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Course of Managing And Financing The Transition

GrInn.City: fostering the transition towards Green and Innovative Cities

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Introduction

We live in a time when everyone talks about sustainability, innovation, digital and ecological transition, but few actually know what this is about and especially what steps need to be taken to achieve these goals. What we can take for granted is that we are lagging behind on the transition to a more sustainable world, and national governments themselves admitted at COP26 in Glasgow that they are not doing enough to meet their Paris Agreement commitments, recommitting to meet to review some strategies by the end of the year at COP27 in Egypt. But sustainability cannot be discussed by governments alone, it is a commitment that involves all levels. Let us take a step back: sustainability by definition embraces three dimensions, the environmental, the economic and above all the social, so when talking about sustainability, rights and participation must be considered. In response to these needs, new ways of operating and innovating have taken hold. Moving through the broader concepts of cooperation and collaboration to more specific ways of operating such as Open and Collaborative Innovation[1] and Design Thinking[2,3], these are ways of operating that are not based on the classic top-down or bottom-up paths, but that transversally channel the interests of all stakeholders involved in the processes. Obviously, it is not always easy to act in this way, either because there is a lack of skills, or because companies are not ready to do so, or because people are not convinced that this is the most effective method, which is often seen as 'charity' and not as innovation.

This is the mission of the start-up company GrInn.City, to make the ecological and digital transition affordable for everyone. Since it is not easy to get different actors such as companies, public administrations, research bodies and local communities to collaborate, GrInn.City proposes itself as a System Integrator to facilitate the realisation of projects by facilitating the creation of multidisciplinary and heterogeneous partnerships for the types of actors involved.

Clearly, launching a start-up based on innovation and sustainability at a time when everyone is talking about them is not easy, so this thesis will serve to understand why this is the right time, what are the favourable conditions that accompany the birth of GrInn.City, and above all what differentiates us in the market to be able to generate a measurable and effective impact, also involving communities in

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[1] ESPOSITO DE FALCO S., RENZI A., ORLANDO B., CUCARI N., 2017, *Open collaborative innovation and digital platforms*, Production Planning & Control, The Management of Operations
[2] BROWN T., 2008, Design Thinking, *Harvard Business Review*, Link:
https://readings.design/PDF/Tim%20Brown,%20Design%20Thinking.pdf
[3] BRENNER W., UEBERNICKEL F., 2016, *Design Thinking for Innovation*, Springer, University of St. Gallen

innovation processes. This thesis therefore aims to find an answer to the question: is GrInn.City the right tool to facilitate the transition by managing to involve all actors in the quintuple helix (private, public, academic and research, community)?

This thesis explores the Italian scenario in which GrInn.City was born and the opportunities it can seize, analysing the tools it employs to operate and the theoretical principles on which its methodology is based, going on to understand whether this start-up is the right tool to facilitate the transition. In the first chapter, the scenario will be analysed, from the European and national funding scheme to the problem of fund absorption that prevents the proper utilisation of European funding while creating an important market opportunity. In the second chapter GrInn.City will be presented, starting with a description of the start-up and the ecosystem in which it was born, then moving on to an analysis of the methodologies employed and the expertise on which it is based, and then going on to justify its work through theoretical principles. In conclusion, an analysis of future scenarios will be made and the first project on which the GrInn.City team is working will be presented.

Theory and literature review

As we will see later on, GrInn.City sees itself as a system integrator of multidisciplinary partnerships to carry out projects, so in theory let us look at some of these fundamental concepts and how they have been addressed in the literature.

System Integrator

Hobday et al.[4] describe system integration as the capabilities that allow companies and other actors to combine high-tech components, subsystems, software, skills, knowledge, engineers, managers, and technicians to manufacture a product in competition with other providers. System integration competence is the capability required to handle outsourcing as well as "joint sourcing" and "insourcing" in order for a system integrator business to reap the benefits of both outsourcing and vertical integration at various points of the product life cycle. Grant and Baden-Fuller[5] further develop this concept, they believe that companies may be compelled to join new, unrelated knowledge and innovation networks due to the rising complexity and diversity of technology and skills. This poses the challenge of creating common knowledge assets when interacting with technology-rich and

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[4] HOBDAYM, DAVIES A., Prencipe A., 2005 *Systems integration: a core capability of the modern corporation, Industrial and Corporate Change*, p. 1109–1143, Link:
https://academic.oup.com/icc/article/14/6/1109/693422?login=true

[5] GRANT R., BADEN-FULLER C., 2004, *Knowledge Accessing Theory of Strategic Alliances*, Journal of Management Studies, Link: https://onlinelibrary.wiley.com/doi/full/10.1111/j.1467-6486.2004.00421.x

knowledge-intensive network enterprises (suppliers). According to Brusoni et al.[6], networked innovation necessitates a two-pronged approach: variety and specialisation among network actors facilitate the discovery of novel solutions, while varying degrees of integration among network actors coordinate dispersed learning processes carried out by network actors. Accordingly, they explain the significant function of the system integrator in achieving a balance between specialisation and integration. The real strength of SI according to Paasi et al.[7] lies in being able to realise co-creation networks without having to invent anything new, but simply by combining existing knowledge and using it in an innovative way.

Multidisciplinary partnerships in innovation system

A different approach to innovation was born with the "open movement," which argues for greater openness and the engagement of a broader and more diversified actor network in knowledge creation and dissemination[8]. This movement was later materialised thanks to Henry Chesbrough in 2003 in the concept defined Open Innovation, where OI is describes as a "paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms seeks to advance their technology"[9]. Users, retailers, suppliers, rivals, universities, research laboratories, and individual researchers from outside the firm are recognised as competent and valued innovation process participants. Another paradigm of innovation in the Collaborative Innovation that happen when a business collaborates with other firms (suppliers, customers, rivals, and consultants) or organisations (such as universities or public research institutions) to create or market a novel invention. The groups agree to pool their resources or exchange information and skills to produce a single project; nevertheless, they maintain their legal independence at the conclusion of the project. The primary objective of such collaborative innovation is to obtain access to the partner's knowledge and skills, particularly tacit knowledge[10]. Based on the concept of collaboration and innovating based on needs, Brown defines Design Think[11], a five-step process for finding solutions

[6] BRUSONI S., PRENCIPE A., PAVITT K., 2001, *Knowledge specialization, organisational coupling, and the boundaries of the firm: Why do firms know more than they make?*, Administrative Science, Link: https://journals.sagepub.com/doi/abs/10.2307/3094825

[7] PAASI J., RANTALA T., VOLKOKARI K., LUOMA T., 2010, *Innovation Management Challenges of a System Integrator in Innovation Networks*, University of Eastern Finland, ReaserchGate, Link: https://www.researchgate.net/publication/48330700_Innovation_Management_Challenges_of_a_System_Integrator_in_Innovation_Networks

[8] JOSEPH H., DAVIS S., 2017, *The power of "open"*, Ser. Libr. 72, Link: https://www.tandfonline.com/doi/full/10.1080/0361526X.2017.1292742

[9] CHESBROUGH H., 2003, *Open Innovation: the New Imperative for Creating and Profiting from Technology*, Harvard Business School Press

[10] GALLAUD D., 2013, *Collaborative Innovation and Open Innovation*, Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship, Link: https://link.springer.com/referenceworkentry/10.1007/978-1-4614-3858-8_500

[11] BROWN T., 2008, Design Thinking, *Harvard Business Review*, Link: https://readings.design/PDF/Tim%20Brown,%20Design%20Thinking.pdf

to complex problems that focuses on the individual, the community and has integration and collaboration as its cornerstones.

Scope and Limitations

The objective of this thesis is to justify the business model choice of GrInn.City, placing it in the market and showing a concrete need for such a tool. Clearly, when developing a start-up company, no matter how thoroughly the research may have been conducted, problems always arise regarding actual market entry and the search for future customers or projects to take forward.

Methodology

The thesis was written during the start-up process. In the first chapter the scenario is framed. Academic papers were used for the qualitative analysis of the transition context in which GrInn.City was born, then a quantitative analysis was conducted based on statistical reports from Istat and the European Commission in order to get the numbers of the transition and the commitment of the national system in the realisation of the projects. For the section on participation in tenders, on the other hand, guidelines of tenders in which the team took part were compared so that generic guidelines could be drawn up. The second chapter has a more empirical character in that it recounts the creation process and describes the ecosystem and partners involved and is therefore based on the team's experience and the processes faced over the course of these months. For the specific aspects related to the methodology of GrInn.City, the team drew on what it learnt in the two years of MSc Law, Digital Innovation and Sustainability and on the methodologies inherited from LabGov.City, always justifying the effectiveness of these methodologies by referring to qualitative and quantitative analyses based on reports from the European Commission and the OECD. The final part describing the Generazione Villa Ada project initiated by GrInn.City is built on the basis of interviews, round tables, and meetings held with project stakeholders.

Discussion

1. The context

The first chapter of this thesis serves to set the context within which GrInn.City was born. The start-up was born in a post-pandemic transition context, characterised by an unprecedented release of funds by the European Union and individual states. While this seems like a promising prospect, it must also be said that in Italy a strong tendency has emerged over the years not to know how to use public funds efficiently. While on the one hand we therefore have the opportunity, on the other we find the inability to seize this opportunity. Analysing the generic picture is essential to understand why GrInn.City was born and what possibilities it has to carve out its own market share.

1.1 The Ecological and Digital Transition

The first quarter of 2020 coincides with the beginning of what will be one of the greatest upheavals in contemporary history. The Covid-19 pandemic and the resulting 'state of emergency' represented, and still represents, a crisis for International Organisations and States to manage. The resulting conditions called into question the complex of principles, norms and decision-making procedures that regulate the various dimensions (political, economic, environmental)[12] , all of which entailed policy and funding measures as never seen before.

Since the first Covid cases, in response to an economy almost at a standstill due to the lockdown, governments and the European Commission moved to initiate the first extraordinary measures to support the stagnating situation. In the wake of these extraordinary measures, larger funding programmes such as the Next Generation-EU and the NRRP[13] were launched. The pandemic has remained at the centre of the international economic scenario, but in the context of multiple and multifaceted "transitions": the end of the liquidity condition that has long driven the global economy; the gradual abandonment of fiscal stimulus policies; the need to address the various forms of inequality. In tandem with these political and economic upheavals, the ecological and technical

[12] COLOMBO A., MAGRI P., 2022, *The Great Transition,* ISPI Report 2022, Introduction, pp. 9-10
[13] SPALLONE R., FILIPPETTI A., TUZI F., *2021, Report on Research and Innovation in Italy 2021*, Chapter 1: Public research as a driver for green and digital transition in national recovery and resilience plans: a comparison between Italy, France, Germany and Spain, pp. 27-29

dimensions are undergoing even more dramatic shifts.[14] . But the most logical question to ask is: why now? Why is it necessary to speak of transition now? The simplest answer is that transition is the primary need, the clock is ticking, and the goals set by the Paris Agreement and the Sustainable Development Goals appear increasingly difficult to achieve. And what has changed with Covid-19? Why are the conditions now right? Covid-19 created the right conditions to justify greater state activism and to address three decades of market excess, which led to environmental degradation, growing inequality and disruptive technologies[15] .

The legacy of combating climate change necessitates the transition to a sustainable economy. The Paris Agreement, which sets the objective of limiting the earth's temperature increase to 1.5C by 2050 relative to 1990s levels, has unquestionably been the most significant step in this process in recent years. The European Council established its position on European climate legislation in June 2021; the G20 and Cop26 were also convened that year. In October, under Italian leadership, the G20 met to, among other things, reaffirm the commitment to comply with the Paris Agreement.[16] . The discussion that began in October continued in Glasgow during Cop26, which set as objectives: accelerating emission reductions, protecting communities and natural habitats, mobilising climate finance, and building public-private-civil partnerships[17] . The latter goal in particular is of great interest to GrInn.City as we will see in chapter two. The large-scale mobilisations at government level over the past year confirm that the transition is urgent because combating climate change will entail a profound change in economic activities, relations and exchanges between nations, and social interactions.

The digital transition, on the other hand, denotes a systematic transformation of social organisation in which digital technological applications replace or replace current tools, approaches, and practises. The move to digital began before the Covid-19 epidemic. Before the shutdown, topics such as the digitisation of public administration, digital security, 5G, platform use, and IoT were heavily debated.[18]. The restrictive measures unquestionably boosted these processes by necessitating a larger application of these innovations. The pandemic has facilitated the large-scale transmission of these technologies in two primary ways: on the one hand, it has revived attention on dormant themes such

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[14] COLOMBO A., MAGRI P., 2022, *The Great Transition,* ISPI Report 2022, Introduction, pp. 11-13
[15] ibid.
[16] GALEOTTI M., 2022, *The Great Transition,* ISPI Report 2022, Climate and Energy Transition, pp. 69-73
[17] SMITH P., 2021, Essential outcomes for COP26, Global Change Biology
[18] SORICE M., 2022, The *Great Transition,* ISPI Report 2022, The Technological-Digital Transition, p. 97

as smart working, and on the other hand, it has hastened the activation of topics that did not appear to be a policy priority[19] .

At this historical juncture, a transition process is required to establish new social institutions capable of resolving the conflicting link between an increasingly damaging technology and an environment that requires less and less sacrifice. Both governments and innovators from below have a responsibility to make these two paradigms work in tandem by allowing them to influence and solve each other. Achieving this cleaner and healthier future will require tremendous attention and resolve from all governments, along with tight collaboration between businesses, investors, and citizens.[20] .

1.2 The Financial Framework

While Covid plunged the states into a crisis the likes of which they had never seen before, it also prompted them to revive the weakened economy by releasing funds as never before. This picture, however, will be analysed to give an idea of the scenario for the coming years.

1.2.1 EU financial framwork

To successfully respond to Covid in 2020, the EU has allocated a package totaling €2.018 trillion at current prices. This package consists of the EU's long-term budget of EUR 1.211 trillion from 2021 to 2027, as well as EUR 806,9 billion through NextGenerationEU, a temporary recovery tool. Together, these monies will assist in repairing the economic and social harm caused by the Coronavirus epidemic and facilitating the transition to a modern, resilient, and sustainable Europe[21].

Funds are allocated to all Member States. They are given in the form of grants, investment loans or subsidies. In order to organise the budget efficiently, headings were created to represent the expenditure items into which NextGenerationEU is divided. These headings are: Human Capital, Foster Investments, Open Strategic Autonomy and finally the two headings we are mainly interested in, namely Green Transition and Digital Transition. Each heading is broken down in further and more detailed ways for the spending of funds, specifying policies, grants and national plans to which these headings contribute. In the two headings concerning Transition we find some common destinations:

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[19] Ibid.

[20] GALEOTTI M., 2022, *The Great Transition,* ISPI Report 2022, Climate and Energy Transition, p. 80

[21] EUROPEAN COMMISSION, April 2021, *The EU's 2021-2027 long-term Budget and NextGenerationEU: facts and figures*, Publications Office of the European Union, 2021, Luxemburg, p. 6

Cohesion policy[22], Horizon Europe[23], Recovery and Resilience Facility[24], Connecting Europe Facility[25]. Specifically, for Green Transition we find the Common agricultural policy[26], the Just Transition Fund[27] and the LIFE programme[28]. Regarding Digital Transition we find the Digital Europe programme[29].

Within the 2021-2027 programming budget, it is interesting to highlight the flexibility mechanism[30]. This mechanism allows for a fund in case of unexpected needs, allowing for additional financial support in the event of exceptional winds such as environmental disasters, other pandemics or emergencies in general. This ensures that both today's needs and any needs of tomorrow are met. At a time of such high uncertainty, it is crucial to show foresight, between environmental disasters due to climate change, an ongoing pandemic and possible others on the horizon[31] a war at the gates.

1.2.2 National Funds: NRRP

The Recovery and Resilience Facility (RRF) and the Recovery Assistance Package for Cohesion and European Territories (REACT-EU) are the two most important instruments of NextGenerationEU. Italy is the first beneficiary in absolute terms[32]. The RRF guarantees 191.5 billion EUR in deployable resources between 2021 and 2026. These resources will be allocated as 68.9 billion EUR non-reimbursable and 122.6 billion EUR loan financing capacity of the RRF. The RRF mandates that Member States propose a package of investments and reforms, known as the National Recovery and

[22] EUROPEAN COMMISSION, *Cohesion Policy 2021-2027*, Link: https://ec.europa.eu/regional_policy/en/2021_2027/#:~:text=EU%20Cohesion%20Policy%20contributes%20to,the%20green%20and%20digital%20transition.
[23] EUROPEAN COMMISSION, *Horizon Europe*, Link: https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en
[24] EUROPEAN COMMISSION, *Recovery and Resilience Facility,* Link: https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en#:~:text=The%20Recovery%20and%20Resilience%20Facility,resilient%20from%20the%20current%20crisis.
[25] EUROPEAN COMMISSION, *Connecting Europe Facility,* Link: https://ec.europa.eu/inea/en/connecting-europe-facility
[26] EUROPEAN COMMISSION, *Common agricultural policy,* Link: https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance_en
[27] EUROPEAN COMMISSION, *Just Transition Fund,* Link: https://ec.europa.eu/info/funding-tenders/find-funding/eu-funding-programmes/just-transition-fund_en
[28] EUROPEAN COMMISSION, *LIFE program,* Link: https://ec.europa.eu/growth/industry/strategy/hydrogen/funding-guide/eu-programmes-funds/life-programme_en
[29] EUROPEAN COMMISSION, *The Digital Europe programme,* Link: https://digital-strategy.ec.europa.eu/en/activities/digital-programme
[30] THINK TANK EUROPEAN PARLIAMENT, 2020, *How flexible is the EU budget? Flexibility instruments and mechanisms in the multiannual financial framework (MFF),* Link: https://www.europarl.europa.eu/thinktank/en/document/EPRS_IDA(2020)646138
[31] WALLACE-WELLS D., 2019, *The Uninhabitable Earth: A Story of the Future,* Penguin Books Ltd
[32] GOVERNO ITALIANO, PRESIDENZA DEL CONSIGLIO DEI MINISTRI, 2021, *National Recovery and Resilience Plan*, Link: https://www.governo.it/it/node/17027

Resilience Plan in Italy (NRRP). This plan consists of six tasks and sixteen components. The six missions are strongly tied to the NextGenerationEU pillars and include:

- o Digitalisation, innovation, competitiveness, culture and tourism;
- o Green revolution and ecological transition;
- o Infrastructure for sustainable mobility;
- o Education and research;
- o Inclusion and cohesion;
- o Cheers.

It should be emphasised that the NRRP is based on a pivotal principle of NexGenerationEU: the *Do No Significant Harm* (DNSH), which stipulates that any innovation or progress must be made without causing significant damage to the environment. In this principle, the close link between digital and ecological transition is made explicit.

According to the NextGenerationEU regulation, 37 per cent of the funds are to be invested in climate change and 20 per cent in the digital transition. This trend also stems from the European Green Deal that envisages climate neutrality by 2050, which is precisely why the push towards these pathways is so high. In addition, one has to consider that compromising these objectives would also change the conditions of existence of all other pillars.

1.2.3 Implementation of the Programming Period by the Memeber States

After the brief overview of the European Union and the national situation with the NRRP it is necessary to go into more detail. GrInn.City being a small company will not be able to draw on the NRRP funds and will have to orientate its market towards other funds. We have seen in the previous section how the funding for the transition is placed in the framework of the 2021-2026 programming period, i.e. the seventh Multiannual Financial Framework (MFF) in chronological order, on which, however, uncertainties are still high and data to assess its impact are not yet available. Taking a step back, we shift the focus to the previous programming period 2014-2020.

Analysing the MFF 2014-2020[33], it is possible to understand how funds are distributed nationwide, through access to smaller, nationwide calls for proposals, in fact, small business initiatives are financed and the economy in regions and municipalities is boosted.

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[33] EUROPEAN COMMISSION, Directorate-General for Budget, 2014, Multiannual Financial Framework 2014-2020 and EU Budget 2014: The Figures, Publications Office, Link: https://data.europa.eu/doi/10.2761/9592

The MFF 2014-2020 provided for an initial allocation of EUR 44.8 billion distributed among the five European Structural and Investment Funds (EIS funds) which are: ERDF, ESF, Cohesion Fund - Youth Employment Initiative (IOG), EAFRD, EMFF. These European funds, however, must necessarily, after consultation with the European Commission, also be co-financed by national resources according to a co-financing rate. For the period under analysis, Italy was granted national co-financing of EUR 30.5 billion. Therefore, according to the principle of additionality, the total expenditure of the 2014-2020 Multiannual Financial Framework amounts to EUR 75.3 billion[34].

For the use of these funds, each Member State must draw up so-called Operational Programmes[35] (OPs), which define the priorities, specific objectives, financial allocations of fund support and the corresponding national co-financing. The OPs must be approved by the European Commission. For the 2014-2020 programming period, Italy has planned a total of 51 OPs, of which 39 are Regional Operational Programmes (ROPs) and 12 are National Operational Programmes (NOPs). The management of the funds of the national co-financing share, the 30.5 billion mentioned above, of the OPs is in the hands of the Rotation Fund for the Implementation of Community Policies (IGRUE). While 100 per cent of the co-financing share of the NOPs and 70 per cent of the ROPs is borne by this fund, the co-financing of the remaining 30 per cent comes from regional sources. In addition to ROPs and NOPs, it is important to mention the presence of Complementary Operational Plans (COPs), which are financed by the IGRUE and are made available through ROPs and NOPs that have a national co-financing rate of less than 50% and 45% respectively. The total number of POCs for the 2014-2020 MFF stands at 16, of which 11 are national and 5 regionals, with a total allocation of EUR 13.14 billion by 2021[36].

1.3 Problems related to public funding: the fund absorption problem

After having analysed what the new European programming period envisages and how funds were allocated in the previous one, it is important to understand what the problems of the MFF 2014-2020 were and how GrInn.City can seize this opportunity to enter the market. Among the main problems,

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[34] COUNCIL OF EUROPE, European Union, 2014, The next MFF in Italy, 2014-2020, Link: https://www.coe-romed.org/articles/next-mff-italy-2014-2020
[35] EUROPEAN SOCIAL FUND, 2014, Operational Programmes, Link: https://ec.europa.eu/esf/main.jsp?catId=576&langId=en
[36] CAMERA DEI DEPUTATI, 2021, I fondi strutturali e di investimento europei 2014-2020, Link: https://www.camera.it/temiap/documentazione/temi/pdf/1106241.pdf?_1591172473770

the one that may represent an opportunity for GrInn.City is the problem of funds absorption. In fact, there has been an inability to spend the funds obtained from the European Union resulting in inefficiency or even non-spending.

According to the European Parliament[37], absorption capacity is "the degree to which a Member State and its regions are able to spend the financial resources allocated to it under the Structural and Cohesion Funds effectively and efficiently". According to this definition, Italy is among the last Member States in terms of absorption capacity. In fact, for the 2014-2020 MFF, the state of progress for structural funds as of 30 June 2021 stands at 85.4 per cent and payments at 54.5 per cent of the programmed resources. Moreover, the MFF provides for annual certified expenditure targets according to the 'N+3' rule, which provides for the automatic decommitment of disbursed EU resources if they are not spent within three years[38].

These figures taken in absolute terms cannot provide a complete overview. Indeed, the 85.4 per cent progress rate of the Structural Funds, when compared to other European countries, is well below average[39].
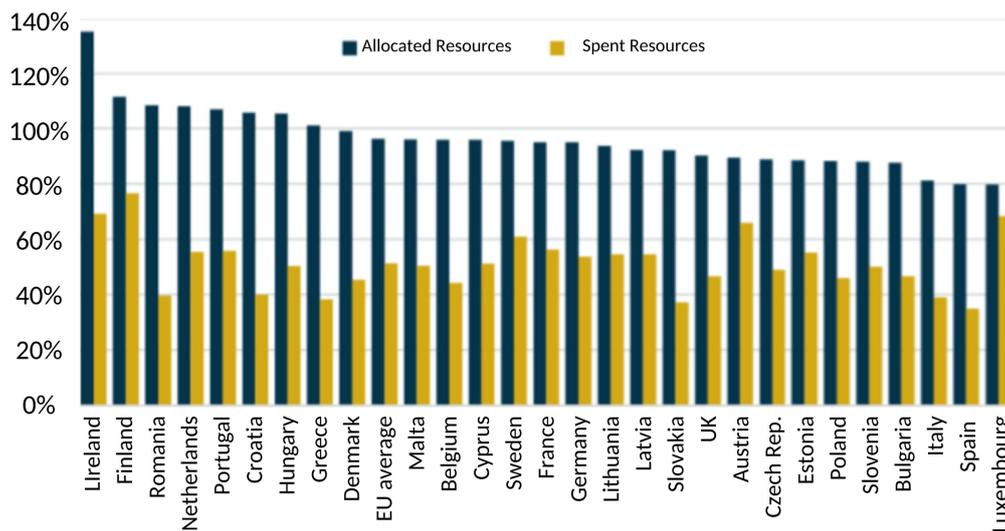
Source: OCPI elaboration on European Commission data. Share of Structural Funds Allocated and Spent by Member State. For some countries, more funds were allocated than planned to prevent planned projects from being blocked; 'over-programming' is a fairly common prudential practice.

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[37] EUROPEAN PARLIAMENT, 2011, *On the absorption of structural and cohesion funds: lessons learnt for the future EU cohesion policy*, Link: https://www.europarl.europa.eu/doceo/document/A-7-2011-0287_IT.html
[38] CAMERA DEI DEPUTATI, 2021, *I fondi strutturali e di investimento europei 2014-2020*, Link: https://www.camera.it/temiap/documentazione/temi/pdf/1106241.pdf?_1591172473770
[39] OCPI, 2021, *Fondi strutturali e d'investimento europei: a che punto siamo*?,Link: https://osservatoriocpi.unicatt.it/cpi-ocpi-fondiSIE.pdf

In addition, the European Court of Auditors published, in its 2020 annual report, the trend of the absorption rate of European funds of the 2014-2020 Multiannual Financial Framework[40]. Italy ranks last in terms of absorption capacity with a rate of around 45%, a profound gap when compared to the first ranking Member States with a rate close to 80%.

2014 to 2019   2020
x %

Member State	2020 value
Finland	13 %
Ireland	16 %
Luxembourg	14 %
Austria	14 %
Estonia	15 %
Greece	21 %
Lithuania	22 %
Sweden	16 %
Portugal	15 %
France	16 %
Hungary	18 %
Latvia	16 %
Poland	17 %
Czechia	18 %
Slovenia	18 %
Cyprus	9 %
Germany	14 %
United Kingdom	12 %
Netherlands	15 %
Denmark	12 %
Belgium	11 %
Romania	14 %
Bulgaria	13 %
Malta	12 %
Slovakia	13 %
Multi-country	17 %
Spain	13 %
Croatia	15 %
Italy	14 %
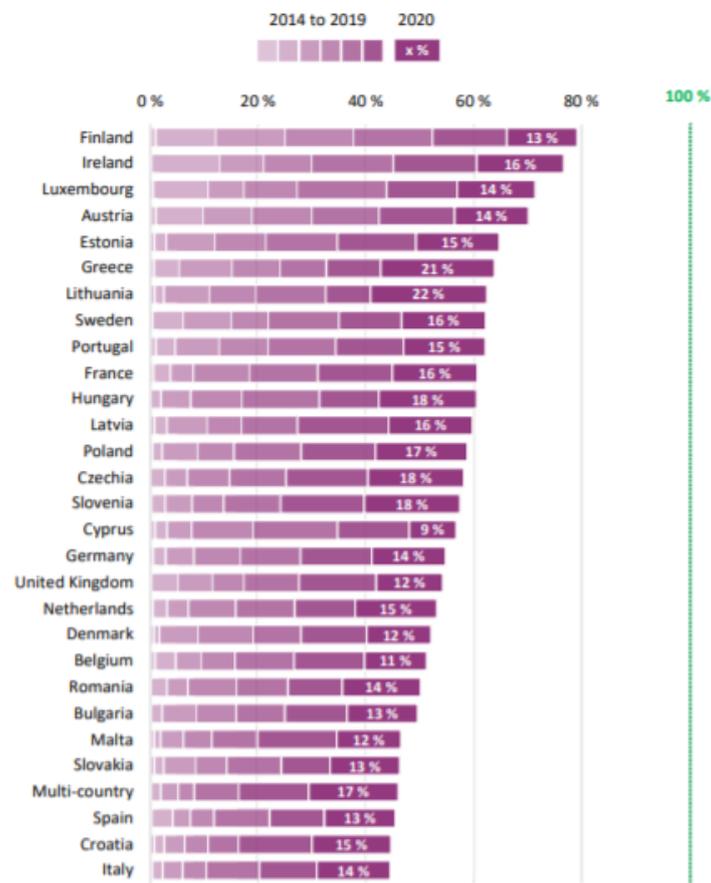
Source: Court of Auditors. Annual ESIF absorption levels for each Member State (2014-2020)

This is a fairly spread issue, in fact, the European Structural and Investment Funds (ESIF) continue to have a low absorption rate since EU resources are not properly utilised. Only 55% of the resources provided in the 2014-2020 multiannual budget were spent on average by European countries. But with 44% of the funds absorbed, Italy is significantly under average and the country least equipped to utilise European resources[41].

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[40] EUROPEAN COURT OF AUDITORS, 2020, *EU audit in brief, Introducing the 2020 annual reports of the European Court of Auditors*, Link: https://www.eca.europa.eu/Lists/ECADocuments/auditinbrief-2020/auditinbrief-2020_EN.pdf
[41] Ibid.
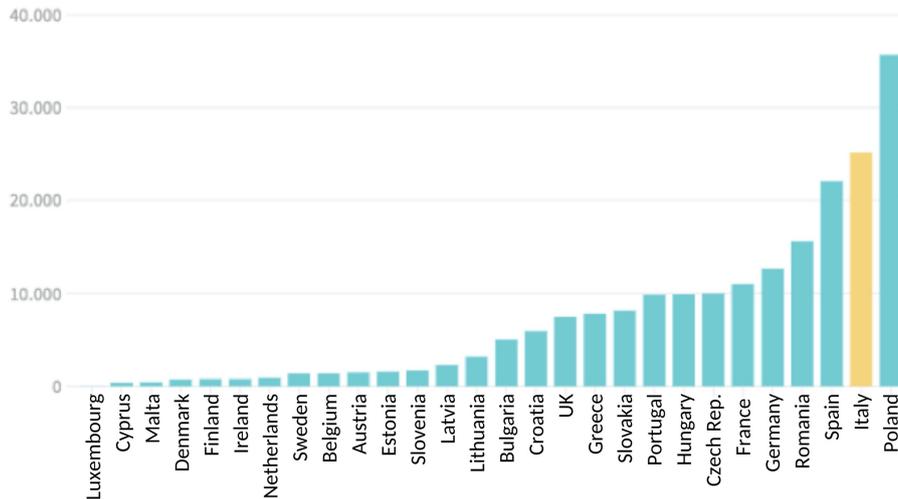
Source: Court of Auditors. European Structural and Investment Funds resources still to be absorbed (million euro)

Poland has the most underutilised resources in Europe, at more than 35 billion euros. Italy ranks second with over 25 billion EUR in unspent cash. Italy's backlog was concentrated primarily between 2014 and 2019, however the absorption rate in 2020 was comparable to the European average (15 per cent). The funds must be expended by 2023[42].

Approximately the years, the EU has accumulated over $300 billion in unfulfilled obligations to member nations. The rises in 2020 were less than in previous years, due in part to the increased availability of cash to combat the epidemic. The volume of outstanding liabilities is projected to remain reasonably stable through 2027, especially if payment requests are fewer than anticipated as a result of implementation delays[43].
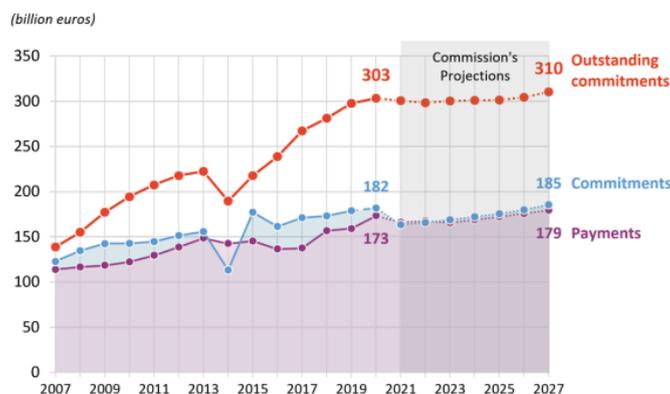
Source: Court of Auditors. Outstanding commitments, commitments and payments (2007-2027)

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[42] CHIUMENTO A., 2021, Le inefficienze nella spesa dei fondi europei in quattro grafici, lavoce.info, Link: https://www.lavoce.info/archives/90839/le-inefficienze-nella-spesa-dei-fondi-europei-in-quattro-grafici/#:~:text=I%20paesi%20europei%20hanno%20speso,pari%20al%2044%20per%20cento
[43] Ibid.

The Court of Auditors has determined the proportion of resources utilised for projects that should not have been sponsored with European funding. This is around 2.7% of the total funds (unchanged from 2019). When the margin of error in the use of funds reaches 2 percent, it is considered significant. The majority of errors, according to the Court, occur in the expenditure of cohesion funds (41.8%), followed by expenditures on natural resources (29.3%) and expenditures on competition (15.5 percent)[44].

Source: Court of Auditors. Estimated level of error for the EU budget as a Whole (2016-2020)

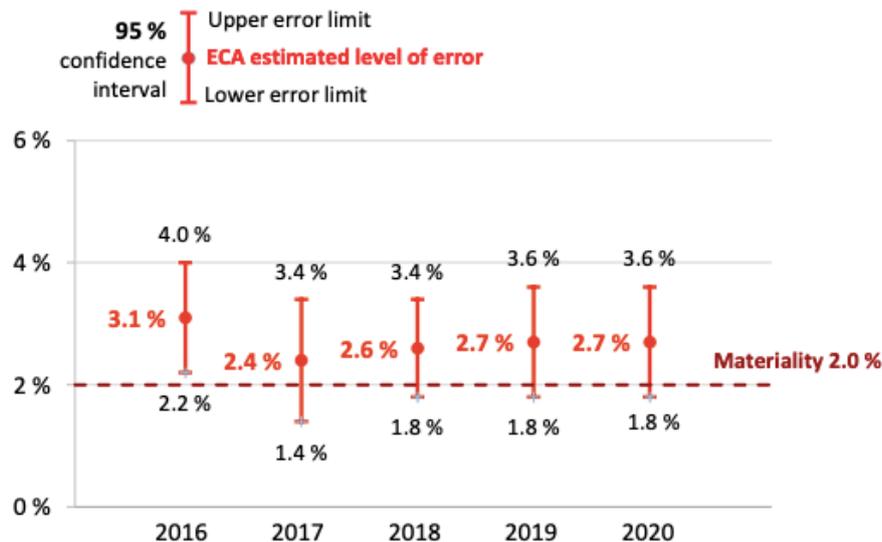In this respect, the European Parliament has published a report listing the causes of low absorption capacity in some Member States[45]. The causes are listed below:

- Difficulties in completing the conformity assessment procedures for the new management and control system, which usually take place at the beginning of the programming period;
- Insufficient resources to co-finance projects;
- Delays in the creation and introduction of EU and national standards or related guidelines, as well as deficient or unclear standards;
- Delays in translating guidance notes and obtaining explanations from the Commission and inconsistency in the Commission's guidelines;
- Overly complicated and stringent national requirements and their frequent modifications;

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[44] CHIUMENTO A., 2021, Le inefficienze nella spesa dei fondi europei in quattro grafici, lavoce.info, Link: https://www.lavoce.info/archives/90839/le-inefficienze-nella-spesa-dei-fondi-europei-in-quattro-grafici/#:~:text=I%20paesi%20europei%20hanno%20speso,pari%20al%2044%20per%20cento
[45] EUROPEAN PARLIAMENT, 2011, *On the absorption of structural and cohesion funds: lessons learnt for the future EU cohesion policy*, Link: https://www.europarl.europa.eu/doceo/document/A-7-2011-0287_IT.html

- The need to set up new institutions for the implementation of the programmes, which may lead to delays in the start-up phase and in the implementation time;
- Insufficient separation between the authorities of the Member States, hierarchical problems between the institutions and internal difficulties related to the allocation of tasks and responsibilities;
- Insufficient involvement of the regional and local level in the elaboration of operational programmes;
- Staff shortages, inadequately trained personnel at national and regional level and difficulties in maintaining staffing levels;
- Difficulties in setting up computer systems;
- Disproportion between the level of controls and the size of the project;
- Insufficient initial preparation for project execution and absence of a project process;
- Politically motivated changes to investment priorities.

The current state of the Italian public administration presents a profile that is scarcely consistent with the challenges that small and medium-sized enterprises are currently called upon to face: faced with problems on an extremely broad scale, thus tangential to related but distant topics and issues, PA employees present themselves with a level of professionalisation that is markedly lower than the European average, with just 4 out of 10 employees holding a university degree[46]. The latter, when present, appears to have been obtained mainly in economics and law, courses that are certainly solid but not sufficient to grasp the relevance and urgency of purely multidisciplinary issues[47]. A strong character of interdisciplinary competences, on the contrary, constitutes a vital factor in order to adequately carry out the activity of drafting calls for proposals with reference to the funds most recently allocated by the European Union. The NRRP, in fact, aims to provide economic support to those companies capable of fostering economic development that is consistent with the most relevant areas of intervention on which the Union deems it urgent to operate (green transition, digital transformation, smart growth, socio-territorial cohesion, health and economic resilience, policies for the new generations). The Italian public administration, on the other hand, is guilty of little, if not non-existent, attention to the training and updating of its employees, with no more than 1.2 days a year dedicated to these activities, while also failing to include in its ranks personnel from the new generations[48].

[46] KONRAD, 2020, P*erché l'Italia non riesce a spendere i fondi europei*, Il Post, Link: https://www.ilpost.it/2020/12/13/italia-fondi-europei/
[47] Ibid.
[48] FORUM PA, 2022, *Lavoro pubblico 2021*, Link: https://www.forumpa.it/riforma-pa/ricerca-fpa-lavoro-pubblico-2021-mai-cosi-pochi-dipendenti-pubblici-ma-la-pa-torna-ad-assumere/

Many resources are further wasted due to a lack of communication between public administration and companies on the topics covered by the calls[49]. In order to catalyse the attention of the latter on the calls for tenders, several institutional desks have been set up over the years, both at national, regional and provincial level, which, however, are perceived by the stakeholders as not being approachable, due to an allegedly high level of technical expertise required to start a fruitful dialogue[50].

A challenge that has emerged as a result of some studies is to succeed in getting more realities to participate in European calls and projects on an ongoing basis, knowing that they require specific skills and a high level of collaboration with established partners. The objective is to spread a culture of project management over the medium to long term. Usually companies innovate on an ongoing basis, but many of them do so at the specific request of the customer. What emerges is an absence of a 'research and development culture' accompanied by a kind of 'culture of mistrust' that hinders the innovation process and limits its benefits[51].

The European Court of Auditors, however, found, following an analysis conducted on the basis of data collected between 2000 and 2013, that the social and environmental impact of ERDF-funded projects for business support, amounting to approximately EUR 75 billion, did not resonate in the medium to long term. As highlighted in Special Report No. 08 of 2018, this is attributable to the lack of attention paid to the durability of results in management, both at programme and project level, which in turn was caused by inherent flaws in the design, selection, monitoring and evaluation of Operational Programmes. As a result, although during the audit the projects examined were found to be consistent with the overall objectives of the OPs themselves, none of them were found to be structured in such a way as to ensure adequate prioritisation to achieve long-term results[52]. More specifically, the Court found that monitoring is mainly focused on project implementation, compliance with the set timeframe, budget and scope, leaving out monitoring on durability in the period after project completion. To ensure that funds are optimised, companies should use these resources for the realisation of new projects and not to support the completion of those already started, such that there is an impact that lasts over time.

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[49] CA'FOSCARI, 2021, *Cooperation with Europe*
[50] Ibid.
[51] Ibid.
[52] COURT OF AUDITORS, 2018, *Special Report No 8/2018: EU Support for Productive Investment in Enterprises*,
Link: https://www.eumonitor.eu/9353000/1/j9vvik7m1c3gyxp/vl2k6om2ikyj

1.4 Collaboration between companies and other actors: data for Italy

According to the 2021 Istat report on enterprises[53], in 2018 slightly more than half (52.5%) of the enterprises with at least three employees had at least one type of network relationship, with a large prevalence of job order contracts (practised by almost a third of the enterprises) and subcontracting (more than a quarter). These contracts are particularly prevalent among companies in Construction and Industry, where there are more network relationships. They are followed, at a great distance, by informal agreements between enterprises, practised by just over 1 in 10, and formal agreements (consortia, joint ventures, ATI, etc.; 7.5% of enterprises).

The main reasons stated for establishing cooperative relationships are access to new customers and markets (38.7%) and cost reduction (36.1%). Aspects of innovation in products/processes and the acquisition of skills and technologies are each reported by about 20% of enterprises.

Finally, the analysis of the responses to the first Permanent Census indicates that enterprises that actively collaborate with others coped more efficiently with market competition. In fact, comparing them with enterprises similar in terms of activity and size (considering more than 240 activities and 5 distinct size classes), it can be observed that the former has a higher level of labour productivity on average by about 18%, and that this differential, albeit to varying degrees, is present across all enterprise sizes and in all sectors, with the exception of services ICT.

This variability is largely explained by the spread of relationships with other companies, typically through job order and subcontracting agreements, which represent the prevalent type: practised by 4 out of 10 companies (almost 8% with foreign companies), the incidence exceeds 50% in Industry (including Construction), in Transport and Storage and in ICT services, but falls below 30% in most other service sectors. This is followed at a great distance by intra-group relations (at 13.7%), relations with the PA (7.8% of companies) and collaboration with universities or research centres (just 2%), with important sectoral differences

Relations with the public administration are mainly activated by companies that provide goods and services (Construction, aggregate of Other Business Services) or operate in sectors characterised by a public presence, such as Health and Social Care and Education. The latter sector, together with ICT

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[53] ISTAT, 2021, *Rapporto sulle imprese 2021- Struttura, comportamenti e performance dal censimento permanente*, Link: https://www.istat.it/storage/rapporti-tematici/imprese2021/Rapportoimprese2021.pdf

Services and Professional, Scientific and Technical Activities, is also the most active in collaborations established with universities and research centres (on agreements, in particular with research institutions

Compared to 2011, the prevalence of inter-company ties has significantly decreased and that of relations with the PA and universities has decreased, while the incidence of intra-group relations has more than doubled (from 6.5 to 13.7%), partly due to the concomitant increase in the number of business groups in the economic system. The intensification of intra-group ties is significant in the majority of sectors, with a notable growth in Construction (from 5.3 to 17.0) and Industry in the narrow sense (from 6.8 to 14.8), where the presence of enterprise groups is more widespread. By contrast, this type of relationship increases more modestly in ICT services, contracting only in Real Estate.

Thanks to a study in The Nederland[54] that analyses 12811 innovative firms, it is possible to say that collaborating increase innovation and revenues. In fact, firms that collaborate on their innovation operations with external firms produce more inventive output per employee. In the case of radical products, the effects are stronger than in the case of incremental items. Radical innovations are inherently riskier, necessitating additional funding and knowledge that may only be available outside the firm's internal resource pool.

Functional diversity has a significant impact on radical innovations. This means that in order to create and introduce new products, companies need a varied group of partners from other sectors. Examining the pattern of collaboration with various types of partners yields some intriguing insights. The most prevalent type of collaboration is vertical cooperation with value chain partners (i.e., suppliers and customers). Horizontal collaboration with competitors and collaboration with science institutes are less usual due to unique risk concerns (e.g., the possibility of sensitive information being leaked) or high obstacles (e.g., the prerequisites for undertaking basic research). In terms of partner location, domestic partners collaborate significantly more than international partners. European companies are, on average, the first option among international partners, followed by partners from the United States and other countries. The diversity metric reveals that the partner portfolios of the sampled enterprises are, on average, somewhat concentrated. In other words, the majority of the companies in the sample

[54] VAN BEERS C., ZAND F., 2013, *R&D Cooperation, Partner Diversity, and Innovation Performance: An Empirical Analysis*, Journal of Product Innovation Management, Link: https://onlinelibrary.wiley.com/doi/10.1111/jpim.12096

either do not collaborate at all or collaborate with partners in only one or a few areas. Geographic diversity has a higher concentration than functional diversity.

As expected, R&D collaboration with external parties has a strong favourable impact on the firm's radical and incremental innovation performance. Firms that collaborate on their innovation operations with external firms produce more inventive output per employee. In the case of radical products, the effects are stronger than in the case of incremental items. Radical innovations are inherently riskier, necessitating additional funding and knowledge that may only be available outside the firm's internal resource pool.

While geographical variety of partners has no effect on sales of radically new items per employee, functional diversity has a considerable impact on this measure of innovation performance. Actors from many functional areas contribute to the complementary knowledge and tacit skills needed to create revolutionary new products.

1.5 How participation in tenders works

Once the scenario has been framed, the following is how participation in tenders works as it will be useful to frame what skills GrInn.City will need and the specific services it will have to offer. Participation in a European call for proposals involves constraints[55] [56]. First and foremost, it is necessary to understand the technical language, typical of design, to which special attention must be paid in order to correctly grasp the requirements of the call-in question and to use the same terminology when drafting the European project.

Although each European call differs in its objectives, eligible activities, terms and conditions, it is possible to identify common features. These common features refer in particular to the categories of key information that constitute the very essence of the call and the rules for project implementation. These include: the deadline, aims and objectives, intervention priorities and types of activities that can be financed, target groups and eligibility criteria, economic aspects and time constraints.

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[55] EUROPEAN COMMISSION, *The application process*, Link: https://ec.europa.eu/info/research-and-innovation/funding/how-apply/application-process_en
[56] OBIETTIVO EUROPA, 2018, *Bandi europei: 7 informazioni-chiave da individuare e valutare prima di partecipare*, Link: https://www.obiettivoeuropa.com/news/bandi-europei-leggerli-in-maniera-strategica/

In order to compete for funds to support your project, you must:

- **find all relevant documentation** (full text of the call for proposals, forms, guidelines for applicants, work programme, etc.).
- **fill in all necessary forms** (project description part, administrative part, budget, etc.).
- **collect the documents to be attached to the application** (articles of association, balance sheet report of the last financial year, CVs of the project leaders, etc.).

European project writing necessarily requires a number of specific skills in order to make the project idea competitive. Firstly, the abstract of the project must be expressed in a clear and concise manner in order to easily identify and define the aims of the project, with direct reference to the call for proposals. In this regard, it is also essential to include a context analysis that provides a detailed description of the state of the art in which the project idea is intended to intervene. Particular attention must therefore be paid to the internal coherence (i.e. between general and specific objectives, strategy and methodology) and external coherence (i.e. with the intervention priorities expressed in the call) of the project, for which a budget and allocation of resources must be foreseen in order to guarantee its effective and sustainable implementation over time. Closely linked to this aspect is the need to make clear, in the drafting of the project plan, how one intends to proceed with regard to measuring the project's impacts with respect to the situation described in the initial needs analysis.

Finally, it is desirable that these content skills are complemented by more formal transversal skills - both managerial and communicative - that ensure maximum efficiency in implementation and maximum capillarity in project dissemination.

European projects are generally promoted and implemented by a consortium of partners. One of the main criteria adopted by the Commission to evaluate a project is the quality of a partnership in terms of quality of actors, competence and above all complementarity. It is essential that the partner network set up ensures that all the specific competences required for the implementation of the project's key activities are covered. The European Parliament also encourages a multi-level partnership involving actors from national, regional and local authorities, without excluding private individuals or individuals. Involving different partners right from the planning phase, through the development of participative processes, would make it possible to weigh up and find answers to the different needs promoted by each actor. This would make a stronger contribution to the achievement of European objectives.

2. GrInn.City

In this chapter, GrInn.City (which stands for Green and Innovative Cities) will be presented, starting with the ecosystem in which it is developed, the process of its birth, the methodology on which it is based, and the business model used to position itself in the market will be described.

2.1 What is GrInn.City?

GrInn.City

GrInn.City Logo

What can be deduced from the previous chapter, therefore, is that on the one hand, local authorities, often due to a lack of appropriate expertise, find it difficult to submit projects, thus missing the opportunity to generate positive impacts from an economic, social and environmental point of view. On the other hand, in the private sector, participation in European calls for proposals and projects is often underestimated and is accompanied by a 'culture of mistrust' to collaborate not only with other companies but also with key players such as universities or research bodies and public administrations. If we combine these two factors with the possibilities opened up by the post-Covid recovery funding framework for GrInn.City, there is a large market window to work on.

To fill the gaps highlighted above, GrInn.City presents itself as a system integrator for innovation and sustainability. Like traditional system integrators, GrInn.City aims to proactively bring together the players of the quintuple helix in order to create a functional ecosystem that can synergistically catalyse the potential of the individuals, simultaneously creating an innovative research hub and a unique consultancy centre.

GrInn.City is at the service of the quintuple helix actors: public administration, the private sector, universities, research institutions and third sector organisations through idea generation and co-design, network building, stakeholder engagement and project management activities, mainly aimed at tender writing. GrInn.City will assist the stakeholders involved in the project in participating in calls for tenders, contributing to project writing and ensuring effective and efficient resource management. In addition, GrInn.City will participate in tenders with its own projects, subsequently building a consortium of actors capable of realising high-impact solutions. To carry out its activities

GrInn.City will follow a methodology consisting of the practical realisation of what was inherited from LabGov.City as we will see later.

We can summarise this methodology in three key steps:
- Idea generation
- Network building
- System Integration

2.1.1 The team

The GrInn.City team is made up of eight students from the Master of Science in Law, Digital Innovation and Sustainability (LDIS) some from a bachelor's degree in political science others in economics. Its members boast experience in various companies during their academic career such as Enel X, Gorillas, Mont Blanc, Bip, as well as several years spent within LabGov where they had the opportunity to participate in Horizon projects (such as EUARENAS[57], OpenHeritage[58]), public calls issued by ministries (such as PINQUA[59]), and where they gained experience on cooperation between actors in the quintuple helix and the principles of urban commoning. In addition, the team benefits from the experience of numerous external consultants, both LDIS professors for topics ranging from policy to finance, and professionals with expertise in matters strictly related to economic and functional aspects.

2.1.2 Founding partners

In the process of establishing GrInn.City, it was decided that the founding partners will not be natural persons but legal entities. In particular, GrInn.City will be founded by four entities which for privacy reasons will remain anonymous except for LabGov. The founding partners are:

LabGov.City: which in addition to be a founding partner is also the entity within which the idea was developed and from which GrInn.City will inherit methodologies.

Company X: is a consultancy agency, has an interest in joining GrInn.City with its own capital. It will provide both technical know-how and human capital to complement the full members of

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57 https://www.euarenas.eu/
58 https://openheritage.eu/
59 https://www.mit.gov.it/comunicazione/news/pnrr-assegnati-28-mld-per-il-programma-pinqua-sulla-qualita-dellabitare-il-40-va

GrInn.City. It will be instrumental in providing support in communication, in the purely economic aspects of projects and in everything to do with data analysis.

Company Y: is a Legal Tech, through the use of technology and software will be able to provide legal support. The presence of a Legal Tech is crucial because each project that GrInn.City will develop may come up against stringent legal constraints, both because it will have to collaborate with Public Administrations but also because each project will involve the use of emerging technologies with which current legislation will probably struggle to keep up in terms of regulation.

Company Z: is a high-tech company, dealing with goods and services related to the world of innovation and sustainability. Having a tech partner who has experience in developing innovative projects and who has specific expertise in one area of technology can facilitate the implementation of that specific technology within each project.

2.1.3 The Ecosystem

To justify the birth of GrInn.City, it is also important to explain the context within which it was born. We have indeed mentioned LabGov and its methodology, we have said that the team is part of the MSc LDIS of Luiss, but what are these entities and how do they influence the birth of the start-up.

GrInn.City stems from the experience of LabGov.City[60] - the LABoratory for the GOVernance of the City as a Commons - is an international network of theoretical, empirical and applied research platforms engaged in exploring and developing methods, policies, and projects focused on the shared and collaborative management of urban spaces and resources. LabGov is committed to the development and testing of innovative models for the sustainable creation of commodities, services, and urban and local infrastructures through problem-based research and active learning.

LabGov is co-directed by Professor Sheila Foster and Christian Iaione and is mainly active within Georgetown University and Luiss Guido Carli University, but recently expanded its network towards Costa Rica in ULCR San José, and Hong Kong with the Center for Civil Society and Governance in University of Hong Kong. LabGov founded also an interdisciplinary urban clinic for action-based learning within the Soft Skills programme at Luiss University. This clinic was recently renamed GrInn Lab and is coordinated by former students which decide to keep collaborating with LabGov. This clinic can be seen as the access gate towards LabGov as a student. LabGov has built and

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[60] https://labgov.city/

consolidated a number of collaborations over the years, allowing it to form a network that includes some of the most innovative enterprises on the international stage, as well as cutting-edge public administrations and national and international research institutions. Together with a collaborative approach to learning, these partnerships contribute to LabGov's mission of establishing a global community of Co-Cities dedicated to developing and implementing innovative urban projects to make cities more inclusive, sustainable, equitable, and collaboratively governed.

Dr. Elinor Ostrom, an American political economist who was given the 2009 Nobel Prize in Economic Sciences for her research on the commons, provided the impetus for the study of urban "commoning" processes - the move to more collaborative forms of urban administration. Ostrom established that when the so-called "Tragedy of the Commons" occurs[61], self-organized communities play a critical role in managing open-access resources without overexploiting and finally destroying them. By combining urban and commons studies, Professors Iaione and Foster reinvent and redefine Ostrom's design ideas, applying them to cities as settings where the quintuple helix is at work[62]. These city citizens, civil society organisations, local governments, research institutes, and private players should have possibilities to collaborate in order to rejuvenate an urban common.

The rationale behind the founding/creation of GrInn.City therefore lies in the desire to go a step further than LabGov, building on the experience consolidated over the years. Following the wave of the increasingly evident need for an effective multidisciplinarityy of actors with complementary academic and professional backgrounds and thus capable of managing digital and social innovation processes with transdisciplinary/transversal skills in system thinking. This methodology, adopted by GrInn.City, allows solutions to be analysed in a holistic manner, focusing on all areas that determine their feasibility. GrInn.City, with its extensive and solid network, also makes use of unique key resources such as a methodological know-how of proven effectiveness based on the most renowned/recognised co-design techniques and design thinking theories of globally recognised excellence.

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[61] OSTROM, E., DIETZ, T., DOLŠAK, N., STERN, P. C., STONICH, S., & WEBER, 2002, *The drama of the commons*, National Academy Press, Link: https://psycnet.apa.org/record/2004-15858-000

[62] IAIONE C., FOSTER S., 2015, *The City as a Commons*, Yale Law & Policy Review, Heinonline, Link: https://heinonline.org/HOL/Page?handle=hein.journals/yalpr34&div=12&g_sent=1&casa_token=&collection=journals

The human capital that will constitute GrInn.City also took part in the Master of Science in Law, Digital Innovation and Sustainability established and directed by Prof. Iaione himself[63]. Thanks to the two-year training course, the team had the opportunity both to hone technical and practical skills and to do job on-the-job training, and to collect a remarkable network of business, human relations and work experience. The focus of the Master of Science is in fact to be able to combine an introduction to pre-legal concepts and tools related to the law of new technologies (i.e. internet of things; algorithms and coding; machine learning; cryptography and digital signature; blockchain; smart contracts; big data; cyber security; management of the legal aspects of a digital innovation project), together with a strong methodological background (e.g. empirical analysis of law; predictive justice; social science methodology; data analysis; user experience; etc.). During the second year of LDIS there are also specialisations in areas such as: the changing relationship between citizens, businesses and public administrations due to technological innovations; new forms of civic participation in administrative decisions; the regulation and financing of digital infrastructures at local and national level; the impact of technology on the governance of mobility and social infrastructures; the intertwining of innovation and environmental sustainability, circular economy, social and civic entrepreneurship, etc.). The course was therefore the enabling tool for the team members, it allowed the right skills to be defined both from a theoretical and practical point of view, and it also enabled the creation of the right network of contacts and expertise.

2.2 The role of Social Sciences in innovation

Having described the role of the ecosystem in the birth of LDIS one thing remains to be clarified, Luiss is a university of social sciences and while the role of the scientific disciplines within innovation is evident, it is more complicated to measure the contribution of the social sciences to innovation. In this regard, reference will be made to an OECD report[64] on the role of social sciences within innovation. The OECD points out 4 main reasons why this contribution of the social sciences remains unclear:

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[63] LUISS, 2020, *Relazione Tecnico-Illustrativa Corso di Studio di nuova istituzione "Law, Digital Innovation and Sustainability"*, Link: https://ho4out7of9.execute-api.eu-west-1.amazonaws.com/prod/sites/default/files/2020-02/Relazione%20Tecnica%20LDS.pdf
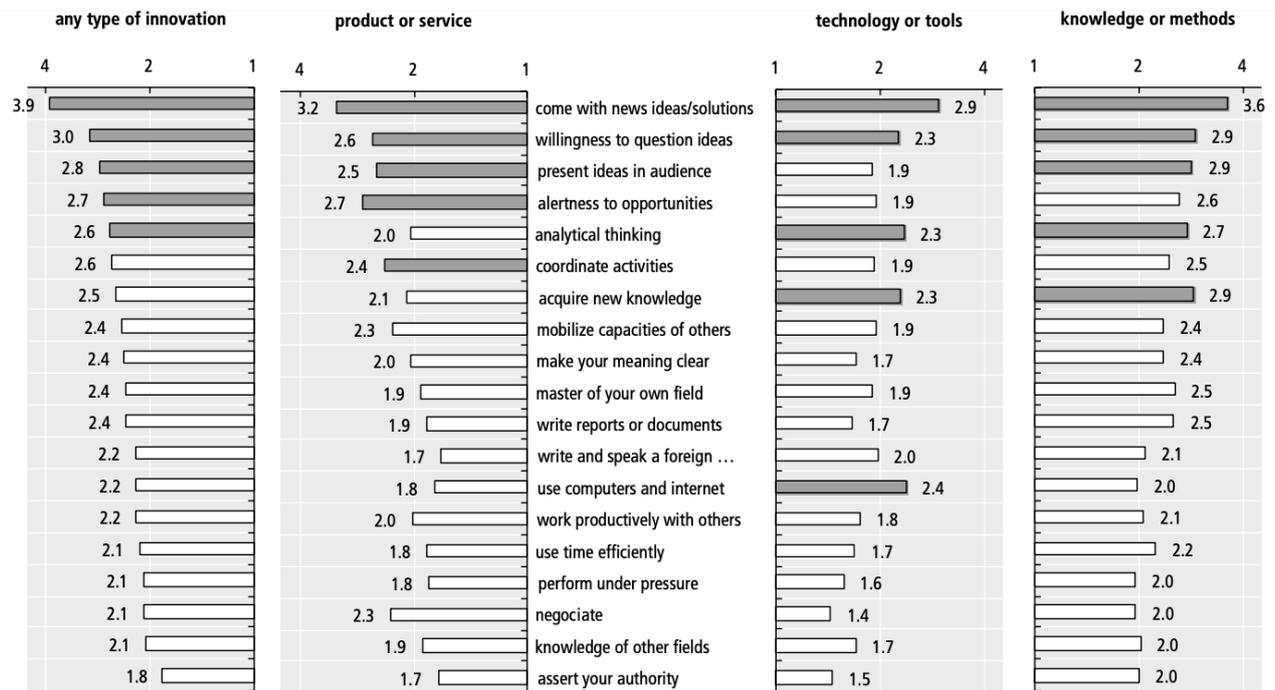
[64] OECD, 2017, *What role for social sciences in innovation? Re-assessing how scientific disciplines contribute to different industries* - OECD Science, Technology and Industry Policy Papers, OECD Publishing, Link: https://www.oecd-ilibrary.org/docserver/8a306011-en.pdf?expires=1654452562&id=id&accname=guest&checksum=73F42D73368F7B19A308C5C67039E00E

- Social scientists contribute to process and organisation improvement through the development of novel techniques that enable adaptation to a changing demand and a growingly apparent digital transformation process. This contribution may be regarded as an increase in the company's resilience, which fosters innovation but is not readily apparent.

- Not only do the social sciences boost a company's responsiveness to demand, but they also alter the communication of supply. In this way, they enable the modification of marketing plans, so altering the technique of consumer connection. Relevant in this regard is the ability to expand the company's network.

- According to the OECD, it is at this moment that the role of consulting develops, acting as a bridge between the research basics of social science and the demands of the business.

- The final reason is the capacity to bring soft skills, or non-discipline-specific talents such as creativity and critical thinking, communication, and the ability to find new opportunities.

At this point, one must also ask why GrInn City therefore fits into this picture and what it can offer.

In another section of the OECD report, it is said that certain soft skills are essential for high-value, innovative employment, so that the solely technical component of scientific disciplines is not emphasised. A reference to twin surveys report by Reflex (2005) and Hegesco (2009) points out that there are specific skills that distinguish innovative from non-innovative workers:

- creativity (i.e. coming up with new ideas and solutions)
- critical thinking (i.e. a willingness to question ideas)
- communication skills (i.e. the ability to present ideas to an audience)
- alertness to opportunities
- analytical thinking
- the ability to co-ordinate activities
- the ability to acquire new knowledge rapidly

any type of innovation	product or service		technology or tools	knowledge or methods
3.9	3.2	come with news ideas/solutions	2.9	3.6
3.0	2.6	willingness to question ideas	2.3	2.9
2.8	2.5	present ideas in audience	1.9	2.9
2.7	2.7	alertness to opportunities	1.9	2.6
2.6	2.0	analytical thinking	2.3	2.7
2.6	2.4	coordinate activities	1.9	2.5
2.5	2.1	acquire new knowledge	2.3	2.9
2.4	2.3	mobilize capacities of others	1.9	2.4
2.4	2.0	make your meaning clear	1.7	2.4
2.4	1.9	master of your own field	1.9	2.5
2.4	1.9	write reports or documents	1.7	2.5
2.2	1.7	write and speak a foreign …	2.0	2.1
2.2	1.8	use computers and internet	2.4	2.0
2.2	2.0	work productively with others	1.8	2.1
2.1	1.8	use time efficiently	1.7	2.2
2.1	1.8	perform under pressure	1.6	2.0
2.1	2.3	negociate	1.4	2.0
2.1	1.9	knowledge of other fields	1.7	2.0
1.8	1.7	assert your authority	1.5	2.0

Source: Avvisati, Jacotin and Vincent-Lancrin, 2013. Educating Higher Education Students for Innovative Economies: What International Data Tell Us. Authors' elaboration on twin surveys Reflex and Hegesco

These soft skills include some that are closely related to the concept of multi-stakeholder partnerships and system integrators. Let us see in detail which of these skills belong to GrInn.City. Operating as a system integrator for multi-stakeholder project partnerships and thus acting as a consultancy and impact assester for stakeholders in innovative projects, GrInn.City will certainly need to possess:

Communication skills: Knowing how to communicate with project partners and, in a larger sense, with all stakeholders engaged (including community stakeholders) is essential for sustaining solid relationships and involving all parties to their fullest extent.

Critical thinking and analytical thinking: GrInn.City, without being the technical partner, will not always be the first to push an idea. Therefore, in order for a project to be successful, it is vital to be able to examine the players' ideas by identifying their weak areas; this will boost the project's viability.

Alertness to opportunities: knowing how to capture opportunities from national and European requests for proposals and being able to broker to include partners at the appropriate time.

Ability to coordinate activities: GrInn.City operates as project manager of the activities in order to coordinate the partnership, continuously monitor the progress of the work, and keep the entire consortium focused and attentive.

Ability to acquire new knowledge rapidly: if you're going to intervene in different fields each time, depending on the type of project you're working on, it will be crucial to keep a broad market and be able to collaborate with any type of partner. The real key lies in implementing the same process regardless of the area, always adjusting it to the new situation, but it remains true that understanding of the project's topic is required to produce a critical analysis and, most importantly, to be able to read the involved actors.

Write reports and documents: Reports and project documents are the key to always aligning all partners and communicating both internally and outside inside the network. Comprehensive, vital, and appealing reports and materials are the key to being heard when communicating with public administrations or major corporations.

Work productively with others: when interacting with a large number of actors, it is essential to be able to develop a fruitful discussion with them and to understand how to collaborate. In terms of outcomes, there is a stark distinction between coordinating alone and knowing how to operate alongside a partner. It is a technique to directly monitor the progress of the project and assert one's authority within the network.

Negotiate: negotiating is frequently undervalued since it is not recognised for what it is, and we negotiate numerous times during the day. When we say "negotiation," we do not imply "compromise," but rather "reaching an agreement that broadly satisfies both sides while respecting their expectations." In this regard, GrInn.City serves as the consortium's negotiating entity.

The acquisition and development of these skills is grounded in the LabGov experience. Since the members of GrInn.City are in fact born out of LabGov, the experience gained over the years through the implementation of European projects, collaboration with public and private bodies, and dialogue with research organisations, has enabled the team members to develop skills that are perfectly in line with the above. Mention should also be made of the fundamental role of LDIS, which with its job-on-the-training approach and through its various laboratories, such as the Negotiation Lab, has made a relevant contribution to the development of these soft skills.

2.3 Why it is a solution: the methodology

GrInn.City stems from the will of LabGov members to apply the research and methodology developed over the years by implementing it in the field of social entrepreneurship. The GrInn.City methodology is strongly based on that developed by LabGov. Since its inception within Luiss, LabGov has adopted the Co-City protocol as one of its methodological approaches.

The Co-City Protocol[65] is the product of field-experiments planned, analysed, and interpreted by LabGov in a number of Italian cities, as well as 200+ global case studies and in-depth investigations conducted in over 100 locations with varying geopolitical circumstances. Co-Cities LabGov is a multi-year research project that yielded a methodology that can serve as a guide for urban policymakers, researchers, and urban populations engaged in co-governance experiences. It focuses on urban commons transitions, including patterns, processes, and public policies in which local communities committed to sustainable urban growth and equitable resource management play a crucial role in collaboration with other political, economic, and institutional players. The Co-City experience strives to position the city as the infrastructure capable of launching peer production through cooperation, sharing, and participatory decision-making, supported by open data and governed by principles of distributive justice. The Co-City is built on the shared governance of a common good, in which the various actors of the quintuple helix participate. The Co-City protocol, which defines the conditions essential for the establishment of polycentric governance, is founded on five design principles:

1. Collective Governance
2. Enabling State
3. Pooling Economies
4. Experimentalism
5. Technological Justice

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[65] LabGov.City (IAIONE C.), 2018, *Co-City Protocol*, Link: https://labgov.city/co-city-protocol/

For the implementation phase, the Co-City protocol is based on the Co-City Cycle[66]:
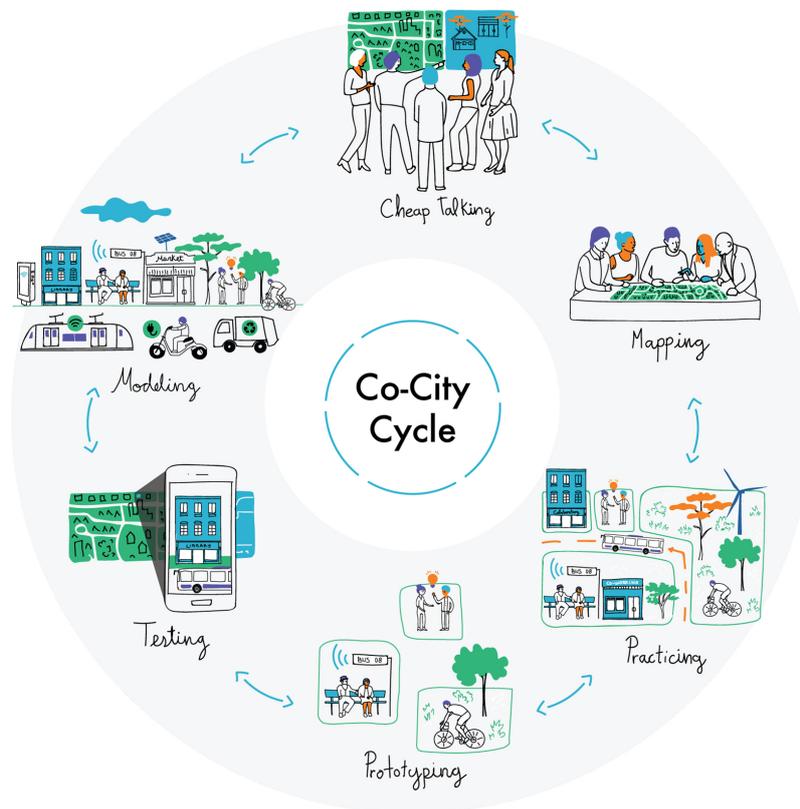
Cheap talking - through discourse encounters, urban commons are localised and local actors are activated.

Mapping - mapping of urban commons by means of pertinent civic activities and self-organization experiences. During this phase, fieldwork, ethnographic work, and exploratory interviews or surveys are required.

Practicing - The establishment of synergies between community-driven development programmes and municipal governments. Actors of the quintuple helix engage in co-working sessions, which may be followed by a day of practising in partnership.

Prototyping - Participants and policymakers will co-design governance schemes based on the requirements of the community that arose in earlier rounds.

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[66] LabGov.City (IAIONE C.), 2018, The Co-City Cycle, Link: https://labgov.city/commonspress/the-co-city-cycle/

Testing - By generating territory-specific measurements, it is confirmed that the adopted prototype satisfies the stated needs.

Modeling - the governance product that has already been prototyped and tested is adapted to the legal and institutional framework of the city by enhancing urban norms, pertinent legislation, and administrative acts.

Finally, this protocol can rely on specific tools each time adapted to the needs of the community[67]. These tools are:

Institutional tools
- Policy Innovation Labs
- Collaborative Districts
- Collaborative Working Hubs
- Collaborative Housing

Legal tools
- Public-Community Pacts
- Urban Civic Uses
- Land Trusts

Financial tools
- Crowdfunding and Civic Financing
- Solidarity Funding
- Social Bonds and Social Impact Investing

Digital tools
- Digital Platforms and
- Local Networks & Connectivity

GrInn.City takes up these concepts, applying the same paradigms in different areas in such a way as to add value to the calls for proposals, showing innovation in the processes and increasing the

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[67] IAIONE C., 2018, *Co-City Protocol*, LabGov.City, Link: https://labgov.city/co-city-protocol/

attractiveness of the proposals. In particular, by combining the experience of LabGov and what was learnt during the MSc LDIS, GrInn.City proposes to adopt these methodologies:

Idea generation: through Open and collaborative Innovation and Design thinking GrInn.City will be able to intervene in a capillary manner on problems, analysing characteristics and needs of the territory, adopting scalable solutions from consolidated national and international best practices.

Network building: thanks to numerous well-established partnerships that those involved in the governance of GrInn.City maintain, GrInn.City will be able to select actors with the appropriate know-how in a given field in order to implement solutions as effectively as possible.

System Integration: thanks to the ability to design projects with cross-impact, to dialogue and co-design with different stakeholders, GrInn.City will be able to ensure a concrete and measurable impact.

2.4 The importance of partnerships for innovation

In this section, we will contextualise the choice of creating multistakeholder partnerships to work on projects. While the importance of partnerships in the transition is also emphasised in the Sustainable Development Goals and in particular Goal 17 in fact the United Nations states that *"To be successful, the sustainable development agenda requires partnerships between governments, the private sector and civil society. These inclusive partnerships, built on principles and values, a common vision and shared goals that put people and planet at the centre, are needed at global, regional, national and local levels"[68]*. On the other hand, however, it must be said that as a natural consequence the partnerships that will be created, since they involve different actors, will be multidisciplinary. GrInn.City espouses this ideal convinced that multidisciplinarity brings value to a project as long as it succeeds in working in the right way.

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[68] UNRIC, ONU, *Goal 17: Strengthen means of implementation and renew the Global Partnership for Sustainable Development*, Link: https://unric.org/it/obiettivo-17-rafforzare-i-mezzi-di-attuazione-e-rinnovare-il-partenariato-mondiale-per-lo-sviluppo-sostenibile/

2.4.1 Multidisciplinarity

In a study published by the European Commission's legal interoperability team and Deloitte[69], multidisciplinary approaches are considered as one of the main ingredients for improving interoperability and creating digitally ready and future-proof legislation. Specifically, policymakers should quickly construct a well-balanced multidisciplinary team composed of policy implementers such as business analysts, enterprise architects, and subject matter experts.

As shown in the preceding section, there are a variety of methods for fostering multidisciplinary teams inside an organisation. However, it is challenging to lead a team with various backgrounds. Managing a diverse, cross-cultural workforce that consists of numerous cultures and areas of expertise is extremely challenging. When businesses want to foster a fantastic, inclusive culture, they must assemble a group of individuals with diverse skills, experiences, and backgrounds. From this perspective, various solutions exist to facilitate the work of a multidisciplinary team: Recognize cultural differences and provide assistance to team members in navigating them: In teams, cultural diversity can be both an asset and a liability; while the individuality of group members may be advantageous, their differences can have a significant impact on how the group performs. Consequently, cross-cultural teams need effective diversity management. Conversely, multidisciplinary teams must promote cultural understanding. Cross-cultural and multidisciplinary teams share many similarities. Cross-cultural teams are multidisciplinary groupings comprised of individuals from diverse cultural backgrounds and ethnicities. When managing a cross-cultural or interdisciplinary team, it is of the utmost importance to find a common thread that binds together the many personalities. The organisation will achieve success if its members share and work toward a common objective. The shared vision guides actions and decisions and provides direction during transitions. A unified vision also motivates employees to do their best job and collaborate for the organization's success[70]. Consequently, a multidisciplinary team requires a clearly defined purpose, shared objectives, and a shared knowledge of why this team is essential to the success of the organisation. The team should consider their ultimate goals and successes. The feedback loop is essential for a varied team to stay on track with its vision and objectives. For a community's efforts

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[69] SZIRANYI Z., VON KALBEN I.C., GUASCH C., VLACHOPOULOU N., MATZAKOU I., CHRONI A., 2022, *Multidisciplinary teams for digital-ready policymaking – Better Legislation for Smoother Implementation*, European Commission and Deloitte, Link: https://joinup.ec.europa.eu/sites/default/files/discussion/attachment/2022-01/Issue%20paper%20-%20Multidisciplinary%20teams%20for%20digital-ready%20policymaking.pdf

[70] CATANA, G.C., DEBREMAEKER, I., SZKOLA, S.S.E., WILLIQUET, F., 2021, *The Communities of Practice Playbook*, European Commission, JRC Publications Repository
Link: https://publications.jrc.ec.europa.eu/repository/handle/JRC122830

to succeed, it must also engage in practises that transcend boundaries. Critical components include stakeholder mapping and dialogues, network expansion, and professional exchanges[71].

These are the fundamental characteristics that a multidisciplinary partnership must have according to the study published by the European Commission's legal interoperability team and Deloitte:

Engagement and communication: Communication, interpersonal interactions, team composition, and team structure are crucial for good team performance. In a workplace characterised by friendliness, optimism, and humour, team respect and dedication can be fostered. The openness with which multidisciplinary teams share information and bridge communication gaps among team members is praised. Hearing each other's stories can help individuals develop greater awareness and comprehension of one another's viewpoints.

Community knowledge management: It is essential to establish defined standards for collaboration, cooperation, coordination, connection, and communication when working in a varied team. Clearly defined roles and expectations are crucial.

Transparency: Transparent and inclusive communication, as well as participatory decision-making procedures, are vital for building confidence among team members.

Knowing well each team member: Acquainting oneself with every member of the multidisciplinary team: it is essential that the leader of a diverse team take the time to get to know each member. Learning about a person's history and journey can aid in assessing individual skills and maximising expertise for the team as a whole. It is essential to develop long-lasting relationships not only with team members but also with stakeholders.

Adopting flexibility: distinct fields have distinct methods of operation. It is essential for diverse team members to acknowledge existing disparities - which might affect how project timelines are established or decisions are made - and arrive at a consensus approach.

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[71] SZIRANYI Z., VON KALBEN I.C., GUASCH C., VLACHOPOULOU N., MATZAKOU I., CHRONI A., 2022, *Multidisciplinary teams for digital-ready policymaking – Better Legislation for Smoother Implementation*, European Commission and Deloitte, Link: https://joinup.ec.europa.eu/sites/default/files/discussion/attachment/2022-01/Issue%20paper%20-%20Multidisciplinary%20teams%20for%20digital-ready%20policymaking.pdf

Encourage team building activities: The leader or facilitator of a multidisciplinary team should promote social events and activities to help team members bond despite their differences.

Visualisation tools: Visual communication, visual representations, and visual thinking all help teams work more effectively. Each member of a diverse team contributes their own research methodologies, decision-making tools, and communication strategies, making teamwork tough. Consequently, efficient use of visualisation tools and their outputs (visual representations) can foster the development of multidisciplinary teams by allowing knowledge exploration, integration, and cross-disciplinary cooperation.

2.5 The role of system integrator

In the initial description, GrInn.City was referred to as a System Integrator (SI) that operates in this multidisciplinary context, so it is worth specifying this concept further. Traditionally, in fact, the role of the System Integrator is closely related to the tech and IT aspects of a company. The inspiration of GrInn.City derives precisely from this. We will then see how this concept is also transposed to other areas of collaboration between different parties, not necessarily of a single company.

The System Integrator is a very common professional figure in the corporate landscape, with roles ranging from small and medium-sized businesses to global corporations. He or she may do a variety of tasks depending on business demands and may work alone or in a group[72].

The primary responsibility of a System Integrator is to integrate IT systems, even those that are extremely divergent, in order to create an IT environment that is distinctive, functional, and appropriate for the sort of business in question. His or her primary responsibility is to ensure that various devices - such as technologies, software, and hardware, i.e. virtual and physical components of a system - interact correctly with one another in order to ensure the company's business continuity[73]. He also keeps track of the integrated system's performance, plans maintenance, and finds the best solutions to any problems that arise.

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[72] TECHYON, 2022, *Role, task and main skills of the system integrator*, Link: https://www.techyon.it/articoli/system-integrator-chi-e-cosa-fa.html
[73] Ibid.

The figure has changed over time to include aspects of the firm other than IT. In fact, System Integrators can be found in a variety of fields, including security, data management, analytics, and other areas. The common thread is usually an edgy and new topic that necessitates specialised knowledge to manage.

What are System Integrators and how do they help customers? An SI (sometimes known as a "solution" or "consulting" partner) is a channel partner who examines, leads, and oversees improvements to a client's technology stack and business processes. Essentially, they advise businesses on how they may improve and then handle all of the modifications once the company has given their approval[74]. This includes situations such as:

- When a client wants to streamline procedures and systems across departments as it grows.
- When a customer wants to improve a specific department, function, or tool (like hiring an SI to evaluate and improve marketing ROI)

GrInn.City would assume this same function but within the multidisciplinary partnership. In fact, just as for real SI the objective is to systematise the heterogeneity and allow the whole system to work efficiently, the same would be done with the partners. The SI also takes care of the monitoring phase of the operation, just as GrInn.City would do once the project is up and running, through constant checkpoints and periodic updates from stakeholders. Exactly like real SIs the aim is to get the parties working cohesively, make sure they communicate and work in synergy.

2.6 Business model

Having seen in detail how GrInn.City operates and what the theoretical foundations behind it are, it is now time to understand how GrInn.City creates, transmits and collects value and how it acquires competitive advantage in the market. In the following, a simplified version of the social business model will be proposed and then explained in detail.

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[74] RAMIREZ O., 2022, Partnerships 101: What is a System Integrator (SI), and Should You Partner With One?, Crossbeam, Link: https://www.crossbeam.com/blog/partnerships-101-system-integrator-si/

Key Resources ●●	Type of Intervention ●●	Key Activities ●●	Segments ●	Value Proposition ●●
Contacts Know-how Methodology Digital tools	**Sustainability (energy efficiency, services for communities, nature based solutions)** **Innovation (bottom-up social entrepreneurship support, Digital accessibility, services for communities)** • project writing • Impact analysis • Support in participating in calls for tenders • Project management • Feasibility study	Search for tenders Identifying the ideal area Mapping of possible actors Dialogue with communities Participation in the call Monitoring of participation activities	Who suffer from Digital Divide People with fragile life conditions Complex local communities *Beneficiary*	Access to funds Creating impact *(emission reduction, better life conditions, services)* Social Value Proposition
Partners + Key Stakeholders ●●		**Channels** ●●	*Customer* ●	Impact Measures ● Number of projects Number of clients Quantity of founds moved Number of people involved Customer Value Proposition ●
Local Communities PA Private Sector		Luiss, LDIS, LabGov Network Social media Partner's netwrork On field interventions Brokerage	Companies not positioned yet Companies with high CSR investments PA with scarce competencies Proactive Local Communities	Access to funds Reputation Support in complying with environmental and social criteria

Cost Structure ●	Surplus ●	Revenue ●
Employees Accountant Digital tools Side visit Bureaucracy	Invested for GrInn.City projects	Fee for the service Ownership of some projects

GrInn.City Social Business Model Canva

Stakeholders

Project stakeholders in the broadest sense are the local communities as project recipients, the public administration as recipients of facilitation in terms of work, and the private sector for the possibility of being involved in projects that give both potential revenue and clear impact.

In particular, PAs and private companies have the opportunity to receive services that make it easier to win tenders, including impact measurement, feasibility measurement, and the writing of tenders by qualified and experienced personnel based on applied research.

Social Mission

'Making the ecological and digital transition affordable for all'

By supporting the public and private sector in accessing funds for innovative and sustainable projects, it will in fact be possible to innovate in vulnerable contexts where an unqualified or overburdened public administration would not be able to pursue participation in a tender.

Social Value Proposition

Ensure access to funds and create positive and measurable impact for local communities, the private sector and public administration. This must translate into a positive impact on project beneficiaries who will see their living conditions improve, accessibility to services improve, all in a sustainable

way with the help of digital innovation. On the other hand, clients who ask GrInn.City to act as an SI for the partnership must first of all receive a higher chance of accessing funds, and by adopting a more inclusive way of working they will see their reputation improve.

Social Impact Measurement Strategy

In order to measure the impact created by GrInn.City, periodic checkpoints will be set with constantly changing units of measurement. If in fact in the first months the number of partners involved in project networks and the amount of calls written will be relevant. In the medium term, the amount of funds moved and how they were allocated will become relevant. Finally, in the long term, the ability of each individual project to create impact will be measured, especially in relation to the vulnerability of the context in which it operated.

Channels

GrInn.City, as shown in the section on the ecosystem, can boast numerous contacts due to the Luiss, LDIS and LabGov network. In this way, building on the already established relationships with the public sector such as the Municipality of Rome and other Italian municipalities such as Reggio Emilia, Naples and Bologna, and contacts with the private sector with companies such as Enel X and Bip, it will be possible to gain credibility and relevance.

In order to attract attention and become a seal of innovation and sustainability, GrInn.City will focus on appealing communication. The ideal vision is that projects are not born and die in a short time, but are communicated to the public, becoming references by advertising both the project and GrInn.City.

Relationships

As demonstrated above, one of the difficulties in the operational capacity of partnerships lies in the communication between stakeholders. Constant monitoring of relationships and ongoing coaching can make relationships efficient and productive. Regular workshops and co-working and constant alignment meetings will need to be organised to keep the attention of the parties involved high at all times.

Key Activities

In order to analyse the activities mentioned above, for the sake of simplicity we can divide them into two programme areas: innovation and sustainability. Assuming that the two areas are closely related, we can go into the specifics: for innovation we find support services for entrepreneurship initiatives

for the most vulnerable population, services to the inhabitants in a broader sense, and support for increasing digital accessibility; for sustainability, on the other hand, the main intervention programmes see support for energy efficiency, services to the inhabitants of the city in a broader sense, and nature-based solutions. To achieve these intervention programmes, concrete actions will consist of call for tenders and support for participation, project writing, impact analysis, feasibility studies, project management.

Cost and revenues analysis

It is not easy to estimate the flow of costs and revenues of GrInn.City as the fees it will receive for each tender and thus the actual income are very variable in relation to the size of the call for proposals, the amount of time it will need to devote to it and above all whether or not the call for proposals is won.

Speaking of costs, we can say that they are not very high, at least at the beginning. If we subtract personnel costs, which for the first few years will be calculated in relation to the bids won, we can find as fixed costs the technological tools needed to carry out the projects and the collaborative sessions (Mural, Canva, Zoom, Microsoft Office) for these costs an annual budget of 300€ is set; another fixed cost is represented by the accountant and amounts to about 1000€ per year. Variable costs, on the other hand, include travel for side visits to the places where the projects are to be carried out; an annual budget of 1,000€ is set for preliminary travel, while travel during the operational phase, once the project has started, is considered to be covered by the project budget. As far as hardware and physical space for employees is concerned, for the first two years there will be maximum flexibility so that there will be no costs borne by GrInn.City, however, LabGov resources and those of the other founding partners can be relied on.

For revenues, on the other hand, the matter is more complex, as it is closely linked to GrInn.City's ability to procure tenders and to create the right network to win the tender.
Two scenarios are possible:
(a) GrInn.City is the promoter of the project: in this case, the profit will be closely linked to the project's performance as the start-up will hold shares in the project. In addition, GrInn.City will take a percentage (5%) of the sum collected for the call for tenders as a consulting service in order to have an immediate inflow, in this way it will be possible to guarantee both the coverage of expenses related to the project and the payment to the human capital engaged in the work.

b) GrInn.City is contacted to carry out a project: when GrInn. City is approached by a third party actor to work within a partnership it will take a fee which can be of two types. In case of winning the project it will take 5% of the sum foreseen by the call, in case of not winning the call it will receive a reimbursement of expenses for the work carried out which amounts to the cost of the human capital engaged (estimated at 25€/h for the number of hours employed plus any extra expenses incurred, plus 10% overhead), the minimum fee is set at 2000€ (including overhead). These obligations to GrInn.City arise at the time of signing the contract. Once GrInn.City has accumulated experience and gained credibility in the market, these numbers will increase.

2.7 Practical application of the GrInn.City methodology: Generazione Villa Ada

Generazione Villa Ada Logo

To make the concept of GrInn.City and the way it operates more concrete, let us apply the methodology to the first project the start-up is working on: Generazione Villa Ada.
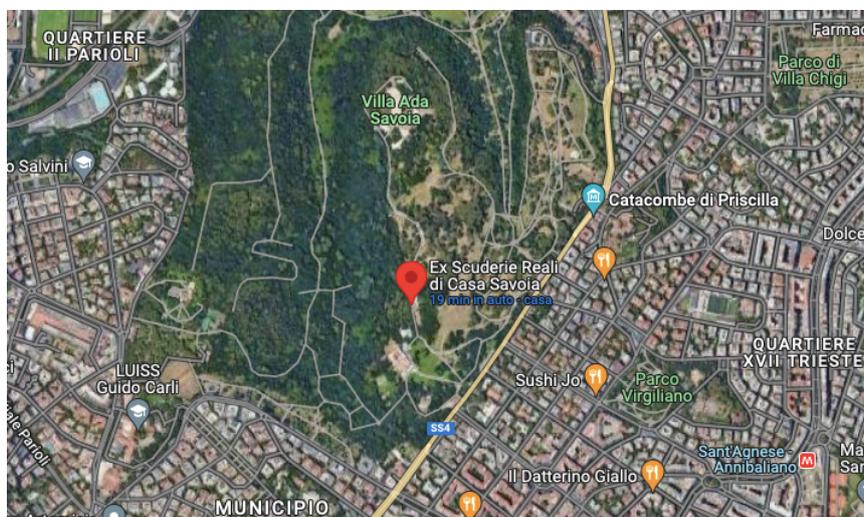
Source: Google Maps, Villa Ada and Ex Scuderie Savoia seen from above

The project envisages the recovery of a complex of three historic buildings (Ex Scuderie Savoia) located in the heart of Villa Ada, which after several years of neglect and after several million euros spent by the municipality to prevent their collapse, remain closed and dilapidated in one of the most picturesque spots in the park. For years, the municipality has been trying to think of uses for those buildings, without ever managing to find a sufficiently convincing idea.

There are several questions to be asked:

- Why were all previous projects rejected?

- What are the issues related to the area that complicate the realisation of any project?

- What are the needs of actual and potential stakeholders?

GrInn.City's objective is to develop a project that answers these questions by satisfying all needs and avoiding any complications.

Source: Google Maps, Ex Scuderie Savoia

The Generazione project envisages the creation of an innovation hub to act as an intergenerational centre capable of providing services to citizens. In concrete terms, the three abandoned buildings will be regenerated and the old greenhouse, of which only the foundations remain, will be rebuilt. In this

image from above you can see the structure of the buildings and the drawing of where the greenhouse was once located.
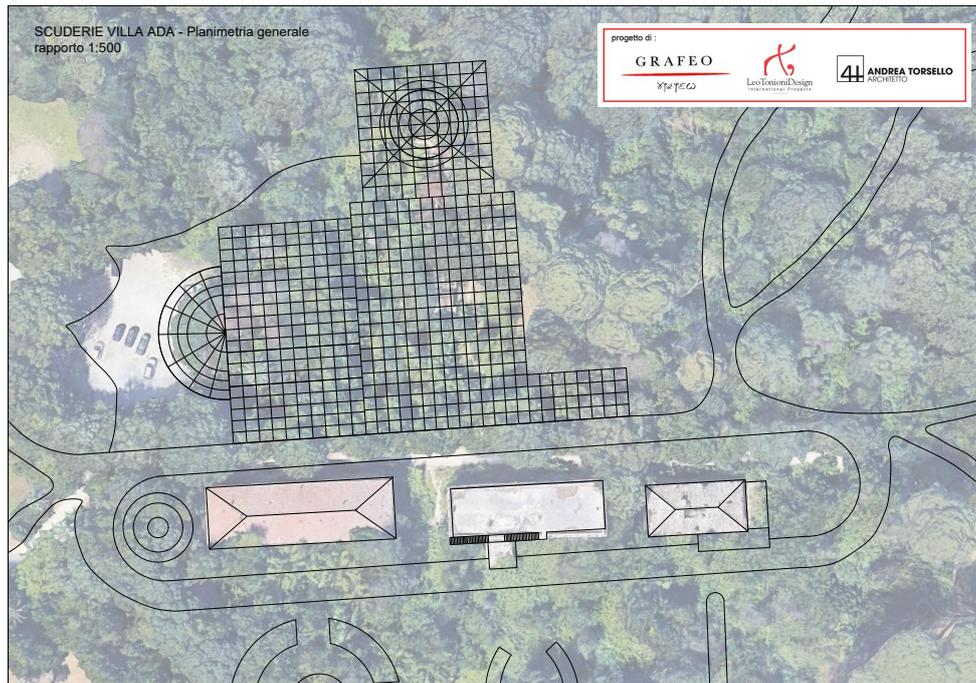
Source: Grafeo Studio & Andrea Torsello Architetto, General Planimetry

The buildings will be regenerated according to their function. In fact, the project envisages a series of services offered in the various buildings, designed to meet the needs of all generations, giving everyone a valid reason to come to Generazione. The first draft of the project includes the creation of:

- A children's and youth museum themed on sustainability and innovation
- A wisdom house that will be a meeting and learning place for young people
- A collaboration space that can be used for new projects
- A house of innovative arts
- A space for associations, which in exchange for the use of those spaces will have to return services to the citizenship
- A greenhouse, part of which will be part of the museum, part of which will be leased to a large nursery so that it becomes both a place of attraction and a place with its own economic sustainability
- A climate change research centre
- A covered rooftop for events that also serves as a relaxation area and cafeteria

At this point, it is necessary to first understand why this purpose answers the first three initial questions and then go on to ask how GrInn.City came up with this idea and how it has operated so far and will operate.

Starting with the first two questions, it must be said that the previous projects were proposed by the former mayors of Rome, both of which envisaged the creation of museums (one of fashion and the other of toys)[75]. Avoiding judgement on the usefulness of a toy or fashion museum in a park such as Villa Ada, the main problems were other, namely that the projects involved the construction of parking spaces and above all the underground excavation to create a few halls, all while leaving out the buildings on the surface[76]. Analysis of the previous projects therefore shows no secondary effects other than the construction of simple museums, while the Generazione project goes much further. It must also be said that that area of the second city hall, according to reports from its inhabitants and people who work or study in the area, is particularly busy and the lack of parking is a serious problem, so creating a complex that attracts even more people would risk congesting the area more than it already is.

To answer the last question, on the other hand, one can rely on a study carried out by the head of the party Azione in charge for the Second Municipality according to this study it appears that the needs of the inhabitants of the area are "Information, reception and teaching".

How did the project come about?

GrInn.City was contacted by AMUSE[77] (Friends of the Second Municipality), an association in the Second Municipality that has been working in the area for years. AMUSE had long hoped for the opportunity to regenerate the Ex-Stables, but it lacked an operational arm capable of taking charge of the situation and operating concretely.

The first step was to listen to the needs of AMUSE, which in this case are both promoters and stakeholders as future users of the asset. In parallel, thanks also to AMUSE's contacts, the creation of the network of partners was started in order to define the project and start operating.

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[75] CORRIERE DELLA SERA (COSTANTINI V.), 2019, Solo bivacchi e rifiuti, così muoiono d'incuria i «gioielli» di Villa Ada, Link: https://roma.corriere.it/notizie/cronaca/19_febbraio_18/solo-bivacchi-rifiuti-cosi-muoiono-d-incuria-gioielli-villa-ada-40eb22de-32dd-11e9-ab13-b1bad8396d5f.shtml
[76] YOUTUBE (ABCittà), 2009, Museo del Gioco e del Giocattolo di Roma, Link: https://www.youtube.com/watch?v=EYPWkzdyBDw
[77] https://www.associazioneamuse.it/

Respecting the criteria of the quintuple helix a multidisciplinary partnership was created, at the moment the actors involved are:

- GrInn.City and LabGov as a cognitive actor, which provided their methodology and know-how to work on the project;

- AMUSE as a community actor, who have become promoters of the project and have been able to expose both the needs and the problems related to the area (such as the lack of parking and traffic);

- Municipality of Rome as a public actor, first contacts were made with various councillors who have competence in this area, and a draft project was also presented before the Mayor of Rome, Roberto Gualtieri;

- Studio di architetti Grafeo as a private actor, which has made its resources available to work on the project;

How GrInn.City works?

As seen in the previous paragraphs GrInn.City adopts three principles in its methodology, below is an analysis of how these principles are used in the Generazione project:

Idea Generation: the Idea Generation phase must take into account the needs of the stakeholders, for this reason both the parties promoting the project and the inhabitants living in the area were listened to, questionnaires previously promoted by the party Azione in charge for the Second Municipality were examined, and finally a benchmark was made on initiatives pursuing the same objectives as Generazione.

In order to meet the needs of the associations, a dedicated space was designed in which they could meet, but in return they would have to offer services to the citizens such as guided tours in the park or support to the elderly in carrying out technological activities (e.g. SPID, paying bills electronically, etc.). The Municipality of Rome has requested an event space on the rooftop of the central building, so the idea was to have a space that could have its own economic sustainability and be adapted and accessible to all at times when there are no events taking place. Citizens have asked for an educational space that also offers services, and to make the place populated even in the morning hours the connection with schools is immediate, so a children's museum that could follow in the footsteps of the very popular Explora[78] in Rome seemed to everyone a solution to offer both economic sustainability and an educational project for the new generations. Lastly, the Wisdom House was born

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[78] https://www.mdbr.it/

out of the need for a co-working space, it is designed to be a transversal path that includes both places of study and project development for young people and co-working for companies, so as to achieve a unique ecosystem that fosters relationships between young people and workers.

The project idea therefore takes into consideration all the needs that have emerged, both from the project promoters and from all the future stakeholders that will benefit from Generazione

Network Building: the construction of the network started already in the project phase, in fact GrInn.City did not develop the project independently but is collaborating with a team of architects and AMUSE. The network will clearly be expanded to include other private actors, other research organisations, other associations.

At the moment they are working on the inclusion of the founding cooperative of the Explora museum, which has long been looking for space to expand its museum centre, which currently only caters for an audience up to 8 years old. Conquering a larger age group and directing the project towards sustainability is therefore in the cooperative's interests. It is also working on partnerships with companies that can both sponsor the construction and add value to the project, such as Technogym for the installation of fitness facilities. Associations that have social missions compatible with the aims of Generazione will then be sought out in the area to include them in the space dedicated to them. As far as research organisations and universities are concerned, contacts have already been made with universities both in the social sciences and with an artistic and creative profile in order to include them in the House of Innovative Arts. This engagement of universities will also be crucial to work on the communication side, the real key node that will serve to make the project attractive.

GrInn.City will be responsible for researching and using its contacts to seek out the ideal actors to include in the project for the financing and construction phases and, above all, for the operational phase once Generazione is up and running.

System Integration: With System Integration we enter the live phase of realisation. GrInn.City will in fact coordinate the realisation phases by integrating all the actors present and will also be responsible for thinking about the governance of the entire hub. In order to regulate the space and ensure that it remains alive after it has been restored, a governance system is needed that knows how to keep the relationships between the actors active. To operate as a System Integrator GrInn.City will use all the tools seen in the previous paragraph and proposed by the European Commission, in

particular periodic co-working activities will be carried out to cooperatively develop the project within which GrInn.City's communication skills, visualisation tools such as Mural's canvas will be used. It will be GrInn.City's task to organise working tables and p2p or b2b meetings aimed at intervening extensively in aspects of the project.

In the description of Generazione not too many details were given as it is still a project in the development phase and some information cannot be disclosed. In the coming days, the illustrative deplian of the project will be delivered to the Municipality of Rome, with the business plan, details of the renovation costs, and details of the use of the buildings.

Interpretation and discussion of findings

Once we have explained what GrInn.City is and how it operates, it is time to conclude with an analysis of three aspects, sustainability, technology and legal aspects. Where does GrInn.City stand? It should be emphasised that it is not compulsory for start-ups to comply with parameters such as ESG, but this provides a competitive advantage and increases investibility.

If we were to make an assessment of GrInn.City's sustainability, it would be better to distinguish between GrInn.City per se as a company and all the projects it promotes. This assessment was made on what are the Principles for Responsible Investments (PRI), which include Sustainable Developments Goals (SDGs), Taxonomy and ESG factors.

If we consider GrInn.City as a company, we can confirm that, since it was founded with the aim of facilitating the transition and making it accessible to all, the intention is precisely to contribute to the achievement of the SDGs by aligning with the Taxonomy and ESG factors. Already from the name "Green and Innovative Cities" one can deduce the will to contribute to Goal 11 "Sustainable Cities and Communities", furthermore, the GrInn.City methodology follows Goal 10 "Reduced inequalities" in fact through Open Innovation it promotes community participation processes, and Goal 17 "Partnerships for the Goal", i.e. the cardinal principle that no goal can be achieved on its own, but that collaboration and partnerships must be created to reach them. By framing GrInn.City within the ESG factors there is certainly a strong commitment to developing projects that are aligned with the E (i.e. that take into account the issues: Emissions emitted, Waste management, Pollution, Biodiversity, Impacts on natural habitat of the site, Water, Noise), considering instead the S the working conditions of the employees must be decent and the relations with the Employees harmonious, moving instead to the G it is important that the board is heterogeneous and inclusive, and obviously much attention will be paid to unethical as well as illegal issues such as Bribery and Corruption and Conflicts of interest.

Turning instead to the analysis of the projects that GrInn.City will choose to be part of, obviously only those projects that are in line with GrInn.City's mission and values can be considered. The projects GrInn.City will take on must be environmentally, economically and socially sustainable, may cover all Sustainable Development Goals, must be in line with the dictates of the Taxonomy, and must respect all ESG factors. Depending on the relevant topic of each project, of course, both the Goals to be pursued and the ESG standard adopted to measure alignment will vary. A discourse must then be opened on the other actors involved in the partnerships, especially for private companies, the

inclusion of those companies that are already aligned with the Taxonomy or that respect the ESG factors or that are undertaking actions for alignment will be adopted as a practice.

Turning instead to GrInn.City's Technology Readiness Level (TRL), it is not possible to define a Level as GrInn.City is not testing any new technology. However, since the projects will include Emerging Technologies, it is in GrInn.City's interest to adopt only those technologies that already have a high TRL and are ready for actual use. In the realisation of projects with high innovative and social value, it is impossible to do without technology, which must be used as a real enabler for social innovation. It is not possible to go into a precise definition of which technologies will be used in the next projects, but IoT and 5G will certainly be indispensable.

As far as the legal aspects and possible legal hacks are concerned, once again one has to think about the projects that will be developed rather than about GrInn.City. In fact, there are no legal hindrances for which GrInn.City will not be able to operate, as it will be registered as an external consultant in tenders, without creating any kind of conflict of interest. Each project developed, however, will have to face and unravel more or less complex legal knots. Since it is certain that emerging technologies will be used, the participation within the founders of a Legal Tech will ensure coverage for all complex legal knots due to digital innovation.

Conclusion

In conclusion, it is worthwhile to make a few observations and highlight a few aspects. First and foremost, it must be emphasised that GrInn.City is not a complete actor; it was formed in a context of transition and was not born to create projects, but rather to collaborate. Therefore, it is in the very essence of GrInn.City to never be able to survive alone, but to always be a member of an ecosystem. This incompleteness is both a weakness and a strength; it is a vulnerability since it is incapable of completing a project on its own, but if correctly utilised, it is a significant strength because it makes it incredibly resilient. In reality, it may adapt to projects dealing with any topic, from housing to healthcare, because the methodology to be applied is always the same; only the network actors vary. According to an analysis of trends and data proposed in this thesis, this is the winning strategy for transition participation.

According to reports from the European Commission and the OECD, the product that GrInn.City is building is indeed beneficial. In order to innovate, partnerships, multidisciplinarity, and specialised soft skills are required. In addition, the statistics indicate that there is a lack of collaboration and that

the difficulty in connections between actors contributes to a problem of funds absorption and, consequently, to the loss of potential money for the implementation of projects. Therefore, GrInn.City appears to be the optimal tool for addressing this issue and transforming it into an opportunity.

GrInn.City, by incorporating all actors of the quintuple helix in participatory processes, takes into account the interests of all actors, whether they are public, private, or community actors, and relies heavily on the knowledge supplied by research. In this way, everyone is an active participant in the transition and everyone receives benefits: the private party benefits from relationships with the PA and comes into contact with the community, the PA receives results for the citizens and makes use of the private party's resources, and the community is able to have its demands met by receiving responses from the PA and benefiting from the private party, all of which are accomplished through the practical application of research.

GrInn.City has the ability to make the transition a fully participatory process as a result of the team's and ecosystem's gathered knowledge over the years. The Generazione Villa Ada project will serve as a prototype to evaluate the viability of this concept, with the goal of making a measurable impact within the community, reclaiming an abandoned location, and establishing a living and sustainable environment over time.

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Summary

We live in a time when everyone talks about sustainability, innovation, digital and ecological transition, but few actually know what this is about and especially what steps need to be taken to achieve these goals. What we can take for granted is that we are lagging behind on the transition to a more sustainable world, and national governments themselves admitted at COP26 in Glasgow that they are not doing enough to meet their Paris Agreement commitments, recommitting to meet to review some strategies by the end of the year at COP27 in Egypt. But sustainability cannot be discussed by governments alone, it is a commitment that involves multiple actors and regards three dimensions: environmental, economic and social. An acceleration of the transition is necessary. This is the mission of the start-up GrInn.City, to make the ecological and digital transition affordable for everyone. Since it is not easy to get different actors such as companies, public administrations, research bodies and local communities to collaborate, GrInn.City proposes itself as a system integrator to facilitate the realisation of projects by facilitating the creation of multidisciplinary and heterogeneous partnerships for the types of actors involved. In particular this thesis answer to the question: is GrInn.City the right tool to facilitate the transition by managing to involve all actors in the quintuple helix (private, public, academic and research, community)?

GrInn.City sees itself as a system integrator of multidisciplinary partnerships to carry out project, following applied research and design principles. It is fundamental to introduce three concepts:

System integrator: SI is the actor that allow companies and other actors to combine high-tech components, subsystems, software, skills, knowledge, engineers, managers, and technicians to manufacture a product in competition with other providers.

Open Innovation: is the paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms seeks to advance their technology

Design Thinking: a five-step process for finding solutions to complex problems that focuses on the individual, the community and has integration and collaboration as its cornerstones.

The start-up was born in a post-pandemic transition context, characterised by an unprecedented release of funds by the European Union and individual states. La transizione in corso riguarda gli aspetti del "green" e del "digital". Covid has created a new scenario in which, on the one hand, we are aware of the problems related to climate change and the digital divide and, on the other hand, we need to give the economy a new boost in order to restart after the deep economic crisis following the

health crisis. In order to restart, therefore, large funds have been issued by the European Union in a framework that combines the EU's long-term budget of EUR 1.211 trillion from 2021 to 2027 and EUR 806.9 billion through NextGenerationEU. In Italy, to allocate these funds, a National Recovery and Resilience Plan was created that allocates EUR 191.5 billion. Instead to use funds from the Programming Period, each Member State must draw up so-called Operational Programmes (OPs), which define the priorities, specific objectives, financial allocations of fund support and the corresponding national co-financing. The OPs must be approved by the European Commission.

Based on data from the previous programming period (2014-2020), we can see quite a few problems in the allocation and utilisation of funds. The main problem is the absorption of funds. According to the European Parliament, absorption capacity is "the degree to which a Member State and its regions are able to spend the financial resources allocated to it under the Structural and Cohesion Funds effectively and efficiently". According to this definition, Italy is among the last Member States in terms of absorption capacity. In fact, for the 2014-2020 MFF, the state of progress for structural funds as of 30 June 2021 stands at 85.4 per cent and payments at 54.5 per cent of the programmed resources. Moreover, the MFF provides for annual certified expenditure targets according to the 'N+3' rule, which provides for the automatic decommitment of disbursed EU resources if they are not spent within three years. In addition, Italy ranks last in terms of absorption capacity with a rate of around 45%, a profound gap when compared to the first ranking Member States with a rate close to 80%, in numbers it amounts at 25 billion EUR in unspent cash.
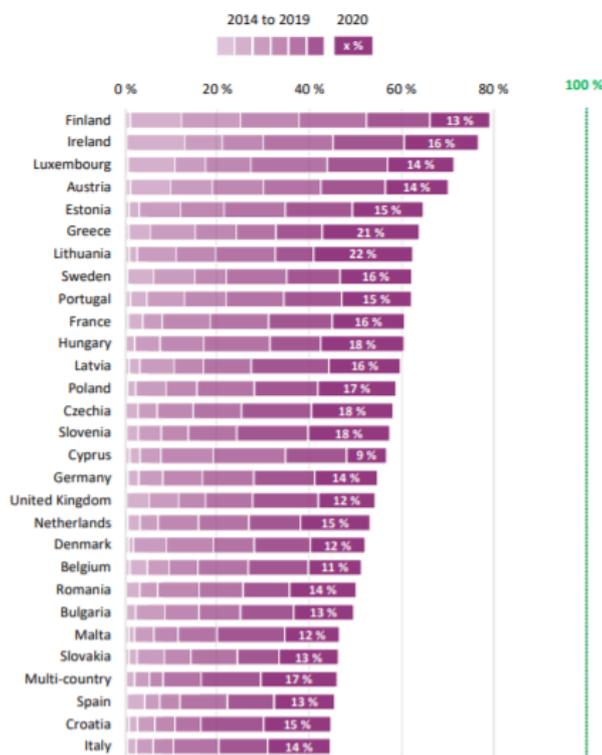
The causes of this phenomena are: difficulties in completing the conformity assessment procedures for the new management and control system; insufficient resources to co-finance projects; delays in the creation and introduction of EU and national standards or related guidelines; the need to set up new institutions for the implementation of the programmes; insufficient separation between the authorities of the Member States, hierarchical problems between the institutions and internal difficulties related to the allocation of tasks and responsibilities; insufficient involvement of the regional and local level in the elaboration of operational programmes; staff shortages and inadequately trained personnel; difficulties in setting up computer systems; insufficient initial preparation for project execution and absence of a project process.

In fact, the current state of the Italian public administration presents a profile that is scarcely consistent with the challenges that small and medium-sized enterprises are currently called upon to face: faced with problems on an extremely broad scale, thus tangential to related but distant topics and issues, PA employees present themselves with a level of professionalisation that is markedly lower than the European average, with just 4 out of 10 employees holding a university degree. Many resources are further wasted due to a lack of communication between public administration and companies on the topics covered by the calls. A challenge that has emerged as a result of some studies is to succeed in getting more realities to participate in European calls and projects on an ongoing basis, knowing that they require specific skills and a high level of collaboration with established partners. The objective is to spread a culture of project management over the medium to long term. Usually companies innovate on an ongoing basis, but many of them do so at the specific request of the customer. What emerges is an absence of a 'research and development culture' accompanied by a kind of 'culture of mistrust' that hinders the innovation process and limits its benefits. While the NRRP and the programming period therefore offer a great opportunity, there is a general failure to seize opportunities.

In Italy we assist to an lack of collaboration between companies and other actors. In fact, according to the 2021 Istat report on enterprises, in 2018 slightly more than half (52.5%) of the enterprises with at least three employees had at least one type of network relationship, with a large prevalence of job order contracts. Only 7.5% of enterprises stipulates consortia or joint ventures agreement. But enterprises that actively collaborate with others coped more efficiently with market competition, it can be observed that the former has a higher level of labour productivity on average by about 18%. For what concerns intra-group relations, companies entertaining relations with the PA are only 7.8% of the total, and the ones that collaborates with universities or research centers are only the 2%.

Thanks to a study in The Nederland that analyses 12811 innovative firms, it is possible to say that collaborating increase innovation and revenues. In fact, firms that collaborate on their innovation operations with external firms produce more inventive output per employee. Functional diversity has a significant impact on radical innovations. This means that in order to create and introduce new products, companies need a varied group of partners from other sectors.

GrInn.City

To fill the gaps highlighted above, GrInn.City presents itself as a system integrator for innovation and sustainability. Like traditional system integrators, GrInn.City aims to proactively bring together the players of the quintuple helix in order to create a functional ecosystem that can synergistically catalyse the potential of the individuals, simultaneously creating an innovative research hub and a unique consultancy centre.

GrInn.City is at the service of the quintuple helix actors: public administration, the private sector, universities, research institutions and third sector organisations through idea generation and co-design, network building, stakeholder engagement and project management activities, mainly aimed at tender writing. GrInn.City will assist the stakeholders involved in the project in participating in calls for tenders, contributing to project writing and ensuring effective and efficient resource management. In addition, GrInn.City will participate in tenders with its own projects, subsequently building a consortium of actors capable of realising high-impact solutions. To carry out its activities GrInn.City will follow a methodology consisting of the practical realisation of what was inherited from LabGov.City as we will see later.

We can summarise this methodology in three key steps:
- Idea generation
- Network building
- System Integration

The GrInn.City team is made up of eight students from the Master of Science in Law, Digital Innovation and Sustainability (LDIS) boast experience in various companies during their academic career such as Enel X, Gorillas, Mont Blanc, Bip, as well as several years spent within LabGov where

they had the opportunity to participate in Horizon projects (such as EUARENAS , OpenHeritage), public calls issued by ministries (such as PINQUA), and where they gained experience on cooperation between actors in the quintuple helix and the principles of urban commoning. In addition, the team benefits from the experience of numerous external consultants, both LDIS professors for topics ranging from policy to finance, and professionals with expertise in matters strictly related to economic and functional aspects.

In the process of establishing GrInn.City, it was decided that the founding partners will not be natural persons but legal entities. In particular, GrInn.City will be founded by four entities: LabGov.City; a consultancy agency, a Legal Tech, a high-tech company.

To justify the birth of GrInn.City, it is also important to explain the context within which it was born. GrInn.City stems from the experience of LabGov.City - the LABoratory for the GOVernance of the City as a Commons - is an international network of theoretical, empirical and applied research platforms engaged in exploring and developing methods, policies, and projects focused on the shared and collaborative management of urban spaces and resources. The rationale behind the founding/creation of GrInn.City therefore lies in the desire to go a step further than LabGov, building on the experience consolidated over the years. Following the wave of the increasingly evident need for an effective multidisciplinarity of actors with complementary academic and professional backgrounds and thus capable of managing digital and social innovation processes with transdisciplinary/transversal skills in system thinking.

The human capital that will constitute GrInn.City also took part in the Master of Science in Law, Digital Innovation and Sustainability established and directed by Prof. Iaione himself. Thanks to the two-year training course, the team had the opportunity both to hone technical and practical skills and to do job on-the-job training, and to collect a remarkable network of business, human relations and work experience. The focus of the Master of Science is in fact to be able to combine an introduction to pre-legal concepts and tools related to the law of new technologies together with a strong methodological background.

Having described the role of the ecosystem in the birth of LDIS one thing remains to be clarified, Luiss is a university of social sciences and while the role of the scientific disciplines within innovation is evident, it is more complicated to measure the contribution of the social sciences to innovation. An

OECD report on the role of social sciences within innovation clarify this issue. The OECD points out 4 main reasons why this contribution of the social sciences remains unclear:

- Social scientists contribute to process and organisation improvement through the development of novel techniques that enable adaptation to a changing demand and a growingly apparent digital transformation process;
- Not only do the social sciences boost a company's responsiveness to demand, but they also alter the communication of supply;
- According to the OECD, it is at this moment that the role of consulting develops, acting as a bridge between the research basics of social science and the demands of the business;
- The final reason is the capacity to bring soft skills.

In fact, there are specific skills that distinguish innovative from non-innovative workers:

- creativity (i.e. coming up with new ideas and solutions)
- critical thinking (i.e. a willingness to question ideas)
- communication skills (i.e. the ability to present ideas to an audience)
- alertness to opportunities
- analytical thinking
- the ability to co-ordinate activities
- the ability to acquire new knowledge rapidly

These soft skills include some that are closely related to the concept of multi-stakeholder partnerships and System Integrators. Furthermore, the acquisition and development of these skills is grounded in the LabGov experience and in the imprinting MSc in LDIS is giving to the students, for this reason GrInn.City is the right for answering these challenges.

Through its methodology, GrInn.City will apply these principles and be able to bring these soft skills into innovation processes. However, the GrInn.City methodology stems from the LabGov methodology that adopts the Co-City Protocol. It is the product of Co-Cities LabGov, a multi-year research project that yielded a methodology that can serve as a guide for urban policymakers, researchers, and urban populations engaged in co-governance experiences. The objective is the realization of the "Co-City" a city built on the shared governance of a common good, in which the various actors of the quintuple helix participate. The Co-City protocol, which defines the conditions essential for the establishment of polycentric governance, is founded on five design principles:

1.   Collective Governance
2.   Enabling State
3.   Pooling Economies
4.   Experimentalism
5.   Technological Justice

For the implementation phase, the Co-City protocol is based on the Co-City Cycle, which is made of six phases:
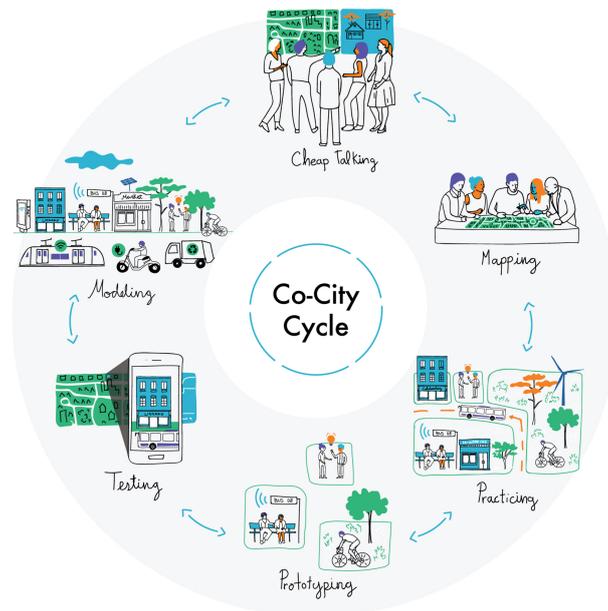
GrInn.City takes up these concepts, applying the same paradigms in different areas in such a way as to add value to the calls for proposals, showing innovation in the processes and increasing the attractiveness of the proposals. In particular, by combining the experience of LabGov and what was learnt during the MSc LDIS, GrInn.City proposes to adopt these methodologies:

Idea generation: through Open and collaborative Innovation and Design thinking GrInn.City will be able to intervene in a capillary manner on problems, analysing characteristics and needs of the territory, adopting scalable solutions from consolidated national and international best practices.

Network building: thanks to numerous well-established partnerships that those involved in the governance of GrInn.City maintain, GrInn.City will be able to select actors with the appropriate know-how in a given field in order to implement solutions as effectively as possible.

System Integration: thanks to the ability to design projects with cross-impact, to dialogue and co-design with different stakeholders, GrInn.City will be able to ensure a concrete and measurable impact.

As a proof that this is the right way to proceed, a study published by the European Commission's legal interoperability team and Deloitte, multidisciplinary approaches are considered as one of the main ingredients for improving interoperability and creating digitally ready and future-proof legislation. Specifically, policymakers should quickly construct a well-balanced multidisciplinary team composed of policy implementers such as business analysts, enterprise architects, and subject matter experts. These are the fundamental characteristics that a multidisciplinary partnership must have according to the study published by the European Commission's legal interoperability team and Deloitte: engagement and communication, community knowledge management, transparency, knowing well each team member, adopting flexibility, encourage team building activities, use of visualisation tools.

In this context GrInn.City operates as a system integrator. The System Integrator is a very common professional figure in the corporate landscape, with roles ranging from small and medium-sized businesses to global corporations. The primary responsibility of a System Integrator is to integrate IT systems, to ensure that various devices - such as technologies, software, and hardware, i.e. virtual and physical components of a system - interact correctly with one another in order to ensure the company's business continuity. The figure has changed over time to include aspects of the firm other than IT. In fact, System Integrators can be found in a variety of fields, including security, data management, analytics, and other areas. GrInn.City would assume this same function but within the multidisciplinary partnership. In fact, just as for real SI the objective is to systematise the heterogeneity and allow the whole system to work efficiently, the same would be done with the partners.

This is the business model of GrInn.City:

Key Resources ●●	Type of Intervention ●●	Key Activities ●●	Segments ●	Value Proposition ●●
Contacts Know-how Methodology Digital tools	**Sustainability (energy efficiency, services for communities, nature based solutions)** **Innovation (bottom-up social entrepreneurship support, Digital accessibility, services for communities)**	Search for tenders Identifying the ideal area Mapping of possible actors Dialogue with communities Participation in the call Monitoring of participation activities	Who suffer from Digital Divide People with fragile life conditions Complex local communities	Access to funds Creating impact *(emission reduction, better life conditions, services)* *Social Value Proposition*
			Beneficiary	*Impact Measures* ●
Partners + Key Stakeholders ●● Local Communities PA Private Sector	• project writing • Impact analysis • Support in participating in calls for tenders • Project management • Feasibility study	**Channels** ●● Luiss, LDIS, LabGov Network Social media Partner's network On field interventions Brokerage	*Customer* ● Companies not positioned yet Companies with high CSR investments PA with scarce competencies Proactive Local Communities	Number of projects Number of clients Quantity of founds moved Number of people involved *Customer Value Proposition* ● Access to funds Reputation Support in complying with environmental and social criteria

Cost Structure ●	Surplus ●	Revenue ●
Employees Accountant Digital tools Side visit Bureaucracy	Invested for GrInn.City projects	Fee for the service Ownership of some projects

Some aspects to underline is the social sustainability of GrInn.City, in facts the BM thakes in consideration all the actors of the quintuple helix. In fact, the social value proposition is to ensure access to funds and create positive and measurable impact for local communities, the private sector and public administration. This must translate into a positive impact on project beneficiaries who will see their living conditions improve, accessibility to services improve, all in a sustainable way with the help of digital innovation. On the other hand, clients who ask GrInn.City to act as an SI for the partnership must first of all receive a higher chance of accessing funds, and by adopting a more inclusive way of working they will see their reputation improve.

generazione
Villa Ada

To make the concept of GrInn.City and the way it operates more concrete, let us apply the methodology to the first project the start-up is working on: Generazione Villa Ada. The project envisages the recovery of a complex of three historic buildings (Ex Scuderie Savoia) located in the heart of Villa Ada. The Generazione project envisages the creation of an innovation hub to act as an intergenerational centre capable of providing services to citizens.

GrInn.City ha applicato tutti i principi di design e la metodologia sopra descritta. Inizialmente siamo stati contattati da un'associazione del territorio che aveva già un accordo pregresso con il Comune, ma a cui mancava un attore operativo. Il network quindi iniziava a formarsi. Si è passati alla fase di generazione dell'idea in cui sono stati portati sul tavolo gli interessi dell'associazione, quelli dei cittadini sondati tramite questionari, quelli del Comune che erano stati espressi in precedenza e anche gli obiettivi di GrInn.City in linea con la missione e la value proposition. Ora siamo in fase di approvazione del progetto da parte del comune e in parallelo stiamo lavorando alla fase di network building per completarlo con tutti gli attori della quintupla elica. Una volta entrati in fase operativa GrInn.City adopererà tutte le soft skills necessarie per gestire ed integrare una partnership multidisciplinare.

Once we have explained what GrInn.City is and how it operates, it is time to conclude with an analysis of three aspects, sustainability, technology and legal aspects. Where does GrInn.City stand? If we consider GrInn.City as a company, we can confirm that, since it was founded with the aim of facilitating the transition and making it accessible to all, the intention is precisely to contribute to the achievement of the SDGs by aligning with the Taxonomy and ESG factors. Turning instead to the analysis of the projects that GrInn.City will choose to be part of, obviously only those projects that are in line with GrInn.City's mission and values can be considered.

Turning instead to GrInn.City's Technology Readiness Level (TRL), it is not possible to define a Level as GrInn.City is not testing any new technology. However, since the projects will include Emerging Technologies, it is in GrInn.City's interest to adopt only those technologies that already have a high TRL and are ready for actual use.

As far as the legal aspects and possible legal hacks are concerned, once again one has to think about the projects that will be developed rather than about GrInn.City. In fact, there are no legal hindrances for which GrInn.City will not be able to operate, as it will be registered as an external consultant in tenders, without creating any kind of conflict of interest.

In conclusion, it is worthwhile to make a few observations and highlight a few aspects.
- First and foremost, it must be emphasised that GrInn.City is not a complete actor; it was formed in a context of transition and was not born to create projects, but rather to collaborate. This incompleteness is both a weakness and a strength; it is a vulnerability since it is incapable

of completing a project on its own, but if correctly utilised, it is a significant strength because it makes it incredibly resilient.

- According to reports from the European Commission and the OECD, the product that GrInn.City is building is indeed beneficial. In order to innovate, partnerships, multidisciplinarity, and specialised soft skills are required

- GrInn.City, by incorporating all actors of the quintuple helix in participatory processes, takes into account the interests of all actors, whether they are public, private, or community actors, and relies heavily on the knowledge supplied by research.

GrInn.City has the ability to make the transition a fully participatory process as a result of the team's and ecosystem's gathered knowledge over the years. The Generazione Villa Ada project will serve as a prototype to evaluate the viability of this concept, with the goal of making a measurable impact within the community, reclaiming an abandoned location, and establishing a living and sustainable environment over time.