During the presentations we had the opportunity to learn about local projects aimed at improving the quality of life of citizens. These initiatives showed the dedication and commitment of local actors to drive positive changes in their communities. In the co-creation workshop session, we participated in collaborative discussions and brainstorming sessions. Our main goal was to find ways to cooperate between various stakeholders within the 4H framework to achieve a more significant social impact. By bringing together diverse perspectives and knowledge, our goal was to amplify our collective efforts and create positive, lasting change for the community at large.

3.3.1 Krakow Study Visit Agenda

Next, you can find the agenda for the two days of our case study visit:

March 28th

9:30 - 9:45: Welcome and introduction to Malopolska 3H & 4H actors, challenges, and ecosystem

Jolanta Perek-Białas, The Jagiellonian University

Małopolska ecosystem of startups and innovators as a drive for boosting social innovation

Monika Machowska, Krakow Technology Park

9.45 - 10.15: Aging Policy in the City of Krakow

Jolanta Perek-Białas, The Jagiellonian University

10:15 - 10:30: Innovation for social change - Jagiellonian University experience

Krystian Gurba, Centre for Technology Transfer CITTRU

10:30 - 11:00: Social Innovation Incubator – from vision to action. Best practices

Katarzyna Ociepka, Regional Center for Social Policy

Coffee, Tea, Water - during a meeting will be served.

11.00 - 11.45: Moderated discussion on current status and key challenges

Moderation: Jagiellonian University

12:00 - 13:30: Transfer to Zabłocie and Lunch

Venue: ul. Zabłocie 20/22, Department of Innovation and Entrepreneurship of Municipality of Krakow

13:30 - 14:15: Welcome

Anna Okońska-Walkowicz, Plenipotentiary of Mayor of City of Krakow for Senior Policy, Healthy Leader 50 (WHO)

Interactive presentation of Integer project and partners

Toni Caro, I2cat Senior Researcher-DST Unit i2CAT

14:15 - 16:00: How to be supported as social innovator in Małopolska?

Case study 1 – Merkury – a simulator of modern self-service kiosks (Bartosz Kosiński, Mirek Bohatkiewicz)

Case study 2 – QR codes QR to help seniors (Marta Salawa)

Workshop session #1:

- Identification of best practices and lessons learnt
- Identifying common challenges and barriers for integration of social innovators
- Connecting people to cross the silos models
- Looking for joint synergies in 4H

Moderation: Jagiellonian University & Krakow Technology Park

16:15 - 16:30: Closing and reflection.

March 29th

9:00 – 9:15: Towards wellbeing and health – best practices from Life Science Krakow

Kazimierz Murzyn, Director Life Science Krakow

9:15 - 10:00: Engaging and empowering stakeholders

Case study 1 – Maria Wojtacha, Internationaler Bund Polska

Case study 2 – Arkadiusz Tomasiak, Spółdzielnia Socjalna Albert

Case study 3 – Wojciech Przybylski, Parenting Technologies

Case study 4 – Tomasz Mikosz, FindAir

Case study 5 – Karolina Gubała, ARCHEZJA, Fundacja Wspomagająca Wychowanie

Coffee, Tea, Water - during a meeting will be served.

10:00 - 11:30: Workshop session #2:

Identification of activities needs and bottlenecks and their analysis in the field of health, wellbeing, and senior policy.

Main quadruple helix collaborations initiatives
Minimum Viable Products and Services for market and society
Existing mechanisms for merging social-driven and business-driven innovations.
Identification of opportunities and barriers

How can INTEGER support regional innovators ecosystem?

Moderation: Krakow Technology Park

11:30 – 12:00: Sum Up – reflections and recommendations

12:00: Lunch

3.3.2 The main challenges for quadruple Helix collaborations in Krakow

Following that, Table 1 provides a structured overview of the primary challenges that emerged after two days of collaborative work, which remain to be addressed:

1. Social value	2. Financing scheme	3. Sustainability
"Social value" label	Financial stability & viability of the social driven projects	Concept of learning organisations by Peter Senge
"Social value" of social enterprise	Participatory budget focused on promoting collaboration between social and technology innovators	Problem – selection of projects and their sustainability
Representations of citizens	Dedicated social budget	Law for 4 H collaborations
Win-win situation	Trigger for profit	Involvement of right decision-makers (not present at the table)
Understanding of different perspectives and languages	Public procurement procedure vs. public benefit organisations	Regulation-Labelling-Relation-Recognition
GAP between business & social needs value	Investors vs. crowdfunding as a new way to finance social innovations	Talent attraction is a problem for social innovators
Process of labelling in business-driven projects	Invitations for NGO/Public for public projects (no others)	Recognition & promotion
Channels for social innovation companies		

Table 1. The main challenges for quadruple Helix collaborations in Krakow.

3.3.3 Conclusions

The first need and main message after the workshop was that a **definition of 'social innovation'** is needed before partners from different institutions/innovation areas can start working together. Because each separate partner/stakeholder understands it differently, and it is difficult to look for solutions if we speak a language on a 'different level'. This is one of the learnings that has been later taken into consideration when drafting the INTEGER model (Module 1: Common language)

Each partner looks at 'social innovation' from a **different perspective**, and it is important to understand the context, including opportunities but also obstacles of dealing with transfer of social innovations further.

From the perspective of the partners, **'social innovation' is understood at a different level** - the successive stages of (1) finding solutions, (2) implementing the solutions in real practice, with piloting, testing and evaluation and then (3) promoting new solutions and sharing solutions beyond the group involved in the process. E.g., innovators think about solving implementation problems - one group has developed a 'good practice guide' for reaching decision makers and being heard.

Institutions are responsible for implementation and solving the problems/challenges which innovators face – **the institutions look for sources of funding, but also sustainability of solutions in the future** (further funding for implementation, not just as one-off start-up grants).

A question raised was the copyright issues. As social innovations are usually free – by default in many cases should be offered for free- and if they are replicable, it is not clear how the legal

aspects of copying them from one region to the other will be working. Hence, a conclusion is the importance of paying attention to the process of **open access and open innovation**.

There is a need to gather needs, expectations and which ones are important and how the cooperation could be developed in the same common fields/domains. There are always **lessons to be learnt from each type of partner** (good practices, but also failures shared for others to be avoided). Although the innovations are different, those involved in this process need to establish together a joint platform of what and how they understand social innovation itself and the whole process before starting discussions and collaborations. Otherwise, it will not work effectively.

Looking **for joint synergies in 4H - building bridges between the target and the partners**, it is also necessary to look for **common threads of agreement, common needs, common problems,** and this is also a topic for discussion on the level of this same understanding under the term 'social innovation'.

By bringing together people **'doing' social innovation**, these different perspectives allow overcoming the silo thinking and acting by bringing in collaboration with all interested stakeholders.

4 Hamburg Case Study



Image 5. Hamburg INTEGER Study Visit.

4.1 Introduction Hamburg economic capital

Hamburg's ecosystem, with large companies and advanced technology, supports one of Germany's thriving startup scenes. The Gesundheitswirtschaft (GWHH), owned by the government, plays a vital role in addressing the expanding health economy in Hamburg. Over the years (from 2011 to 2022), this entity has successfully executed numerous projects, encompassing various areas such as civic engagement, enhanced healthcare training, psychological support, and promotional campaigns. Notably, one of the noteworthy outcomes from their efforts is the "Digital Health Hub," which consists of 130 startups and 60 experts. This hub serves as a catalyst for collaboration among entrepreneurs within the social economy. It accomplishes this by facilitating connections with experts, aiding in project development, and providing support for pitches, among other things.

Another noteworthy initiative is the "eHealth" project, aimed at promoting the digitization of healthcare and fostering cooperation among key stakeholders in this domain.

Crucially, the projects undertaken by the Gesundheitswirtschaft are closely aligned with the societal needs of the local population, inherently carrying a strong social dimension. Furthermore, these initiatives prioritise collaboration with interest groups right from the project's inception, ensuring that they effectively address the community's specific needs.

4.2 Hamburg Study Visit

4.2.1 Agenda

Next, you can find the agenda for the two days of our case study visit in Hamburg:

March 30th, 2023

8:45 **Reception in the conference rooms in the Ministry**

9:00 **Opening speech** by Kai Schnackenberg, Free and Hanseatic City of Hamburg - Ministry of Labour, Health, Social, Family Affairs and Integration, Deputy head of division for international affairs and innovation

9:10-10:10 Cluster Agency GWHH **and the senior app** Mein Lido (foundation); Kai Schnackenberg & Matti Zeiger, project manager content & digital.

10:20 - 10:50 **Working group sustainable city health** (4helix), Rainer Fehr, speaker of the working group.

10:50 - 11:50 Optimedis (company that develops innovative forms of provision) by Dr. H. C. Helmut Hildebrandt, founder, and CEO.

Afterwards transfer to the University Hospital UKE

13:30 - 16:45 UKE, different visits like the 3d printing of medicines by Adrin Dadkhah.

Including: [...]

13:30 - 13:45 **Meeting and welcome**

Until 14:00 travel time

14:00 - 14:20 **Forensic medicine / Project NATON** (a subproject in NUM) by Benjamin Ondruschka, director of the institute of forensic medicine.

Until 14:30 travel time

14:30 - 15:00 **Deanery** / Viewing Campus Research II (including welcome by the Dean).

Until 15:15 travel time

15:15 - 15:45 Pharmacy of the UKE - 3D print of medicines; Dr. Michel Baer - head of the pharmacy.

16:00 - 16:30 **Visit to the "Institute for Infection Research and Vaccine Development" by** Marylyn M. Addo; director of the institute infectiology.

Until 16:45 Travel time / Escort to the meeting point & farewell

19:00 Dinner together

March 31st, 2023

10:00 – 11:30 Health innovation Port/ Philips company, Henrik Mencke, head of the health innovation port.

4.2.2 Selection of different projects visited

4.2.2.1 Optimedis

Optimedis is at the forefront of developing integrated regional care models in various regions, establishing a strong connection with INTEGER. These teams comprise a diverse group of experts, including health professionals and urban planners, totalling 35 individuals. They are responsible for overseeing multiple ecosystems in Baden-Württemberg, Hessen, and Thüringen.

During the presentation, the speaker emphasised that the success of a regional ecosystem hinges on the integration of numerous partners. Crucially, they highlighted the importance of appointing a regional population health manager, responsible for bringing together

stakeholders, civil society, and the healthcare system. This role is aptly described as an "INTEGRATOR" and bears a resemblance to the "Col·laber" position that will be further elaborated on within the INTEGER project.

Another notable point raised pertained to the business models for these integrated systems. A new value-based business model has emerged, one that extends beyond merely focusing on measurable health funds. This model primarily focuses on future savings. For instance, in the Kinzigtal region, an impressive €66.5 million was saved in the health fund, attributed to more efficient planning and management of services. The ultimate objective should be to underscore the long-term benefits that will accrue for society as well as for investors.

4.2.2.2 The Sustainable Health Working Group

The Sustainable Health Working Group is a dedicated and voluntary initiative. It was established in 2019 as an offshoot of the "Patriotic Society" and has since grown to include approximately 30 enthusiastic members who convene once a month.

The group's efforts have yielded a substantial body of work, including reports, research papers and the facilitation of workshops, all centred around the crucial theme of sustainable urban health in Hamburg. Additionally, the group has organised a noteworthy campaign addressing Hamburg's traffic issues.

Presently, the primary objective is to promote a culture of healthy living in the southwest of Hamburg. This mission involves a comprehensive understanding of local challenges and needs, with the ultimate aim of providing incentives for improvement. The focus here is on addressing the specific health needs of the community.

In essence, the working group serves as a dynamic "Think Tank," fostering in-depth discussions between economic stakeholders and health-related partners. This is achieved while vigilantly keeping a watchful eye on the societal demands and requirements that underpin their efforts.

4.2.2.3 UKE (University Hospital Eppendorf)

After visiting the Institute of Legal Medicine, the consortium was equipped with helmets and was allowed to visit the construction site of the newly built research Campus II.

Construction began in 2021 and is scheduled for completion by the end of 2024. The new research unit will have a total area of 18,000 m² and will provide space for 150 laboratories in the fields of bio - molecular and cell biology. After visiting the construction site, the founder of the IIRVD, Prof. Dr. Marylin Addo, welcomed the consortium and explained the cooperative concept of the institute. At the beginning she explained about running projects, working on Ebola vaccines and vaccine test networks. In relation to INTEGER, she gave insights about existing cooperations in the IIRVD. For example, in the DZIF (German Center for Infection Research), that includes institutions and persons from whole Germany and has been elaborated through the NUM (Network University Medicine). Another network she explained is the NKS (Network of Immunology infection Studies) where institutions from all over Germany are jointly doing experiments. Moreover, the Institute is participating in the NAPKON (Nationales Pandemie Kohorten Netz), which is a research network for COVID-19.

As the last item on the day's programme, the consortium was given an insight into the pharmacy of the Eppendorf University Hospital and the 3D printing of medicines project. This is funded by the ERD (European Regional Development Fund). The idea of the project is to use medical

wearables to send patient data directly to the pharmacy so that precisely tailored mixtures can be incorporated into drugs based on these.

The model is particularly suitable for diseases such as Parkinson, where the amount of active ingredient can vary significantly from patient to patient.

4.2.2.4 Phillips Health Innovation Port

Phillips is a big Dutch (Eindhoven) technology company founded in 1881 and first producing light bulbs. Since 1927 the company has been based in Hamburg. Nowadays, Phillips is mostly focussing on Health technology (X-Ray; Connected care, Personal Health). For that, they are also using co-creation processes. The company has 770,000 workers worldwide.

Starting in 2016, Phillips founded six “Innovation hubs” worldwide. The goal is to engage startups in the Phillips innovation processes. In this regard the “Health Innovation Port” in Hamburg is unique, not just collaborating and investing, but also giving a fixed structure to support the startups even with a workspace. In addition, they offer them a big network of companies and institutions that can help right from the start.

In the DACH market, the implementation of a global startup strategy found a robust foothold through the Health Innovation Port (HIP) initiative. HIP boasts an impressive 1,000 square metres of co-working and event space, providing vital support to 30 teams and involving a network of over 150 experts. Notably, this venture has catalysed public funding for ten startups, collectively exceeding one million euros in investment.

The success of the Health Innovation Port (HIP) can be attributed to three fundamental pillars: Location & Infrastructure, Community & Partner Network and Health Expertise & Mentoring. HIP serves as an unparalleled environment for nurturing health startups in Germany, with its strategic location and state-of-the-art infrastructure, an extensive and collaborative community and partner network and access to invaluable health expertise and mentoring.

INTEGER has already demonstrated its worth by connecting Optimedis with intriguing individuals and acquainting the organisation with Mein LIDO. Given Optimedis' strong emphasis on the health industry, INTEGER holds the potential to seamlessly integrate social elements into their work. The exciting prospect of collaborating on the design of a workshop for the European conference in Belgium could further strengthen the partnership and amplify their collective impact.

4.2.3 Conclusions

In the rapidly evolving landscape of health innovation, **startups play a pivotal role** in shaping the future of healthcare and wellbeing. Initiatives like the Health Innovation Port (HIP) demonstrate the power of collaboration and the support necessary to nurture innovative solutions in the field.

Optimedis, through their integrated regional care models and the notion of an "INTEGRATOR," exemplify how co-creation and the establishment of 4 Helix innovation ecosystems can drive meaningful change in healthcare. Their **value-based business models, focusing on long-term benefits**, underscore the potential for sustainable and impactful transformations in the healthcare sector.

Similarly, the Sustainable Health Working Group showcases the importance of proactive engagement in public health and the necessity for interdisciplinary discussions in creating

solutions that address the specific health needs of local communities. These efforts underscore the value of community-driven health solutions.

Moreover, UKE, Phillips and their involvement in research and **innovative healthcare technology underscore the importance** of research and technological advancements in healthcare. The utilisation of 3D printing and wearable technology in personalised medicine represents a forward-looking approach that can significantly improve patient care and treatment efficacy.

INTEGER, as a connecting force, has already demonstrated its ability to foster collaboration and amplify the impact of various health-focused organisations. By promoting inclusivity and the integration of social elements, INTEGER's role in designing workshops for European conferences can further advance the cause of health innovation, building on the principles of co-creation and interconnected, 4 Helix innovation ecosystems.

Collectively, these initiatives and organisations embody the essence of health innovation, illustrating the potential for transformative change in healthcare and providing a glimpse into a future where **cutting-edge technology, collaboration and community engagement are central to promoting health and wellbeing**.

5 CONCLUSIONS

The visits to Catalonia, Krakow and Hamburg have proved instrumental in advancing the INTEGER 4 Helix collaboration model, raising awareness on the need for inter-regional exchange, co-creation, and more connected innovation ecosystems. These visits laid the foundation for strengthened collaboration among:

a) project partners,
b) diverse stakeholders within each region, it was notably recalled in the three regions that the INTEGER project has offered the opportunity for actors operating in the same region and sector to have not had the chance to meet or exchange before.
c) actors from different regions exchanging models and experiences.
d) And facilitators (Col·labers to be) and startups.

All serving to enrich the INTEGER project and co-creation processes. Importantly, they underscored the potential for innovative, inclusive, and community-driven solutions that harness the power of collective action. By nurturing the 4 Helix framework and instilling a culture of collaboration, these visits acted as tangible examples of the transformative impact that interconnected ecosystems can have. They further solidified the 4 Helix model as the driving force behind innovative solutions with enduring societal well-being at their core.

These interactions exemplified how embracing the quadruple helix, fostering a collaborative ethos, and engaging a diverse range of actors contribute to the flourishing of innovation ecosystems. Such collaborative endeavours pave the way for accelerated development and the introduction of Minimum Viable Products or Services, demonstrating the potential to address complex societal challenges in a comprehensive manner. With INTEGER's focus on promoting shared vision, the visits emphasised the importance of proactive collaborations that drive innovation and create positive societal outcomes. As INTEGER advances on its mission to nurture regional quadruple helix ecosystems, these visits served as an inspirational basis and lessons learned to implement and accomplish the subsequent tasks and phases of the project work plan.

Funded by the European Union

REFERENCES

The links to all the training and learning opportunities are published on the platform and the website. Concretely under the following sections.

- Caro-Gonzalez, A. (2023), Transformative Governance for the Future. Navigating Profound Transitions, SpringerBriefs in Business, available at: https://eohforgood.com/eoh-for-good-book/

- INTEGER platform (theglocal.network): Facilitator's corner project group https://integer4h.theglocal.network/ideas/facilitators-corner

- The INTEGER YouTube channel: https://www.youtube.com/@INTEGER-Collab/videos