
Support Local Businesses Through Design

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Abstract: The paper illustrates a case study of crisis-driven innovation that emerged in the age of COVID19 to help create the future for local and small businesses, which are extremely affected by this pandemic. Tied to the urgency of this situation, a one-week design sprint with 12 multidisciplinary teams, mentors and motivational speakers, involving more than 100 people, was launched with very short notice. The work was done in one week, in a 100%

online environment with participants from 15 different nationalities, resulted in 12 concept solutions to support tourism, culture, events, restaurants, municipalities, shops, and services to children and families. This is a promising approach to address complex societal and business challenges with wide applications in the fields of education, capability building and stakeholder engagement.

Keywords: Strategic Design; Innovation Challenges; Small Businesses; Design Sprint; Innovation Management; Online Workshops; Covid-19.

1 Area of opportunity

Context

This project aimed to find new solutions to support the recovery of local businesses during and after COVID-19, through the application of Strategic Design methodologies and tools. There is widespread concern about the negative impacts of this pandemic, with a central concern in the future of these small businesses: “When this is over, I dream of returning to my local café, baker, barber/hairdresser, the local gym, local cinema, the independent local workshop where I fix my bike, the local kindergarten and after-school club for my children, that music and bookstore... But will these be there?”

In order to support local and small businesses (e.g. restaurants, cultural events and gyms, among others) more vulnerable and exposed to this current situation, Strategic Design and Innovation Lab (SDI.Lab) launched an innovation project aiming to develop viable solutions for the immediate future of these businesses. This was a rapid response from Academia that gathered significant support from students, innovation & design professionals and small business owners (over one hundred people) to create solutions, within the shortest possible time. The main goal of this pro-bono project was to create concepts of new products, services and business models that can be offered to small businesses to support their ability to recover and respond to the uncertainties of the post-covid19 economic reality.

SDI.Lab, the institution that organized and developed this project, is a partnership between UNIDCOM/IADE-Faculty of Design, Technology and Communication, Universidade Europeia, Lisbon, Portugal, and the Department of Design/CILAB research group of Politecnico di Milano (POLIMI), Italy. The main purpose of SDI.Lab is to increase the business and social impact of research by accelerating the deployment of strategic design and innovation capabilities, which is completely in line with this project idea and context.

This project raised the following key questions that encouraged the whole team to take action: What will be the products/services and businesses most suitable to boost local economy in Europe, during and post-COVID19? What will be the top user-needs of the post-COVID-19 era? With less disposable income, what emerging solutions can take advantage of “sharing economy” business models? Which types of “local businesses” have adapted due to COVID-19 and how? Which past needs/services/products might disappear as a consequence of social isolation, and what is the impact to the local economy?

Under these circumstances, the project tackles innovation management challenges in times of uncertainty and fast adaption to deep shifts caused by the pandemic. Countries and businesses are addressing a health, economic and social crisis, for which more flexible and collaborative design-driven innovation methodologies have a new role to play.

Relevance

The aim of sharing this story is to stimulate debate and critical thinking about new design and innovation management approaches to manage high level of uncertainty business challenges. It contributes to experimental innovation applied to disruptive and crisis-driven urgencies with a particular focus in local and small businesses. Furthermore, it brings new insights about the engagement of multidisciplinary and multicultural teams with the design and innovation process in a completely virtual collaborative environment and geographically dispersed teams.

This case is particularly relevant for the innovation community (researchers, managers, consultants, policy officers and funding agencies) that in many ways support local businesses challenged by the economic disruption from COVID-19. Some of these businesses adapted, some temporarily suspended their activities, and some stopped and might not reopen after this pandemic. The impact of COVID-19 will also result in much higher unemployment rates with severe reduction of disposable income (the fuel local economy) and expected a profound shift in consumption habits, behaviours and lifestyles. New ways of buying and working, learning, sourcing, problem solving are emerging, at the same time, several local businesses risk becoming obsolete or unable to recover from this crisis. This scenario represents an emerging field for new research agendas and the development of creative solutions and innovation processes, which makes this case extremely relevant to a different group of stakeholders, not only to the most affected by the pandemic crisis such as owners of small businesses (e.g. artists, coffee shop, restaurant, gym owners, local entrepreneurs, among others) and their employees but also suppliers, consumers and citizens, universities, state, city and regional authorities.

The central message is that it is possible to conduct a 100% virtual collaborative design and innovation project to address critical and urgent economic and societal challenges in a very short period of time. Design and innovation capabilities along with digital collaboration expertise fuelled an agile and immediate reply to COVID-19 crisis. It is amazing how it was possible to mobilize high skilled people from all over the world around this cause and other key resources in less than 4 weeks, working in a completely virtual environment.

2 Storyline

Project setup

The project was based on an intensive one-week design sprint project with multicultural and multidisciplinary teams, which included students and professionals/business owners from 10 countries and 15 nationalities (from China to the US, Brazil, India and Europe),

with diverse backgrounds in the areas of design (interior, product, service, graphic, experience, web), marketing, social media and health (figure 1).

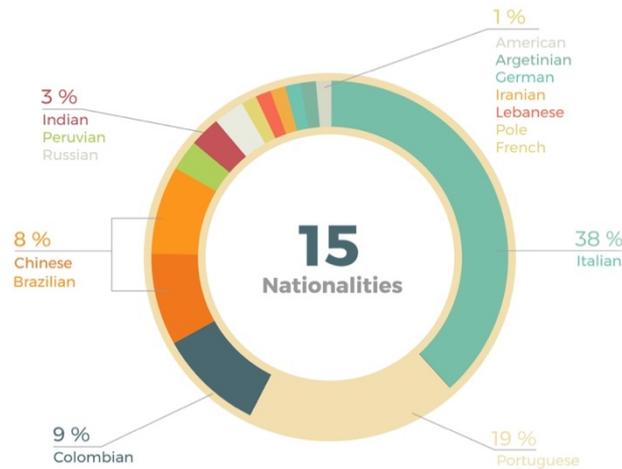


Figure 1 Characterization of team members.

The selected 72 team members that responded to the call for action were divided into twelve teams of six members each, mainly constituted of students with different backgrounds both from IADE and POLIMI MSc courses and one or two professionals/business owners (figure 2).

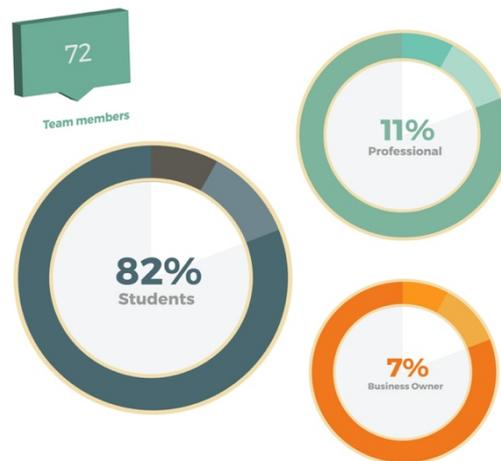


Figure 2 Team composition.

The project community workspace was built on *Slack*. Since the opening day (April 14) it engaged all community members (72 team members, 17 mentors, 9 speakers and the 5 organizers/enablers from SDI.Lab team) and provided a more structured process for communication and knowledge sharing (figure 3).



Figure 3 Community composition.

Besides internal channels for project management, general and private group channels were devised for each team. All members received on *Slack* the design brief document that comprised generic and specific questions about local businesses' current situation and suggestions to connect with people from their own networks, relevant experts and business owners to search and validate initial thoughts. This document built-in specific guidelines for external (*LinkedIn*) and internal (*Slack*) communication as well as the platform for the talks, meetings and presentations (*BlackBoard*). Other methodologies and tools were recommended to support each project's activities. Furthermore, special attention was given to the topic of teamwork, in particular for participants that did not know each other beforehand and were asked to work remotely with people from other cultures and background. For this purpose, the onboarding document provided useful best practice tips such as: “make sure all members of a team are welcomed and their diverse backgrounds and cultures appreciated; take time to get to know each other and understand what each team member is great at; allocate roles, define the team's rules and give each member space and time to align; be inclusive and sensitive to behaviours, stressful moments, limited ability to focus or work, technology disruptions; give time to experiment and explore with senses and intuition... and to be human!”

A pre-launch inspiration weekend (April 18-19), included nine contextual talks about the future of the economy and society. Speakers with different backgrounds (design, sustainability, innovation and finance) discussed COVID-19 implications for society and business and encouraged participants to contextualise the design proposals. At the same time, participants had access to relevant materials and resources such as trends analysis, reports of emerging solutions and projects already in place and breakthrough articles from leading organizations. They also had the opportunity to join the project *LinkedIn* group to share, discuss and contribute with questions and ideas. Moreover, participants received the design process document and onboarding information to better navigate and prepare themselves for the design sprint (April 20-24).

Design sprint

During the design sprint (figure 4), teams were able to conduct online activities such as meetings, interviews, workshops and presentations, with the involvement or consultation of target users and project mentors.

On day 1 (April 20), the idea was to empathise and contextualise. A virtual meeting room “Café of Clarity” was open at the end of the day to allow open discussions about the project. Since the beginning of the sprint, teams had the possibility to interact with a team of mentors available to help, chat, advise and conduct reality checks. Teams were able to choose mentors adequate for their project / concept and scheduled meetings to get support. The mentor’s job was to guide the teams in the appropriate direction but not intervene directly with his/her opinion. On day 2, teams started to develop their design problem more and did further work on their initial concepts. Day 3 was planned for building the prototype. The goal was to achieve presentable design concepts to be tested with target users and their peers in the HotSpot Peer Review session. This was the most powerful catalyst for the Design Sprint that helped to shape the early stage concepts. By presenting amongst their peers, teams gained insights and external inputs to improve their concepts.



Figure 4 Design process.

Day 4, was the time for validation. All teams aimed to validate assumptions and design decisions and make their working prototypes into more robust concepts towards the route to market. Most teams had a working prototype at this time and conducted surveys to test with end users and their peers. Day 5 was dedicated to present the project deliverables. The design sprint resulted in 12 concepts offering specific solutions for business sectors and as well as wider range of sectors. After another round of peer review feedback, 4 out of 12 concepts were selected to the final presentation where business owners, end users, local authorities and scholars were invited to provide feedback and to discuss the potential of these concept solutions.

Developing solutions gave the possibility to identify new scenarios and applications both to let businesses restart and to reshape activities according to the post-crisis phases

that citizens and companies will be called to face. Success metrics for this program were framed to the needs of local businesses and communities. The aim is also to produce and promote solutions that can be easily implemented and adopted by target users such as customers and local businesses. The focus was to meet target customer's needs and possible desires for the future after COVID.19. The overall impact of the proposed solutions was also aimed at attracting investment in order to produce a product or service that has an underlying goal of sustainability.

3 Project assessment

Team members' engagement

The assessment of team members involved in the project was two-fold. The first component is the satisfaction survey that has been submitted at the end of the project to all team members. The second is related to the evaluation of team members experience with the internal communication platform (*Slack*) that has been used to keep everyone updated and engaged with the project.

The high survey response rate (76%) is a good measure of the quality of the relationship that has been established with team members. The percentages that will be reported take into consideration the answers from respondents who evaluated equal or higher than 4 the related parameter (4-5). The first important result is related to the "overall experience with the project" (figure 5).

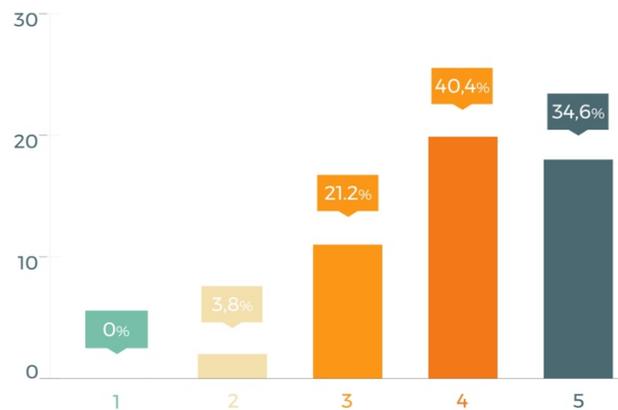


Figure 5 Overall experience with the project by team members' assessment.

It was highly evaluated by 85% of respondents. This figure also gives back the value of the approach proposed to address this challenge. The mix of talks, mentors, peer reviews and sprint phases represented a very good formula to support an event like this. One of the respondents mentioned that:

“the set of community that people managed to build during these several days, positive energy from the mentors and organizers. It was a soul lifting experience much needed in these times of isolation.”

Another important result is related to the design process itself. 75% of respondents highly evaluated the “support and guidance provided by the design process” (figure 6). Respondents highly appreciated the process structure and management, being able to use the sprint phases to quickly generate new concepts. The idea of giving them in advance the day-by-day suggestions on the expected outputs to produce allowed teams to organize effectively their work. Related to this aspect, one of the respondents stated that:

“the schedule and structure proposed were excellent to help us develop the project, the peer review and mentors’ support was important to have other views over what we were working.”

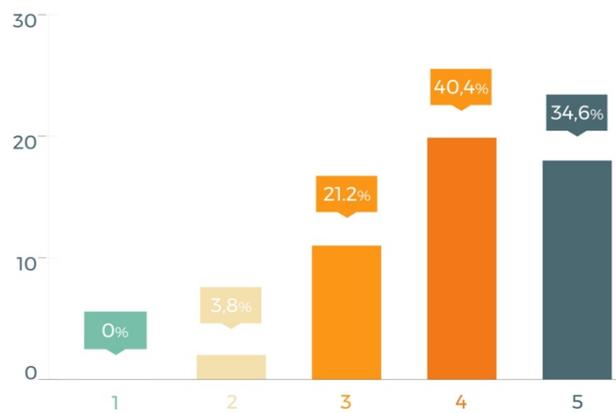


Figure 6 Support and guidance provided by the design process.

Respondents provided recognition and appreciation and well as suggestions for process improvement. A significant number of respondents have expressed satisfaction with the team work experience. In fact, one of the factors that team members liked the most was the ability to work with people from different cultures, backgrounds and ways of thinking. In terms of improvements, the most significant suggestion was the need for extra days of work to prepare, adjust and even develop further their ideas.

As mentioned, the *Slack* platform was chosen as the primary means to communicate and implement the project activities, which also allowed to create empathy with team members and collect important data about their experience. Several direct messages were exchanged with the 72 team members, from the moment they registered on *Slack* to the last day of the design sprint. The purpose was to gather inputs about their first impressions, overall experience, objectives and expectations. Most of the team members disclosed openly their views, which allowed them to adapt to project communication and improve the process over time. The type of feedback received at *Slack* support the results of the satisfaction survey and provides richer insights about team member onboarding, first issues with the tools and process and more suggestions for improvement:

“I am happy to see this good vibe and I hope it will be stimulating and funny! In this precise moment, I don’t have any specific suggestion, the only thing I would like to get from the project is positivity towards the future situation we will face”

“At the beginning, we struggled a lot because it was the first experience in remote working but the platforms (*Blackboard*, *Slack*) and tools you gave us (like *Mural*) and the mentors were really useful. I also felt your support but at the same time you let us free in the process and it was good. If I have to say a suggestion maybe it would be to give us few live presentations before the workshop starts to explain them the brief and the schedule, in order not to have all the documents to read”

“I’m satisfied with the project. Of course, is not easy to work in 6 people with different time zones and develop a project in 5 days. I don’t have any particular suggestions because I think the workshop was really well organized. I’m also very happy about the kind help that all the tutors we contacted gave us! The only small concern I had was about all the lessons, the cafes and the co-inspirational sessions. I found them really important and useful for the project development but also for my personal growth, but sometimes we had some problems because of time issues, sometimes we chose to send only a few people to participate so the others could go on with the work”

“I really enjoyed this week, especially knowing that it can somehow help to the community. The only suggestion I have is maybe during the peer review in the middle of the week, it would’ve been nice to have also one opinion from experts or organizers. Because we prepared this presentation, but in the end haven’t received enough feedback. But the rest is great! Was also nice to realize how many aspects of the teamwork can be done online, thanks to all the existing tools”

The level of engagement on *Slack* (figure 7) was extremely high, not just before and during the design sprint but also after the project presentations on Friday (April 24).

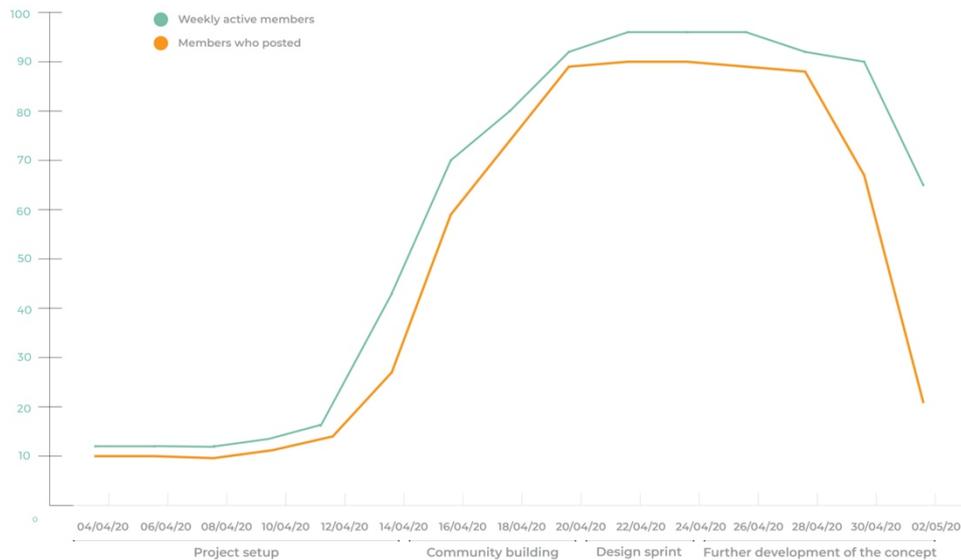


Figure 7 *Slack* level of community engagement.

It shows that part of the community is active and willing to continue with the next steps. Files were shared and messages were exchanged between organizers, mentors, speakers and participants in a total of almost 100 active members, 10,650 messages sent and 2gb of shared files. Other apps used by some of the teams were also integrated with *Slack* (*Skype*, *Simple Poll*, *Box File Picker*, *Google Drive*, *Microsoft OneDrive*, *Miro Feed*, *Slagram*, and *Zoom*). The major activity on the platform took place between April 3 and May 1, particularly during the 4 days of the design sprint with exponential growth of participation and impressive rate of engagement (most of the active members posted on different channels). Even after the design print conclusion, a lower but still significant number of team members remained active.

Value of concepts generated by teams

Out of 12 teams concept proposals, it is possible to find several products, services and business models that cover tourism, restaurants, tourist guides, retail, leisure, culture, food distribution, street markets, health and safety, music/events, assets management, sharing economy, children/families, inclusive design for non-digitals, payment systems, logistics, low-cost delivery, reinventing experiences (home, local, digital hybrids), disrupting museum/gallery business models, municipality and health and safety agencies certification for covid19 safe seal, and crowd management systems. The top two are community building and partnership brokerage (see figure 8).

These concept solutions are “innovation proposals” and open-ended “visions for the future”. Considering both the short time frame for developing the concepts (a one-week design sprint) and that Local Businesses are only one part of a whole system, they cannot define the road ahead by themselves. In other words, the proposals that emerged from the Design Sprint will require the ability to continuously adapt, knowing that such experiments will change the system and be changed by it as well. One of the reasons is that in many cases require a coordinated effort of relationships/collaboration between different sectors and stakeholders who do not have a shared agenda, culture, mindset and openness to collaborate. Nevertheless, it might be possible to reduce the complexity level for implementation by testing with the top two stakeholders (offer-demand) the minimum concepts, for which a few will be normal service users, while others require partnerships with innovators.

The Design Sprint happened in a key moment of greater innovation capability from all fronts, namely businesses, governments, cross-sector collaboration and businesses pivoting at all sectors and levels. There is a need now to review and benchmark these solutions, with existing/emerging solutions (emerging now, vs. pre-covid) and build on what is emerging. Some of the generated concepts already addressed this concern and tried to hypothesize possible synergies to implement. In fact, there are obvious synergies between some proposals, which either complement or duplicate each other. Others are slightly incremental innovations of existing solutions, which in a way is great as it can be built on existing platforms and systems.

CONCEPT PROPOSALS		
NAME	DESCRIPTION	TARGETS
Tales of wizards and witches	Editorial project that offers immersive and educational experiences	Children and Families; Schools; Educators; Libraries
Save the Summer	App and product (kit) to help public institutions manage people at beach more efficiently	Municipalities; Tourism offices; Beach management and Users
restART	Digital showroom that allows Local Museums & Galleries to use their artworks to set up new exhibitions for the public	Museums; Galleries; Curators; Content creators; Culture and art public
HoVe	Platform that provides a digital/physical experience by connecting food and music/entertainment.	Restaurants; Entertainment; Music gigs; Delivery companies
Story - a tale in a box	App and product (kit and a recipe) that builds a connection between past - non digital with present - digital	Restaurants; Delivery companies
PatchWork	Web platform and payment system that promotes mutual beneficial partnerships between local businesses.	Micro retail shops and other small businesses
WeShare	B2B marketplace for lending and renting assets, connecting local businesses and services	Local businesses; Freelancers; Event Organizers; Volunteers
Local	Platform that promotes the local / domestic tourism, co-creating hybrid experiences with community partners (restaurants, stores, museums)	Local Guides; Tourists; Experience Hosts / Locals
Co-Immunity	Social networks-based community that connects local restaurants with the neighbors to diversify the gastronomical offering	Local restaurants + residents - digital and not digital
2Be	Platform for municipalities that supports businesses to get sanitary certifications and share resources and create synergies with other businesses	Municipalities; Event planners; Hospitality; Restaurants and Bars
Arriva	Platform that recreates the local street markets in the digital world by providing a safer place to shop and build relationships	Street Markets; Local customers; Municipalities
Locally	"Airbnb" for tourism guides/local experts that provides a specialized channel for promote their services	Tourism Office; Tourist Guides; Tourism Visitors; Local

Figure 8 Categories and target markets.

Another finding is that none proposals addressed the fact that most markets are already facing the lowest consumption levels, especially non-essentials, but is already hitting sectors like food. This is due to loss of jobs and reduced wages to less than 50% - and the high level of uncertainty for the future - will there be a job? Can businesses afford the high overheads in rents, staff and taxes when social distance and low income reduce their revenue capability, therefore facing bankruptcy unless the tax burden and rents are relieved?

Considering resistance to change (the main reason why small businesses / local businesses are still behind the digital transition) the proposals require the next stage of co-creation in “baby-steps” working together with businesses and users as user engagement and be mindful of the resistance as for many the immediate response is to expect to return to business as usual. From the Design Sprint exercise, this has not yet been addressed for the reason that we were still unable to foresee or anticipate what is the new reality.

However, as part of the Design-led approach, this is one of the advantages of working with end-users (both business and customers) and “prototype” the solutions in an iterative way.

4 Conclusion

Next steps

Following this experiment, further research will be taken to validate the process, test the whole process from design brief to implementation. Research can help us demonstrate with evidence, the role of Design-driven innovation in high level of uncertainties. We also aspire to test solutions and evaluate the value creation from such a participative process vs. traditional methods. Now we aim to achieve two complementary goals. The first is to further develop the concept solutions by carrying out additional activities to consolidate what has been proposed. The second, to be conducted in parallel is to make the project results freely available to target users, inspiring others to use these concept solutions to build upon it. This can be done by identifying potential partners (like small business associations, local government, funding agencies, among others) that can help flourish and support the most viable concept solutions with the required resources for the next stages.

Further developments should take into account the degree of uncertainty and unprecedented disruption levels the business landscape is facing now. This scenario requires an experimental and iterative approach, taking a step backward and going back to more in-depth research of user needs and problems. After analysing the results of the project ex-post, it was possible to observe that some projects focused more on certain aspects, for obvious time reasons. Becoming aware of these limitations will make it possible to better define the required additional activities and focus on all the aspects that should be fully considered.

There are a need and an opportunity for further research into the project topics. How different business categories are being affected in this period? In-depth research will help understand how different businesses are operating in their sectors. The research should aim to look exclusively at the reference sector. It may also be important to a new "How might we...?" question that lays the foundations of the research and clearly orients the project in all the different phases.

Another aspect to be implemented in these projects could be a greater analysis of user needs. It is necessary to provide a clear and detailed representation of the needs both for the owner of the activity and also for the final client. The assumptions on users' needs that are elaborated within an implementation phase should be verified. Engaging users and perceiving their real needs are at the basis of the user-centred approach, which is one of the pillars of design. Looking more in-depth into the users could offer new insights and new possibilities for implementing other concepts elaborated during the workshop week. The third block of refinement will provide a timely analysis of case studies that are offering similar solutions to derive insights from what is already in place. After initially analysing the sector, and after clearly defining the concept, looking at similar realities can offer new insights for the development of the idea.

Also, the implementation actions could concern the creation of a robust prototype, more detailed and taking into account what emerged at the end of the workshop and the feedback

received in the peer sessions. Besides, it could be useful to review the prototype also after the implementation of one (or more) of the phases previously described as an in-depth project in a second phase.

Finally, it may be necessary to deepen the business model downstream of all the implementations made. As said, the actions suggested for the implementation phase are just a few tips concerning the possible different insights needed after the project. The process adopted in the design sprint provides suggestions for outputs to be reached daily but does not foresee all the real possible constraints. For this reason, as already mentioned, the different teams have reached different degrees of depth at different points of the project. These actions described possible aspects that should be taken into account in order to elaborate on a more developed concept solution.

The communication strategy and the content that is being prepared will make the concept solutions available to target users and share the methodology created to conduct the project with other scholars and practitioners. The goal is to build partnerships with organizations, brands and other businesses that can use these concept solutions to build on it. Rich media, such as podcasts, infographics, e-book and videos will be incorporated into the strategy, which will offer an engaging user experience leading to higher interaction rates and increased project awareness. During the next two months of project results, testimonies from team members, mentors, and speakers will be published on social media.

Lessons learned

This last section aims to consolidate some of the key lessons, which can contribute to improving the outcomes of future projects.

- Support Local Business Through Design project is a good example of the power of digital collaboration driven by a common goal (i.e., to create concept solutions that can be offered to small businesses to support their ability to recover from Covid-19 negative impact).
- This project provided a great understanding of a team's ability to embrace change in uncertain scenarios, as well as to orchestrate effective teamwork purely online.
- The design sprint approach is a great way to perform research in new areas or have a go at unsolved problems, particularly when there is a focus on a problem at hand, alignment around the solution and validated learning. It is well-known that design processes are iterative and can, therefore, take an infinite amount of time. So, it would be useful to create more intermediate feedback stages to help the teams moving forward easily and faster. Other potential improvements can be:
 - Include more time for preparation of the activities and further development of the concepts;
 - Have more diverse feedback. Review sessions (both intermediate and final), can be improved by designing-in the input from mentors and practitioners as well as from professors and researchers. Moreover, have direct feedback and guidance from someone with particular experience in the field of the concept proposal can be a key step for some teams. Therefore, it would be necessary to have feedback not only from peers but also on possible directions to be taken to speed up and streamline the iteration process.

- The application of this methodology can be replicated and applied in other settings, like countries/regions/communities that have the same needs and look for more effective approaches to better aid users to develop better solutions for crisis and other possible problems they might face in the future.
- The design sprint helped to assess the viability of different ideas, business models and products. We were able to understand the right features for a robust concept and able to redesign a specific problem based on that. The sprint also allowed us to understand how to start a project from scratch and be able to create a viable roadmap for new product/service. The Design Sprint has also helped us engage with new audiences and create an outlet to showcase new ideas, projects and business models.
- Support Local Business Through Design project provided a frame of reference to SDI.Lab in new ways to collaborate with external-internal stakeholders in a purposeful and shared goal. Lessons learned from this experience will be shared inside SDI.Lab partner Universities: Universidade Europeia and Politecnico di Milano and across external stakeholders like companies, business associations, local and central governmental entities.
- In a time of profound shifts, strategic design and innovation approaches can be applied beyond the educational environment and co-creation platforms like this, will allow the fusion of different worlds, and removal of "silos" between corporate departments, cultures, sectors and nationalities.