

Digital Deep Dives into Swedish Municipal Libraries: A Case Description

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Abstract: A current renewal project involving two municipal libraries in Älvsborg County in Sweden is described. The said project was designed to prepare the libraries for the future as part of the digital society. The article focuses on the initiation of the renewal project and its implementation as a technological process. The resulting gains and challenges are also considered. Some of the main points that emerged from an interview with the project leader are presented. The key concepts of *renewal*, *multiple approaches* and *knowledge-sharing* relate to ways of implementing new technology. Further, agile organizations are discussed as a concept that is highly relevant for future library development.

1. Introduction

Technology is rapidly transforming our society. Information is delivered in real time and information management competence has become increasingly in demand worldwide.

In order to defend their position, libraries must adapt to and keep pace with the digital transformation of society. This article describes A recent library makerspace project (Sjödén 2018), in which two small public libraries in Sweden have responded to this challenge, by implementing a makerspace—a technology workshop that is freely available to library users.

The two libraries, both in Sweden's Älvsborg County, obtained a government grant to implement the makerspace project in cooperation with a local technology firm. As a result they were able to create a library-based makerspace in Sweden, illustrating how libraries can indeed pivot and transform their offerings in response to the challenges of technological change.

The creation of this makerspace exemplifies the agile development discussed by Mathews (2012), Cram (2019) and others, whereby organizations respond to the challenge of rapid technological development by “[thinking] like a startup” (Mathews), minimizing documentation, soliciting ongoing feedback and seeking customer engagement throughout the project, in a more participative, collaborative atmosphere.

This article describes an instance of the modern phenomenon of “making room for a ‘makerspace’” (Harris & Cooper 2015) in a Swedish library context, beginning with three background sections to place the project in the context of (2.) Swedish public libraries, (3.) agile development vs. traditional development, and (4.) projects as tools, followed by (5.) the description of the creation of the makerspace, and, finally, (6.) the conclusion, in which I discuss the resulting and potential gains and challenges. As my research method I employed an interview with the key actor in the project—the person who took the initiative.

2. Swedish public libraries

Most of Sweden’s public libraries are part of public administration. They are, on the one hand, a part of their mother organizations, often a municipal administration, and on the other, a part of the national library system. This allows the public libraries also to apply for additional resources from national level of the library organization. Efforts are currently under way to guarantee that national-level library services are on a uniform or almost uniform level throughout the country.

The gender bias toward females in Swedish libraries is often pronounced: According to official Swedish statistics, of the total number of librarians in Sweden in 2017—7,499—5,705 were female and 1,794 male.

In terms of librarian age, of the 5,705 female librarians, 1,467 (25.7%) were between the ages of 30–39, and of the 1,794 male librarians 511 (28.5%) were between the ages of 30–39. This information may indicate the amount of digital natives among librarians. According to these statistics there are 1,978 librarians (26.4%) in Sweden between the ages of 30-39 who are expected to meet the challenges of the democratization of access to information and knowledge in the ongoing rapid digital transformation. How may this be accomplished in reality?

Moreover, job mobility in Swedish libraries is low because securing a steady position in a library is like winning a lottery. Librarians often are emotionally engaged in their work and may also stay in their positions for that reason. Mobility is a way to assure flexibility, address new challenges and discover new ways in solving things. But if it is not possible, other ways have to be found (e.g., through innovative projects).

Swedish public library staffs often include an IT Librarian, who is considered to be responsible for the library’s IT system. The IT Librarian participates in

purchasing and is expected to be interested in technical solutions generally. But the IT Librarian must deal not only with technical solutions but also the changes that implementing such solutions entails. Matthews (2012) lists the IT librarian competencies required—“nimble,” “adaptive,” “flexible,” “self-starter”—in an ever-changing environment in which “change is the new normal.”

3. Agile development vs. traditional development

Mathews (2012) stresses transformative thinking, start-up culture, innovation methodologies and an entrepreneurial spirit as tools by which to face the future. In this paper, Mathews also describes ways to achieve innovation in “tradition-obsessed” organizations. One of his recommendations is to “think like a startup”: a startup “thinks” about what is going to come next; a startup “wants” to build a platform, design challenges to test and validate assumptions, and promote a culture of forward-thinking and a future-focused orientation.

Aghina et al. (2019) discuss the need to create agile organizations in order to respond to the changes in the surrounding world. They identify five trademarks of agile organizations—naming specifically the democratization of information and accelerating digitations as current trends that are also relevant for libraries. They also claim that organizations need to “rapidly engage in multidirectional communication and complex collaboration with customers, partners and colleagues.”

Cram (2019) describes agile development in contrast with traditional, plan-driven development focusing on written documentation, up-front planning, up-front customer involvement, and a more formal, command-and-control management structure. Aghina et al. (2019) note that in traditional management structures, the “skeletal structure is strong, but often rigid and slow-moving.”

According to Cram (2019), agile development relies on minimizing documents, ongoing feedback and change, customer engagement throughout the project, and a more participative, collaborative atmosphere.

Cram (2019) presents a system for achieving agile development based on three key elements:

- agile adoption (Why agile? B Agile in what way? Says who?)
- agile tailoring (How much agility? Which employees? What benefits?)
- agile use (How? When? Is it worth it?)

Cram and Marabelli (2018) have studied traditional and agile approaches. Their findings name agile features like “just enough” documentation, ongoing communication, cross-functional teams, person-to-person interactions, reliance on tacit knowledge, and trial and error.

Aghina et al. (2019) describe the agile operating model as being based on “a network of teams within a people-centered culture that operates in rapid learning

and fast decision cycles which are enabled by technology, and that is guided by a powerful common purpose to co-create value for all stakeholders.”

4. Projects as tools

Projects are often the form through which libraries apply resources to test a concept or develop new options. A project can be simple or complex, and librarians can be involved in project work in different ways. Regardless of project size, the roles are the same: leader, manager, and team member, according to Allen (2017). There may be projects that are multi-professional across organizations. Multi-professional teams are challenging from several angles: they introduce multiple approaches to problem-solving and thus to knowledge-sharing. They can bring renewal to libraries by challenging the status quo.

The need for multiple perspectives in modern organizations is based on the necessity to combine different areas of knowledge to solve complex problems.

Projects can be used to implement or test changes. Libraries may conduct high-tech projects (see, e.g., Moorefield-Lang 2014, 2015; Groenendyk & Gallant 2013; Harris & Cooper 2015), such as library-based makerspaces, described by Moorefield-Lang (2015) as an exciting new service. Moorefield-Lang also points out that no two makerspaces are the same. That is why the makerspace project described in this article is described in terms of its own premises and through the project leader’s account.

This makerspace project, funded through a grant awarded under the “Strengthened Libraries” (*Stärkta bibliotek*) initiative of the Swedish Arts Council, is a cooperation project involving two Swedish public libraries, in Tranemo and Svenljunga, and the local tech company Uddebo Makerspace. But what exactly is this particular “Strengthened Libraries” project about? To find the answer to this question, I conducted an interview with the creators of the makerspace.

5. The makerspace project of the Tranemo and Svenljunga libraries

The project is the result of a joint grant application by the public libraries of Tranemo and Svenljunga, Sweden, and Uddebo Makerspace. In May 2019, I interviewed the project leader, Janne Kemi. Kemi is Creative Project Leader at Uddebo Makerspace, a company that provides business renewal and development solutions. Kemi, 39 years old, is of the generation of digital natives who also make up 26.4% of Swedish librarians. Also present during the interview was Anett Kansanen, Strategist and CEO of the company.

Based in Tranemo, Sweden, Uddebo Makerspace is an established arena in which small enterprises engage in technology projects such as VR (virtual reality) and virtual experiences. As the project application stated, “A significant

strength of VR and virtual experiences is that they enable us to see things from a new perspective.”(Project application, 2018, page 6/8).

Kemihim self had recently moved to a rural area in western Sweden. In 2018, the Swedish Arts Council initiative “Strengthened Libraries” announced a project announcement, one of the requirements was that the project had to involve the modernization of libraries. Kansanen had submitted a similar application in 2014 to create a makerspace in libraries but that application had not been successful. As she pointed out, whether this was because the concept was too new at the time we cannot know. At any rate, if that was the case, no doubt it did prepare the ground for an understanding of the new application as an opportunity.

Kimi was also involved in Uddebo Makerspace, a nonprofit association in the small village of Uddebo. At that time, libraries in Sweden held a special week-long event focused on digital technology, called “E-citizen week”. The library in Tranemo held one of these digital weeks and they invited Uddebo Makerspace. Kemi and his friend from the association participated in the event, to network and demonstrate various technologies. The event was much appreciated by visitors young and old who found it very exciting to see all the new technology, especially the virtual reality equipment and 3D printers. This sparked discussions between the library and Uddebo Makerspace about a potential cooperation. Then, the chance to apply for funding for just this type of cooperation appeared.

It was Kemi who took the initiative to launch the project. Cooperation between libraries was a requirement for the application, so Kemi brought in another library—Svenljunga. Kemi himself is a programmer and an entrepreneur who is very interested in technology and IT and has always worked with technology. He worked with the Internet back when it looked like text-TV and relied on ASCII code, and users had to call up a modem to get in touch with another modem.

The Uddebo Makerspace association and the two libraries that functioned as an umbrella for the project submitted a joint application, but the actual work is done through the Uddebo Makerspace company where both Kemi and Kansanen work. This company provides services and solutions in renewal and business development, digitalization and IT. The other employee of the company who is involved in the project group, in addition to Kemi, is Gustav Bodell, who works with 3D visualization. Bodell and Kemi run Uddebo Makerspace, a technology workshop that runs a multitude projects—all for the fun of it.

Makerspace culture is based in the open-source tradition of free software. Makerspaces encourage people to explore technology together and sharing knowledge with each other. There are makerspace websites that enable people all over the world to connect with each other, to help each other. People

describe projects they have started to build. Others can then download the project descriptions, improve them and upload them again, revised. In this way the projects get better all the time. Kemi and Bodell found that this was an excellent method. Makerspace culture goes hand in hand with library culture as well, as it shares the aim of making information available and democratic.

The project has now been running for two years and will be finished by the end of April/May 2019. Both the project leader and the libraries wanted it to become an established part of their operations. The main purpose of the project was to build a mobile makerspace. Rural libraries do not have enough staff to dedicate a staff person full-time for this purpose. Nor do they have enough room to accommodate a makerspace. The mobile solution involves a large wagon containing technical equipment that is ready to use. Both the Tranemo and the Svenljunga libraries have the wagon available every evening so that anybody can come and use it. Kemi and Bodell have also created a system that allows visitors who have completed a makerspace training to have that information on their library card. They are then allowed to check out the wagon and use it in the library at any time. All staff must have a basic understanding of what the wagon is about. The staff themselves view this as a competence upgrade.

Both the Tranemo and the Svenljunga libraries have an IT Librarian. The IT librarians of both libraries have a basic understanding of the makerspace and can guide visitors. It is a matter of getting people engaged when they come to the library—encouraging them to visit the makerspace. Kemi relates that there have been workshops at the library for both staff and visitors. Staff competence varies but no one has shown any negative attitude. Everyone has found the makerspace to be an asset. Kemi expected more negative attitudes towards the technology.

The working process involved frequent meetings and a project group consisting of Kemi, Bodell, and both IT librarians. There was also a steering group consisting of the four of them plus the library directors. Kemi explained that they were given a substantial mandate and that the IT librarians were allowed to devote work time to the project. The project has now been completed, the project period ended. A final report and evaluation are under way. A mobile wagon containing IT equipment has been left on site for future use.

For Kemi, makerspaces are like a grass-roots organization. The internal vision in the project has been that—in the best-case scenario—they would succeed in getting everything in place on time. They hope that library visitors will come and will start to operate, say, the Tranemo makerspace in the library—that the visitors will take responsibility for it so that it will not depend solely on the library staff. In a makerspace it is very important to find right kind of people to get involved and run it. It must not be the libraries that run it. Preferably, a group of people or an association that has made the library their own starts to hang around in the makerspace and use its equipment.

The workshops have been attended by parents who often work in local companies. They say that in today's industrial landscape everybody must learn programming. Nowadays, computers and technology are involved in almost everything, regardless of one's occupation.

The project employed simple forms of decision-making. Perhaps the explanation for this is that it is locally based and exists in small municipalities typically having short decision pathways. The only thing that has been late in the project is the delivery of V Equipment. This equipment was not released in time. Hopefully, it will be released by the end of May. Kemi and Bodell have used their own equipment from Uddebo Makerspace. The techniques that do not yet exist or are not yet mature have not received as much attention as was initially expected.

Kemi described his relationship to technology as a keen interest. He follows different blogs, and Instagram, and experiments with his own projects. He prefers to work in the area somewhere between audiovisual music and visual art. He builds small microcomputers and different kinds of mechanical solutions that move and make sound. According to Kemi, "Technology is there all the time. I see things through technology all the time."

Libraries have an aspect of their character other than the one that requires you to be silent. Bodell and Kemi thought that it would not be fun to be at the library. They thought that libraries were silent places for studying—places where talking was against the rules; you could only whisper there. Kemi admitted that perhaps this was a somewhat archaic image. Libraries in rural areas are not like that anymore.

CEO Anett Kansanen brought the interview session to a close by reflecting on the agile project organization as being a matter of putting needed, instead of always doing traditional education. In her words, "The brand of the library is damaged. The brand is associated with the idea that libraries are boring, libraries are dull and that you have to study there. Makerspaces, digital solutions, virtual reality, augmented reality and knowledge and cooperation are modern phenomena and can make the image of libraries more vital in people's minds".

6. Conclusion

Makerspaces are a way to modernize libraries and are yet in the same spirit as libraries. An entrepreneurial individual is the driving force, the source of the energy for the present project. The project itself exemplifies an agile organization in that it is not formal, is organized in cross-functional teams, and arises from chance. The library space is a suitable arena for it, having values similar to those of makerspace culture. Libraries welcome and readily adopt the makerspace.

Library administration benefits from combining agile projects. The guiding atmosphere of agility (less formal planning, less documentation, more doing) provides a space to create and develop new things in addition to traditional library activities, bringing added value to library activities in the digital era. The damaged brand of libraries can thus be restored and updated to defend its position in people's minds. The next question will be whether agile ways of organizing library operations are also the answer to the problems associated with rapid digital transformation in general, leading to changes to structures and the shaking up of entrenched beliefs.

Multiple perspectives can be reached by involving and letting different people from different fields enter the library, as was the case in the makerspace project described here. This makerspace was initiated by a project leader who sees the world through technology and "likes things that sound and move." People like him—entrepreneurs—create movement in and for the organization on different levels. The makerspace project itself is like a "virtual reality stop" on the rapid digital transformation route, helping visitors and staff to gain knowledge about information technology.

In order to match the rapid development of technology libraries should reflect over ways to organize themselves to ensure their continuous renewal. Agile organizing could be worth considering as a way to keep this continuous renewing going.

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