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Spatial solutions supporting creativity, innovation, and co-creation

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As our world is getting evermore interconnected and entwined across professional, organizational and national boundaries, challenges rarely fall neatly into the realm of single functions, departments or disciplines any more. While it is uncertain what the world will look like in a few decades, and many of the needed skills and approaches are unknown, we do know we need a way of creating the future together. Counting on a few heroic innovation champions will not suffice in transforming our organizations.

Passion-based co-creation describes the approach to tackling these issues that has led to the creation of Aalto Design Factory and the Global Design Factory Network of 20 co-creation platforms around the globe. Our approach, in a nutshell, is a way of creating something new together, sprinkled with a hefty dose of intrinsic motivation. Sound too hype-y? Worry not, we aren’t preaching the adoption of yet another ‘perfect’ tool, licensed process, or turnkey solution. Rather, we want to share some principles we have found effective, offer a look into the scientific backbone of our approach, and provide tangible examples on how to bring the mindset and ways of working into your organization. Mix, match, and adapt these elements to create your own personalized stack of building blocks for passion-based co-creation in your unique context.

Senni Kirjavainen

Cite as:

For the full book, please visit
https://designfactory.aalto.fi/for-media/#publications
The ways we work and the places where we work have changed during the last decade, and during this change, spatial design as an organizational interest has boomed. It is clear that our working environments—the possibilities the space allows and the way our working environment is arranged—have an effect on our motivation, productivity, and job satisfaction and have other important outcomes. In recent years, many companies have developed their work environment to better support innovation, and many co-working spaces have been opened to house freelancers and creative professionals in different countries. Also, many academic institutions have started their own learning hubs and co-creation spaces in order to positively affect work and learning—Design Factories being amongst these examples.

New technologies and the increased pace of the globalization of companies and communication have also changed the ways we work, how we perceive time and how we are expected to perform in our work. In many countries, the manufacturing industry is in decline and knowledge work has a bigger role than before. There are new professions that have only existed for a while and more are emerging as technology and societies develop. The design profession is also expanding and in flux. Regardless of the organization at hand, knowledge workers do not stay in one place nor do they only work during fixed hours. Also the content and mode of their work might vary a lot depending on the day. This requires flexibility not only from the workers or organizations but also from our working environments. As a result, in recent years work has moved from being conducted in cubicles to being conducted in open-plan offices and easy-to-access spaces for teamwork. This chapter focuses on how the physical work environment and especially the way the space is constructed can support co-creation and creative work (the following three chapters delve more into the social and virtual dimensions of the work environment).

### Adaptability as a key requirement for workspaces

The recently manifested creative environments, hubs, and innovation laboratories often look very similar to each other. There seems to be “a DNA of aesthetics” that these spaces share: colorful furniture, motivational statements, whiteboards on wheels, and piles of sticky notes. However, there is more to creative environments than colorful walls and motivational posters. This aesthetic has become so common that there might be many cases where only the visible surface is created without sufficient thought and reflection. What should lie beneath this recurring look is a pursuit to support different activities, and the objectives of creating a space should not be focused on chairs, desks, or square meters but on the needs of the users and organizations. A workspace should allow people to modify the space according to their needs, and it should communicate the ways of acting in that environment.

The way our offices, learning spaces, or meeting rooms are designed can have a direct and significant effect on work performance, learning, new products, and ways of working. Many studies have explored the idea of innovative spaces shedding light on what kind of working environments support creativity. If we are tuned into thinking about the issues we are going to be dealing with, our environment can help us connect thoughts and find links between concepts. Some environments can facilitate idea creation and experimentation better than others, especially if

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**Key points**

- Think beyond aesthetics when changing from cubicles to teamwork and open-plan offices
- Provide clear cues on how the spaces can be used and modified
- Allow spaces to be modified according to the needs of different individuals, tasks, and phases of work
- Place people who should work with each other near to each other but also balance collaborative spaces with possibilities to escape distractions
a person is already geared towards breaking away from conventions. To prompt innovation, the environment we work in should enable collaboration while being modifiable to meet the varied and changing needs of the users, not forgetting about the possibilities for communication and working that adding virtual space to physical spaces can offer. Different stages of creative processes also require different kinds of spaces, sometimes more private and sometimes more communal, which also supports the idea of modifiability. There should be a possibility for the users of the space to develop and modify the space to fit the users’ current needs and this possibility should be built into the design of the space. A physical space also gives us mental cues on how to behave. If a working environment is designed so that it conveys a message that it is desirable to take action and develop the environment, the users are more likely to do this. It often comes down to small details that guide the users of the space. For example, an unpolished feel and mobile furniture suggest that one is allowed to make modifications to the environment and can encourage new types of behavior. Consequently, creating a polished environment is not necessarily desirable. At Aalto Design Factory (ADF), there are two kinds of changes users can make in the spaces. First, the spaces offer opportunities to temporarily modify the set up—for example for a teaching session or prototyping session—where the facilities are “reset” to the original configuration after the session is over. When teachers at ADF were interviewed, they described how the facilities had encouraged them to work in a more student-oriented and hands-on manner than previously. In addition, sometimes users develop the space to better meet their needs together with the staff, and these changes
While our work environment should be attractive, this does not only refer to visual attractiveness. Even though visual attractiveness is debatably hard to measure, it has been shown that other aspects of attractiveness—comfort, location, and architecture—are important features of a workplace. The place we work in should reflect our needs and thus give us the ability to experiment and find the right rhythm, as well as offer ways of working that suit us and allow collaboration, prototyping, and all other shapes and forms of creative work.

Physical proximity sets the scene for collaboration

A study on ADF conducted three years into its running showed that having a common physical space and spatial arrangements supporting interaction are perceived to enhance becoming part of the community. These spaces include, for example, rooms and offices that one shares with not only one’s closest colleagues but also with other members of the community. At ADF, no one has his or her own office, regardless of organizational status. Researchers from different research groups occupy one part of the building, teaching staff from multiple courses in different disciplines occupy another part, and so on. It is a given that people can move between these spaces according to their prevailing needs. On the other hand, clustering people in the building according to their primary activities (rather than the organization they come from) can help to lower the threshold for reaching out to your neighbor, as you know you are likely to share some interests and challenges.

The study on ADF also revealed that simple solutions, such as creating open offices or centralizing coffee makers, can support and facilitate sharing and openness in an organization. Teamwork happens in spaces that are designed to support teamwork. It is futile to expect community members to interact, engage, and collaborate if they do not meet each other during their time at the office. It is easy to see the sense in this: when the environment steers community members into mingling, discussing, and interacting, these actions are much more likely to take place. The physical proximity of people in a space was perceived as highly beneficial in the study on ADF. Development collaboration increased with physical proximity—distance being the biggest obstacle to co-creation. Being located in the same building does not do the trick as being located in different rooms is enough distance to hinder collaboration. There has to be the possibility to interact with others, overhear discussions and catch up with other members of the community.

There are also drawbacks to all the openness. In a 2011 review, Davis et al. summarized the benefits as well as the risks of open offices. The risks include distraction from work, noise that can lead to dissatisfaction and further to bad work performance, and reduced privacy. The work environment should be well thought out in order to avoid the potential risks from outweighing the positive effects of openness. The challenges of open-plan offices and shared spaces also came up in the study on ADF. Privacy was one issue that the interviewees were concerned about and some community members felt that they needed more privacy than that which the environment allows.

As discussed in the next chapter (Bridging physical and social space: Practices and behavior in co-creation platforms), a space that has been deliberately designed for supporting co-creation can also facilitate the process of cultivating a desired social environment. Spaces supporting creative collaboration should be designed with intention and starting from the users’ needs and the space should also reflect them, the community they comprise, and its values. The workspace is a physical representation of the organizational identity and often also one of the first things we experience in regards to an organization. Our physical work environment provides a story of who we are; it can even lay a foundation for the whole organizational identity and have a great influence on our organizational culture and its formation. For example the physical environment of ADF is—among other things—designed to support trying things out, which is one of the core values of ADF. Therefore the spaces provide low-threshold possibilities for rapid prototyping, machining, and experimenting in other ways as well. ADF or any other co-creation platform is more about the community than it is just walls and furniture, and the environment plays an important role in creating the ways the people that make up the community go about their days.
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REFERENCES


About the author

Senni Kirjavainen (Aalto Design Factory) worked in developing the very first iteration of the facilities of the Design Factory and has since joined building the scientific foundation of the Factory. She’s been on board since the Factory’s predecessor, Future Lab of Product Design. Senni has an MA degree in industrial and strategic design and is currently working on her PhD in product development, exploring design thinking and how to best support creative work.