

# Startup Digi-Dojo: A Digital Space Supporting Practice and Research of Startup Remote Work

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## Abstract

Many companies, including startup companies, are transitioning or pondering about the transition to remote work. However, with the various benefits of remote work also come specific challenges. These challenges tend to be exacerbated in the startup context. The existing body of knowledge on remote work neglects the specifics of the startup context. Similarly, the research on startups does not provide knowledge on their challenges in the remote work setting. Even though online support for startups does exist, it is not clear how the support tools should be designed to purposefully address the specifics of startup remote work. In this article, we introduce a research project that aims at obtaining a comprehensive understanding of the challenges and characteristics of startup remote work, and building a digital space, which we call Startup Digi-dojo, that can support startup remote work as well as research on remote startups. Startup Digi-dojo will offer a unique opportunity to build a novel kind of collaboration and synergy between startups and researchers. We will develop Startup Digi-dojo using the Design Science Research approach. Since the project is in its inception phase, we present the research design and initial architecture of the system in this article in order to get early feedback from the scientific audience.

## Keywords

Remote work, Digital workspace, Startups, Research practice partnership, Virtual workspace

## 1. Introduction

Remote work (or telework, work from home, work from anywhere) is on the rise for quite some years. Already in 2013, Fried and Hansson (2013) stated that “The (remote work as) future is already here – it’s just not evenly distributed” [1]. With the outbreak of the COVID-19 pandemic, remote work has become an evenly distributed reality, at least temporarily. The advancement of technology enables an increasing number of people to fulfil their tasks not only from their workplaces but from wherever they want.

Remote work is particularly attractive for startups. It increases the chances to recruit talent from all over the world which is particularly difficult for startups as they do not yet have an employer brand. Startups working remotely can benefit from virtual technologies, e.g., as support for knowledge creation and leadership development [2]. Indeed, some startups have even committed to working all-remote from the beginning, for example, the successful software

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companies GitLab ([www.gitlab.com](http://www.gitlab.com)) and Basecamp ([www.basecamp.com](http://www.basecamp.com)). Despite of the large number of studies on remote work, the research is fragmented and focuses on established companies [3]. Because startups are understudied in the remote work literature, we know little about startup-specific remote work practices and tools. This is problematic because working in startups differs from working in established firms [4]. Understanding the startup-specifics is important because building startups, especially innovative high-tech startups, is a highly challenging endeavour, and the failure rate is extremely high [5].

The research project presented in this paper aims to provide a better understanding of the challenges and characteristics of startup remote work, and to support startups towards efficient and sustainable remote work practices. To achieve the objectives, a design science research approach will be employed and a digital platform will be developed as the main resulting artifact. We call the platform “Startup Digi-dojō”. *Dojo* is a Japanese term that means literally *place of the way*. The term is used in martial arts to refer to a place of formal training. Startup Digi-dojō will be a digital place that provides remote work training to startup teams. This training will be underpinned by a novel kind of collaboration and synergy between practice and research, enabled by the online setting.

## **2. Background and Related Work**

### **2.1. Remote Work Challenges for Startups**

Remote work can have positive outcomes. For example, increased flexibility provides new opportunities for skill development and for knowledge transfer [6]. However, despite the evidence for positive outcomes of remote work, research has also shown that problems can arise such as reduced collaboration and well-being [7]. Often there are frictions on several levels including reduced social embeddedness and different legal regulations at different locations [6]. The challenges associated with remote work tend to be exacerbated in startups. When startups work remotely, they need to find new ways to advance the quality of their teamwork because low team member proximity can decrease communication and coordination quality, mutual support, effort, and cohesion in innovation projects [8]. Due to the dynamic and challenging environment in startups, team building activities are often neglected, particularly when working remotely. Moreover, in remote settings, a climate of psychological safety and empowering is even more important than in on-site settings [9], and the effects of leadership amplify [10], suggesting challenges for leaders in startups who often do not yet have leadership experience.

### **2.2. Digital Solutions Supporting Startup Remote Work**

Remote work is based on digital and virtual solutions. When working in a remote manner, startups avail online support naturally and primarily. Due to the scarcity of the knowledge on startup remote work in the literature, there also is a lack of understanding on what digital solutions can better support the remote work of startups. Some online solutions do exist to support startup development. For instance, Leanstack ([leanstack.com](http://leanstack.com)) offers “workshops, tools, and coaching” that are “delivered 100% virtually” and on which startups can “participate from anywhere in the world.” Founderly ([founderly.com](http://founderly.com)) offers a virtual co-working space to allow

the creation of new connections among participants and offers educational resources, such as workshops. Some accelerators offer their programs fully online, such as Newchip (newchip.com) that “require[s] no relocation and [runs their] program entire online.” However, all these existing online solutions do not support startups with purposeful consideration of the unique challenges of remote work in the startup context.

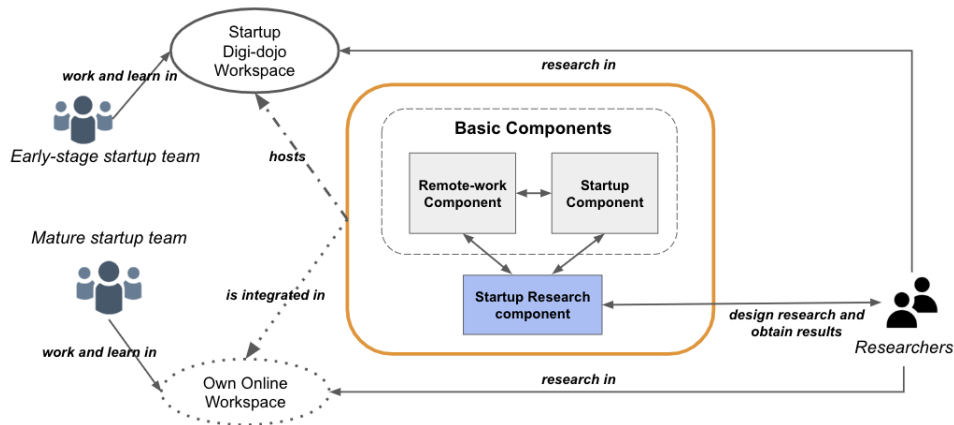
### **2.3. Research Practice Partnership**

Research-practice partnership (RPP) is a type of initiative commonly seen among educational researchers where researchers partner with school districts, principals, and teachers to create and implement interventions to improve educational outcomes. They establish a process that is characterized by co-creation where researchers and practitioners continuously interact. Through co-creation, scientific results are translated into practical interventions after researchers conclude that an intervention or tool is useful based on their development and trials [11]. Penuel et al. proposed a framework to conceptualize RPPs as joint work at boundaries based on cultural historical theories of learning and development. According to the framework, researchers and practitioners have cultural, professional and organizational differences, forming boundaries between them [12]. In RPPs, the actors cross these boundaries, i.e., they try to be “understood and navigated” to achieve successful collaboration. Thereby, they encounter crossings, i.e., moments in which the actors recognize these differences, and build boundary practices, i.e., “more stabilized routines, established and sustained over time, that bring together participants from different domain for ongoing engagement”, which enable them to develop boundary objects that “anchor joint work.” The remote online setting lowers the barriers of researchers and startup teams to reach each other, and equips them with advanced digital tools to implement boundary practices which bring them together to co-create practices and routines to facilitate startup remote work and research on it.

## **3. Startup Digi-dojos: a digital workspace for remote startups**

Startup Digi-dojos will consist of three different components, supporting remote work of startups at different stages (early and mature), and supporting researchers to conduct startup related studies, as shown in Figure 1.

The basic components, i.e., a remote-work component and a startup component (the grey boxes in Figure 1), will provide the support to startup teams to work in a fully remote manner. Special focus will be put on the creative, dynamic, and fast-paced processes of building a startup (e.g., rapid prototyping, group brain storming, customer interviews, etc.). The Startup Research component (the blue box in Figure 1) will allow researchers to conduct their studies with the startup teams that use Startup Digi-dojos. This component will have unique features to establish the research-practice-partnership that Startup Digi-dojos is aiming for. Startup teams work and learn in their Digi-dojos Workspace or their own workspace with integrated elements from Startup Digi-dojos, and their work is studied by researchers via the Startup Research component. Combining the remote-work and startup components with the Startup Research component allows startups and researchers to collaborate online. This way will enable a positive loop between practice and research. Through this close collaboration, Startup Digi-dojos will allow us



**Figure 1:** The overall architecture of Startup Digi-doj

to derive interesting insights towards a comprehensive understanding of startup remote work, and yield scientifically sound solutions that are immediately implementable for startups, and meanwhile, increase the validity and relevance of the research for startups.

## 4. Conclusion

Remote work is the “new normal” that all companies have to embrace in their way of working. It presents specific opportunities and challenges to startups. We expect that the scientific results obtained in our project will fill in the knowledge gap in the literature by adding a better understanding of remote work in startups. For entrepreneurs and startup teams, the scientific results could support them to work more sustainably in remote work settings. The results can also be utilized by business incubators to better support startups.

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